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Stephen Lee, Director
Louisiana Department of Energy and Natural
Resources
Office of Conservation - Injection & Mining Division
617 North Third Street, LaSalle Building
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DATE
July 9, 2024

SUBJECT
8th Analytical Data Submittal
Sulphur Mines Dome
Calcasieu Parish, Louisiana

REFERENCE
0732435

Dear Mr. Lee:

On behalf of Westlake US 2, LLC (Westlake), Environmental Resources Management Southwest, Inc. (ERM) is pleased to provide the Louisiana Department of Energy Natural Resources (LDENR) Injection & Mining Division with final laboratory analytical reports for groundwater, surface water, and oil samples collected at the Sulphur Mines Dome in Calcasieu Parish.

Included in this report are data received in March, April, and May 2024, which includes the results of the 1st Quarter bubble site sampling event.

Enclosed are the following:

- Table 1 – Groundwater Data Summary
- Table 2 – Surface Water Data Summary
- Table 3 – Central Lake Water Column Profile
- Table 4 – Gas Data Summary
- Table 5 – Survey Results and Groundwater Elevations
- Figure 1-2 – Sample Location Maps
- Figures 3-4 – Groundwater Chloride Trend Graphs
- Figure 5 – Groundwater Piper Diagram
- Figure 6 – Central Lake Chloride Statistics
- Figure 7 – Central Lake TDS Trend
- Figure 8 – Methane Isotopes
- Figure 9-14 – Potentiometric Surface Maps
- Attachment 1 – Laboratory Reports

Only final laboratory reports received since the previous data submittal are provided in Attachment 1. Supplemental submittals will be made as additional final laboratory analytical data are received.

1. WATER SAMPLING RESULTS

In March and April 2024, additional samples of groundwater and surface water were collected throughout the site. The sampling locations are shown on Figures 1-2. The water samples were analyzed by ALS Global laboratory in Houston, Texas, a Louisiana Environmental Laboratory Accreditation Program (LELAP) accredited laboratory. Dissolved gas samples were submitted to and analyzed by Isotech, a Stratum Reservoir Company in Champaign, Illinois. All samples were hand delivered or shipped under proper Chain-of-Custody in laboratory supplied containers with appropriate preservative and handling requirements.

1.1 WATER WELL SAMPLING

Monthly groundwater samples continue to be collected from the industrial water wells operated by Westlake, as well as the Cottages Well (019-17636Z) located west of Cavern 7 (see Figure 1). For the March sampling event, Water Well #19 (019-1055) was undergoing work over and could not be sampled. A sample of this well was later collected during the April sampling event. During the April groundwater sampling event, Water Well #40 (019-1603) was out of operation and could not be sampled.

At each well, water was allowed to flow for several minutes prior to sampling, and field parameters, i.e., pH, specific conductivity (SC), oxidation-reduction potential (ORP), and temperature, were recorded with a hand-held meter at the time of sampling. The groundwater analytical data to date are summarized in Table 1.

Reported constituent concentrations have generally been consistent since sampling began in January 2023. Groundwater chloride trend graphs for the Chicot aquifer are provided as Figures 3-4. Concentrations reported from the industrial water wells have consistently been below their respective RECAP screening standards (GWSS) or EPA Secondary Maximum Contaminant Limits (SMCL), except for iron and manganese. Except for the few minor TPH fraction detections, the volatile organic compounds have been reported as not detected in the water wells since January 2023.

A Piper diagram depicting the water quality of multiple samples is provided as Figure 5. The Piper diagram illustrates the differences between the Chicot aquifer water and the produced water and brine, as well as the overall consistency of the groundwater quality within the Chicot aquifer outside of the salt dome. The industrial water wells ("500-foot" sand) and the Cottages well ("700-foot" sand) have consistently plotted in tight clusters, with the "500-foot" and "700-foot" sands having slightly different water quality signatures, and distinctly different from the produced water or brine.

1.2 MONITORING WELL SAMPLING

The installation of the monitoring wells was completed in March 2024. The wells were sampled following installation, and then on a monthly schedule beginning in March 2024. The pump intake is set to be in the middle of the screened interval. During pumping, water quality parameters (pH, specific conductance, oxidation-reduction

potential, dissolved oxygen, temperature, and turbidity) were monitored along with the drawdown in the well to ensure a representative sample was collected from the aquifer. Once the water quality parameters stabilized, a sample was collected. The analytical data from the monitoring well samples are provided on Table 1.

Four of the nine monitoring wells (MW-1-500, MW-1-700, MW-2-500, and MW-2-700) were initially installed and sampled then subsequently pulled and/or plugged and reinstalled. The initial sampling data are included on Table 1 and shaded in gray as those wells do not exist as originally installed. The wells reinstalled in the "700-foot" sand were set at slightly shallower depths.

Constituents are generally reported below their respective GWSS or SMCL standard with the exception of iron and manganese, consistent with the industrial water wells. However, chloride, sulfate, and TDS are elevated above the SMCLs at the MW-3 location. Trend graphs of the chloride concentrations within the monitoring wells are provided as Figures 3-4. The reported constituent concentrations have been stable. Elevated chloride concentrations reported in MW-3-500 and MW-3-700 are shown on Figure 4.

A few additional constituents were reported above the GWSS or SMCL in one or more of the monitoring wells, including arsenic, barium, chloride, sulfate, and TDS. Each of these exceedances are discussed below.

Arsenic was reported slightly above the GWSS in MW-1-200 during the March and April sampling events. Arsenic at a similar concentration was also reported in residential water 019-13434Z, screened in the "200-foot" sand. Arsenic is known to be present in alluvial aquifers, especially where finer-grained sediments are present. This arsenic is likely representative of native conditions.

Vanadium was reported slightly above the GWSS in MW-2-700 in March, and slightly below the GWSS in April. Also, TDS was reported above the SMCL in March but below the SMCL in April. MW-2-700 is installed at the base of the "500-foot" sand and TDS is expected to be elevated. These concentrations likely represent the native groundwater at that depth.

At the MW-3 locations, chloride and TDS are above their SMCLs in MW-3-500 and MW-3-700. TDS was also reported above the SMCL in MW-3-200 during March, but below the SMCL in April. Sulfate was also reported above the SMCL in MW-2-500. Barium is reported above the GWSS in the MW-3-700 well. At MW-3-500, low levels of benzene, toluene, and light hydrocarbons (Aliphatics >C6-C8) have been detected but below the GWSS. The source of higher barium, chloride, TDS, and hydrocarbons is not known. The barium reported in the brine samples is either reported as not detected, or detected at levels lower than what is reported at MW-3-700. On the other hand, the produced water samples collected have relatively high levels of barium, and MW-3-700 plots similar to produced water on the Piper diagram (Figure 5). The high barium, chloride, and TDS concentrations reported at MW-3 could be a result of either natural water conditions on the edge of the salt dome due to migration of shallow formation water, or related to the historical E&P operations at the site.

The water quality from the monitoring wells, on the salt dome, is quite different than what is observed off the dome. The monitoring well data are not tightly clustered as expected but are scattered and dispersed on the Piper diagram. There are no clear mixing or water evolution trends within the monitoring well data. However, groundwater at MW-2-200, MW-3-500, and MW-3-700, plot more similar to produced water and/or brine than the other monitoring wells. The water quality of the monitoring wells is considered to be the baseline conditions and concentrations will be monitored over time to evaluate changes or trends, if any.

Consistent with previous observations, the groundwater in the "200-foot" sand around the salt dome exhibits high levels of dissolved gas, along with elevated pH and water temperature within the "500-foot" and "700-foot" sands.

1.3 SURFACE WATER SAMPLING RESULTS

During the 1st Quarter 2024, surface water samples were collected from the Central Lake, Salt Lake (LDNR 26), Brine Well 7B vault (PPG 7B BS), and the water body adjacent to Brine Well 4 (LDNR 9, and LDNR 19). The sampling locations are shown on Figure 2. Surface water sample data is summarized in Table 2.

Chloride concentrations have significantly decreased in the Central Lake since December 2023. The site received over 12-inches of rain during the 1st Quarter of 2024 which has increased the water level within the Central Lake. Chloride has been elevated when the water level has been low. The chloride fluctuation appears to be seasonal and sensitive to the depth of the water column. The concentrations will continue to be monitored over time.

The Central Lake is generally homogeneous, with minor variations in water quality between sampling locations. General statistics were calculated for the chloride data from the previous four sampling events (Figure 6). Water samples collected from within the Central Lake have been generally consistent with each other during the sampling events with relatively small standard deviations. There does not appear to be any locations within the Central Lake that would indicate a source of high chloride water.

1.3.1 CENTRAL LAKE WATER COLUMN PROFILE

Field readings from the Central Lake water column are continuing on a weekly basis. The profile data collected from the monitoring station are provided in Table 3. The specific conductance increased during the second half of 2023 during a period of drought and began decreasing in late 2023 to early 2024 as water levels increased. A trend of the field measured TDS compared with water depth is shown on Figure 7. Laboratory reported TDS confirms the general trend observed in the field data. The surface water will continue to be monitored to evaluate changes over time, which appear to be reflective seasonal water level changes.

2. GAS SAMPLING RESULTS

The majority of bubbles sites were successfully sampled using a water-displacement technique. At a few bubble sites (LDNR 1, 9, 14, 19, 25, and PPG 7B BS) dissolved gas samples were collected either due to accessibility issues with the gas collection set-up or because no free gas observed bubbling even with agitation of the sediments. At BS-21 no gas sample was collected but will be during the next sampling event. Methane levels were generally low at these locations, with the exception of LDNR 25 with methane reported at 39.9 mol%.

Gas samples were again collected at LDNR 27 and LDNR 28 in March 2024. These sites were no longer underwater, and locations were identified with the use of a DP-IR methane detector. The gas samples were collected via a hand pump and funnel surrounded with modeling clay in order to limit atmospheric contamination.

Dissolved gas samples continue to be collected from the water wells on a monthly basis. Dissolved gas samples were also collected from the monitoring wells in March and April 2024. The gas data are summarized in Table 4 and sampling locations are shown on Figures 1 and 2.

The methane isotopic data have been plotted on Figure 8 for comparison with other gas samples collected. In general, the gas collected from the caverns, oil wells, and bubble sites plot as thermogenic gas, originating from deep hydrocarbon sources.

With a few exceptions, obtaining deuterium isotopic ratio data from the dissolved methane in the industrial water wells has been difficult due to the small quantity of methane present in the water. The available methane isotopic data for the water wells indicates that the methane is more depleted in Carbon-13 (^{13}C) compared with the bubble sites and oil wells. Based solely on the $\delta^{13}\text{C}$ ratio, the industrial wells appear to plot in a mixed gas range, generally between thermogenic and biogenic. The Cottages well methane is more depleted in ^{13}C compared with the industrial water wells and plots as biogenic gas.

Conversely, the monitoring wells installed on the dome had significant amounts of gas dissolved in the water. The gas from the monitoring wells has a biogenic signature being depleted in ^{13}C , with the wells installed in the "700-foot" sand having the most depleted ^{13}C methane. The gas from the well installed in the "200-foot" sand are not as depleted in ^{13}C and plot in an area that might be mixed gas or thermogenic gas. It is likely that there is mixing of the gas in the Chicot sands on and near the salt dome with deep thermogenic gas moving upward through the sands mixing with natural biogenic gas forming in the sands from the decay of naturally present organic matter.

3. MONITORING WELL SURVEY

The nine monitoring wells were surveyed in March 2024. Field measured water levels and are shown on Table 5. Groundwater elevations were corrected for density following Post, et al (2007), and are shown on Table 5 as Equivalent Freshwater Head (EFWH).

Potentiometric surface contour maps from data collected during the March and April sampling events for the three sand intervals are provided as Figures 9-14.

In the “200-foot” sand, groundwater flow direction is generally toward the south southeast. The water elevation in MW-1-200 is significantly higher than the other monitoring wells. The groundwater elevation at MW-3-200 is the lowest indicating an easterly component to groundwater flow.

Because of the elevated TDS in MW-3-500 and MW-3-700 wells, the groundwater elevations have been corrected for density to EFWH. In both the “500-foot” sand, and the “700-foot” sand the groundwater flow direction appears to be toward the southwest, toward the industrial water wells. This flow regime is consistent for both the March and April water levels. Groundwater levels will continue to be recorded on a monthly basis.

4. PROPOSED SURFACE WATER SAMPLING REDUCTION

The majority of the bubble sites are located within the Central Lake. Based on the data collected over the last year, there is little variation between the surface water samples collected at the bubble sites in the Central Lake. It is proposed that the water quality sampling at the bubble sites within the Central Lake be reduced to 5 locations, instead of every bubble site location. Each bubble site will be sampled for gas or dissolved gas, but the water quality sampling will change to include only 5 locations distributed around the Central Lake. Also, LDNR 9 and LDNR 19 are within the same water body and only one water quality sample will be collected from that water body. It is proposed that the following bubble site locations be included for water quality sampling during future quarterly sampling events.

Proposed Water Quality Sample Locations

Bubble Site	Water Body
LDNR 1	Bermed Area
LDNR 3	Central Lake
LDNR 5	
LDNR 6	
LDNR 12	
LDNR 25	
LDNR 9	Pad 4 Pond
LDNR 26	Salt Lake
PPG 7B BS	Well Vault

5. PROPOSED SCHEDULE

Water wells have been sampled on a monthly basis since January 2023. There has been no change in water quality for any of the industrial water wells over that time. It is proposed to sample the monitoring wells, and the Cottages Well (019-17636Z) on a monthly schedule and move the industrial water wells to a quarterly sampling schedule. The bubble sites will continue to be sampled as discovered with a full round of sampling all bubble sites completed quarterly. The proposed sampling schedule for 2024 is shown below:

Industrial Water Wells	Monitoring Wells & Cottages Well	Bubble Sites
June 2024	June 2024	June 2024
September 2024	July 2024	September 2024
December 2024	August 2024	December 2024
	September 2024	
	October 2024	
	November 2024	
	December 2024	

We will continue to report additional sampling results to LDENR as they are received, with final laboratory reports provided via email within 48 hours of receipt.

Should you have any questions or need additional information, please contact us at scott.himes@erm.com and david.upthegrove@erm.com.

Sincerely,

Environmental Resources Management Southwest, Inc.



Scott A. Himes, P.G.
 Senior Hydrogeologist




David C. Upthegrove, P.G.
 Partner



SAH/DCU/jdm

REFERENCES CITED

Harder, A.H., H.M. Whitman, and S.M. Rogers, 1965, *Methane in the fresh-water aquifers of Southwestern Louisiana and theoretical explosion hazards*, US Geological Survey, Water Resources Pamphlet No. 14, 22 pp.

Hodges, A.L., Jr., S.M. Rogers, A.H. Harder, 1963, *Gas and brackish water in fresh-water aquifer, Lake Charles area, Louisiana*, US Geological Survey, Water Resources Pamphlet No. 13, 35 pp.



FIGURES



Legend

- Water Well Sample Location
- Monitoring Well Sample Location
- Produced Water Sample Location
- Brine Sample Location
- Westlake Property

Notes:
2023 NAIP imagery via USDA.

Figure 1
Groundwater Sampling Locations
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





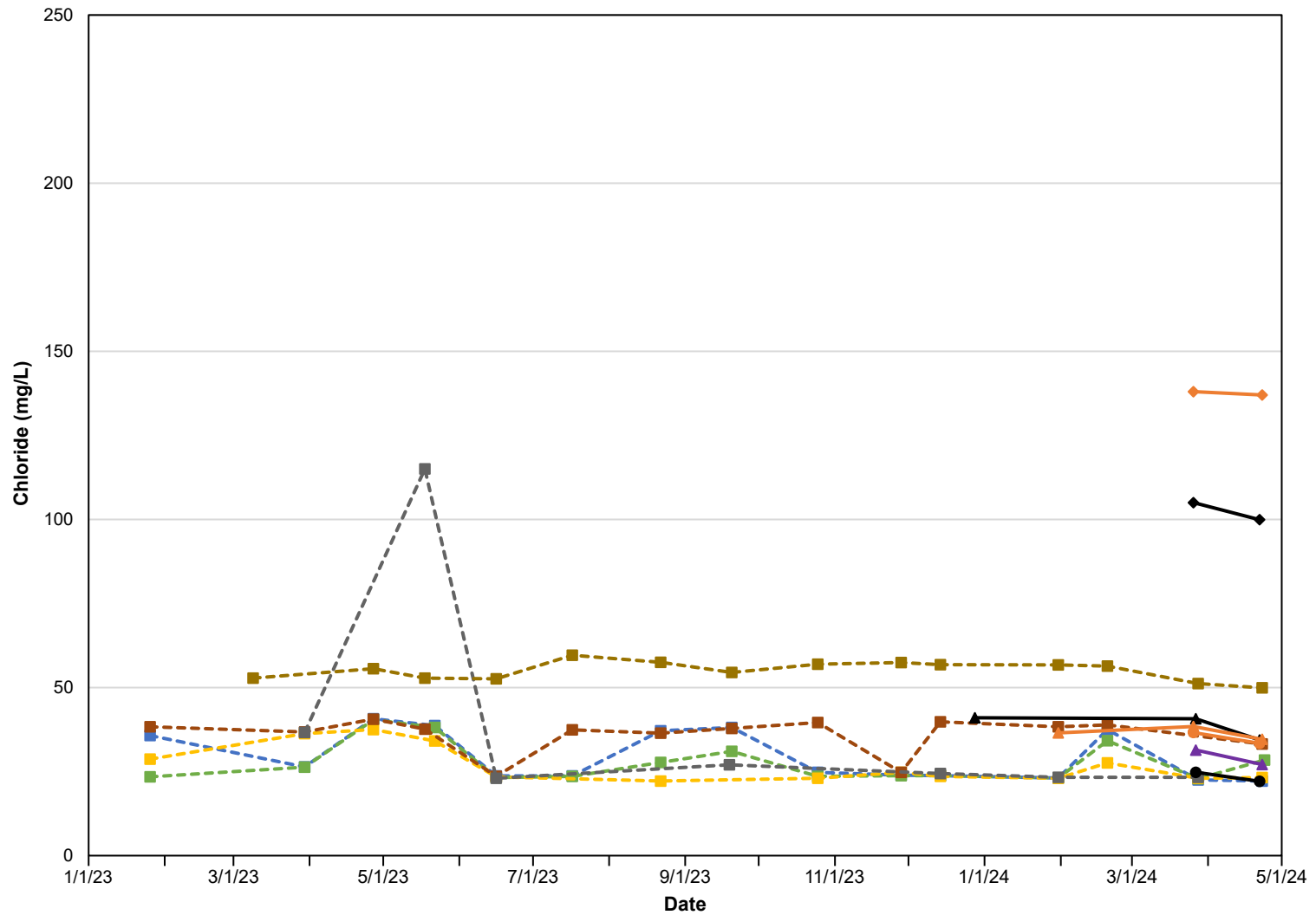
Legend

- Surface Water Sample Location (non-bubble site)
- Bubble Site Water/Gas Sample Location
- Sheen Sample Location
- Westlake Property

Notes:
2023 NAIP imagery via USDA.

Figure 2
Surface Water Sampling Locations
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana



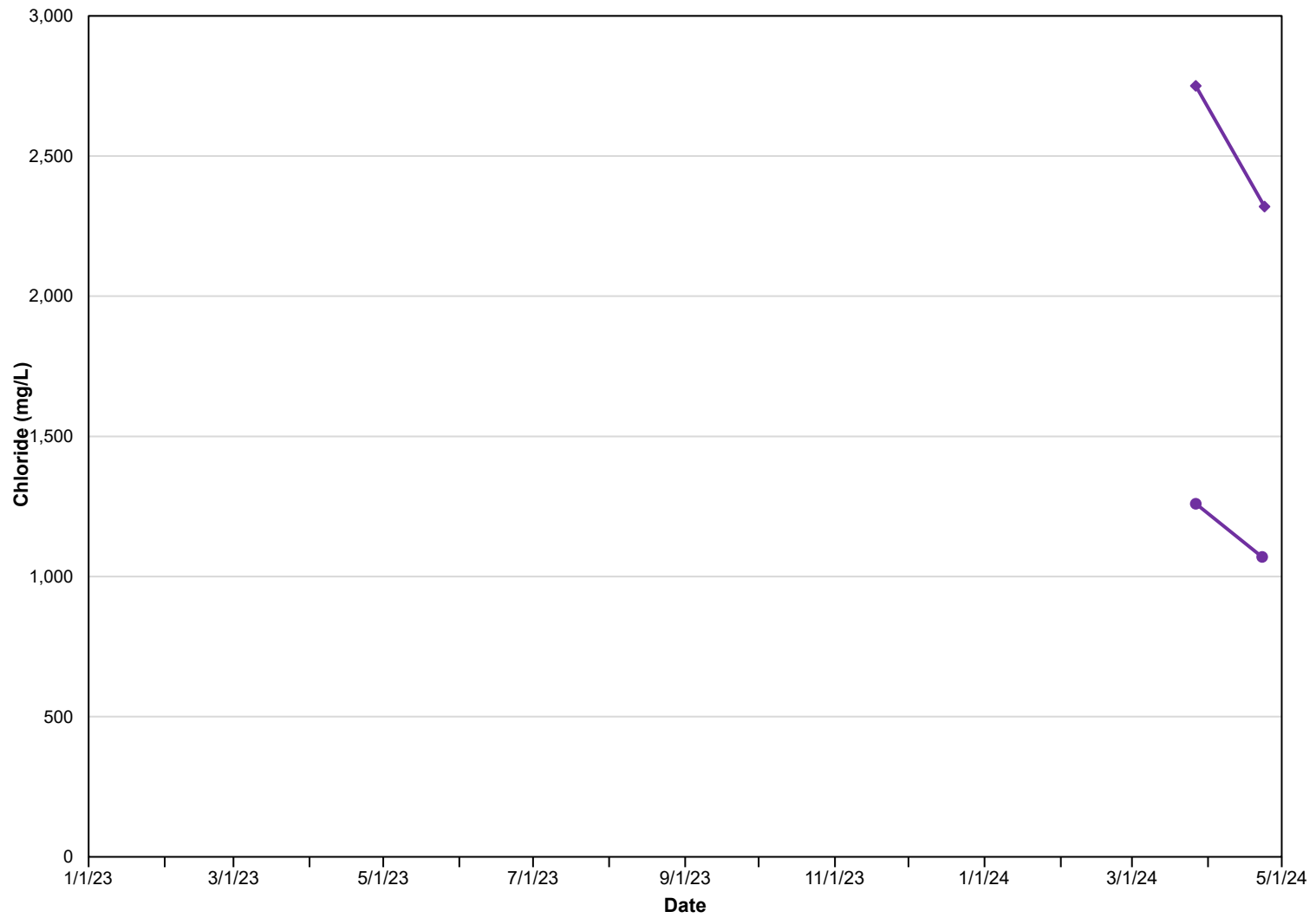


Legend

- 019-580
- 019-582
- 019-995
- 019-1055
- 019-1603
- 019-17636Z (Cottages)
- ▲— MW-1-200
- MW-1-500
- ◆— MW-1-700
- ▲— MW-2-200
- MW-2-500
- ◆— MW-2-700
- ▲— MW-3-200

Figure 3
Groundwater Chloride Trend
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana



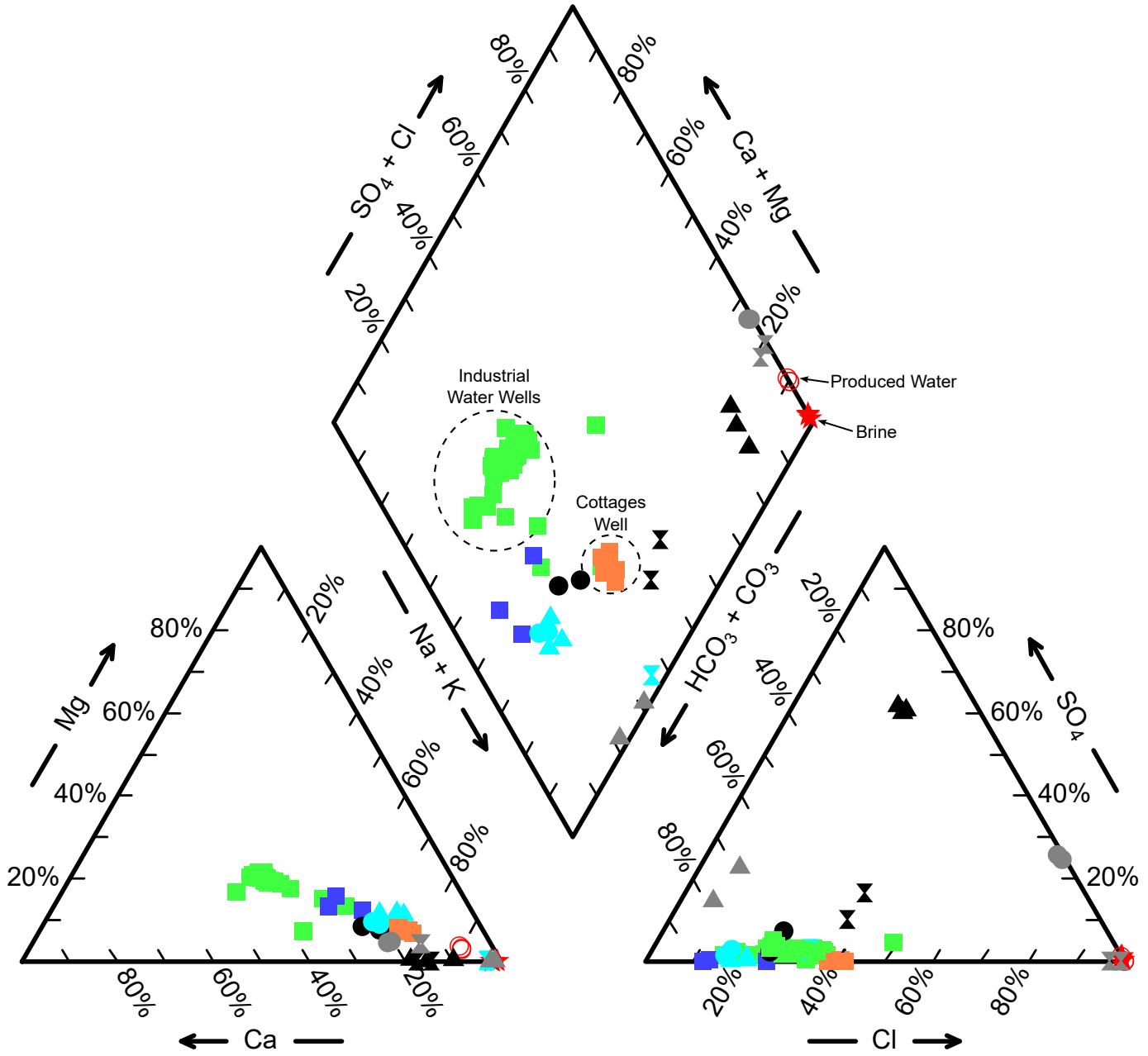


Legend

- MW-1-500
- ◆ MW-1-700

Figure 4
Groundwater Chloride Trend
MW-3-500 & MW-3-700
Sulphur Dome
Westlake US 2, LLC
Calcasieu Parish, Louisiana



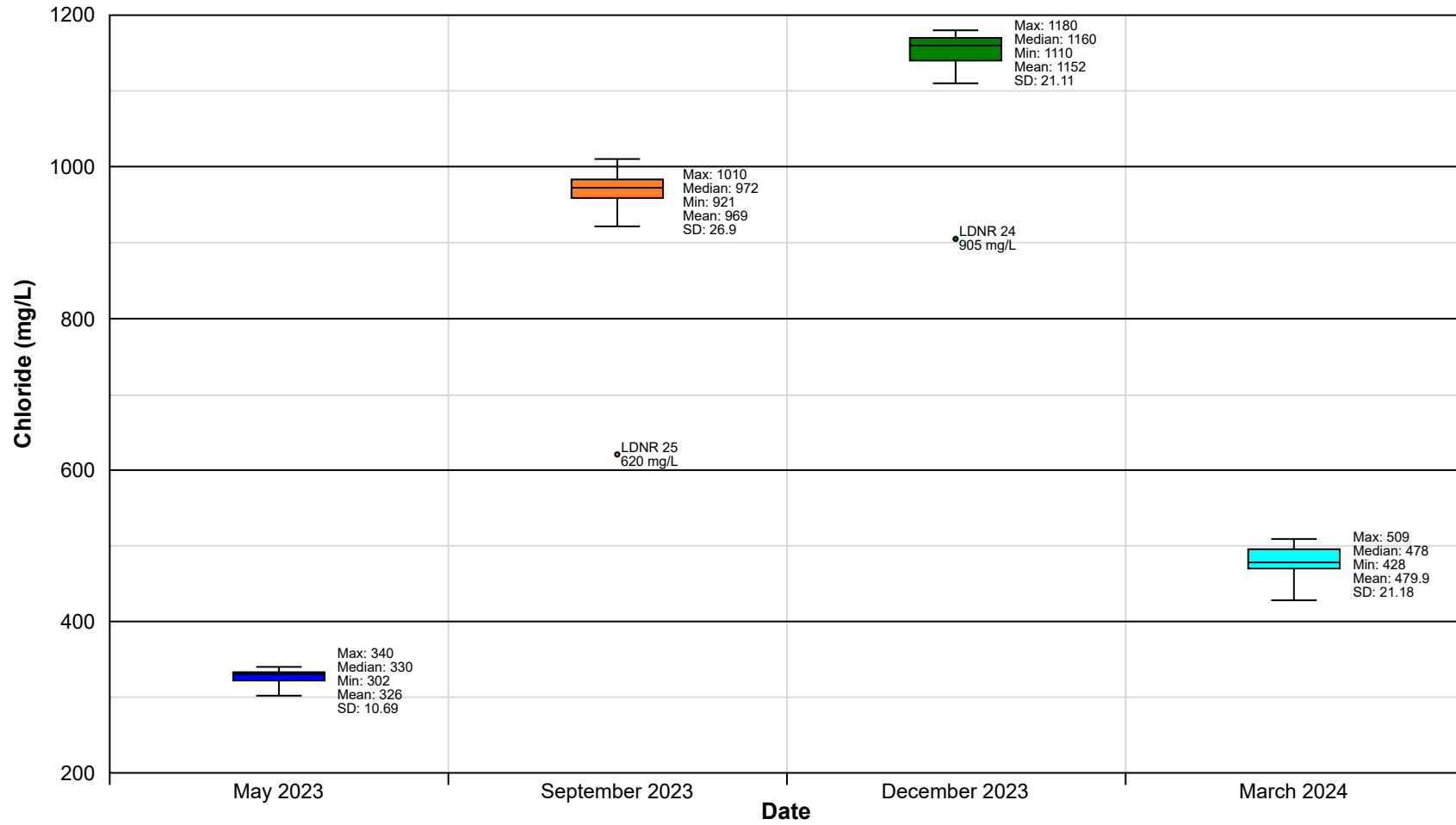


Legend

- Industrial Water Well
- Residential Water Well
- Cottages Well
- Produced Water
- ★ Brine
- ▲ MW-1-200
- MW-1-500
- ◆ MW-1-700
- ▲ MW-2-200
- MW-2-500
- ✕ MW-2-700
- ▲ MW-3-200
- MW-3-500
- ✕ MW-3-700

Figure 5
Groundwater Piper Diagram
 Sulphur Dome
 Westlake US 2, LLC
 Calcacieu Parish, Louisiana





Legend

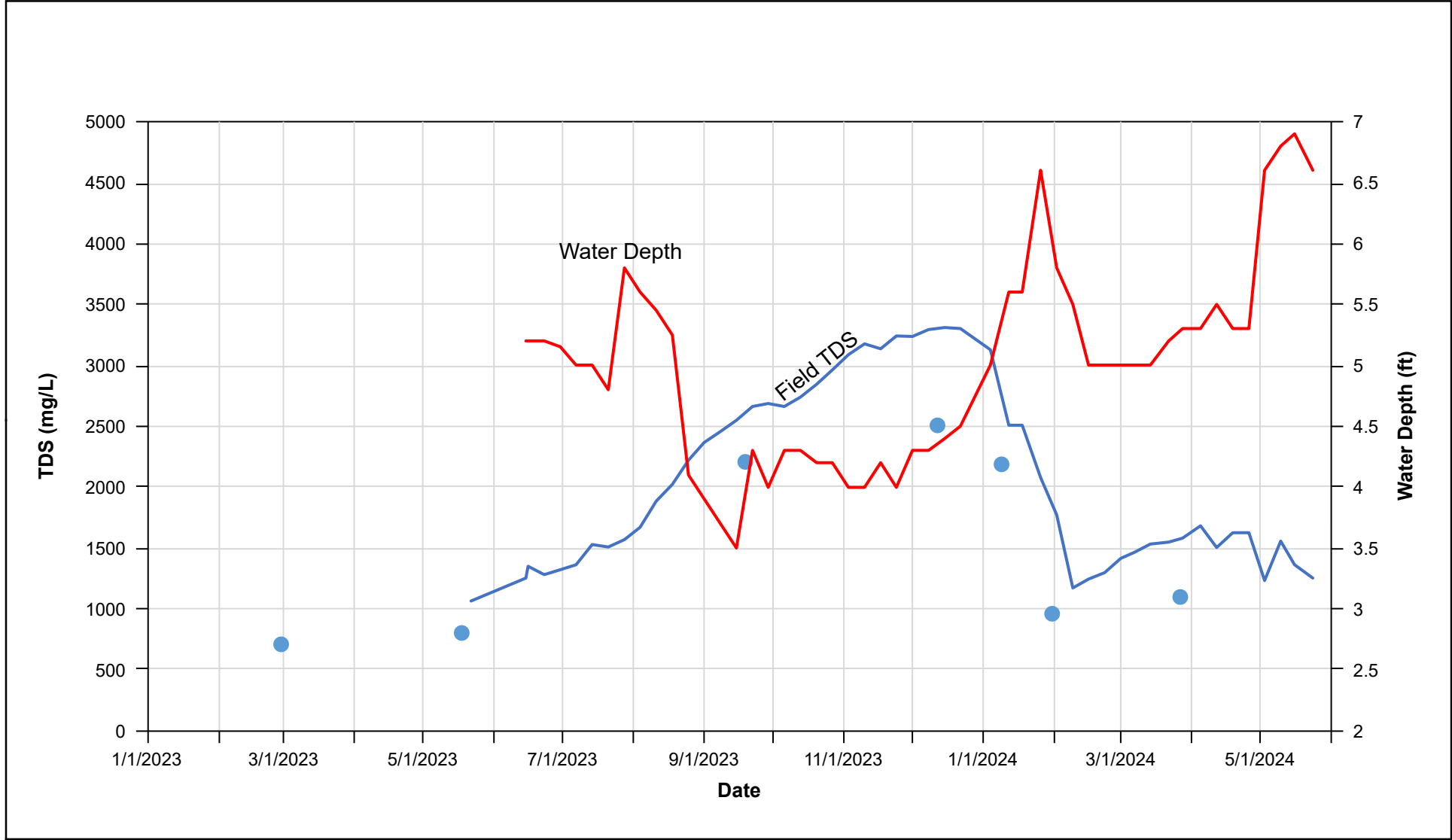
- Outlier data

Notes:

Outlier test performed via ProUCL.
 Box plots and statistics listed do not include outliers.

Figure 6
Central Lake Chloride Statistics
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





Legend

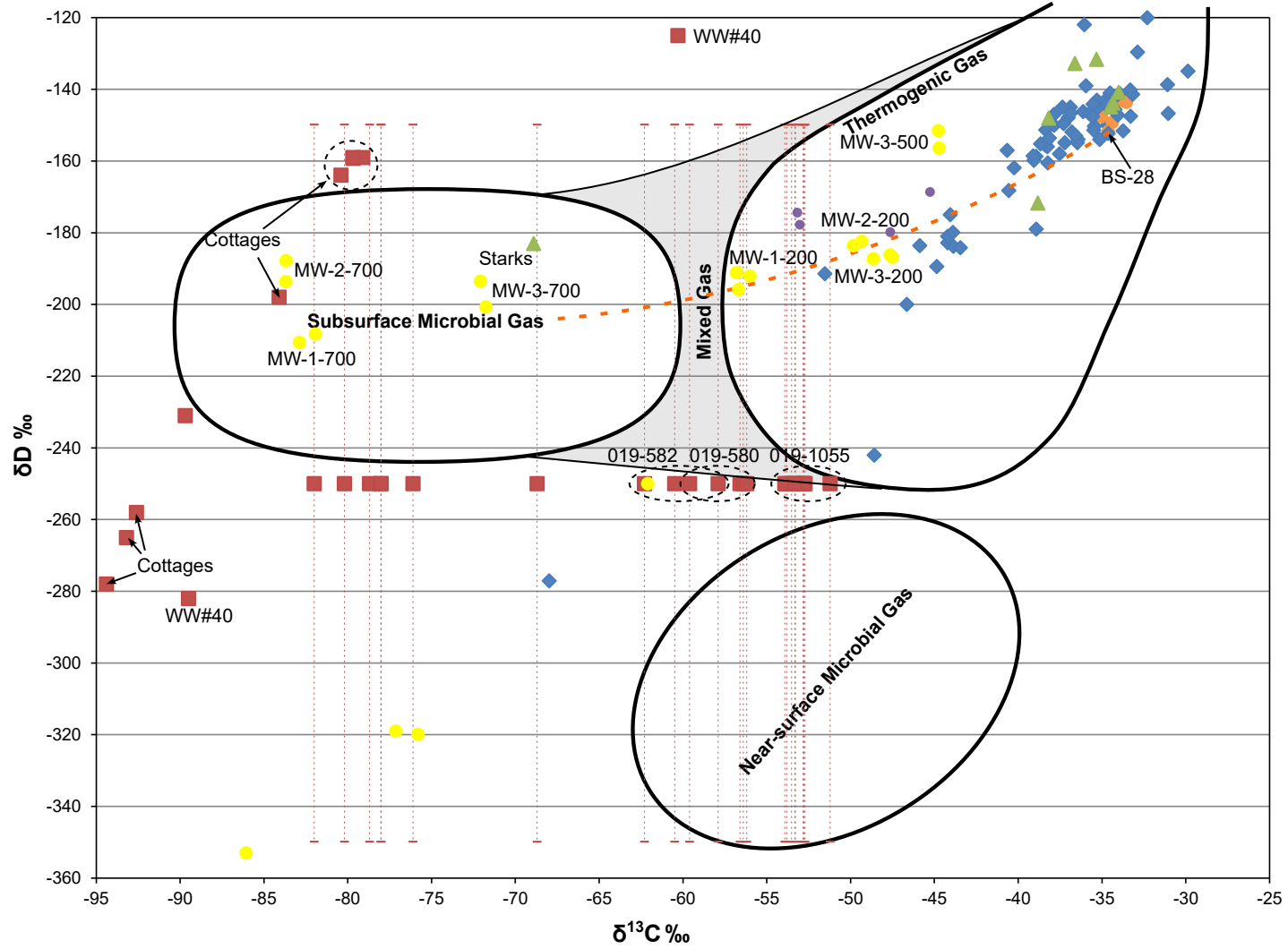
- Field TDS (mg/L)
- Water Depth (ft)
- Laboratory TDS at LDNR 12 (mg/L)

Notes:

Field TDS measured from approximately 5-ft deep with handheld Ultrameter II, which is calculated based on Specific Conductivity.

Figure 7
Central Lake TDS Trend
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





Legend

- Cavern Gas (Lonquist)
- ◆ Bubble Site
- Groundwater
- Monitoring Well
- ▲ Brine
- Production Gas
- - - Potential Mixing Line

Notes:




If δD is not analyzed due to insufficient methane in sample δD is assumed at -250‰ with error bars added.
 Coleman, D.D., Liu, C., Hackley, K.C., and Pelphrey, S.R., 1995, Identification of Landfill Methane, Environmental Geosciences, Vol. 2, No. 2, pp. 95-103.

Figure 8
Methane Isotopes
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





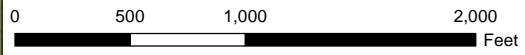
Legend

-  "200-foot" Sand Monitoring Well
-  Potentiometric Surface Contour (5 ft)
-  General Direction of Groundwater Flow

Notes:
 Groundwater elevations adjusted to equivalent
 freshwater head (Post, et al., 2007)
 2023 Aerial imagery via USDA (NAIP).

Figure 9
Potentiometric Surface Map - March 2024
"200-foot" Sand
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





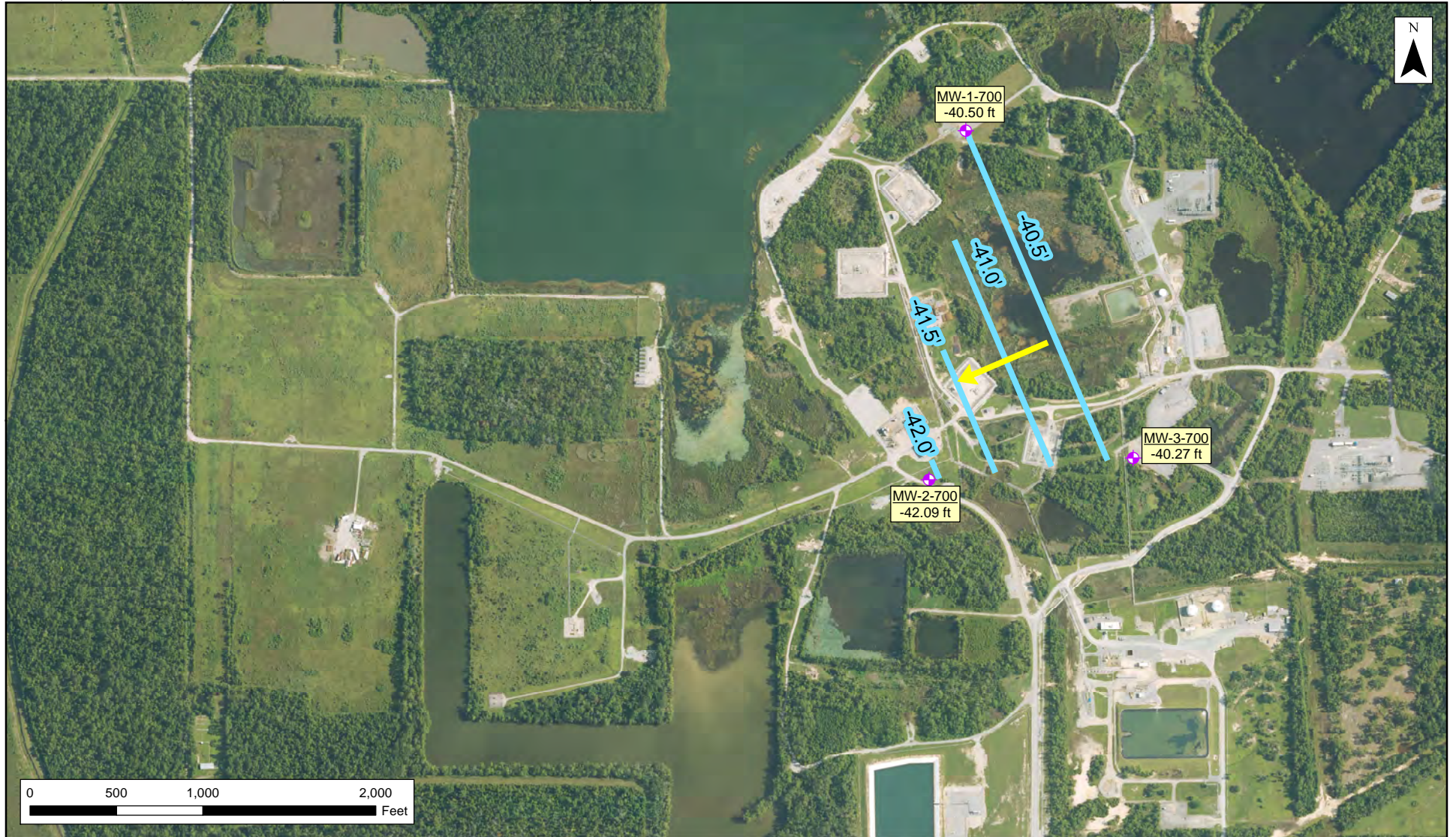
Legend

- "500-foot" Sand Monitoring Well
- Potentiometric Surface Contour (0.5 ft)
- General Direction of Groundwater Flow




Notes:
 Groundwater elevations adjusted to equivalent
 freshwater head (Post, et al., 2007)
 2023 Aerial imagery via USDA (NAIP).

Figure 10
Potentiometric Surface Map - March 2024
"500-foot" Sand
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





Legend

-  "700-foot" Sand Monitoring Well
-  Potentiometric Surface Contour (0.5 ft)
-  General Direction of Groundwater Flow




Notes:
 Groundwater elevations adjusted to equivalent
 freshwater head (Post, et al., 2007)
 2023 Aerial imagery via USDA (NAIP).

Figure 11
Potentiometric Surface Map - March 2024
"700-foot" Sand
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





Legend

-  "200-foot" Sand Monitoring Well
-  Potentiometric Surface Contour (5 ft)
-  General Direction of Groundwater Flow




Notes:
 Groundwater elevations adjusted to equivalent
 freshwater head (Post, et al., 2007)
 2023 Aerial imagery via USDA (NAIP).

Figure 12
Potentiometric Surface Map - April 2024
"200-foot" Sand
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





Legend

-  "500-foot" Sand Monitoring Well
-  Potentiometric Surface Contour (0.5 ft)
-  General Direction of Groundwater Flow




Notes:
 Groundwater elevations adjusted to equivalent
 freshwater head (Post, et al., 2007)
 2023 Aerial imagery via USDA (NAIP).

Figure 13
Potentiometric Surface Map - April 2024
"500-foot" Sand
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





Legend

-  "700-foot" Sand Monitoring Well
-  Potentiometric Surface Contour (0.5 ft)
-  General Direction of Groundwater Flow

Notes:
 Groundwater elevations adjusted to equivalent
 freshwater head (Post, et al., 2007)
 2023 Aerial imagery via USDA (NAIP).

Figure 14
Potentiometric Surface Map - April 2024
"700-foot" Sand
 Sulphur Dome
 Westlake US 2, LLC
 Calcasieu Parish, Louisiana





TABLES

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample ID		019-580															
Sample Location		WW #11															
Sample Interval (ft)		469'															
Sample Date		1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	7/17/23	8/22/23	9/20/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24	
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM		
Constituent	Units	Industrial Water Wells															
Total Metals																	
Arsenic	mg/L	0.01															
Barium	mg/L	0.00477 J	<0.0004	0.000615 J	<0.0004	0.000452 J	0.000556 J	<0.0004	<0.0004	0.000688 J	<0.0004	<0.0004	0.000723 J	0.000481 J	0.000743 J	<0.0004	
		0.23	0.235	0.205	0.216	0.197	0.200	0.221	0.233	0.217	0.196	0.207	0.227	0.265	0.207	0.208	
Cadmium	mg/L	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	
Calcium	mg/L	NS	26.8	25.4	15.8	24.1	22.7	18.9	25.1	27.9	24.5	21.9	24.0	21.9	27.7	22.9	22.5
Chromium	mg/L	0.1	<0.0004	<0.0004	0.000559 J	<0.0004	0.000462 J	<0.0004	0.00172 J	<0.0004	<0.0004	<0.0004	0.000681 J	0.000559 J	<0.0004	0.000654 J	0.000926 J
Iron ^(a)	mg/L	0.3	5.12	4.25	2.72	1.81	3.61	6.07	4.97	3.57	3.84	3.53	3.66	3.51	1.45	3.51	3.57
Lead	mg/L	0.015	0.00144 J	<0.0006	<0.0006	<0.0006	<0.0006	0.00388	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000870 J
Magnesium	mg/L	NS	8.03	8.10	4.32	7.19	7.43	5.88	7.71	8.54	7.66	7.31	7.35	7.00	8.70	7.24	6.97
Manganese ^(a)	mg/L	0.05	0.412	0.413	0.215	0.317	0.355	0.329	0.411	0.471	0.397	0.360	0.373	0.353	0.352	0.366	0.370
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000520 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000330 J	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	0.00368	<0.0006	<0.0006	<0.0006	0.000793 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000724 J	<0.0006	<0.0006
Potassium	mg/L	NS	2.93	2.68	2.42	2.62	2.51	1.99	2.64	3.06	2.84	2.42	2.63	2.91	2.5	2.44	2.44
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA
Sodium	mg/L	NS	31.9	27.7	71.5	27.4	24.6	19.7	30.2	30.1	28.2	24.3	24.8	23.4	32.5	24.4	23.9
Strontium	mg/L	NS	0.246	0.228	0.163	0.212	0.214	0.175	0.215	0.247	0.220	0.191	0.195	0.203	0.255	0.203	0.196
Vanadium	mg/L	0.026	NA	NA	0.00434 J	<0.0006	0.00322 J	<0.0006	<0.0006	<0.0006	0.0151	0.00157 J	<0.0006	0.00216 J	0.00273 J	0.00523	<0.0006
Zinc	mg/L	1.1	0.0147	0.0495	0.350	0.011	0.0130	0.00934	0.00613	0.0215	0.0103	0.0094	0.0065	0.0109	0.0138	0.0211	0.0106
Anions/Water Quality Parameters																	
Bicarbonate Alkalinity	mg/L	NS	200	115	116	114	107	118	120	123	114	112	113	111	120	113	112
Bromide	mg/L	NS	0.0992 J	<0.03	<0.03	<0.03	<0.03	<0.03	0.0634 J	<0.03	<0.03	<0.03	<0.03	<0.03	0.0647 J	<0.03	<0.03
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3
Chloride ^(a)	mg/L	250	35.7	26.4	40.7	38.7	23.7	23.7	37.1	38.1	24.8	23.9	23.8	23.1	37.5	22.5	22.2
Sulfate ^(a)	mg/L	250	2.91	3.67	2.21	3.3	4.28	4.07	2.95	2.58	5.13	4.33	4.65	4.10	4.64	4.46	4.39
Total Dissolved Solids (TDS) ^(a)	mg/L	500	236	186	210	266	204	222	204	232	168	210	138	238	244	196	182
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
pH ^(a)	SI	6.5 - 8.5	NA	7.04 H	NA	7.30 H	7.22 H	7.85 H	7.63 H	7.25 H	7.12 H	7.16 H	7.48 H	7.78 H	7.33 H	7.53 H	7.45 H
pH (field)	SI	6.5 - 8.5	6.41	NA	5.79	6.68	NA	6.40	6.90	NA	5.83	5.99	6.88	7.15	6.18	6.90	6.40
Sulfides																	
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Volatile Organic Compounds																	
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																	
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0243	<0.008	<0.008	0.0293	<0.025
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.0661	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0115	0.0214	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	0.0450	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025
Stable Isotopes																	
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
 J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time.
 < - Not Detected at the reporting limit shown.
Bolded values detected in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 1
Groundwater Data Summary
Sulphur Dome
Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	019-582 WW #13 609'															
			1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	7/17/23	8/22/23	9/20/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/24/24	
			ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	
Total Metals			Industrial Water Wells															
Arsenic	mg/L	0.01	0.000812 J	<0.0004	0.000451 J	0.000418 J	0.000635 J	0.000436 J	0.000488 J	<0.0004	0.000739 J	<0.0004	<0.0004	0.000697 J	0.000475	0.000870 J	<0.0004	
Barium	mg/L	2	0.239	0.221	0.243	0.232	0.210	0.217	0.224	0.197	0.218	0.188	0.206	0.215	0.214	0.221	0.189	
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	
Calcium	mg/L	NS	25.5	23.9	25.8	24.6	22.9	21.1	24.2	22.6	22.9	22.3	23.5	21.7	22.2	23.4	21.3	
Chromium	mg/L	0.1	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000697 J	0.000469 J	<0.0004	0.00105 J	0.000929 J	0.000631 J	<0.0004	0.000540 J	<0.0004	
Iron ^(a)	mg/L	0.3	4.03	4.02	6.09	6.13	3.28	3.12	3.49	4.49	3.23	2.55	4.70	3.04	4.04	2.01	3.24	2.37
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	7.81	7.66	7.58	7.36	7.36	6.45	7.47	7.05	7.05	7.47	7.08	6.91	6.78	7.25	6.67	
Manganese ^(a)	mg/L	0.05	0.417	0.388	0.388	0.408	0.361	0.349	0.372	0.353	0.379	0.423	0.388	0.362	0.310	0.385	0.343	
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.000640 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	
Nickel	mg/L	0.073	NA	NA	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000831 J	0.000872 J	0.000704 J	<0.0006	<0.0006	<0.0006	
Potassium	mg/L	NS	2.94	2.50	2.70	2.55	2.49	2.28	2.74	3.30	2.64	2.60	2.54	2.40	2.31	2.51	2.30	
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	
Sodium	mg/L	NS	28.0	26.4	30.2	27.8	24.7	22.2	29.8	46.5	26.2	24.8	24.4	23.4	25.7	25.0	22.8	
Strontium	mg/L	NS	0.240	0.208	0.231	0.218	0.221	0.195	0.215	0.201	0.216	0.195	0.192	0.197	0.209	0.217	0.167	
Vanadium	mg/L	0.026	NA	NA	0.00352 J	<0.0006	0.00358 J	<0.0006	<0.0006	<0.0006	0.0148	0.00222 J	<0.0006	0.00200 J	0.00167 J	0.00475 J	<0.0006	
Zinc	mg/L	1.1	0.0107	0.0166	0.0474	0.019	0.00897	0.0102	0.656	0.00742	0.0115	0.00754	0.00922	0.00897	0.00841	0.0118	0.00814	
Anions/Water Quality Parameters																		
Bicarbonate Alkalinity	mg/L	NS	180	115	119	120	109	119	116	132	114	112	113	113	120	109	110	
Bromide	mg/L	NS	0.0860 J	<0.03	<0.03	0.168	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.0680 J	<0.03	<0.03	
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3	<3	
Chloride ^(a)	mg/L	250	23.4	26.3	40.4	38.1	23.2	23.6	27.7	31.0	23.6	23.8	23.1	34.2	22.9	28.4	17.0	
Sulfate ^(a)	mg/L	250	4.11	3.68	2.69	2.9	4.30	4.41	3.44	2.73	4.61	4.18	4.42	3.93	3.72	4.55	4.17	
Total Dissolved Solids (TDS) ^(a)	mg/L	500	212	200	236	248	190	234	226	256	214	184	158	228	244	330	180	
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
pH ^(a)	SI	6.5 - 8.5	NA	7.01 H	NA	7.37 H	7.36 H	7.75 H	7.23 H	7.42 H	7.21 H	7.24 H	7.57 H	7.54 H	7.13 H	7.47 H	7.45 H	
pH (field)	SI	6.5 - 8.5	6.45	6.53	5.89	6.42	NA	6.38	6.80	NA	5.60	6.09	6.91	7.32	6.11	7.01	6.62	
Sulfides																		
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	
Volatile Organic Compounds																		
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
TPH Fractions																		
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01	
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0192	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0206	<0.008	<0.008	0.0205	0.0204	<0.008	0.0365	<0.025	
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01	
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	
Stable Isotopes																		
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes
J - Estimated Value reported below the detection limit.
H - pH is received at the lab outside of hold time.
<- Not Detected at the reporting limit shown.
Bolded values detected in the sample.
NA - Not Analyzed
NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
Shaded values exceed standard

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	019-995												
			WW #12												
			1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	8/22/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24
			Industrial Water Wells												
RECAP GWSS															
Total Metals															
Arsenic	mg/L	0.01	0.000762 J	<0.0004	0.000739 J	0.000497 J	<0.0004	0.000638 J	0.000623 J	0.000555 J	0.000461 J	0.000782 J	0.000756 J	0.000900 J	0.000715 J
Barium	mg/L	2	0.214	0.234	0.242	0.207	0.211	0.174	0.197	0.194	0.186	0.222	0.195	0.224	
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA
Calcium	mg/L	NS	26.4	25.3	27.7	24.3	23.0	24.3	21.1	22.8	24.1	20.4	25.2	23.4	25.9
Chromium	mg/L	0.1	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000600 J	<0.0004	<0.0004	0.000577 J	0.000513 J	<0.0004	0.00196 J	0.000420 J
Iron ^(a)	mg/L	0.3	0.821	4.76	3.42	2.11	4.88	3.53	1.23	3.42	1.38	1.26	1.04	0.907	2.88
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	8.02	7.87	8.14	7.47	7.51	7.66	6.40	7.46	7.40	6.41	7.96	7.23	8.01
Manganese ^(a)	mg/L	0.05	0.388	0.403	0.416	0.403	0.375	0.377	0.222	0.35	0.411	0.328	0.366	0.235	0.399
Mercury	mg/L	0.002	<0.00003	0.0000310 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000310 J	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	0.00531	<0.0006	0.000820 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000682 J	<0.0006
Potassium	mg/L	NS	3.00	2.60	2.79	2.61	2.53	2.65	2.20	2.36	2.61	2.22	2.67	2.51	2.69
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000242 J	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA
Sodium	mg/L	NS	29.9	30.3	32.2	30.5	25.0	27.2	31.6	24.1	25.4	22.3	29.3	26.2	26.3
Strontium	mg/L	NS	0.241	0.221	0.244	0.223	0.220	0.207	0.214	0.197	0.201	0.164	0.235	0.203	0.224
Vanadium	mg/L	0.026	NA	NA	0.00299 J	<0.0006	0.00370 J	<0.0006	0.0130	0.00228 J	<0.0006	0.00220 J	0.00308 J	0.00474 J	<0.0006
Zinc	mg/L	1.1	0.00426	<0.002	0.00276 J	<0.002	<0.002	0.00218 J	0.00245 J	0.00385 J	0.00244 J	0.00461	0.00932	0.00606	0.00583
Anions/Water Quality Parameters															
Bicarbonate Alkalinity	mg/L	NS	258	122	124	128	194	118	129	116	116	117	119	110	119
Bromide	mg/L	NS	0.0931 J	0.0782 J	<0.03	0.164	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.0655 J	<0.03	<0.03
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3
Chloride ^(a)	mg/L	250	28.7	36.3	37.5	34.1	23.4	22.2	23.0	24.8	23.6	23.0	27.6	23.0	23.2
Sulfate ^(a)	mg/L	250	3.63	2.80	2.12	2.53	3.57	4.11	1.98	4.38	4.04	3.63	2.50	4.25	4.26
Total Dissolved Solids (TDS) ^(a)	mg/L	500	226	240	202	222	194	228	180	182	138	224	220	164	192
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	3.84	NA	NA	NA	NA	NA	NA	NA
pH ^(a)	SI	6.5 - 8.5	NA	6.94 H	NA	7.55 H	7.30 H	7.32H	7.49 H	7.18 H	7.75 H	7.74 H	7.34 H	7.57 H	7.51 H
pH (field)	SI	6.5 - 8.5	6.35	6.53	5.64	6.18	NA	6.87	6.15	6.56	6.84	6.98	6.32	7.36	6.14
Sulfides															
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2	<1.2
Volatile Organic Compounds															
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions															
Aliphatics >C8-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0235	0.0746	<0.008	<0.008	0.0535 J
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025
Stable Isotopes															
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
 J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time.
 < - Not Detected at the reporting limit shown.
Bolded values detected in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	019-1055 WW #19 520'														
			1/26/23 ERM	3/30/23 ERM	4/27/23 ERM	5/18/23 ERM	6/16/23 ERM	7/17/23 ERM	8/22/23 ERM	9/20/23 ERM	10/25/23 ERM	11/28/23 ERM	12/14/23 ERM	1/31/24 ERM	2/20/24 ERM	4/23/24 ERM	
Total Metals			Industrial Water Wells														
RECAP GWSS																	
Arsenic	mg/L	0.01	0.000419 J	<0.0004	0.000461 J	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000668 J	0.000616 J	0.000661 J	0.000731 J	<0.0004	0.000483 J
Barium	mg/L	2	0.265	0.263	0.242	0.256	0.207	0.262	0.229	0.275	0.259	0.241	0.258	0.269	0.314	0.236	
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA
Calcium	mg/L	NS	28.7	27.5	24.7	25.9	22.6	24.7	24.2	30.1	26.8	22.3	25.7	25.7	29.4	26.2	
Chromium	mg/L	0.1	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000535 J	<0.0004	<0.0004	0.00113 J	0.00105 J	0.000638 J	<0.0004	0.000408 J	
Iron ^(a)	mg/L	0.3	3.81	3.96	3.48	3.42	4.24	3.72	3.29	3.83	3.68	7.61	3.63	3.58	4.11	2.81	
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	
Magnesium	mg/L	NS	8.66	8.42	7.32	7.46	7.32	7.45	7.46	9.04	8.31	7.24	8.06	7.98	9.12	8.06	
Manganese ^(a)	mg/L	0.05	0.420	0.400	0.353	0.379	0.359	0.369	0.344	0.432	0.392	0.339	0.388	0.363	0.432	0.390	
Mercury	mg/L	0.002	<0.00003	0.0000300 J	<0.00003	<0.00003	<0.00003	0.0000570 J	<0.00003	<0.00003	<0.00003	0.0000480 J	0.0000690 J	<0.00003	0.0000320 J	<0.00003	
Nickel	mg/L	0.073	<0.0006	NA	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00146 J	<0.0006	<0.0006	<0.0006	0.000639 J	
Potassium	mg/L	NS	3.10	2.69	2.54	2.74	2.48	2.59	2.54	3.29	2.95	2.31	2.75	2.63	3.06	2.79	
Selenium	mg/L	0.05	0.00114 J	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	
Sodium	mg/L	NS	34.4	32.0	28.5	24.8	29.0	28.3	35.1	35.6	23.9	19.9	30.7	35.0	31.8	0.238	
Strontium	mg/L	NS	0.262	0.238	0.225	0.24	0.215	0.229	0.215	0.266	0.249	0.196	0.23	0.233	0.288	0.238	
Vanadium	mg/L	0.026	NA	NA	0.00320 J	<0.0006	0.00311 J	<0.0006	<0.000698 J	<0.0006	0.0136	0.00209 J	0.00629	0.00246 J	0.000831 J	<0.0006	
Zinc	mg/L	1.1	0.00993	0.0107	0.0163	0.00906	0.00514	0.0231	0.0260	0.0241	0.0318	0.0275	0.00595	0.00892	0.00589	0.0120	
Anions/Water Quality Parameters																	
Bicarbonate Alkalinity	mg/L	NS	250	123	119	118	108	135	119	121	120	113	118	120	122	119	
Bromide	mg/L	NS	0.0982 J	<0.03	<0.03	0.167	<0.03	<0.03	<0.03	<0.03	<0.03	0.0700 J	<0.03	0.0592 J	0.0745 J	<0.03	
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3	<3	
Chloride ^(a)	mg/L	250	38.3	36.8	40.6	37.6	23.6	37.4	36.4	37.8	39.6	24.8	38.3	38.9	38.9	33.2	
Sulfate ^(a)	mg/L	250	3.51	3.39	3.55	3.85	4.21	3.77	3.64	3.45	4.00	4.02	4.44	3.58	3.72	3.97	
Total Dissolved Solids (TDS) ^(a)	mg/L	500	244	230	220	274	176	272	238	244	180	180	236	266	246	208	
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	1.11	NA	NA	NA	NA	NA	NA	NA	
pH ^(a)	SI	6.5 - 8.5	NA	7.16 H	NA	7.14 H	7.38 H	7.70 H	7.21 H	7.23 H	7.22 H	7.16 H	7.52 H	7.47 H	7.12 H	7.54 H	
pH (field)	SI	6.5 - 8.5	6.82	6.53	5.84	6.46	NA	6.25	7.03	NA	5.73	5.85	6.89	6.83	6.32	5.97	
Sulfides																	
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Sulfide	mg/L	NS	<1	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	
Volatile Organic Compounds																	
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
TPH Fractions																	
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025	
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.025	
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025	
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025	
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025	
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025	
Stable Isotopes																	
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes
 J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time.
 < - Not Detected at the reporting limit shown.
Bolded values detected in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	019-1603						
			WW #40						
			520'						
			3/30/23	5/18/23	6/16/23	9/19/23	12/14/23	1/31/24	3/28/24
ERM	ERM	ERM	ERM	ERM	ERM	ERM			
			Industrial Water Wells						
Total Metals		RECAP GWSS							
Arsenic	mg/L	0.01	0.000974 J	0.0044	0.000466 J	<0.0004	0.00215	0.000561 J	0.00194 J
Barium	mg/L	2	0.258	0.178	0.136	0.173	0.389	0.193	0.391
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002002	<0.0002	<0.0002	NA	NA
Calcium	mg/L	NS	26.9	56	22.4	19.7	26.5	20.4	27.2
Chromium	mg/L	0.1	<0.0004	0.000825 J	0.000415 J	0.000721 J	0.00123 J	0.000496 J	0.00134 J
Iron ^(a)	mg/L	0.3	12.4	0.69	4.39	3.45	68.1	1.69	44.8
Lead	mg/L	0.015	<0.0006	0.000702 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	8.33	6.58	7.37	6.34	7.76	6.48	8.35
Manganese ^(a)	mg/L	0.05	0.506	0.348	0.491	0.297	0.728	0.330	0.492
Mercury	mg/L	0.002	<0.00003	0.0000720 J	0.0000400 J	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	0.00202	0.000750 J	0.000615 J	0.00133 J	<0.0006	0.0032
Potassium	mg/L	NS	2.81	2.61	2.43	3.62	2.65	2.35	2.60
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA
Sodium	mg/L	NS	32.1	92.9	24.0	52.1	25.7	23.2	26.8
Strontium	mg/L	NS	0.235	0.397	0.210	0.177	0.237	0.161	0.247
Vanadium	mg/L	0.026	NA	0.0136	0.00320 J	<0.0006	<0.0006	0.00202 J	0.00224 J
Zinc	mg/L	1.1	0.0845	0.0231	0.0200	1.47	0.0362	0.0343	0.0720
Anions/Water Quality Parameters									
Bicarbonate Alkalinity	mg/L	NS	125	183	113	144	114	112	118
Bromide	mg/L	NS	0.101	<0.03	0.143	<0.03	<0.03	<0.03	<0.0300
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<3.5	<3.5	<3.5
Chloride ^(a)	mg/L	250	36.6	115	23.0	27.0	24.4	23.3	23.3
Sulfate ^(a)	mg/L	250	0.426 J	14.5	3.00	2.87	3.16	3.78	6.82
Total Dissolved Solids (TDS) ^(a)	mg/L	500	206	446	192	224	120	226	202
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA
pH ^(a)	SI	6.5 - 8.5	7.23 H	8.02 H	7.45 H	7.38 H	7.66 H	7.93 H	7.59 H
pH (field)	SI	6.5 - 8.5	6.68	6.65	NA	6.81	6.99	7.61	7.30
Sulfides									
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2
Volatile Organic Compounds									
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions									
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	0.0191	<0.008	<0.008
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Stable Isotopes									
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA

Notes
 J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time.
 < - Not Detected at the reporting limit shown.
Bolded values detected in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	019-17636Z Cottages Well 740'													
			3/9/23	4/27/23	5/18/23	6/16/23	7/17/23	8/22/23	9/20/23	10/25/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24
			ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
			Industrial Water Wells													
Total Metals		RECAP GWSS														
Arsenic	mg/L	0.01	<0.0004	0.000464 J	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000502 J	<0.0004	<0.0004	<0.0004
Barium	mg/L	2	0.187	0.187	0.171	0.172	0.187	0.160	0.181	0.178	0.177	0.188	0.198	0.212	0.181	0.211
Cadmium	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA
Calcium	mg/L	NS	13.7	14.5	14.5	14.4	13.4	12.2	14.4	13.2	13.5	13.8	14.4	14.6	14	16.2
Chromium	mg/L	0.1	<0.0004	<0.0004	0.00103 J	0.000522 J	0.00744	0.000562 J	<0.0004	<0.0004	<0.0004	0.000404 J	0.00634	<0.0004	0.000849 J	<0.0004
Iron ^(a)	mg/L	0.3	5.57	2.48	4.76	6.04	2.34	1.46	2.35	3.22	3.49	3.32	3.46	2.97	5.99	9.13
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	NS	3.69	3.97	4.05	3.96	3.72	3.38	4.05	3.70	3.98	3.85	3.96	3.98	3.84	4.53
Manganese ^(a)	mg/L	0.05	0.193	0.192	0.224	0.211	0.190	0.156	0.183	0.178	0.185	0.182	0.192	0.194	0.220	0.259
Mercury	mg/L	0.002	<0.00003	<0.00003	0.000117 J	<0.00003	0.0000510 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	0.00330	0.00408	0.00304	0.00239	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00221	<0.0006	0.00135 J	0.00185 J
Potassium	mg/L	NS	2.03	2.24	2.31	2.20	2.12	2.03	2.38	2.18	2.11	2.18	2.19	2.22	2.15	2.54
Selenium	mg/L	0.05	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA
Silver	mg/L	0.18	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA
Sodium	mg/L	NS	57.7	65.2	71.2	66.2	71.2	72.1	77.9	73.5	75.2	72.5	77.8	79.5	67.3	76.8
Strontium	mg/L	NS	0.160	0.167	0.171	0.179	0.157	0.141	0.166	0.165	0.156	0.161	0.165	0.175	0.162	0.193
Vanadium	mg/L	0.026	NA	0.00270 J	0.0006	0.00295 J	<0.0006	0.000689 J	<0.0006	0.0139	0.00204 J	<0.0006	0.00312 J	0.00303 J	0.00562	<0.0006
Zinc	mg/L	1.1	0.255	0.320	0.202	0.203	0.798	0.0237	0.0981	0.166	0.170	0.151	1.65	0.123	0.202	0.276
Anions/Water Quality Parameters																
Bicarbonate Alkalinity	mg/L	NS	139	134	139	132	153	153	141	146	142	144	143	143	144	138
Bromide	mg/L	NS	0.102	0.105	0.19	0.179	0.156	0.118	0.106	0.122	0.126	0.152	0.215	0.108	0.0891 J	0.0807 J
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	<5	<5	<5	<5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3
Chloride ^(a)	mg/L	250	52.8	55.6	52.8	52.6	59.6	57.5	54.5	56.9	57.4	56.8	56.7	56.4	51.2	49.9
Sulfate ^(a)	mg/L	250	<0.2	0.286 J	0.574	0.608	0.277 J	0.462 J	0.300 J	0.491 J	0.297 J	0.322 J	0.317 J	0.304 J	0.306 J	0.212 J
Total Dissolved Solids (TDS) ^(a)	mg/L	500	274	250	284	244	308	270	236	270	236	268	200	304	268	234
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	1.38	NA	NA	NA	NA	NA	NA	NA	NA
pH ^(a)	SI	6.5 - 8.5	NA	NA	7.63 H	7.30 H	7.91 H	7.32 H	7.44 H	7.63 H	7.29 H	7.49 H	7.59 H	7.46 H	7.77 H	7.50 H
pH (field)	SI	6.5 - 8.5	7.67	5.73	7.06	NA	6.28	7.05	NA	6.05	6.63	6.94	6.47	6.53	7.06	6.14
Sulfides																
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.2	<1.2	<1.2
Volatile Organic Compounds																
Benzene	mg/L	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions																
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.017	<0.085	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.019	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.025
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0433 J
Aromatics >C8-C10	mg/L	0.15	0.0132	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.012	<0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.025
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.025
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.025
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.025
Stable Isotopes																
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
 J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time.
 < - Not Detected at the reporting limit shown.
Bolded values detected in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	MW-3								
			MW-3-200		MW-3-500		MW-3-700		019-13434Z	019-1261	019-13785Z
			228-238'	228-238'	464-474'	464-474'	680-690'	680-690'	180-190'	170-175'	240-260'
		3/27/24	4/23/24	3/27/24	4/23/24	3/27/24	4/24/24	12/28/23	12/28/23	1/31/24	
		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	
			Monitoring Wells						Residential Wells		
Total Metals											
Arsenic	mg/L	0.01	0.00364	0.00334	0.000750 J	<0.0004	0.000760 J	<0.0008	0.0165	0.00115 J	0.00342
Barium	mg/L	2	0.0225	0.0320	0.215	0.230	2.46	2.31	0.288	0.203	0.276
Cadmium	mg/L	0.005	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002
Calcium	mg/L	NS	2.02	2.99	170	165	207	181	21.1	26.7	25.8
Chromium	mg/L	0.1	0.00249 J	0.000974 J	0.00154 J	0.000775 J	0.00175 J	0.00387 J	0.00223 J	0.000654 J	0.000634 J
Iron ^(a)	mg/L	0.3	0.506	1.11	1.15	6.25	2.21	0.274 J	0.0804 J	0.0962 J	0.335
Lead	mg/L	0.015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.001	<0.0006	<0.0006	0.000918 J
Magnesium	mg/L	NS	0.227	0.0811 J	22.0	23.4	36.6	31.7	6.94	7.29	9.20
Manganese ^(a)	mg/L	0.05	0.00270 J	0.00657	0.0823	0.0586	0.613	0.112	0.132	0.0887	0.0868
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	0.00203	0.00117 J	0.000670 J	<0.0006	0.00164 J	0.00421	<0.0006	0.000964 J	<0.0006
Potassium	mg/L	NS	62.3	53.1	15.1	20.7	18.7	26.2	1.04	1.22	1.21
Selenium	mg/L	0.05	NA	NA	NA	NA	NA	NA	<0.0011	<0.0011	<0.0011
Silver	mg/L	0.18	NA	NA	NA	NA	NA	NA	<0.0002	<0.0002	<0.0002
Sodium	mg/L	NS	139	120	666	671	1,320	1,100	68.9	59.7	64.2
Strontium	mg/L	NS	0.0947	0.108	4.52	4.41	4.31	3.63	0.228	0.230	0.307
Vanadium	mg/L	0.026	0.01	0.00171 J	0.00421 J	<0.0006	0.00141 J	<0.0012	0.00178 J	0.00133 J	0.00146 J
Zinc	mg/L	1.1	0.00474	0.00294 J	0.00327 J	0.0160	0.0581	<0.004	0.0782	0.0595	0.0291
Anions/Water Quality Parameters											
Bicarbonate Alkalinity	mg/L	NS	<3.5	16.9	36.3	18.6	163	29.7	208	214	213
Bromide	mg/L	NS	<0.03	<0.03	<0.03	<0.03	3.41	1.36	<0.03	0.0980 J	0.101
Carbonate Alkalinity	mg/L	NS	221	250	<3.5	<3	<3.5	<3	<3.5	<3.5	<3.5
Chloride ^(a)	mg/L	250	31.4	27.1	1,260	1,070	2,750	2,320	19.1	17.3	42.2
Sulfate ^(a)	mg/L	250	116	76.4	603	480	2.81	3.63	0.468 J	<0.200	0.380 J
Total Dissolved Solids (TDS) ^(a)	mg/L	500	552	488	2,220	2,280	4,320	4,800	212	226	298
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH ^(a)	SI	6.5 - 8.5	11.1 H	10.4 H	7.75 H	7.83 H	7.89 H	7.62 H	7.76 H	7.67 H	8.08 H
pH (field)	SI	6.5 - 8.5	10.88	11.08	8.08	8.92	8.25	11.23	NA	NA	NA
Sulfides											
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	NS	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Volatile Organic Compounds											
Benzene	mg/L	0.005	<0.0002	<0.0002	0.0017	0.0016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	1	0.0062	<0.0002	0.010	0.0031	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions											
Aliphatics >C6-C8	mg/L	3.2	<0.01	<0.01	0.419	0.164	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0373	<0.01	<0.01
Aliphatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.001	<0.025	<0.001	<0.025	<0.001	<0.001	<0.001
Aliphatics >C12-C16	mg/L	0.15	<0.002	<0.025	<0.002	<0.025	<0.002	<0.025	<0.002	<0.002	<0.002
Aliphatics >C16-C35	mg/L	7.3	<0.008	<0.025	<0.008	<0.025	<0.008	0.275	<0.008	<0.008	<0.008
Aromatics >C8-C10	mg/L	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0286	<0.01	<0.01
Aromatics >C10-C12	mg/L	0.15	<0.001	<0.025	<0.001	<0.025	<0.001	<0.025	0.0181	<0.001	<0.001
Aromatics >C12-C16	mg/L	0.15	<0.004	<0.025	<0.004	<0.025	<0.004	<0.025	<0.004	<0.004	<0.004
Aromatics >C16-C21	mg/L	0.15	<0.003	<0.025	<0.003	<0.025	<0.003	<0.025	<0.003	<0.003	<0.003
Aromatics >C21-C35	mg/L	0.15	<0.009	<0.025	<0.009	<0.025	<0.009	<0.025	<0.004	<0.009	<0.009
Stable Isotopes											
δD	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ18O	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ13C (DIC)	‰	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes
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Bolded values detected in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 1
Groundwater Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Constituent	Units	Sample ID Sample Location Sample Interval (ft) Sample Date Sampler	6X Brine		007-B Brine		Starks Tie-In	SN 973224 Brine Well 18	SN 973365 Brine Well 21	SN 974245 Brine Well 22	Tank Battery Produced Water	189416	
			SN 67788	SN 67270	7B-Brine	SN 189416							
			Brine	3,000'	3,000'	1,300'						2,700'	
			1/25/23	2/16/23	7/27/23	8/28/23						8/28/23	
		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	
			Brine						Produced Water				
Total Metals			RECAP GWSS										
Arsenic	mg/L	0.01	0.0300 J	<0.04	<0.04	NA	NA	NA	NA	NA	<0.008	<0.008	<0.008
Barium	mg/L	2	0.220	<0.19	<0.19	NA	NA	NA	NA	NA	60.1	67.4	80.6
Cadmium	mg/L	0.005	<0.01	<0.02	<0.02	NA	NA	NA	NA	NA	<0.004	<0.004	<0.004
Calcium	mg/L	NS	722	1,320	1,360	NA	NA	NA	NA	NA	2,940	2,920	3,050
Chromium	mg/L	0.1	0.243	0.722	0.114 J	NA	NA	NA	NA	NA	0.0717 J	0.0593 J	0.0606 J
Iron ^(a)	mg/L	0.3	25.7	9.65 J	2.78 J	NA	NA	NA	NA	NA	1.94 J	31.1	32.4
Lead	mg/L	0.015	<0.03	<0.06	<0.06	NA	NA	NA	NA	NA	<0.012	0.0839	0.0342 J
Magnesium	mg/L	NS	8.16 J	8.64 J	9.30 J	NA	NA	NA	NA	NA	971	832	843
Manganese ^(a)	mg/L	0.05	0.953	0.487 J	0.361 J	NA	NA	NA	NA	NA	1.43	6.78	6.60
Mercury	mg/L	0.002	<0.00003	<0.00003	<0.00003	NA	NA	NA	NA	NA	<0.00003	<0.00003	<0.00003
Nickel	mg/L	0.073	NA	NA	0.211	NA	NA	NA	NA	NA	<0.012	0.124	0.125
Potassium	mg/L	NS	14.4	13.8 J	14.0 J	NA	NA	NA	NA	NA	185	182	190
Selenium	mg/L	0.05	<0.0550	<0.11	<0.11	NA	NA	NA	NA	NA	<0.022	<0.022	<0.022
Silver	mg/L	0.18	<0.01	<0.02	<0.02	NA	NA	NA	NA	NA	<0.004	<0.004	<0.004
Sodium	mg/L	NS	100,000	82,600	91,900	NA	NA	NA	NA	NA	44,000	45,400	47,900
Strontium	mg/L	NS	2.66	11.0	10.7	NA	NA	NA	NA	NA	134	149	162
Vanadium	mg/L	0.026	NA	NA	<0.06	NA	NA	NA	NA	NA	<0.012	<0.012	<0.012
Zinc	mg/L	1.1	0.481	1.70	1.55	NA	NA	NA	NA	NA	0.0695 J	7.10	1.54
Anions/Water Quality Parameters													
Bicarbonate Alkalinity	mg/L	NS	159	140	124	NA	NA	NA	NA	NA	204	95.9	94.0
Bromide	mg/L	NS	<3	<7.5	<15	NA	NA	NA	NA	NA	79.5	96.4	95.7
Carbonate Alkalinity	mg/L	NS	<5	<5	<5	NA	NA	NA	NA	NA	<5	<5	<5
Chloride ^(a)	mg/L	250	213,000	201,000	179,000	NA	NA	NA	NA	NA	79,900	70,500	72,600
Sulfate ^(a)	mg/L	250	1,380	3,060	3,270	NA	NA	NA	NA	NA	1,340	<10	<10
Total Dissolved Solids (TDS) ^(a)	mg/L	500	239,000	300,000	255,000	NA	NA	NA	NA	NA	161,000	159,000	149,000
Total Organic Carbon (TOC)	mg/L	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH ^(a)	SI	6.5 - 8.5	NA	NA	6.75 H	NA	NA	NA	NA	NA	6.97 H	8.10 H	8.06 H
pH (field)	SI	6.5 - 8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfides													
Hydrogen Sulfide	mg/L	NS	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	1.7	23.1	23.3
Sulfide	mg/L	NS	<1	<1	<1.7	NA	NA	NA	NA	NA	<1.7	<1.7	<1.7
Volatile Organic Compounds													
Benzene	mg/L	0.005	0.170	0.092	0.360	NA	NA	NA	NA	NA	<0.0002	<0.005	<0.005
Ethylbenzene	mg/L	0.7	0.0075 J	<0.0003	0.0059	NA	NA	NA	NA	NA	<0.0003	<0.0075	<0.0075
Toluene	mg/L	1	0.110	0.025	0.130	NA	NA	NA	NA	NA	<0.0002	<0.005	<0.005
m,p-Xylene	mg/L	10	0.013 J	<0.0005	0.0079	NA	NA	NA	NA	NA	<0.0005	<0.012	<0.012
o-Xylene	mg/L	10	0.0091 J	<0.0003	0.0079	NA	NA	NA	NA	NA	<0.0003	<0.0075	<0.0075
Xylenes, Total	mg/L	10	0.022	<0.0003	0.016	NA	NA	NA	NA	NA	<0.0003	<0.0075	<0.0075
TPH Fractions													
Aliphatics >C6-C8	mg/L	3.2	0.0997	0.0803	0.147	NA	NA	NA	NA	NA	0.144	1.08	<1
Aliphatics >C8-C10	mg/L	0.15	<0.01	0.107	<0.01	NA	NA	NA	NA	NA	0.0131	2.58	<1
Aliphatics >C10-C12	mg/L	0.15	<0.001	NA	<0.00192	NA	NA	NA	NA	NA	0.969	5.78	3.05
Aliphatics >C12-C16	mg/L	0.15	<0.002	NA	0.0288	NA	NA	NA	NA	NA	3.77	37.4	20.2
Aliphatics >C16-C35	mg/L	7.3	<0.008	NA	0.774	NA	NA	NA	NA	NA	4.44	118	65.3
Aromatics >C8-C10	mg/L	0.15	0.0284	0.422	0.0373	NA	NA	NA	NA	NA	0.0557	1.23	<1
Aromatics >C10-C12	mg/L	0.15	<0.001	NA	0.00293	NA	NA	NA	NA	NA	0.211	1.62	0.714
Aromatics >C12-C16	mg/L	0.15	<0.004	NA	0.0109	NA	NA	NA	NA	NA	1.29	12.8	5.52
Aromatics >C16-C21	mg/L	0.15	<0.003	NA	0.0281	NA	NA	NA	NA	NA	1.09	19.5	9.75
Aromatics >C21-C35	mg/L	0.15	<0.009	NA	0.161	NA	NA	NA	NA	NA	1.05	38.2	20.3
Stable Isotopes													
δD	‰	NS	NA	NA	NA	-19.9	-17.7	-17.5	-16.9	NA	NA	-11.8	-12.8
δ18O	‰	NS	NA	NA	NA	-4.18	-3.95	-4.03	-4.00	NA	NA	1.06	1.04
δ13C (DIC)	‰	NS	NA	NA	NA	-13.2	-14.0	-14.1	-13.9	NA	NA	NA	NA

Notes
 J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time.
 < - Not Detected at the reporting limit shown.
Bolded values deleted in the sample.
 NA - Not Analyzed
 NS - No Standard
^(a) - EPA Secondary MCL (No RECAP standard)
 Shaded values exceed standard

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Units	LDNR 1				LDNR 3					LDNR 4			
	1/25/23	5/18/23	12/11/23	3/26/24	1/30/23	5/22/23	9/18/23	12/11/23	3/26/24	1/30/23	5/22/23	12/11/23	3/26/24
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Bubble Site (Surface Water)													
Total Metals													
Arsenic mg/L	0.00149 J	0.00594	0.00135 J	0.00261	0.000862 J	0.00113 J	0.00442	0.00142 J	0.000986 J	0.000868 J	0.00110 J	0.00211	0.00125 J
Barium mg/L	0.300	0.317	0.122	0.172	0.160	0.156	0.453	0.344	0.127	0.367	0.276	0.201	0.139
Cadmium mg/L	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA
Calcium mg/L	71.2	83.5	98.2	183	75.3	65.9	88.2	174	108	64.2	69.6	175	111
Chromium mg/L	0.000847 J	0.00159 J	0.000590 J	<0.0004	<0.0004	0.00201 J	0.000602 J	0.000578 J	<0.0004	<0.0004	<0.0004	0.00159 J	<0.0004
Iron mg/L	1.14	3.04	0.879	2.30	0.132 J	0.118 J	0.254	1.06	0.628	0.0258 J	0.0647 J	8.23	0.904
Lead mg/L	0.00208	0.00466	<0.0006	0.000678 J	<0.0006	<0.0006	0.000710 J	<0.0006	<0.0006	<0.0006	<0.0006	0.00103 J	<0.0006
Magnesium mg/L	19.8	16.1	25.9	48.7	15.0	12.0	25.4	41.8	21.2	12.6	13.6	42.6	22.1
Manganese mg/L	0.797	1.75	1.34	2.76	0.266	0.389	0.859	0.977	0.195	0.458	0.747	3.15	0.477
Mercury mg/L	<0.00003	0.0000990 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel mg/L	NA	0.00641	0.00473	0.00733	NA	0.00114 J	0.00212	0.00838	0.00120 J	NA	0.00385	0.00519	0.00132 J
Potassium mg/L	2.57	2.83	2.81	3.79	2.90	2.17	4.09	5.28	2.61	2.58	2.34	5.52	2.77
Selenium mg/L	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	NA
Silver mg/L	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA
Sodium mg/L	156	123	161	288	174	155	534	630	288	166	176	581	288
Strontium mg/L	0.619	0.598	0.622	1.22	0.556	0.479	0.894	1.32	0.709	0.482	0.532	1.21	0.72
Vanadium mg/L	NA	0.00639	0.00189 J	0.00222 J	NA	0.00324 J	0.0115	0.00626	0.00275 J	NA	0.00181 J	0.00569	0.00316 J
Zinc mg/L	0.00857	0.0179	0.0135	0.0386	0.00452	0.0448	0.0243	0.0395	0.00319 J	0.00213 J	0.00289 J	0.0186	0.015
Anions/Water Quality Parameters													
Bicarbonate Alkalinity mg/L	269	178	84.9	249	241	149	206	114	110	238	164	105	113
Bromide mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity mg/L	<5	<5	<3.5	<3.5	<5	<5	<5	<3.5	<3.5	<5	<5	<3.5	<3.5
Chloride mg/L	317	213	346	592	308	322	928	1,110	472	296	340	1,140	462
Sulfate mg/L	45.2	70.3	179	327	113	89.6	74.9	473	324	111	83.5	531	311
Total Dissolved Solids (TDS) mg/L	676	760	716	1,680	80.0	880	1,990	2,500	1,200	512	864	2,940	1,230
pH	NA	7.20 H	7.18 H	7.41 H	NA	7.75 H	6.97 H	7.41 H	7.50 H	NA	7.66 H	6.93 H	7.45 H
Sulfides													
Hydrogen Sulfide mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide mg/L	<1	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.2
Volatile Organic Compounds													
Benzene mg/L	0.00120	<0.0002	0.00066 J	<0.0002	<0.0002	<0.0002	0.00046 J	<0.0002	<0.0002	<0.0002	<0.0002	0.0011	<0.0002
Ethylbenzene mg/L	<0.0003	0.00058 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene mg/L	0.00079 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	0.00087 J	<0.0002
m,p-Xylene mg/L	<0.0005	<0.0005	0.00066 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total mg/L	<0.0003	<0.0003	0.00066 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions													
Aliphatics >C6-C8 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.134	<0.01	<0.01	<0.01	<0.01	0.0645	<0.01
Aliphatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12 mg/L	<0.001	0.0202	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16 mg/L	0.0746	0.234	<0.001	0.0354	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35 mg/L	0.249	0.876	0.0367	0.117	<0.008	<0.008	0.0546	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Aromatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12 mg/L	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16 mg/L	0.0417	0.0179	0.0146	0.0153	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21 mg/L	0.121	0.0535	0.0259	0.0281	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35 mg/L	<0.009	0.0511	0.0197	0.0470	<0.009	<0.009	0.0290	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009

Notes

J - Estimated Value reported below the detection limit.
 H - pH is received at the lab outside of hold time (15 min from sampling).
 < - Not Detected at the reporting limit shown.
Bolded values detected in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Units	LDNR 5					LDNR 6					LDNR 7				
	1/30/23	5/17/23	9/19/23	12/13/23	3/26/24	2/28/23	5/18/23	9/19/23	12/12/23	3/26/24	2/28/23	5/17/23	9/19/23	12/12/23	3/27/24
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	Bubble Site (Surface Water)														
Total Metals															
Arsenic mg/L	0.000769 J	0.00139 J	0.00168 J	0.00151 J	0.00105 J	0.000784 J	0.00108 J	0.00200	0.00134 J	0.00106 J	0.000886 J	0.00118 J	0.00206	0.00129 J	0.00108 J
Barium mg/L	0.155	0.216	0.413	0.385	0.134	0.116	0.152	0.446	0.37	0.129	0.119	0.194	0.451	0.355	0.136
Cadmium mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA
Calcium mg/L	77.7	73.3	74.5	147	114	66.3	66.3	82.8	142	113	65.8	66.3	74.5	132	116
Chromium mg/L	<0.0004	0.000998 J	<0.0004	0.00274 J	0.000460 J	<0.0004	0.000731 J	<0.0004	0.00196 J	0.000500 J	<0.0004	0.000695 J	<0.0004	0.00179 J	0.000719 J
Iron mg/L	0.125 J	0.160 J	0.0875 J	0.0794 J	0.217	0.0485 J	0.0249 J	0.0871 J	0.0757 J	0.0920 J	0.0546 J	0.0565 J	0.0248 J	0.0657 J	0.0612 J
Lead mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium mg/L	15.0	14.7	28.0	40.1	23.5	11.7	12.4	31.1	38.8	23.1	11.5	13.2	29.7	35.8	23.9
Manganese mg/L	0.232	2.28	0.523	0.145	0.206	0.813	0.645	1.18	0.19	0.0905	1.03	2.36	0.435	0.194	0.123
Mercury mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000670 J	<0.00003	<0.00003	<0.00003	<0.00003	0.000133 J	<0.00003	<0.00003	<0.00003
Nickel mg/L	NA	0.00168 J	0.000849 J	0.00322	0.00160 J	NA	0.00124 J	0.00128 J	0.00265	0.00129 J	NA	0.00130 J	0.000966 J	0.00255	0.00149 J
Potassium mg/L	2.86	2.53	4.25	4.78	2.66	2.31	2.18	4.63	4.71	2.60	2.36	2.19	4.31	4.30	2.64
Selenium mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA
Silver mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA
Sodium mg/L	19.1	203	571	792	275	142	161	598	649	300	140	171	591	592	302
Strontium mg/L	0.578	0.552	0.883	1.19	0.761	0.441	0.496	0.930	1.14	0.76	0.426	0.509	0.895	1.07	0.787
Vanadium mg/L	NA	0.00207 J	0.00499 J	0.00628	0.00274 J	NA	0.00171 J	0.00667	0.00593	0.00235 J	NA	0.00226 J	0.00588	0.00568	0.00274 J
Zinc mg/L	0.00748	0.00250 J	0.00357 J	0.0297	0.0176	<0.002	0.00307 J	0.00336 J	0.00469	0.0604	<0.002	0.0171	0.00219 J	0.00463	0.00401
Anions/Water Quality Parameters															
Bicarbonate Alkalinity mg/L	245	150	107	146	107	148	143	116	146	109	162	147	116	144	118
Bromide mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity mg/L	<5	<5	13.8	<3.5	<3.5	<5	<5	<5	<3.5	<3.5	<5	<5	<5	<3.5	<3.5
Chloride mg/L	343	332	982	1,140	507	253	302	957	1,150	464	253	333	975	1,170	476
Sulfate mg/L	135	82.9	105	388	356	96.8	90.7	101	386	309	95.1	85.7	101	386	319
Total Dissolved Solids (TDS) mg/L	892	792	1,990	2,870	1,160	710	784	2,030	2,810	1,220	712	832	1,890	2,530	1,180
pH	NA	7.79 H	8.61 H	7.85 H	7.81 H	NA	7.96 H	7.84 H	7.96 H	8.07 H	NA	7.95 H	8.01 H	7.83 H	7.99 H
Sulfides															
Hydrogen Sulfide mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide mg/L	<1	<1.7	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.7	<1.2
Volatile Organic Compounds															
Benzene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions															
Aliphatics >C6-C8 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0118	<0.01	<0.01
Aliphatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	0.0083	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16 mg/L	<0.002	<0.002	<0.002	<0.002	0.0177	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0242
Aliphatics >C16-C35 mg/L	<0.008	<0.008	<0.008	0.0193	0.0341	<0.008	<0.008	<0.008	0.0288	<0.008	<0.008	<0.008	<0.008	0.0207	0.0483
Aromatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.0102	<0.01	<0.01	<0.01	<0.01	0.0103	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16 mg/L	<0.004	<0.004	<0.004	<0.004	0.0167	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21 mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35 mg/L	<0.009	<0.009	0.0145	<0.009	<0.009	<0.009	<0.009	0.0379	<0.009	<0.009	<0.009	<0.009	0.0243	<0.009	<0.009

Notes
 J - Estimated Value reported below the c
 H - pH is received at the lab outside of h
 < - Not Detected at the reporting limit sh
Bolded values detected in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Units	LDNR 8					LDNR 9				LDNR 10
	2/28/23	5/18/23	9/19/23	12/12/23	3/27/24	2/10/23	5/18/23	12/13/23	3/28/24	2/10/23
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Constituent	Bubble Site (Surface Water)									
Total Metals										
Arsenic mg/L	0.000975 J	0.00150 J	0.00189 J	0.00134 J	0.00104 J	0.00176 J	0.00419	0.00154 J	0.00212	0.000896 J
Barium mg/L	0.127	0.224	0.475	0.388	0.125	0.118	0.168	0.037	0.0233	0.0594
Cadmium mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA	<0.0002
Calcium mg/L	68.1	74	80.1	140	114	38.6	50.2	303	113	55.8
Chromium mg/L	<0.0004	0.000627 J	0.000472 J	0.00238 J	<0.0004	<0.0004	0.000513 J	0.00192 J	0.000866 J	<0.0004
Iron mg/L	0.166 J	0.27	0.0310 J	0.0580 J	0.0505 J	0.609	0.694	1.83	1.24	0.0432 J
Lead mg/L	<0.0006	0.000694 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium mg/L	12	14.7	30.7	37.9	22.6	4.2	5.93	26.5	12.7	5.64
Manganese mg/L	0.972	2.15	0.602	0.146	0.113	0.204	0.614	0.11	0.135	0.0295
Mercury mg/L	<0.00003	0.000109 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel mg/L	NA	0.00179 J	0.00106 J	0.00254	0.00139 J	NA	0.00192 J	0.00504	0.0023	NA
Potassium mg/L	2.39	2.54	4.51	4.47	2.63	1.17	2.39	3.45	0.669	2.44
Selenium mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	NA	<0.0011
Silver mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA	<0.0002
Sodium mg/L	144	196	631	653	303	64.6	83.4	334	166	37.6
Strontium mg/L	0.457	0.56	0.951	1.15	0.712	0.243	0.35	1.4	0.711	0.237
Vanadium mg/L	NA	0.00434 J	0.00532	0.00599	0.00232 J	NA	0.0105	0.00487 J	0.00316 J	NA
Zinc mg/L	0.0658	0.0171	0.0296	0.0823	0.00633	0.00496	0.0221	0.0516	0.00406	0.00654
Anions/Water Quality Parameters										
Bicarbonate Alkalinity mg/L	144	148	99.4	144	113	163	188	71.0	63.6	107
Bromide mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity mg/L	<5	<5	14.0	<3.5	<3.5	<5	<5	<3.5	<3.5	<5
Chloride mg/L	251	333	1,010	1,180	481	95.8	117	241	175	47.0
Sulfate mg/L	96.2	84.9	105	388	339	16.5	13.3	1,170	503	133
Total Dissolved Solids (TDS) mg/L	748	836	1,770	2,770	1,160	290	416	1,640	890	412
pH	NA	8.00 H	8.69 H	7.84 H	7.95 H	NA	8.09 H	7.76 H	8.02 H	NA
Sulfides										
Hydrogen Sulfide mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	23.9
Sulfide mg/L	<1	<1.7	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.2	<1
Volatile Organic Compounds										
Benzene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions										
Aliphatics >C6-C8 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	0.0125	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16 mg/L	<0.002	<0.002	<0.002	<0.002	0.0259	<0.002	<0.002	<0.002	0.0176	<0.002
Aliphatics >C16-C35 mg/L	<0.008	<0.008	0.0334	<0.008	0.0406	<0.008	<0.008	<0.008	0.0319	<0.008
Aromatics >C8-C10 mg/L	0.0101	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00424	<0.001	<0.001
Aromatics >C12-C16 mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21 mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0137	<0.003	<0.003
Aromatics >C21-C35 mg/L	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009

Notes
 J - Estimated Value reported below the c
 H - pH is received at the lab outside of h
 < - Not Detected at the reporting limit sh
Bolded values deteted in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Constituent Units	LDNR 12								LDNR 13		LDNR 14	
	2/28/23	5/18/23	9/19/23	12/12/23	1/9/24	1/9/24	1/31/24	3/27/24	12/13/23	3/27/24	12/13/23	3/27/24
	Surface	Surface	Surface	Surface	Surface	Bottom	Surface	Surface	Surface	Surface	Surface	Surface
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Bubble Site (Surface Water)												
Total Metals												
Arsenic mg/L	0.000861 J	0.00121 J	0.00217	0.00135 J	NA	NA	NA	0.00104 J	0.00152 J	0.00102 J	0.00133 J	0.000983 J
Barium mg/L	0.119	0.168	0.440	0.411	NA	NA	NA	0.144	0.407	0.155	0.371	0.142
Cadmium mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	<0.0002	NA	<0.0002	NA
Calcium mg/L	66.9	70.2	80.7	151	NA	NA	NA	121	152	123	147	118
Chromium mg/L	<0.0004	0.000565 J	0.000960 J	0.00236 J	NA	NA	NA	0.000659 J	0.00260 J	0.00106 J	0.00227 J	0.00251 J
Iron mg/L	0.0570 J	0.0237 J	0.0404 J	0.0689 J	NA	NA	NA	0.0544 J	0.0712 J	0.132 J	0.0460 J	0.107 J
Lead mg/L	<0.0006	<0.0006	<0.0006	<0.0006	NA	NA	NA	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium mg/L	11.9	14.2	32.6	41.4	NA	NA	NA	24.8	41	24.8	38.2	24.2
Manganese mg/L	0.885	0.732	0.768	0.159	NA	NA	NA	0.14	0.134	0.336	0.233	0.234
Mercury mg/L	<0.00003	0.000206	<0.00003	<0.00003	NA	NA	NA	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003
Nickel mg/L	NA	0.00126 J	0.00137 J	0.00255	NA	NA	NA	0.00148 J	0.0034	0.00160 J	0.00238	0.00200 J
Potassium mg/L	2.30	2.33	4.79	4.93	NA	NA	NA	2.74	4.85	2.88	4.71	2.78
Selenium mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	NA	NA	NA	<0.0011	NA	<0.0011	NA
Silver mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	NA	<0.0002	NA	<0.0002	NA
Sodium mg/L	146	194	603	693	NA	NA	NA	318	626	318	674	309
Strontium mg/L	0.451	0.533	0.947	1.25	NA	NA	NA	0.829	1.24	0.828	1.19	0.786
Vanadium mg/L	NA	0.00202 J	0.00636	0.00592	NA	NA	NA	0.00264 J	0.00506	0.00311 J	0.00527	0.00229 J
Zinc mg/L	0.0445	0.00299 J	0.0118	0.0134	NA	NA	NA	0.0237	0.00759	0.0111	0.00472	0.00932
Anions/Water Quality Parameters												
Bicarbonate Alkalinity mg/L	142	146	107	148	NA	NA	NA	112	144	120	144	114
Bromide mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity mg/L	<5	<5	<5	<3.5	NA	NA	NA	<3.5	<3.5	<3.5	<3.5	<3.5
Chloride mg/L	257	327	972	1,170	834	816	337	504	1,170	493	1,130	503
Sulfate mg/L	96.5	84.9	103	385	393	385	236	339	391	316	397	329
Total Dissolved Solids (TDS) mg/L	712	802	2,210	2,510	2,190	2,020	960	1,100	1,970	1,190	2,140	1,240
pH	NA	8.07 H	8.15 H	7.87 H	6.89 H	6.79 H	NA	7.93 H	7.85 H	7.58 H	7.91 H	7.71 H
Sulfides												
Hydrogen Sulfide mg/L	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide mg/L	<1	<1.7	<1.7	<1.7	NA	NA	NA	<1.2	<1.7	<1.2	<1.7	<1.2
Volatile Organic Compounds												
Benzene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA	NA	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	NA	NA	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene mg/L	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA	NA	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total mg/L	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA	NA	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions												
Aliphatics >C6-C8 mg/L	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10 mg/L	<0.01	<0.01	0.0123	<0.01	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16 mg/L	<0.002	<0.002	<0.002	<0.002	NA	NA	NA	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35 mg/L	<0.008	<0.008	<0.008	<0.008	NA	NA	NA	<0.008	<0.008	<0.008	0.0173	<0.008
Aromatics >C8-C10 mg/L	0.0102	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16 mg/L	<0.004	<0.004	<0.004	<0.004	NA	NA	NA	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21 mg/L	<0.003	<0.003	<0.003	<0.003	NA	NA	NA	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35 mg/L	<0.009	<0.009	<0.009	<0.009	NA	NA	NA	<0.009	<0.009	<0.009	<0.009	<0.009

Notes
 J - Estimated Value reported below the detection limit
 H - pH is received at the lab outside of the reporting interval
 < - Not Detected at the reporting limit shown
Bolded values detected in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Units	LDNR 17					LDNR 18					LDNR 19				
	2/28/23	5/17/23	9/20/23	12/13/23	3/26/24	2/28/23	5/17/23	9/19/23	12/13/23	3/26/24	2/28/23	5/18/23	12/11/23	3/28/24	
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	
Constituent	Bubble Site (Surface Water)														
Total Metals															
Arsenic	mg/L	0.000797 J	0.00130 J	0.00192 J	0.00140 J	0.000926 J	0.000916 J	0.00124 J	0.00195 J	0.00132 J	0.00102 J	0.00355	<0.0004	0.00111 J	0.00272
Barium	mg/L	0.118	0.188	0.475	0.400	0.114	0.125	0.183	0.450	0.405	0.126	0.127	0.149	0.0326	0.0379
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA
Calcium	mg/L	65.8	71.3	77.5	156	101	68.6	70.1	86.2	150	109	62	19.8	267	112
Chromium	mg/L	<0.0004	0.00127 J	<0.0004	0.00200 J	<0.0004	<0.0004	0.000762 J	<0.0004	0.00244 J	0.00128 J	<0.0004	0.000530 J	<0.0004	0.000985 J
Iron	mg/L	0.0795 J	0.0852 J	0.0764 J	0.162 J	0.181 J	0.0686 J	0.0526 J	0.0298 J	0.0896 J	0.111 J	0.102 J	2.43	0.657	0.769
Lead	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium	mg/L	11.5	14.1	29.0	42.1	20.2	12.0	14.0	32.9	41.0	22.7	4.36	6.72	23.7	12.4
Manganese	mg/L	1.00	1.29	0.785	0.195	0.171	1.03	1.43	0.484	0.134	0.113	0.24	0.314	0.0462	0.0348
Mercury	mg/L	<0.00003	0.000338	<0.00003	<0.00003	<0.00003	<0.00003	0.0000970 J	<0.00003	<0.00003	<0.00003	<0.00003	0.000407	<0.00003	<0.00003
Nickel	mg/L	NA	0.00159 J	0.00123 J	0.00398	0.00122 J	NA	0.00144 J	0.00102 J	0.0029	0.00150 J	NA	<0.0006	0.00384	0.00229
Potassium	mg/L	2.36	2.42	4.07	5.00	2.36	2.42	2.35	4.66	4.84	2.55	0.962	3.03	3.22	0.619
Selenium	mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	NA
Silver	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA
Sodium	mg/L	137	197	564	808	269	143	189	594	843	287	71.2	58.3	200	168
Strontium	mg/L	0.435	0.54	0.900	1.240	0.663	0.452	0.536	0.975	1.24	0.743	0.338	0.17	1.36	0.709
Vanadium	mg/L	NA	0.00221 J	0.00586	0.00637	0.00273 J	NA	0.00207 J	0.00646	0.00609	0.00194 J	NA	<0.0006	0.00105 J	0.00378 J
Zinc	mg/L	0.0119	<0.002	0.00505	0.0321	0.0156	<0.002	0.00659	<0.002	0.00572	0.0119	0.00535	0.132	0.0121	0.0198
Anions/Water Quality Parameters															
Bicarbonate Alkalinity	mg/L	144	149	130	143	114	148	146	106	146	111	240	159	73.5	71.4
Bromide	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.144	<0.03	<0.03
Carbonate Alkalinity	mg/L	<5	<5	<5	<3.5	<3.5	<5	<5	17.6	<3.5	<3.5	<5	<5	<3.5	<3.5
Chloride	mg/L	248	328	984	1,170	428	248	331	971	1,140	475	98.4	30.1	221	171
Sulfate	mg/L	95.9	84.7	101	400	292	95.9	83.8	102	379	322	6.72	7.5	1,110	478
Total Dissolved Solids (TDS)	mg/L	732	928	2,160	2,390	1,170	706	748	1,950	2,330	1,130	408	286	1,640	864
pH	SI	NA	7.84 H	7.74 H	7.85 H	7.66 H	NA	7.94 H	8.73 H	7.90 H	7.85 H	NA	8.03 H	7.72 H	8.13 H
Sulfides															
Hydrogen Sulfide	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.15	<0.5	<0.5	<0.5	<0.5
Sulfide	mg/L	<1	<1.7	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.7	<1.2	<1	<1.7	<1.7	<1.2
Volatile Organic Compounds															
Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions															
Aliphatics >C6-C8	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0148	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35	mg/L	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0278	<0.008	<0.008	<0.008	<0.008
Aromatics >C8-C10	mg/L	0.0101	<0.01	<0.01	<0.01	<0.01	0.0101	<0.01	<0.01	<0.01	<0.01	0.0105	<0.01	<0.01	<0.01
Aromatics >C10-C12	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35	mg/L	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009

Notes
 J - Estimated Value reported below the detection limit
 H - pH is received at the lab outside of the reporting interval
 < - Not Detected at the reporting limit shown
Bolded values detected in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Units	LDNR 21					LDNR 22					LDNR 23				
	3/30/23	5/17/23	9/19/23	12/13/23	3/26/24	3/30/23	5/17/23	9/19/23	12/13/23	3/26/24	3/30/23	5/18/23	9/19/23	12/12/23	3/27/24
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	Bubble Site (Surface Water)														
Total Metals															
Arsenic mg/L	0.000855 J	0.00115 J	0.00184 J	0.00138 J	0.000873 J	0.000998 J	0.00120 J	0.00186 J	0.00136 J	0.000841 J	0.000930 J	0.00126 J	0.00250	0.00142 J	0.00106 J
Barium mg/L	0.116	0.163	0.400	0.395	0.126	0.135	0.175	0.496	0.388	0.121	0.132	0.18	0.460	0.393	0.147
Cadmium mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA
Calcium mg/L	78.4	65.5	77.7	146	110	89.2	71.9	78.8	155	102	84.1	73.1	85.9	149	126
Chromium mg/L	<0.0004	0.000779 J	<0.0004	0.00271 J	0.00239 J	<0.0004	0.000811 J	<0.0004	0.00231 J	<0.0004	<0.0004	0.000789 J	<0.0004	0.00248 J	0.000831 J
Iron mg/L	0.0273 J	0.0315 J	0.0291 J	0.0827 J	0.145 J	0.0375 J	0.0302 J	0.330	0.0448 J	0.0693 J	0.0270 J	0.0654 J	0.0343 J	0.0799 J	0.245
Lead mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Magnesium mg/L	13.9	13.1	29.2	39.8	23.0	15.9	14.4	29.2	40.7	21.1	14.8	13.7	32.5	40.5	25.7
Manganese mg/L	0.445	0.99	0.540	0.142	0.152	0.43	1.04	1.03	0.196	0.12	0.379	1.08	0.696	0.216	0.148
Mercury mg/L	<0.00003	0.000151 J	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.000124 J	<0.00003	<0.00003	<0.00003
Nickel mg/L	NA	0.00143 J	0.000935 J	0.00298	0.00219	NA	0.00142 J	0.00103 J	0.00267	0.0094	NA	0.00147 J	0.00119 J	0.00277	0.00155 J
Potassium mg/L	2.15	2.21	4.16	4.71	2.53	2.45	2.37	4.30	4.93	2.35	2.33	2.51	5.03	4.9	2.91
Selenium mg/L	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	<0.0011	NA
Silver mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	NA
Sodium mg/L	186	169	570	664	296	211	195	534	679	268	205	175	586	661	327
Strontium mg/L	0.495	0.501	0.898	1.20	0.741	0.559	0.545	0.919	1.24	0.690	0.542	0.546	0.937	1.20	0.849
Vanadium mg/L	NA	0.00184 J	0.00473 J	0.00592	0.00254 J	NA	0.00197 J	0.00528	0.00583	0.00232 J	NA	0.00167 J	0.00711	0.00612	0.00189 J
Zinc mg/L	<0.002	0.0657	0.00372 J	0.0139	0.0319	0.00431	0.0368	0.00635	0.0143	0.00793	0.00291 J	0.0588	0.00284 J	0.00868	<0.002
Anions/Water Quality Parameters															
Bicarbonate Alkalinity mg/L	162	147	106	148	106	162	148	124	142	108	162	148	120	146	112
Bromide mg/L	<0.03	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity mg/L	<5	<5	13.2	<3.5	<3.5	<5	<5	<5	<3.5	<3.5	<5	<5	<5	<3.5	<3.5
Chloride mg/L	342	334	921	1,120	460	343	330	999	1,170	476	346	312	960	1,160	489
Sulfate mg/L	93.9	83.6	100	375	312	94.1	83.7	105	400	320	94	89.1	99.3	387	328
Total Dissolved Solids (TDS) mg/L	872	776	2,000	2,460	1,220	812	812	2,300	2,680	1,250	844	1,540	1,810	2,580	1,250
pH	7.74 H	7.88 H	8.62 H	7.87 H	7.82 H	7.70 H	7.98 H	8.02 H	7.88 H	7.82 H	7.58 H	7.79 H	7.94 H	7.89 H	7.77 H
Sulfides															
Hydrogen Sulfide mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide mg/L	<1.7	<1.7	<1.7	<1.7	<1.2	<1.7	<1.7	<1.7	<1.7	<1.2	<1.7	<1.7	<1.7	<1.7	<1.2
Volatile Organic Compounds															
Benzene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m,p-Xylene mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions															
Aliphatics >C6-C8 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16 mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35 mg/L	<0.008	<0.008	<0.008	0.0183	<0.008	<0.008	<0.008	<0.008	0.0172	<0.008	<0.008	<0.008	<0.008	0.0197	<0.008
Aromatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16 mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21 mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35 mg/L	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	0.0374	<0.009	<0.009	<0.009	<0.009	0.0366	<0.009	<0.009

Notes

J - Estimated Value reported below the c
 H - pH is received at the lab outside of h
 < - Not Detected at the reporting limit sh
Bolded values deteted in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler Units	LDNR 24			LDNR 25			LDNR 26			
	5/22/23	12/11/23	3/26/24	9/20/23	12/12/23	3/27/24	7/17/23	9/18/23	12/11/23	3/26/24
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	Bubble Site (Surface Water)									
Total Metals										
Arsenic	0.00124 J	0.00173 J	0.00105 J	0.00215	0.00143 J	0.000945 J	0.00246	0.00130 J	0.00190 J	0.00166 J
Barium	0.226	0.327	0.122	0.393	0.386	0.145	1.07	0.540	0.504	0.400
Cadmium	<0.0002	<0.0002	NA	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA
Calcium	71.8	192	99.7	83.7	151	119	11.5	9.70	10.20	8.50
Chromium	<0.0004	0.00100 J	<0.0004	0.00101 J	0.00224 J	0.000726 J	0.00322 J	<0.0004	0.000515 J	<0.0004
Iron	0.327	2.56	0.554	0.172 J	0.0452 J	0.0721 J	1.06	0.0902 J	0.146 J	0.149 J
Lead	<0.0006	0.000602 J	<0.0006	<0.0006	<0.0006	<0.0006	0.00946	<0.0006	0.000846 J	<0.0006
Magnesium	12.5	40.2	19.5	33.5	40.6	24.7	1.90	1.70	1.91	1.53
Manganese	0.574	2.22	0.177	0.557	0.181	0.224	0.516	0.0277	0.0524	0.0264
Mercury	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.0000500 J	<0.00003	<0.00003	<0.00003
Nickel	0.000869 J	0.0041	0.00144 J	0.00115 J	0.00249	0.00139 J	0.00271	<0.0006	0.000815 J	0.000764 J
Potassium	2.6	7.04	2.37	4.87	4.87	2.79	1.19	1.44	1.55	1.15
Selenium	<0.0011	<0.0011	NA	<0.0011	<0.0011	NA	<0.0011	<0.0011	<0.0011	NA
Silver	<0.0002	<0.0002	NA	<0.0002	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA
Sodium	161	385	272	609	685	313	30.8	38.7	37.1	27.6
Strontium	0.519	1.28	0.666	1.01	1.22	0.819	0.174	0.161	0.153	0.123
Vanadium	0.00246 J	0.00442 J	0.00331 J	0.00687	0.0058	0.00214 J	0.00483 J	0.00160 J	0.00248 J	0.00314 J
Zinc	0.00278 J	0.0428	0.102	0.00256 J	0.00468	0.00222 J	0.0638	<0.002	0.0438	0.00694
Anions/Water Quality Parameters										
Bicarbonate Alkalinity	176	197	111	104	148	111	48.8	44.4	40.9	38.3
Bromide	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Carbonate Alkalinity	<5	<3.5	<3.5	<5	<3.5	<3.5	<5	<5	<3.5	<3.5
Chloride	314	905	480	620	1,160	509	35.9	37.8	38.3	33.6
Sulfate	79.9	492	323	96.2	391	340	16.1	16.6	21.7	24.6
Total Dissolved Solids (TDS)	840	1,570	1,150	2,280	2,600	1,140	180	120	140	150
pH	7.58 H	7.24 H	7.45 H	8.37 H	7.98 H	7.75 H	7.38 H	7.05 H	7.44 H	7.50 H
Sulfides										
Hydrogen Sulfide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulfide	<1.7	<1.7	<1.2	<1.7	<1.7	<1.2	<1.7	<1.7	<1.7	<1.2
Volatile Organic Compounds										
Benzene	0.00074 J	0.0037	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Ethylbenzene	<0.0003	0.00044 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Toluene	0.0011	0.0050	<0.0002	<0.0002	<0.0002	<0.0002	0.00051 J	<0.0002	<0.0002	<0.0002
m,p-Xylene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Xylene	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Xylenes, Total	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
TPH Fractions										
Aliphatics >C6-C8	0.0758	0.719	0.0125	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C8-C10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatics >C10-C12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aliphatics >C12-C16	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Aliphatics >C16-C35	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.0405	<0.008	<0.008
Aromatics >C8-C10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatics >C10-C12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aromatics >C12-C16	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Aromatics >C16-C21	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Aromatics >C21-C35	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009

Notes
 J - Estimated Value reported below the c
 H - pH is received at the lab outside of h
 < - Not Detected at the reporting limit sh
Bolded values deteted in the sample.

Table 2
Surface Water Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

LDNR Sample No. Sample Date Sample Interval (ft) Sampler	PPG 7A BS		PPG 7B BS					LDNR 2		Central Pond	LDNR 20	BS 24-oily water
	1/25/23	12/11/23	2/16/23	5/18/23	9/18/23	12/12/23	3/28/24	1/25/23	1/9/24	1/25/23	3/9/23	2/26/24
	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Constituent	Bubble Site (Surface Water)											
Units	Surface Water											
Total Metals												
Arsenic mg/L	0.000767 J	0.00192 J	0.0202 J	<0.0004	0.000799 J	<0.002	0.00136 J	0.00141 J	NA	0.00192 J	0.00109 J	NA
Barium mg/L	0.232	0.133	1.23	0.118	3.71	1.04	1.48	0.0832	NA	0.146	0.43	NA
Cadmium mg/L	<0.0002	0.000664 J	<0.01	<0.0002	0.000336 J	<0.001	NA	<0.0002	NA	<0.0004	<0.0002	NA
Calcium mg/L	24.5	29.8	141	23.8	65.6	61.9	46.4	58.2	NA	149	8.98	NA
Chromium mg/L	0.000474 J	0.00218 J	0.114 J	0.00175 J	0.000523 J	0.00341 J	0.00659	0.00101 J	NA	0.00458 J	<0.0004	NA
Iron mg/L	0.0406 J	0.267	3.34 J	0.98	1.43	1.35	1.29	0.207	NA	2.07	0.148 J	NA
Lead mg/L	<0.0006	0.00251	<0.03	0.00245	0.00300	0.00409 J	0.00110 J	<0.0006	NA	<0.00120	<0.0006	NA
Magnesium mg/L	1.54	2.29	2.85 J	1.73	1.78	1.77	1.97	5.44	NA	37.8	1.6	NA
Manganese mg/L	0.0215	0.0205	0.509	0.161	0.211	0.324	0.215	0.00934	NA	0.847	0.0163	NA
Mercury mg/L	<0.00003	<0.00003	<0.00003	0.000358	<0.00003	<0.00003	<0.00003	<0.00003	NA	<0.00003	<0.00003	NA
Nickel mg/L	NA	0.0033	NA	0.00417	0.00268	0.00858 J	0.0067	NA	NA	NA	NA	NA
Potassium mg/L	1.02	1.42	1.78 J	1.30	2.13	3.58	1.00	2.86	NA	3.22	1.2	NA
Selenium mg/L	<0.0011	<0.0011	<0.055	<0.0011	0.00156 J	<0.0055	NA	<0.0011	NA	<0.0022	<0.0011	NA
Silver mg/L	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.001	NA	<0.0002	NA	<0.0004	<0.0002	NA
Sodium mg/L	8.45	6.20	26,400	1,390	27,400	11,200	5,420	158	NA	1,080	27.5	NA
Strontium mg/L	0.167	0.186	0.678	0.160	0.683	0.427	0.606	0.341	NA	0.941	0.134	NA
Vanadium mg/L	NA	0.00830	NA	0.00113 J	<0.0006	<0.003	0.00447 J	NA	NA	NA	NA	NA
Zinc mg/L	0.0466	0.209	1.97	0.451	0.291	0.427	0.259	0.0153	NA	0.0258	<0.002	NA
Anions/Water Quality Parameters												
Bicarbonate Alkalinity mg/L	159	67.3	128	78.4	241	112	152	210	NA	495	37.4	NA
Bromide mg/L	<0.03	<0.03	<1.5	<0.06	<1.5	<0.3	<0.300	<0.03	<0.03	<0.06	<0.03	NA
Carbonate Alkalinity mg/L	<5	<3.5	<5	<5	<5	<3.5	<3.5	<5	NA	<5	<5	NA
Chloride mg/L	6.45	5.60	55,900	2,400	48,000	16,500	8,540	215	149	2,090	32	400
Sulfate mg/L	2.97	13.3	243	14.2	155	57.0	24.9	92.1	47.5	183	17.2	285
Total Dissolved Solids (TDS) mg/L	320	70.0	97,400	4,840	67,200	45,200	12,300	498	406	3,600	148	1,060
pH	NA	7.82 H	NA	7.65 H	7.93 H	7.34 H	7.93 H	NA	7.37 H	NA	NA	NA
Sulfides												
Hydrogen Sulfide mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	NA
Sulfide mg/L	<1	<1.7	<1	<1.7	<1.7	<1.7	<1.2	<1	NA	<1	<1.7	NA
Volatile Organic Compounds												
Benzene mg/L	0.00034 J	0.00059 J	0.00075 J	<0.0002	0.00080 J	0.0030	0.00038 J	<0.0002	NA	<0.0002	<0.0002	NA
Ethylbenzene mg/L	0.00180	0.0020	0.0023	<0.0003	0.00086 J	0.0034	<0.0003	<0.0003	NA	<0.0003	<0.0003	NA
Toluene mg/L	0.00055 J	0.0018	0.0073 J	<0.0002	<0.0002	0.0010	<0.0002	<0.0002	NA	<0.0002	<0.0002	NA
m,p-Xylene mg/L	0.0020 J	0.0024	0.0030	<0.0005	0.0013 J	0.0061	<0.0005	<0.0005	NA	<0.0005	<0.0005	NA
o-Xylene mg/L	<0.0003	0.00052 J	0.0020	<0.0003	0.0010	0.0045	<0.0003	<0.0003	NA	<0.0003	<0.0003	NA
Xylenes, Total mg/L	0.00200	0.0029	0.0050	<0.0003	0.0024	0.011	<0.0003	<0.0003	NA	<0.0003	<0.0003	NA
TPH Fractions												
Aliphatics >C6-C8 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	<0.01	<0.01	NA
Aliphatics >C8-C10 mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	<0.01	<0.01	NA
Aliphatics >C10-C12 mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	NA
Aliphatics >C12-C16 mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0242	<0.002	NA	<0.002	<0.002	NA
Aliphatics >C16-C35 mg/L	<0.008	0.0217	0.239	<0.008	0.137	0.0824	0.0992	<0.008	NA	<0.008	<0.008	NA
Aromatics >C8-C10 mg/L	0.0285	<0.01	0.0192	<0.01	<0.01	<0.01	<0.01	<0.01	NA	<0.01	0.012	NA
Aromatics >C10-C12 mg/L	<0.001	<0.001	0.00551	<0.001	<0.001	<0.001	<0.001	<0.001	NA	<0.001	<0.001	NA
Aromatics >C12-C16 mg/L	<0.004	<0.004	0.0225	<0.004	<0.004	<0.004	0.0137	<0.004	NA	<0.004	<0.004	NA
Aromatics >C16-C21 mg/L	<0.003	<0.003	0.0188	<0.003	<0.003	<0.003	0.0145	<0.003	NA	<0.003	<0.003	NA
Aromatics >C21-C35 mg/L	<0.009	<0.009	0.079	<0.009	<0.009	<0.009	0.0217	<0.009	NA	<0.009	<0.009	NA

Notes
 J - Estimated Value reported below the c
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Bolded values deteted in the sample.

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

1/30/2023	LDNR #4 (water depth 2.55 ft)				
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
0.5	6.14	1317	31	17.5	NR
2.55	6.3	1321	-4	17.1	NR

5/22/2023	LDNR #5 (water depth 5.0 ft)				
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
0	6.95	1509	59	30.1	1058
1	6.95	1513	69	30.1	1058
2	6.96	1515	77	30	1057
3	6.94	1513	83	29.7	1059
4	6.96	1513	84	29.6	1057
5	6.77	1522	-64	28.7	1065

6/15/2023	13:55	Water Column Station (water depth 5.2 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.55	1665	113	34.3	1238
3	7.02	1671	137	34.7	1241
5	7.52	1692	39	33.7	1254

6/16/2023	12:58	Water Column Station (water depth 5.2 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.67	1792	205	33.5	1256
3	7.70	1786	174	33.3	1254
5	7.30	1902	-240	33.4	1352

6/23/2023	8:13	Water Column Station (water depth 5.2 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.53	NR	165	27.7	NR
3	7.56	NR	155	29.1	1291
5	7.54	1814	-186	29.8	1282

6/30/2023	13:40	Water Column Station (water depth 5.15 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.60	1883	64	36.1	1322
3	7.50	1878	84	34.8	1325
5	7.50	1876	94	35.0	1320

7/7/2023	8:45	Water Column Station (water depth 5.0 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.60	1910	103	29.3	1355
3	7.61	1951	107	29.6	1389
5	7.59	1916	113	29.7	1364

7/14/2023	13:00	Water Column Station (water depth 5.0 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.85	NR	161	35.2	NR
3	7.65	2032	148	34.2	1449
5	7.59	1962	140	33.1	1529

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

7/21/2023	9:10	Water Column Station (water depth 4.8 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.72	2123	168	31.6	1515
3	7.67	2117	162	31.7	1514
5	7.70	2104	155	31.4	1509

7/28/2023	7:15	Water Column Station (water depth 5.8 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.66	2238	168	29.3	1609
3	7.61	2106	165	29.9	1513
5	7.48	2185	151	29.5	1568

8/4/2023	9:25	Water Column Station (water depth 5.6 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.62	2328	161	32.4	1678
3	7.56	2317	149	32.5	1669
5	7.47	2317	79	32.6	1670

8/11/2023	7:30	Water Column Station (water depth 5.45 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.64	2648	101	29.7	1935
3	7.75	2588	18	30.6	1888
5	7.58	2593	-147	31.1	1885

8/18/2023	7:30	Water Column Station (water depth 5.25 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.71	2871	141	28.9	2116
3	7.58	2813	103	30.1	2067
5	7.54	2747	-48	30.3	2023

8/25/2023	9:00	Water Column Station (water depth 4.1 ft.)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.71	3071	149	29.6	2253
3	7.69	3034	121	30.3	2215
5	7.58	3038	-8	30.2	2219

9/1/2023	10:00	Water Column Station (water depth NR)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.06	3233	34	31.1	2371
3	8.10	3203	25	29.4	2357
5	7.62	3216	-13	29.6	2366

9/8/2023	7:45	Water Column Station (water depth NR)			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.06	3373	109	28.9	2486
3	8.16	3337	87	30.1	2458
5	7.87	3341	-32	30.4	2457

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

9/15/2023	7:20	Water Column Station (water depth 3'5")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.04	3554	149	25	2650
3	7.96	3416	144	26.2	2545
5	7.55	3426	-81	26.2	2549

9/22/2023	8:15	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.19	3625	146	28.6	2699
3	8.23	3570	131	28.7	2652
5	7.50	3587	-114	28.5	2660

9/29/2023	7:30	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.43	3614	152	26.5	2684
3	7.42	3601	121	27.1	2689
5	7.41	3603	-32	27.3	2685

10/6/2023	8:00	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.57	3584	103	24.3	2681
3	7.44	3572	96	24.8	2671
5	7.55	3558	10	24.7	2660

10/13/2023	9:42	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.95	3555	146	22.8	2665
3	7.92	3641	148	23.6	2733
5	7.94	3646	135	23.7	2737

10/20/2023	8:00	Water Column Station (water depth 4'2")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.88	3775	109	21	2854
3	7.97	3738	116	21.4	2823
5	7.92	3770	119	21.7	2846

10/27/2023	8:42	Water Column Station (water depth 4'2")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	8.19	4035	80	26.9	3036
3	7.96	3990	26.7	26.7	2995
5	7.92	3946	26.3	26.3	2962

11/3/2023	9:00	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.83	4025	208	16.2	3086
3	7.77	4060	161	19.3	3116
5	7.72	4035	186	15.7	3088

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

11/10/2023	10:17	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.7	4150	164	22.1	3160
3	7.63	4179	128	22	3187
5	7.55	4161	2	21.8	3178

11/17/2023	9:45	Water Column Station (water depth 4'2")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.52	4115	192	20.5	3144
3	7.45	4119	160	20.9	3143
5	7.46	4113	84	20.8	3136

11/24/2023	8:01	Water Column Station (water depth 4')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.75	4238	181	15.6	3758
3	7.76	4220	146	15.4	3239
5	7.70	4209	96	15.3	3240

12/1/2023	8:00	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.85	4132	-41	17.8	3171
3	7.81	4144	21	17.3	3173
5	7.75	4204	39	17.6	3237

12/8/2023	9:00	Water Column Station (water depth 4'3")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.66	4275	141	16.7	3288
3	7.72	4175	109	16.7	3203
5	7.61	4276	75	16.9	3294

12/15/2023	9:00	Water Column Station (water depth 4'4")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.62	4287	-66	14.5	3311
3	7.77	4301	-32	15.1	3315
5	7.68	4300	5	15.5	3310

12/22/2023	8:30	Water Column Station (water depth 4'5")			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.74	4296	65	18.1	3311
3	7.76	4305	32	18	28
5	7.69	4289	77	17.9	3301

1/4/2024	13:35	Water Column Station (water depth 5')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.63	4040	115	15.7	3092
3	7.59	4041	97	14.3	2101
5	7.70	4044	227	14.9	3127

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

1/12/2024	8:48	Water Column Station (water depth 5.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	5.50	3236	69	15.6	2486
3	7.51	3303	61	16.0	2544
5	7.54	3268	89	16.3	2509

1/18/2024	12:39	Water Column Station (water depth 5.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.57	3141	94	11.6	2416
3	7.54	3235	69	10.7	2492
5	7.50	3240	-45	10.3	2507

1/26/2024	9:08	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.35	2464	-21	16.3	1860
3	7.28	2616	13	15.7	1988
5	7.33	2731	-114	15.0	2081

2/2/2024	9:03	Water Column Station (water depth 5.8')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.19	1578	68	16.7	1151
3	7.14	1616	62	16.2	1183
5	7.39	2359	-132	17.4	1773

2/9/2024	8:35	Water Column Station (water depth 5.5')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.34	1570	58	18.7	1143
3	7.27	1572	76	18.5	1144
5	7.29	1607	14	18.5	1171

2/16/2024	9:00	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.42	1690	184	17.8	1237
3	7.31	1664	111	18.2	1217
5	7.35	1700	47	17.1	1245

2/23/2024	12:45	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.75	1766	146	20.5	1289
3	7.65	1767	137	21.1	1286
5	7.70	1782	115	20.9	1299

3/1/2024	9:06	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.48	1900	182	15.7	1405
3	7.4	1887	133	15.4	1396
5	7.32	1910	55	15.5	1414

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

3/7/2024	12:40	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.59	1956	164	24.0	1443
3	7.53	1950	108	24.6	1431
5	7.59	1988	-17	24.1	1463

3/14/2024	8:40	Water Column Station (water depth 5.0')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.69	2059	171	22.6	1519
3	7.63	2044	152	22.4	1507
5	7.53	2073	-135	22.5	1532

3/22/2024	9:20	Water Column Station (water depth 5.2')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.53	2078	189	18.7	1543
3	7.48	2076	133	18.5	1545
5	7.54	2107	-117	19.0	1548

3/28/2024	9:26	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.68	2120	37	18.4	1578
3	7.57	2117	80	18.6	1575
5	7.50	2118	-90	18.5	1580

4/5/2024	10:15	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.87	2212	92	23.3	1636
3	7.69	2211	102	22.9	1639
5	7.63	2271	-172	23.4	1684

4/12/2024	7:38	Water Column Station (water depth 5.5')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.57	2021	135	20.5	1498
3	7.45	2034	116	20.0	1506
5	7.53	2031	-38	20.7	1503

4/19/2024	8:00	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.92	2125	37	26.0	1566
3	7.68	2126	4	26.2	1568
5	7.16	2197	-254	26.0	1625

4/26/2024	9:52	Water Column Station (water depth 5.3')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.69	2181	107	25.5	1612
3	7.62	2169	103	25.3	1605
5	7.45	2199	-104	25.1	1626

Table 3
Central Lake Water Column Profile
 Sulphur Dome
 Calcasieu Parish, Louisiana

5/3/2024	11:45	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.49	1761	81	23.7	1280
3	7.57	1795	62	25.0	1305
5	7.42	1823	-104	23.9	1233

5/10/2024	10:33	Water Column Station (water depth 6.8')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.39	1503	29	27.8	1074
3	7.34	1589	-21	27.4	1141
5	6.96	2119	-251	26.8	1557

5/16/2024	8:20	Water Column Station (water depth 6.9')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.37	1461	50	26.8	1042
3	7.19	1465	7	26.6	1045
5	6.88	1868	-225	26.2	1362

5/24/2024	8:10	Water Column Station (water depth 6.6')			
Depth (ft)	pH	SC (uS/cm)	ORP (mV)	Temp (°C)	TDS (ppm)
1	7.49	1314	120	27.7	929.4
3	7.46	1324	-15	27.9	937.1
5	7.12	1730	-226	26.1	1252

Notes:

Readings were recorded with an Ultrameter II, hand-held meter

NR - Not Recorded

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location Sample ID Sample Date Sampler	Units	LDNR 1					LDNR 3					LDNR 4				
		1/25/23	5/18/23	9/20/23*	12/11/23*	3/26/24	1/30/23	5/22/23*	9/18/23*	12/11/23*	3/26/24*	1/30/23	5/22/23*	9/20/23*	12/11/23*	3/26/24*
		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Surface Water (Bubble Site)																
Carbon Monoxide	mol%	ND	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	0.0053	ND	NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.35	1.31	0.0612	0.669	1.42	1.04	0.0448	0.917	0.543	0.648	0.905	0.0360	0.550	0.0266	0.0872
Oxygen	mol%	0.47	17.47	0.96	14.23	ND	8.91	0.086	20.38	2.87	14.22	15.5	0.16	8.93	0.23	1.63
Nitrogen	mol%	61.78	64.5	4.41	61.50	88.37	45.65	2.11	77.1	15.08	52.31	65.33	1.87	41.87	1.73	6.81
Carbon Dioxide	mol%	7.47	6.37	2.57	0.46	10.05	3.58	2.14	0.089	2.02	0.68	1.29	1.56	1.55	1.75	1.39
Methane	mol%	28.45	10.00	89.73	22.56	0.137	40.41	94.46	1.49	78.53	31.77	16.69	94.48	46.17	94.44	88.44
Ethane	mol%	0.287	0.110	1.50	0.382	0.0014	0.261	0.673	0.0108	0.575	0.221	0.209	1.30	0.64	1.27	1.14
Ethylene	mol%	ND	ND	0.0006	0.0002	ND	0.0097	0.0286	0.003	0.0178	0.0075	0.0067	0.0540	0.0223	0.0447	0.0409
Propane	mol%	0.0926	0.0412	0.414	0.107	0.0075	0.0702	0.198	0.0036	0.159	0.0619	0.0445	0.294	0.144	0.277	0.250
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.0216	0.0070	0.0977	0.0255	0.0037	0.0259	0.0751	0.0013	0.0608	0.0238	0.0115	0.0819	0.0408	0.0790	0.0723
N-butane	mol%	0.0216	0.0070	0.106	0.0277	0.0028	0.0189	0.0647	0.0016	0.0519	0.0197	0.0091	0.0757	0.0372	0.0720	0.0651
Iso-pentane	mol%	0.0083	0.0017	0.0410	0.0112	0.0014	0.0083	0.0356	0.0009	0.0286	0.0108	0.0032	0.0318	0.0158	0.0301	0.0274
N-pentane	mol%	0.0055	0.0012	0.0308	0.0093	0.0005	0.0051	0.0262	0.0008	0.0223	0.0081	0.0019	0.0220	0.0111	0.0205	0.0185
Hexanes +	mol%	0.0449	0.0064	0.0685	0.0227	0.0103	0.0083	0.0548	0.0020	0.0411	0.0154	0.0029	0.0341	0.0173	0.0291	0.0265
Stable Isotopes																
δ ¹³ C (CH ₄)	‰	-33.03	-24.86	-39.25	-39.09	NA	-34.2	-34.66	-31.24	-33.88	-33.97	-38.37	-38.5	-37.03	-37.69	-37.29
δD (CH ₄)	‰	-129.6	-81.1	-158.6	-158.7	NA	-147.2	-141.0	-138.7	-151.6	-141.1	-160.5	-151.3	-145.0	-158.0	-149.6
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
 ND - Not Detected
 NA - Not Analyzed (insufficient volume)
 * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		LDNR 5					LDNR 6					LDNR 7				
Sample ID	Sample Date	1/30/23	5/17/23	9/20/23*	12/13/23*	3/26/24*	2/28/23	5/18/23	9/20/23	12/12/23*	3/26/24*	2/28/23	5/17/23	9/20/23	12/12/23*	3/27/24*
Component	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Surface Water (Bubble Site)																
Carbon Monoxide	mol%	ND	0.099	ND	ND	ND	ND	0.22	0.093	ND	ND	ND	0.31	0.15	ND	ND
Helium	mol%	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.54	1.12	0.540	0.131	0.797	1.68	1.63	1.06	0.108	0.873	1.66	1.64	1.2	0.365	0.140
Oxygen	mol%	21.68	15.89	11.11	2.44	17.71	21.86	21.22	23.75	1.78	19.55	22.94	17.64	24.65	6.63	2.62
Nitrogen	mol%	69.85	73.83	40.07	8.90	64.69	72.96	72.30	73.08	6.58	71.76	71.73	73.45	73.16	25.40	6.52
Carbon Dioxide	mol%	2.47	2.79	0.52	0.59	0.17	3.22	4.39	0.15	0.75	0.13	3.27	6.46	0.40	0.42	0.47
Methane	mol%	4.39	6.20	46.82	86.34	16.34	0.278	0.234	1.84	89.64	7.59	0.398	0.493	0.427	64.68	87.04
Ethane	mol%	0.0472	0.0488	0.579	1.08	0.192	0.0042	0.0014	0.0112	0.669	0.0549	0.0050	0.0057	0.0100	2.22	2.82
Ethylene	mol%	0.0022	0.0042	0.0874	0.0362	0.0132	ND	ND	0.0007	0.0363	0.0030	ND	ND	ND	ND	ND
Propane	mol%	0.0128	0.0120	0.1590	0.272	0.0495	ND	0.0014	0.0041	0.235	0.0185	0.0006	ND	0.0013	0.176	0.235
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.0033	0.0030	0.0406	0.0741	0.0134	ND	ND	0.0014	0.0831	0.0067	ND	ND	ND	0.0452	0.0631
N-butane	mol%	0.0028	0.0021	0.0387	0.0685	0.0121	ND	ND	0.0010	0.0644	0.0053	ND	ND	ND	0.0365	0.0506
Iso-pentane	mol%	0.0006	0.0006	0.0133	0.0250	0.0045	ND	ND	0.0003	0.0270	0.0023	ND	ND	ND	0.0135	0.0189
N-pentane	mol%	ND	ND	0.0092	0.0165	0.0030	ND	ND	ND	0.0142	0.0013	ND	ND	ND	0.0072	0.0101
Hexanes +	mol%	0.0039	0.0009	0.0148	0.0261	0.0054	0.0012	0.0028	0.0018	0.0142	0.0028	0.0013	0.0041	0.0024	0.0111	0.0148
Stable Isotopes																
δ ¹³ C (CH ₄)	‰	-35.45	-39.21	-37.16	-37.36	-36.87	NA	NA	-34.8	-34.83	-33.32	-36.7	-48.9	-39.5	-45.00	-43.87
δD (CH ₄)	‰	-143	-159.8	-147.9	-154.9	-146.6	NA	NA	-144	-150.0	-140.2	NA	NA	NA	-189.4	-183.8
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
 ND - Not Detected
 NA - Not Analyzed (insufficient volume)
 * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		LDNR 8				LDNR 9				LDNR 10				
Sample ID	Sample Date	2/28/23	5/18/23	9/20/23	3/27/24*	2/10/23	5/18/23	12/13/23*	3/28/24	2/10/23	5/22/23*	9/20/23*	12/12/23*	3/28/24*
Sampler	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
		Surface Water (Bubble Site)												
Carbon Monoxide	mol%	ND	0.33	0.16	ND	0.034	0.26	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	ND	NA	NA	ND	NA	NA	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.31	1.71	1.19	0.117	1.14	1.50	0.700	1.27	0.837	0.970	0.910	0.748	0.942
Oxygen	mol%	16.43	12.99	27.26	1.92	22.32	30.16	15.35	39.56	14.68	21.72	16.81	15.67	21.12
Nitrogen	mol%	57.26	75.89	71.03	5.57	75.05	63.88	62.75	56.50	59.75	77.00	75.02	68.50	77.75
Carbon Dioxide	mol%	2.88	7.63	0.28	0.45	0.61	2.70	0.63	1.58	1.04	0.062	1.69	1.55	0.037
Methane	mol%	21.89	1.44	0.0769	88.62	0.845	1.49	20.40	1.08	23.55	0.247	5.56	13.48	0.148
Ethane	mol%	0.146	0.0040	0.0020	2.92	0.0022	0.0032	0.121	0.0070	0.12	0.0004	0.0030	0.0470	0.0006
Ethylene	mol%	0.0044	ND	ND	ND	ND	ND	0.0008	ND	ND	ND	ND	ND	ND
Propane	mol%	0.0482	0.0008	0.0007	0.242	0.0004	ND	0.0238	0.0009	0.0084	ND	0.0004	0.0017	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	0.0003	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.0158	ND	ND	0.0652	ND	ND	0.0114	ND	0.0112	ND	0.0009	0.0028	ND
N-butane	mol%	0.0108	ND	ND	0.0521	ND	ND	0.0051	ND	ND	ND	0.0002	ND	ND
Iso-pentane	mol%	0.0034	ND	ND	0.0199	ND	ND	0.0037	ND	0.0019	ND	0.0002	0.0004	ND
N-pentane	mol%	0.0015	ND	ND	0.0108	ND	ND	0.0022	ND	ND	ND	0.0001	ND	ND
Hexanes +	mol%	0.0030	0.0040	0.0031	0.0161	0.0007	0.0040	0.0065	ND	0.0012	0.0001	0.0006	0.0005	0.0004
Stable Isotopes														
δ ¹³ C (CH ₄)	‰	-34.96	-60.3	NA	-43.45	-33.1	-38.9	-33.44	-31.2	-35.63	-25.78	-22.20	-30.02	-36.5
δD (CH ₄)	‰	-143.1	NA	NA	-184.2	-81	NA	-147.5	NA	-151.4	-107	-103.2	-134.9	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values detected in the sample.
 ND - Not Detected
 NA - Not Analyzed (insufficient volume)
 * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		LDNR 12					LDNR 13		LDNR 14		LDNR 17				
Sample ID	Sample Date	2/28/23	5/18/23	9/20/23	12/12/23*	3/27/24*	12/13/23	3/27/24*	12/13/23	3/27/24	2/28/23	5/17/23	9/20/23	12/13/23*	3/26/24*
Component	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Surface Water (Bubble Site)															
Carbon Monoxide	mol%	ND	0.23	0.13	ND	ND	ND	ND	ND	ND	0.17	0.3	ND	ND	
Helium	mol%	NA	NA	NA	ND	ND	NA	ND	NA	NA	NA	NA	ND	ND	
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Argon	mol%	1.62	1.68	1.12	0.315	0.101	1.22	0.370	1.48	1.65	1.69	1.57	1.13	0.213	0.890
Oxygen	mol%	19.99	20.99	24.67	6.00	1.74	24.49	0.61	29.11	22.53	16.22	17.08	31.25	2.84	19.89
Nitrogen	mol%	70.00	72.41	73.77	25.63	5.25	73.05	19.41	66.00	72.05	74.92	66.25	50.78	13.63	73.23
Carbon Dioxide	mol%	3.51	4.56	0.24	0.47	0.61	1.17	6.77	1.98	3.55	5.42	7.42	0.7	1.02	0.14
Methane	mol%	4.72	0.122	0.0650	65.00	88.92	0.0670	72.72	1.41	0.221	1.73	7.42	15.57	80.49	5.73
Ethane	mol%	0.138	0.0014	0.0015	2.29	2.98	0.0011	0.119	0.0231	0.0007	0.0148	0.0714	0.225	1.45	0.0970
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0002	ND
Propane	mol%	0.0108	0.0007	0.0004	0.177	0.240	ND	0.0002	ND	ND	0.0021	0.0090	0.0279	0.197	0.0136
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.0025	ND	ND	0.0459	0.0629	ND	0.0004	ND	ND	ND	0.0025	0.0071	0.0620	0.0044
N-butane	mol%	0.0019	ND	ND	0.0359	0.0487	ND	0.0001	ND	ND	ND	0.0016	0.0049	0.0448	0.0033
Iso-pentane	mol%	ND	ND	ND	0.0137	0.0185	ND	ND	ND	ND	ND	ND	0.0015	0.0205	0.0016
N-pentane	mol%	ND	ND	ND	0.0073	0.0096	ND	ND	ND	ND	ND	ND	0.0009	0.0118	0.0010
Hexanes +	mol%	0.0038	0.0058	0.0023	0.0106	0.0148	ND	0.0008	ND	0.0015	0.0028	0.0025	0.0052	0.0187	0.0029
Stable Isotopes															
δ ¹³ C (CH ₄)	‰	-44.36	NA	NA	-44.36	-43.89	NA	-67.98	-66.5	NA	-44.2	-39.07	-40.39	-40.70	-36.79
δD (CH ₄)	‰	-181	NA	NA	-182.8	-179.9	NA	-277.1	NA	NA	-175	-179	-161.9	-168.2	-151.9
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values detected in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		LDNR 18					LDNR 19				LDNR 21			
		Sample ID	Sample Date	Sampler	Units									
		2/28/23	5/17/23	9/20/23	12/13/23*	3/26/2024	2/28/23	5/18/23	12/11/23*	3/28/24	3/30/23	5/17/23	9/20/23	12/13/23
		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component		Surface Water (Bubble Site)												
Carbon Monoxide	mol%	ND	0.066	0.27	ND	ND	ND	0.26	ND	ND	0.11	0.25	0.12	ND
Helium	mol%	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.21	1.09	1.28	0.134	0.895	0.976	1.50	0.535	1.17	1.29	1.61	1.09	1.42
Oxygen	mol%	14.38	16.45	34.44	2.48	20.03	29.18	28.03	10.73	38.25	20.65	18.44	26.85	25.21
Nitrogen	mol%	52.67	79.94	61.19	9.16	73.61	43.27	63.87	40.42	58.83	75.31	73.33	69.78	63.27
Carbon Dioxide	mol%	3.08	1.67	0.3	0.71	0.086	2.83	2.92	1.27	0.34	1.77	5.64	0.16	2.79
Methane	mol%	28.32	0.784	2.49	86.23	5.31	23.62	3.40	46.71	1.40	0.860	0.721	1.970	7.230
Ethane	mol%	0.240	0.0028	0.0208	0.863	0.0470	0.106	0.0130	0.280	0.0089	0.0080	0.0015	0.0194	0.0665
Ethylene	mol%	ND	ND	ND	ND	0.0019	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	0.0616	0.0007	0.0052	0.228	0.0125	0.093	0.0007	0.0258	ND	0.0011	0.0008	0.0032	0.0087
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.176	0.0002	0.0015	0.0711	0.0038	0.0034	ND	0.0164	ND	0.0004	ND	0.001	0.0036
N-butane	mol%	0.132	ND	0.0012	0.0607	0.0033	ND	ND	0.0001	ND	ND	ND	0.0005	ND
Iso-pentane	mol%	0.0044	ND	ND	0.0266	0.0015	0.0004	ND	0.0044	ND	ND	ND	ND	0.0007
N-pentane	mol%	0.0024	ND	ND	0.0178	0.0010	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0044	0.0006	0.0045	0.0235	0.0030	0.0021	0.0036	0.0095	0.0006	0.0018	0.0031	0.0017	ND
Stable Isotopes														
δ ¹³ C (CH ₄)	‰	-36.62	-46.8	-37.5	-36.57	-35.54	-32.77	-36.1	-36.27	-32.3	-36.2	-48.0	-38.0	-38.00
δD (CH ₄)	‰	-154.9	-200	-145	-154.0	-144.1	-109.4	-139	-146.2	-120	-122	NA	150	-147
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values detected in the sample.
 ND - Not Detected
 NA - Not Analyzed (insufficient volume)
 * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		LDNR 22					LDNR 23					LDNR 24			
Sample ID	Sample Date	3/30/23	5/17/23	9/20/23	12/12/23*	3/26/24*	3/30/23	5/18/23	9/20/23	12/12/23	3/27/24*	5/22/23*	9/20/23*	12/11/23*	3/26/24*
Component	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Surface Water (Bubble Site)															
Carbon Monoxide	mol%	0.098	0.11	0.3	ND	ND	0.040	0.25	0.24	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.43	1.25	1.33	0.126	0.875	1.09	1.68	1.40	1.42	0.0492	0.0271	0.210	0.0269	0.491
Oxygen	mol%	20.90	16.79	32.90	2.25	19.51	21.18	14.37	30.67	28.99	0.34	0.13	4.05	0.27	10.72
Nitrogen	mol%	71.96	79.02	62.91	8.79	71.62	76.89	74.50	65.61	66.73	2.41	1.37	16.04	1.66	39.50
Carbon Dioxide	mol%	2.40	2.54	0.47	0.69	0.12	0.69	6.71	0.45	2.30	1.31	2.26	2.35	2.51	1.23
Methane	mol%	3.16	0.288	2.06	86.33	7.73	0.105	2.47	1.61	0.548	94.26	94.64	76.08	94.02	47.33
Ethane	mol%	0.410	0.0010	0.0253	1.34	0.111	0.0013	0.0124	0.0131	0.0081	1.13	0.884	0.729	0.869	0.422
Ethylene	mol%	0.0005	ND	ND	0.0184	0.0014	ND	ND	ND	ND	ND	0.150	0.110	0.133	0.0657
Propane	mol%	0.0064	0.0003	0.0045	0.233	0.0182	0.0002	0.0044	0.0036	0.0008	0.253	0.270	0.214	0.253	0.123
Propylene	mol%	ND	ND	ND	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.0015	ND	0.0012	0.0735	0.0057	ND	0.0015	0.0011	ND	0.0809	0.0828	0.0663	0.0799	0.0388
N-butane	mol%	0.0010	ND	0.0010	0.0646	0.0050	ND	0.0007	0.0008	ND	0.0690	0.0784	0.0623	0.0747	0.0351
Iso-pentane	mol%	ND	ND	ND	0.0296	0.0024	ND	ND	ND	ND	0.0352	0.0347	0.0282	0.0347	0.0159
N-pentane	mol%	ND	ND	ND	0.0208	0.0017	ND	ND	ND	ND	0.0246	0.0259	0.0214	0.0264	0.0120
Hexanes +	mol%	0.0020	0.0010	0.0073	0.0324	0.0034	0.0007	0.0037	0.0038	ND	0.0338	0.0460	0.0378	0.0445	0.0188
Stable Isotopes															
δ ¹³ C (CH ₄)	‰	-38.40	-44.40	-37.00	-38.50	-38.67	-34.0	-33.0	-37.6	-35.7	-36.56	-35.9	-35.52	-35.28	-35.56
δD (CH ₄)	‰	-156	NA	NA	-154.7	-155.2	NA	-99	NA	NA	-153.0	-146.8	-145.7	-154.0	-147.6
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values detected in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		LDNR 25			LDNR 26				LDNR 27		LDNR 28	
		Sample ID	Sample Date	Sampler	Sample ID	Sample Date	Sampler	Sample ID	Sample Date	Sampler	Sample ID	Sample Date
Component		Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Surface Water (Bubble Site)												
Carbon Monoxide	mol%	0.20	ND	ND	ND	0.063	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	ND	0.0052	NA	ND	NA	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.30	1.46	0.946	1.46	1.29	0.213	0.157	1.71	0.942	0.300	0.942
Oxygen	mol%	28.32	33.30	14.82	18.56	17.19	2.25	1.23	23.25	21.22	1.95	21.21
Nitrogen	mol%	69.58	63.82	41.82	66.42	75.71	13.90	8.79	73.42	77.78	16.00	77.75
Carbon Dioxide	mol%	0.40	1.18	2.04	7.87	3.62	1.39	1.14	1.51	0.052	0.62	0.057
Methane	mol%	0.195	0.233	39.39	5.68	2.12	81.36	87.76	0.106	0.0063	80.47	0.0434
Ethane	mol%	0.0027	0.0038	0.909	0.0076	0.0116	0.723	0.748	0.0007	ND	0.477	0.0003
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	0.0432	ND	0.0009	0.0634	0.0634	ND	ND	0.107	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	0.0134	ND	0.0006	0.0736	0.0779	ND	ND	0.0466	ND
N-butane	mol%	ND	ND	0.0072	ND	ND	0.0030	0.0027	ND	ND	0.0173	ND
Iso-pentane	mol%	ND	ND	0.0021	ND	ND	0.0150	0.0155	ND	ND	0.0051	ND
N-pentane	mol%	ND	ND	0.0010	ND	ND	0.0001	0.0001	ND	ND	0.0014	ND
Hexanes +	mol%	0.0038	ND	0.0046	0.0025	0.0027	0.0065	0.0074	ND	0.0003	0.0007	0.0002
Stable Isotopes												
δ ¹³ C (CH ₄)	‰	NA	NA	-51.54	-48.74	-40.8	-38.38	-38.14	NA	NA	-34.64	NA
δD (CH ₄)	‰	NA	NA	-191.4	-242	-157	-155.6	-153.6	NA	NA	-152.3	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values detected in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		SN 67269					SN 67270				Central Pond	LDNR 20
Sample ID		PPG 7A BS					PPG 7B BS					
Sample Date		1/25/23	5/17/23*	9/20/23*	12/11/23*	3/28/24*	2/16/23	5/18/23	9/18/23	3/28/2024	1/25/23	3/9/23
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	Units	Surface Water (Bubble Site)									Surface Water	
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	0.023
Helium	mol%	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	0.744	0.823	0.754	0.215	0.927	0.955	1.58	0.969	1.40	1.98	1.01
Oxygen	mol%	16.39	18.25	15.34	3.92	20.72	19.64	25.16	19.27	17.34	0.41	22.40
Nitrogen	mol%	41.21	66.37	61.16	16.65	76.20	76.59	68.50	79.45	79.85	84.79	76.38
Carbon Dioxide	mol%	0.29	0.07	0.39	0.034	0.047	0.51	1.69	0.30	0.64	12.25	0.16
Methane	mol%	40.83	14.3	22.05	78.13	2.08	2.26	3.00	0.0036	0.756	0.302	0.0245
Ethane	mol%	0.397	0.132	0.216	0.733	0.0159	0.0333	0.0427	0.0001	0.0011	0.0015	ND
Ethylene	mol%	0.0013	0.0001	ND	0.0007	ND	0.0011	ND	ND	ND	ND	ND
Propane	mol%	0.099	0.0372	0.0607	0.207	0.0047	0.0085	0.0192	0.0013	0.0026	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	0.0286	0.013	0.0207	0.0699	0.0017	0.0011	0.0043	0.0007	0.0026	ND	ND
N-butane	mol%	0.0106	0.005	0.0080	0.0258	0.0006	0.0024	0.0043	0.0012	0.0037	ND	ND
Iso-pentane	mol%	0.013	0.0011	0.0018	0.0052	0.0001	0.0005	ND	0.0003	0.0016	ND	ND
N-pentane	mol%	ND	0.0003	0.0005	0.0013	ND	0.0004	ND	0.0002	0.0005	ND	ND
Hexanes +	mol%	0.003	0.0022	0.0018	0.0037	0.0003	0.001	0.0028	0.0009	0.0011	0.0037	0.005
Stable Isotopes												
δ ¹³ C (CH4)	‰	-35.6	-34.94	-33.32	-31.20	-34.17	-46.02	-38.20	NA	-74.1	NA	NA
δD (CH4)	‰	-150.3	-144.2	-141.4	-146.7	-141.9	-183.6	-117.0	NA	NA	NA	NA
δ ¹³ C (CO2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Bolded values detected in the sample.

ND - Not Detected

NA - Not Analyzed (insufficient volume)

* - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		WW 11												
		019-580												
Sample ID	Sample Date	1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	8/22/23	9/20/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24
Sampler	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
		Industrial Water Wells												
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.64	1.17	1.66	1.76	1.48	1.75	1.66	1.48	1.46	1.79	1.76	1.44	1.79
Oxygen	mol%	5.59	14.38	9.66	11.60	17.51	8.22	6.23	7.14	7.85	2.29	3.83	8.42	3.73
Nitrogen	mol%	79.08	80.66	76.17	72.37	73.84	75.69	80.38	84.09	83.27	84.45	83.13	82.49	83.25
Carbon Dioxide	mol%	13.23	3.75	11.99	14.23	7.13	13.80	11.30	7.24	7.39	11.42	11.27	7.62	11.18
Methane	mol%	0.456	0.0421	0.517	0.0348	0.0321	0.532	0.433	0.0336	0.0315	0.0504	0.0065	0.0339	0.055
Ethane	mol%	ND	ND	0.0007	ND	0.0005	ND	ND	ND	ND	0.0006	ND	ND	0.0008
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0042	0.0008	0.0039	0.0030	0.0041	0.0031	0.0031	0.0127	0.0004	ND	0.0018	0.0009	0.0011
Stable Isotopes														
δ ¹³ C (CH ₄)	‰	-56.4	NA	-59.6	NA	NA	-56.6	-56.2	NA	NA	NA	NA	NA	NA
δD (CH ₄)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	-19.21	NA	NA	NA	NA	NA	NA	NA

Notes:

Bolded values detected in the sample.

ND - Not Detected

NA - Not Analyzed (insufficient volume)

* - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		WW 13												
		019-582												
Sample ID	Sample Date	1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	8/22/23	9/20/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/24/24
Sampler	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
		Industrial Water Wells												
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.76	1.27	1.61	1.27	1.56	1.58	1.72	1.48	1.31	1.81	1.62	1.46	1.41
Oxygen	mol%	5.03	13.10	8.07	4.94	16.60	10.74	3.50	8.07	6.70	1.84	3.70	8.46	3.23
Nitrogen	mol%	82.36	80.92	80.13	88.21	73.36	74.73	79.67	83.08	84.49	84.35	84.88	81.68	87.79
Carbon Dioxide	mol%	10.83	4.66	9.64	5.26	8.46	12.76	13.9	7.32	7.46	11.93	9.59	8.35	7.52
Methane	mol%	0.0186	0.0516	0.547	0.313	0.0154	0.189	1.21	0.0474	0.0367	0.0713	0.207	0.0443	0.0469
Ethane	mol%	ND	ND	0.0022	0.0012	ND	ND	0.0029	ND	ND	0.0007	0.0009	ND	0.0005
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0018	0.0007	0.0027	0.0012	0.0023	0.0040	0.0034	0.0021	ND	ND	0.0052	0.0010	ND
Stable Isotopes														
δ ¹³ C (CH ₄)	‰	NA	NA	-62.3	NA	NA	NA	-57.9	NA	NA	NA	NA	NA	NA
δD (CH ₄)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	-20.51	NA	NA	NA	NA	NA	NA	NA

Notes:

Bolded values deteted in the sample.

ND - Not Detected

NA - Not Analyzed (insufficient volume)

* - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		WW 12											
		019-995											
Sample ID	Sample Date	1/26/23	3/30/23	4/27/23	5/22/23	6/16/23	8/22/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24
Sampler	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
		Industrial Water Wells											
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.75	1.29	1.61	1.77	1.60	1.55	1.62	1.81	1.85	1.74	1.80	1.65
Oxygen	mol%	6.3	11.66	11.53	10.41	14.54	11.52	6.19	3.26	3.02	5.49	4.57	7.24
Nitrogen	mol%	80.84	81.99	77.35	76.58	75.78	76.96	82.94	82.26	82.91	81.38	77.39	82.06
Carbon Dioxide	mol%	10.81	4.83	9.19	10.71	8.00	9.95	9.23	12.52	12.09	11.00	16.23	9.05
Methane	mol%	0.294	0.231	0.313	0.532	0.0701	0.0162	0.0129	0.151	0.124	0.385	0.0089	0.0118
Ethane	mol%	ND	0.0005	ND	ND	0.0016	ND	ND	ND	ND	ND	ND	ND
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	0.0005	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0019	0.0018	0.0034	0.0020	0.0032	0.0031	0.0047	ND	0.0014	0.0013	0.0010	ND
Stable Isotopes													
δ ¹³ C (CH ₄)	‰	NA	-56.6	-68.7	-78.7	NA	NA	NA	NA	NA	-78.0	NA	NA
δD (CH ₄)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	-20.47	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values deteted in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		WW 19											
		019-1055											
Sample ID	Sample Date	1/26/23	3/30/23	4/27/23	5/18/23	6/16/23	8/22/23	9/20/23	11/28/23	12/14/23	1/31/24	2/20/24	4/23/24
Sampler	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
		Industrial Water Wells											
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.39	1.23	1.68	1.64	1.55	1.55	1.66	1.50	1.43	1.78	1.73	1.55
Oxygen	mol%	9.78	13.74	9.15	11.70	15.55	8.81	4.65	8.45	8.51	2.06	2.62	7.32
Nitrogen	mol%	82	80.18	78.32	76.17	75.03	79.23	77.74	82.32	80.06	83.87	82.03	82.3
Carbon Dioxide	mol%	6.53	4.67	10.43	10.09	7.82	10.04	15.52	7.64	9.71	11.85	13.20	8.57
Methane	mol%	0.3	0.180	0.411	0.396	0.049	0.369	0.423	0.0854	0.291	0.435	0.418	0.261
Ethane	mol%	0.0013	0.0007	0.0017	0.0021	0.0005	0.0016	0.0021	ND	0.0015	0.0018	0.0020	0.0012
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.002	0.0015	0.0034	0.0021	0.0021	0.0027	0.0036	0.004	ND	0.0006	0.0040	0.0007
Stable Isotopes													
δ ¹³ C (CH ₄)	‰	-53.9	-53.5	-52.7	-21.3	NA	-53.8	-52.8	NA	-51.2	-53.3	-52.8	-52.8
δD (CH ₄)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	-20.10	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values detected in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		WW 40						
		019-1603						
Sample ID		3/30/23	5/18/23	6/16/23	9/19/23	12/14/23	1/31/24	3/28/24
Sample Date		ERM	ERM	ERM	ERM	ERM	ERM	ERM
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	Units	Industrial Water Wells						
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.26	1.57	1.56	1.12	1.77	1.51	1.95
Oxygen	mol%	11.67	10.06	13.05	15.46	5.29	8.5	3.05
Nitrogen	mol%	82.50	73.32	82.13	78.53	81.98	81.95	81.14
Carbon Dioxide	mol%	3.77	4.67	3.25	4.25	10.16	7.85	13.83
Methane	mol%	0.802	10.37	0.0095	0.641	0.799	0.193	0.0268
Ethane	mol%	0.0009	0.0075	ND	0.0014	ND	0.0004	ND
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0013	0.0035	0.0010	0.0012	ND	ND	ND
Stable Isotopes								
$\delta^{13}\text{C}$ (CH ₄)	‰	-89.5	-57.53	NA	-60.3	-60.5	NA	NA
δD (CH ₄)	‰	-282	-110.9	NA	-125	NA	NA	NA
$\delta^{13}\text{C}$ (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA

Notes:

Bolded values detected in the sample.

ND - Not Detected

NA - Not Analyzed (insufficient volume)

* - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		Cottages Well											
Sample ID		019-17636Z											
Sample Date		4/27/23	5/18/23	6/16/23	7/17/23	8/22/23	9/20/23	11/28/23	12/14/23	1/31/24	2/20/24	3/28/24	4/23/24
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	Units	Industrial Water Wells											
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	0.071	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0098
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	1.43	1.58	1.33	1.50	1.34	1.35	1.68	1.73	1.79	1.72	1.26	0.96
Oxygen	mol%	20.30	17.31	18.77	16.60	13.82	10.78	4.95	2.30	2.05	2.41	10.17	18.84
Nitrogen	mol%	70.51	70.87	68.11	70.87	75.96	77.25	79.57	78.59	80.52	80.79	81.74	78.29
Carbon Dioxide	mol%	7.28	7.44	9.81	9.69	7.56	9.41	12.07	15.26	13.12	13.16	5.71	1.66
Methane	mol%	0.476	2.80	1.98	1.34	1.32	1.14	1.73	2.12	2.52	1.92	1.12	0.241
Ethane	mol%	ND	ND	ND	ND	ND	0.0017	ND	ND	ND	ND	ND	ND
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propane	mol%	ND	ND	ND	ND	ND	0.0009	ND	ND	ND	ND	ND	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0015	0.0014	0.0030	0.0019	0.0030	0.0026	0.0039	ND	ND	0.0034	0.0006	0.0002
Stable Isotopes													
δ ¹³ C (CH ₄)	‰	-76.1	-94.4	-93.2	-78.3	-80.4	-80.2	-79.1	-82.0	-84.1	-79.7	-89.7	-92.6
δD (CH ₄)	‰	NA	-278	-265	NA	-164	NA	-159	NA	-198	-159	-231	-258
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	-22.5	NA	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values detected in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location Sample ID Sample Date Sampler		MW-1						MW-2										
		MW-1-200			MW-1-500			MW-1-700		MW-2-200			MW-2-500			MW-2-700		
		12/28/23	3/27/24	4/22/24	12/27/23	3/27/24	4/22/24	3/26/24	4/22/24	1/31/24	3/26/24	4/23/24	1/31/24	3/26/24	4/22/24	1/30/24	3/26/24	4/23/24
Units		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	
Monitoring Wells																		
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Argon	mol%	0.359	0.564	0.34	1.90	1.85	1.36	1.60	1.67	0.25	0.331	0.316	1.65	2.01	1.93	1.48	1.80	1.83
Oxygen	mol%	0.51	8.34	1.41	0.99	3.31	3.67	2.01	3.12	1.23	1.72	0.84	2.91	2.82	3.13	13.50	3.71	5.21
Nitrogen	mol%	16.92	39.44	14.49	88.83	84.03	60.04	75.24	73.73	7.27	11.89	11.09	73.26	92.24	86.68	77.05	85.21	83.34
Carbon Dioxide	mol%	0.55	0.25	0.35	6.85	2.48	1.05	0.12	0.15	ND	ND	ND	ND	2.19	2.05	ND	ND	ND
Methane	mol%	81.63	51.39	83.37	1.42	8.33	33.87	21.02	21.32	91.12	85.97	87.67	22.16	0.743	6.21	7.93	9.27	9.62
Ethane	mol%	0.0323	0.0194	0.0322	0.0008	0.0009	ND	0.0043	0.0037	0.0964	0.0690	0.0685	0.0134	ND	0.0008	0.0325	0.0027	0.0025
Ethylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0015	ND	ND	0.0006	ND	ND
Propane	mol%	0.0002	ND	ND	ND	ND	ND	ND	ND	0.0214	0.0097	0.0094	0.0022	ND	ND	0.0062	0.0013	0.0008
Propylene	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	ND	ND	ND	ND	0.0006	0.001	0.0113	0.0050	0.0051	0.0015	ND	0.0013	0.0006	ND	0.001
N-butane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	0.0029	0.0022	0.0015	ND	ND	ND	ND	ND	ND
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	0.0008	0.0004	0.0004	ND	ND	ND	ND	ND	ND
N-pentane	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexanes +	mol%	0.0014	0.0003	ND	ND	ND	ND	0.0067	ND	ND	0.0004	ND	ND	0.0018	0.0018	0.0006	0.0013	0.0018
Stable Isotopes																		
$\delta^{13}\text{C}$ (CH ₄)	‰	-56.2	-56.81	-56.68	-68.8	-86.06	-75.80	-81.93	-82.87	-47.6	-49.82	-49.33	-49.3	-62.1	-77.1	-64.1	-83.69	-83.68
δD (CH ₄)	‰	-192.1	-191.1	-195.8	NA	-353	-319.9	-208.3	-210.6	-186.2	-183.6	-182.4	-186.4	NA	-319	-202.2	-193.6	-187.8
$\delta^{13}\text{C}$ (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Bolded values deteted in the sample.
 ND - Not Detected
 NA - Not Analyzed (insufficient volume)
 * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		MW-3						SN 57788	SN 32069		SN 37320	
		MW-3-200		MW-3-500		MW-3-700		6X Brine	Brine Well 2		Cavern 4	
Sample ID	Sample Date	3/27/24	4/23/24	3/27/24	4/23/24	3/27/24	4/24/24	1/25/23	5/22/23*	9/18/23*	3/28/24*	9/20/23*
Sampler	Units	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component		Monitoring Wells										
		Brine										
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	ND	ND	ND	0.0466	0.0483	0.0136	0.0560
Argon	mol%	0.411	0.324	0.873	0.859	1.12	1.29	1.91	0.0341	0.0547	0.0411	0.150
Oxygen	mol%	0.92	0.44	7.47	1.24	10.21	5.51	0.74	0.21	0.64	0.46	0.88
Nitrogen	mol%	17.82	11.99	55.64	36.97	63.14	53.69	79.17	10.9	12.99	7.32	65.43
Carbon Dioxide	mol%	ND	ND	0.32	0.02	1.00	0.28	5.31	3.88	2.78	1.99	0.28
Methane	mol%	80.80	87.19	35.35	60.34	24.48	39.16	11.72	84.12	82.76	86.93	32.05
Ethane	mol%	0.0431	0.0493	0.299	0.509	0.0466	0.0733	0.462	0.339	0.300	0.433	0.173
Ethylene	mol%	0.0005	0.0004	0.0015	0.0027	ND	ND	0.0193	ND	ND	ND	ND
Propane	mol%	ND	ND	0.0217	0.0318	0.0052	0.0069	0.389	0.0587	0.0558	0.135	0.198
Propylene	mol%	ND	ND	ND	0.0004	ND	ND	0.0006	ND	ND	ND	ND
Iso-butane	mol%	ND	ND	0.0066	0.0065	ND	ND	0.0312	0.0321	0.0260	0.0955	0.0719
N-butane	mol%	ND	ND	0.0009	0.0007	ND	ND	0.0893	0.123	0.0955	0.466	0.254
Iso-pentane	mol%	ND	ND	ND	ND	ND	ND	0.0162	0.0643	0.0548	0.389	0.1150
N-pentane	mol%	ND	ND	ND	ND	ND	ND	0.0193	0.0837	0.0752	0.622	0.1520
Hexanes +	mol%	0.0026	0.0011	0.0173	0.0199	0.0009	ND	0.12	0.105	0.117	1.10	0.191
Stable Isotopes												
δ ¹³ C (CH4)	‰	-48.64	-47.5	-44.75	-44.71	-72.08	-71.75	-38.98	-34.64	-34.49	-34.22	-34.15
δD (CH4)	‰	-187.3	-186.8	-151.5	-156.4	-193.5	-200.7	-171.7	-144.9	-143.8	-145.6	-140.8
δ ¹³ C (CO2)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- Bolded** values detected in the sample.
- ND - Not Detected
- NA - Not Analyzed (insufficient volume)
- * - Gas sample (not dissolved gas)

Table 4
Gas Data Summary
 Sulphur Dome
 Calcasieu Parish, Louisiana

Sample Location		Starks Tie-In	SN 973224	SN 973365	SN 974245	SN 209459	SN 189416		SN 246792	BCKGRD ATM	
Sample ID			Brine Well 18	Brine Well 21	Brine Well 22	Fee 1012	Fee 969		Fee 1026		
Sample Date		10/30/23	10/30/23	10/30/23	10/30/23	5/2/23*	5/25/23*	8/29/23*	5/25/23*	12/13/23*	3/28/24*
Sampler		ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM	ERM
Component	Units	Brine				Oil Wells				Background	
Carbon Monoxide	mol%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Helium	mol%	NA	NA	NA	NA	ND	0.0089	ND	ND	ND	ND
Hydrogen	mol%	ND	ND	ND	ND	1.40	0.02	ND	3.37	ND	ND
Argon	mol%	1.38	1.68	1.53	1.35	0.0086	0.0630	0.0400	0.0125	0.867	0.942
Oxygen	mol%	7.65	1.95	6.80	2.09	0.015	0.13	0.12	0.24	19.41	21.22
Nitrogen	mol%	72.47	75.33	77.42	61.67	0.38	9.27	3.71	0.83	79.64	77.79
Carbon Dioxide	mol%	13.83	12.71	8.33	10.68	1.34	ND	0.012	ND	0.062	0.51
Methane	mol%	4.65	8.28	5.77	23.80	88.34	89.63	93.74	89.59	0.0230	0.0006
Ethane	mol%	0.0033	0.039	0.0966	0.332	3.11	0.592	1.4	4.39	0.0006	ND
Ethylene	mol%	ND	0.0011	0.0015	0.0010	ND	0.001	0.0003	0.0002	ND	ND
Propane	mol%	0.0013	0.0038	0.0208	0.0468	2.78	0.202	0.662	1.17	0.0003	ND
Propylene	mol%	ND	ND	ND	ND	ND	ND	0.0002	ND	ND	ND
Iso-butane	mol%	ND	0.0011	0.0077	0.0107	0.701	0.0326	0.118	0.117	0.0001	ND
N-butane	mol%	ND	0.0011	0.0073	0.0083	0.905	0.0381	0.135	0.135	0.0002	ND
Iso-pentane	mol%	ND	ND	0.0039	0.0024	2.7	0.0072	0.0214	0.0273	ND	ND
N-pentane	mol%	ND	ND	0.0023	0.0015	0.191	0.0053	0.0138	0.0789	0.0001	ND
Hexanes +	mol%	0.0114	0.0059	0.0081	0.0073	0.562	0.0069	0.0319	0.0948	0.0002	0.0002
Stable Isotopes											
δ ¹³ C (CH ₄)	‰	-68.91	-35.32	-36.62	-38.18	-45.41	-53.33	-53.17	-47.78	NA	NA
δD (CH ₄)	‰	-183	-131.6	-132.62	-148.0	-168.6	-174.4	-177.8	-179.8	NA	NA
δ ¹³ C (CO ₂)	‰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Bolded values deteted in the sample.

ND - Not Detected

NA - Not Analyzed (insufficient volume)

* - Gas sample (not dissolved gas)

Table 5
Survey Results and Groundwater Elevations
 Sulphur Dome
 Calcasieu Parish, Louisiana

Well ID	UTM X	UTM Y	Screened Interval	Screen Length	Top of Casing Elevation	Ground Elevation	Stickup	Total Depth	Mid Screen	Mid Screen Elevation	TDS	Calcuated Density	3/25-27/2024			4/22/2024		
													DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH
	m	m	ft bgs	ft	ft	ft	ft	ft btoc	ft bgs	ft	mg/L	kg/m ³	ft btoc	ft	ft	ft btoc	ft	ft
MW-1-200	460257.857	3347201.961	162-172	10	12.75	9.22	3.53	175.81	167	-158.06	328	998.434	23.83	-11.08	-11.05	23.83	-11.08	-11.05
MW-1-500	460260.314	3347203.590	503-513	10	12.11	9.30	2.81	515.90	508	-498.79	296	998.411	53.35	-41.24	-41.14	54.65	-42.54	-42.44
MW-1-700	460262.682	3347205.242	694-674	10	12.17	9.26	2.91	708.40	699	-691.23	494	998.553	52.90	-40.73	-40.50	54.08	-41.91	-41.68
MW-2-200	460190.048	3346592.350	230-240	10	14.56	11.40	3.16	243.06	235	-223.50	260	998.386	46.88	-32.32	-32.29	47.20	-32.64	-32.61
MW-2-500	460186.918	3346593.844	502-512	10	14.61	11.51	3.10	515.10	507	-495.49	296	998.411	57.19	-42.58	-42.48	58.66	-44.05	-43.95
MW-2-700	460198.229	3346589.473	680-690	10	14.69	11.09	3.60	694.60	685	-674.91	594	998.624	57.05	-42.36	-42.09	58.63	-43.94	-43.67
MW-3-200	460555.076	3346638.627	228-238	10	14.74	12.04	2.70	242.69	233	-222.95	552	998.594	50.35	-35.61	-35.54	51.49	-36.75	-36.68
MW-3-500	460555.867	3346635.699	464-474	10	15.08	11.64	3.44	475.95	469	-455.87	2,220	999.786	56.74	-41.66	-41.00	57.92	-42.84	-42.18
MW-3-700	460557.858	3346628.300	680-690	10	14.41	11.53	2.88	695.38	685	-675.97	4,320	1,001.286	56.64	-42.23	-40.27	57.75	-43.34	-41.38

Notes:
 Coordinates, Top of Casing Elevation, and Ground elevation data from Mayeux Surveying.
 All elevation data are referenced to NAVD '88 datum.
 Depth to water (DTW) measurements are shown as depth below top of casing (btoc).
 Density is calculated using Langevin, et al., 2003.
 ft bgs = feet below ground surface
 EFWH = Equivalent fresh water head (corrected for density based on TDS), based on Post, et al., 2007.



ATTACHMENT 1

LABORATORY REPORTS



10450 Stancliff Rd. Suite 210
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March 04, 2024

Scott Himes
Environmental Resources Mgmt.
CityCentre Four
840 W. Sam Houston Pkwy., Suite 600
Houston, TX 77024

Work Order: **HS24021710**

Laboratory Results for: **Weslake Bubble Site**

Dear Scott Himes,

ALS Environmental received 1 sample(s) on Feb 28, 2024 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

Bernadette A. Fini
Project Manager

Client: Environmental Resources Mgmt.
Project: Weslake Bubble Site
Work Order: HS24021710

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24021710-01	Bubble Site- Oily Water	Water		26-Feb-2024 14:50	28-Feb-2024 13:35	<input type="checkbox"/>

Client: Environmental Resources Mgmt.
Project: Weslake Bubble Site
Work Order: HS24021710

CASE NARRATIVE

WetChemistry by Method M2540C

Batch ID: R460336

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SW9056

Batch ID: R460324

Sample ID: HS24021742-01MS

- MS and MSD are for an unrelated sample (Sulfate)
-

Client: Environmental Resources Mgmt.
 Project: Weslake Bubble Site
 Sample ID: Bubble Site- Oily Water
 Collection Date: 26-Feb-2024 14:50

ANALYTICAL REPORT

WorkOrder:HS24021710
 Lab ID:HS24021710-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C-2011		Method:M2540C					Analyst: HB
Total Dissolved Solids (Residue, Filterable)	1,060		5.00	10.0	mg/L	1	01-Mar-2024 13:30
ANIONS BY SW9056A		Method:SW9056					Analyst: TH
Chloride	400		2.00	5.00	mg/L	10	01-Mar-2024 16:21
Sulfate	285		2.00	5.00	mg/L	10	01-Mar-2024 16:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
Project: Weslake Bubble Site
WorkOrder: HS24021710

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R460324 (0)		Test Name : ANIONS BY SW9056A			Matrix: Water	
HS24021710-01	Bubble Site- Oily Water	26 Feb 2024 14:50			01 Mar 2024 16:21	10
Batch ID: R460336 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011			Matrix: Water	
HS24021710-01	Bubble Site- Oily Water	26 Feb 2024 14:50			01 Mar 2024 13:30	1

Client: Environmental Resources Mgmt.
Project: Weslake Bubble Site
WorkOrder: HS24021710

QC BATCH REPORT

Batch ID: R460324 (0)		Instrument: ICS-Integrion		Method: ANIONS BY SW9056A					
MBLK	Sample ID: MBLK	Units: mg/L			Analysis Date: 01-Mar-2024 13:59				
Client ID:		Run ID: ICS-Integrion_460324		SeqNo: 7865014		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	U	0.500							
Sulfate	U	0.500							

LCS	Sample ID: LCS	Units: mg/L			Analysis Date: 01-Mar-2024 14:05				
Client ID:		Run ID: ICS-Integrion_460324		SeqNo: 7865015		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	19.68	0.500	20	0	98.4	80 - 120			
Sulfate	20.74	0.500	20	0	104	80 - 120			

MS	Sample ID: HS24021742-01MS	Units: mg/L			Analysis Date: 01-Mar-2024 14:16				
Client ID:		Run ID: ICS-Integrion_460324		SeqNo: 7865017		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	15.41	0.500	10	5.555	98.6	80 - 120			
Sulfate	90.18	0.500	10	85.04	51.4	80 - 120			SO

MSD	Sample ID: HS24021742-01MSD	Units: mg/L			Analysis Date: 01-Mar-2024 14:22				
Client ID:		Run ID: ICS-Integrion_460324		SeqNo: 7865018		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	15.44	0.500	10	5.555	98.9	80 - 120	15.41	0.207	20
Sulfate	90.44	0.500	10	85.04	53.9	80 - 120	90.18	0.286	20 SO

The following samples were analyzed in this batch: HS24021710-01

Client: Environmental Resources Mgmt.
Project: Weslake Bubble Site
WorkOrder: HS24021710

QC BATCH REPORT

Batch ID: R460336 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK	Sample ID: WMBLK-03012024	Units: mg/L			Analysis Date: 01-Mar-2024 13:30				
Client ID:	Run ID: Balance1_460336	SeqNo: 7865299		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

LCS	Sample ID: WLCS-03012024	Units: mg/L			Analysis Date: 01-Mar-2024 13:30				
Client ID:	Run ID: Balance1_460336	SeqNo: 7865298		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 996 10.0 1000 0 99.6 85 - 115

DUP	Sample ID: HS24021703-02DUP	Units: mg/L			Analysis Date: 01-Mar-2024 13:30				
Client ID:	Run ID: Balance1_460336	SeqNo: 7865285		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 10620 10.0 10180 4.23 20

DUP	Sample ID: HS24021703-01DUP	Units: mg/L			Analysis Date: 01-Mar-2024 13:30				
Client ID:	Run ID: Balance1_460336	SeqNo: 7865283		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 9040 10.0 8580 5.22 20

The following samples were analyzed in this batch: HS24021710-01

Client: Environmental Resources Mgmt.
Project: Weslake Bubble Site
WorkOrder: HS24021710

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L22-90-R2	31-Mar-2024
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624 - 2024	31-Dec-2024
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-32	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

Sample Receipt Checklist

Work Order ID: HS24021710

Date/Time Received: 28-Feb-2024 13:35

Client Name: ERMSW-HOU

Received by: Monica Smith

Completed By: /S/ <u>Monica Smith</u>	01-Mar-2024 10:33	Reviewed by: /S/ <u>Bernadette A. Fini</u>	01-Mar-2024 13:20
eSignature	Date/Time	eSignature	Date/Time

Matrices: Water

Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Samplers name present on COC? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

1 Page(s)
COC IDs:ALS COC-No Id

Temperature(s)/Thermometer(s):	7.5 UC/7.4 C	IR31
Cooler(s)/Kit(s):	Red	
Date/Time sample(s) sent to storage:	03/31/2024 1034	
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/> No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/> No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1



Environmental Resources Mgmt.
Westlake Bubble Site

HS24021710

Customer Information		Project Information					Parameter/Method Request for Ana										
Purchase Order		Project Name	Westlake Bubble Site			A	Chloride										
Work Order		Project Number	0722101			B	Sulfate										
Company Name	ERM	Bill To Company	✓			C	TDS										
Send Report To	Scott Himes	Invoice Attn.				D											
Address	840 W. Sam Houston Hwy N., Suite 600	Address				E											
City/State/Zip	Houston Tx 77024	City/State/Zip				F											
Phone	832-209-8811	Phone				G											
Fax		Fax				H											
e-Mail Address	Scott.Himes@ERM.com	e-Mail Address				I											
					J												
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Bubble Site - City Water	2/26/24	1450	Water	8	1	X	X	X								
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Sampler(s): Please Print & Sign David Sanguinetti / DSJ		Shipment Method:		Required Turnaround Time: <input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				Results Due Date:									
Relinquished by: DSJ	Date: 2/26/24	Time: 1335	Received by:			Notes:											
Relinquished by:	Date: 2/26/24	Time: 1335	Received by (Laboratory): [Signature]			Cooler Temp. 1.5	QC Package: (Check Box Below)										
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):			Level II: Standard QC		Level III: Std QC + Raw Data				Level IV: SW846 CLP-Like				
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035		Other:															

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group. Copyright 2008 by ALS Laboratory Group



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T: +1 281 530 5656
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April 05, 2024

Scott Himes
Environmental Resources Mgmt.
CityCentre Four
840 W. Sam Houston Pkwy., Suite 600
Houston, TX 77024

Work Order: **HS24040024**

Laboratory Results for: **Sulphur Dome**

Dear Scott Himes,

ALS Environmental received 9 sample(s) on Mar 29, 2024 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

Bernadette A. Fini
Project Manager

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040024

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24040024-01	019-582	Water		28-Mar-2024 08:15	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-02	019-580	Water		28-Mar-2024 08:20	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-03	Cottages Well	Water		28-Mar-2024 08:45	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-04	PPB No.7B	Water		28-Mar-2024 09:15	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-05	LDNR-19	Water		28-Mar-2024 11:20	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-06	LDNR-09	Water		28-Mar-2024 11:45	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-07	019-1603	Water		28-Mar-2024 13:45	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-08	019-995	Water		28-Mar-2024 13:20	29-Mar-2024 11:45	<input type="checkbox"/>
HS24040024-09	Trip Blank	Water	VBLKW-032124-36	29-Mar-2024 00:00	29-Mar-2024 11:45	<input checked="" type="checkbox"/>

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040024

CASE NARRATIVE

Work Order Comments

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Work Order Comments

- Login notes:
Trip blanks not on COC. Placed on hold.

GC Semivolatiles by Method MA EPH

Batch ID: 209839

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method MA VPH

Batch ID: R463013,R463015

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R463081

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470A

Batch ID: 210021

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A

Batch ID: 209729

Sample ID: HS24031762-09MS

- MS and MSD are for an unrelated sample

Sample ID: HS24031762-09PDS

- PDS is for an unrelated sample

WetChemistry by Method E376.1

Batch ID: R463103

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500H+ B

Batch ID: R463237

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040024

CASE NARRATIVE

WetChemistry by Method SM2320B

Batch ID: R463216

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SM4500 S2-F

Batch ID: R463071

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SW9056

Batch ID: R463032

Sample ID: PPB No.7B (HS24040024-04)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Bromide)
-

WetChemistry by Method M2540C

Batch ID: R463003

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-582
 Collection Date: 28-Mar-2024 08:15

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 13:30
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 13:30
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 13:30
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 13:30
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 13:30
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 13:30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>106</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>84.1</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:30</i>
<i>Surr: Dibromofluoromethane</i>	<i>104</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:30</i>
<i>Surr: Toluene-d8</i>	<i>99.1</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:30</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 07:04
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 07:04
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 07:04
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>84.9</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 07:04</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>85.7</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 07:04</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 21:35
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 21:35
Aliphatics >C16 - C35	0.0365		0.00800	0.00800	mg/L	1	04-Apr-2024 21:35
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 21:35
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 21:35
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 21:35
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 21:35
<i>Surr: 1-Chlorooctadecane</i>	<i>70.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 21:35</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>87.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 21:35</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>95.5</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 21:35</i>
<i>Surr: o-Terphenyl</i>	<i>71.8</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 21:35</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-582
 Collection Date: 28-Mar-2024 08:15

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.000870	J	0.000400	0.00200	mg/L	1	03-Apr-2024 23:18
Barium	0.221		0.00190	0.00400	mg/L	1	03-Apr-2024 23:18
Calcium	23.4		0.0340	0.500	mg/L	1	03-Apr-2024 23:18
Chromium	0.000540	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:18
Iron	3.24		0.0120	0.200	mg/L	1	03-Apr-2024 23:18
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:18
Magnesium	7.25		0.0100	0.200	mg/L	1	03-Apr-2024 23:18
Manganese	0.385		0.000700	0.00500	mg/L	1	03-Apr-2024 23:18
Nickel		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:18
Potassium	2.51		0.0180	0.200	mg/L	1	03-Apr-2024 23:18
Sodium	25.0		0.0140	0.200	mg/L	1	03-Apr-2024 23:18
Strontium	0.217		0.000200	0.00500	mg/L	1	03-Apr-2024 23:18
Vanadium	0.00475	J	0.000600	0.00500	mg/L	1	03-Apr-2024 23:18
Zinc	0.0118		0.00200	0.00400	mg/L	1	03-Apr-2024 23:18
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 13:45
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	330		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	109		3.50	5.00	mg/L	1	05-Apr-2024 10:43
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 10:43
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.47	H	0.100	0.100	pH Units	1	05-Apr-2024 16:27
Temp Deg C @pH	21.1	H	0	0	°C	1	05-Apr-2024 16:27
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 23:07
Chloride	22.9		0.200	0.500	mg/L	1	03-Apr-2024 23:07
Sulfate	4.55		0.200	0.500	mg/L	1	03-Apr-2024 23:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-580
 Collection Date: 28-Mar-2024 08:20

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 13:52
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 13:52
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 13:52
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 13:52
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 13:52
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 13:52
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	04-Apr-2024 13:52
<i>Surr: 4-Bromofluorobenzene</i>	91.1			77-113	%REC	1	04-Apr-2024 13:52
<i>Surr: Dibromofluoromethane</i>	109			77-123	%REC	1	04-Apr-2024 13:52
<i>Surr: Toluene-d8</i>	98.3			82-127	%REC	1	04-Apr-2024 13:52
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 07:48
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 07:48
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 07:48
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	74.3			70-130	%REC	1	04-Apr-2024 07:48
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	77.5			70-130	%REC	1	04-Apr-2024 07:48
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 22:04
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 22:04
Aliphatics >C16 - C35	0.0293		0.00800	0.00800	mg/L	1	04-Apr-2024 22:04
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 22:04
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 22:04
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 22:04
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 22:04
<i>Surr: 1-Chlorooctadecane</i>	80.0			40-140	%REC	1	04-Apr-2024 22:04
<i>Surr: 2-Bromonaphthalene</i>	88.7			40-140	%REC	1	04-Apr-2024 22:04
<i>Surr: 2-Fluorobiphenyl</i>	99.0			40-140	%REC	1	04-Apr-2024 22:04
<i>Surr: o-Terphenyl</i>	72.6			40-140	%REC	1	04-Apr-2024 22:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-580
 Collection Date: 28-Mar-2024 08:20

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.000743	J	0.000400	0.00200	mg/L	1	03-Apr-2024 23:20
Barium	0.207		0.00190	0.00400	mg/L	1	03-Apr-2024 23:20
Calcium	22.9		0.0340	0.500	mg/L	1	03-Apr-2024 23:20
Chromium	0.000654	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:20
Iron	3.51		0.0120	0.200	mg/L	1	03-Apr-2024 23:20
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:20
Magnesium	7.24		0.0100	0.200	mg/L	1	03-Apr-2024 23:20
Manganese	0.366		0.000700	0.00500	mg/L	1	03-Apr-2024 23:20
Nickel		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:20
Potassium	2.50		0.0180	0.200	mg/L	1	03-Apr-2024 23:20
Sodium	24.4		0.0140	0.200	mg/L	1	03-Apr-2024 23:20
Strontium	0.203		0.000200	0.00500	mg/L	1	03-Apr-2024 23:20
Vanadium	0.00523		0.000600	0.00500	mg/L	1	03-Apr-2024 23:20
Zinc	0.0211		0.00200	0.00400	mg/L	1	03-Apr-2024 23:20
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 13:53
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	196		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	113		3.50	5.00	mg/L	1	05-Apr-2024 10:48
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 10:48
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.53	H	0.100	0.100	pH Units	1	05-Apr-2024 16:30
Temp Deg C @pH	21.1	H	0	0	°C	1	05-Apr-2024 16:30
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	04-Apr-2024 00:07
Chloride	22.5		0.200	0.500	mg/L	1	04-Apr-2024 00:07
Sulfate	4.46		0.200	0.500	mg/L	1	04-Apr-2024 00:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: Cottages Well
 Collection Date: 28-Mar-2024 08:45

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:14
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:14
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 14:14
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:14
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:14
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 14:14
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>109</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 14:14</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>87.3</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 14:14</i>
<i>Surr: Dibromofluoromethane</i>	<i>104</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 14:14</i>
<i>Surr: Toluene-d8</i>	<i>97.4</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 14:14</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 08:32
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 08:32
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 08:32
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>76.5</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 08:32</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>75.5</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 08:32</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 22:33
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 22:33
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 22:33
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 22:33
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 22:33
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 22:33
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 22:33
<i>Surr: 1-Chlorooctadecane</i>	<i>68.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 22:33</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>89.1</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 22:33</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>99.8</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 22:33</i>
<i>Surr: o-Terphenyl</i>	<i>67.7</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 22:33</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: Cottages Well
 Collection Date: 28-Mar-2024 08:45

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic		U	0.000400	0.00200	mg/L	1	03-Apr-2024 23:22
Barium	0.181		0.00190	0.00400	mg/L	1	03-Apr-2024 23:22
Calcium	14.0		0.0340	0.500	mg/L	1	03-Apr-2024 23:22
Chromium	0.000849	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:22
Iron	5.99		0.0120	0.200	mg/L	1	03-Apr-2024 23:22
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:22
Magnesium	3.84		0.0100	0.200	mg/L	1	03-Apr-2024 23:22
Manganese	0.220		0.000700	0.00500	mg/L	1	03-Apr-2024 23:22
Nickel	0.00135	J	0.000600	0.00200	mg/L	1	03-Apr-2024 23:22
Potassium	2.15		0.0180	0.200	mg/L	1	03-Apr-2024 23:22
Sodium	67.3		0.0140	0.200	mg/L	1	03-Apr-2024 23:22
Strontium	0.162		0.000200	0.00500	mg/L	1	03-Apr-2024 23:22
Vanadium	0.00562		0.000600	0.00500	mg/L	1	03-Apr-2024 23:22
Zinc	0.202		0.00200	0.00400	mg/L	1	03-Apr-2024 23:22
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 13:55
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	268		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	144		3.50	5.00	mg/L	1	05-Apr-2024 10:54
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 10:54
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.77	H	0.100	0.100	pH Units	1	05-Apr-2024 16:32
Temp Deg C @pH	21.1	H	0	0	°C	1	05-Apr-2024 16:32
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	0.0891	J	0.0300	0.100	mg/L	1	03-Apr-2024 23:13
Chloride	51.2		0.200	0.500	mg/L	1	03-Apr-2024 23:13
Sulfate	0.306	J	0.200	0.500	mg/L	1	03-Apr-2024 23:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: PPB No.7B
 Collection Date: 28-Mar-2024 09:15

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	0.38	J	0.20	1.0	ug/L	1	04-Apr-2024 14:36
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:36
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 14:36
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:36
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:36
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 14:36
Surr: 1,2-Dichloroethane-d4	109			70-126	%REC	1	04-Apr-2024 14:36
Surr: 4-Bromofluorobenzene	86.6			77-113	%REC	1	04-Apr-2024 14:36
Surr: Dibromofluoromethane	104			77-123	%REC	1	04-Apr-2024 14:36
Surr: Toluene-d8	96.7			82-127	%REC	1	04-Apr-2024 14:36
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 09:16
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 09:16
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 09:16
Surr: 2,5-Dibromotoluene (Aliphatic)	75.1			70-130	%REC	1	04-Apr-2024 09:16
Surr: 2,5-Dibromotoluene (Aromatic)	73.5			70-130	%REC	1	04-Apr-2024 09:16
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 23:01
Aliphatics >C12 - C16	0.0242		0.00200	0.00200	mg/L	1	04-Apr-2024 23:01
Aliphatics >C16 - C35	0.0992		0.00800	0.00800	mg/L	1	04-Apr-2024 23:01
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 23:01
Aromatics >C12 - C16	0.0137		0.00400	0.00400	mg/L	1	04-Apr-2024 23:01
Aromatics >C16 - C21	0.0145		0.00300	0.00300	mg/L	1	04-Apr-2024 23:01
Aromatics >C21 - C35	0.0217		0.00900	0.00900	mg/L	1	04-Apr-2024 23:01
Surr: 1-Chlorooctadecane	65.9			40-140	%REC	1	04-Apr-2024 23:01
Surr: 2-Bromonaphthalene	91.3			40-140	%REC	1	04-Apr-2024 23:01
Surr: 2-Fluorobiphenyl	103			40-140	%REC	1	04-Apr-2024 23:01
Surr: o-Terphenyl	70.4			40-140	%REC	1	04-Apr-2024 23:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: PPB No.7B
 Collection Date: 28-Mar-2024 09:15

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.00136	J	0.000400	0.00200	mg/L	1	03-Apr-2024 23:30
Barium	1.48		0.00190	0.00400	mg/L	1	03-Apr-2024 23:30
Calcium	46.4		0.0340	0.500	mg/L	1	03-Apr-2024 23:30
Chromium	0.00659		0.000400	0.00400	mg/L	1	03-Apr-2024 23:30
Iron	1.29		0.0120	0.200	mg/L	1	03-Apr-2024 23:30
Lead	0.00110	J	0.000600	0.00200	mg/L	1	03-Apr-2024 23:30
Magnesium	1.97		0.0100	0.200	mg/L	1	03-Apr-2024 23:30
Manganese	0.215		0.000700	0.00500	mg/L	1	03-Apr-2024 23:30
Nickel	0.00670		0.000600	0.00200	mg/L	1	03-Apr-2024 23:30
Potassium	1.000		0.0180	0.200	mg/L	1	03-Apr-2024 23:30
Sodium	5,420		14.0	200	mg/L	1000	04-Apr-2024 13:20
Strontium	0.606		0.000200	0.00500	mg/L	1	03-Apr-2024 23:30
Vanadium	0.00447	J	0.000600	0.00500	mg/L	1	03-Apr-2024 23:30
Zinc	0.259		0.00200	0.00400	mg/L	1	03-Apr-2024 23:30
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 13:56
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	12,300		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	152		3.50	5.00	mg/L	1	05-Apr-2024 10:59
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 10:59
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.93	H	0.100	0.100	pH Units	1	05-Apr-2024 16:34
Temp Deg C @pH	21.1	H	0	0	°C	1	05-Apr-2024 16:34
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.300	1.00	mg/L	10	04-Apr-2024 00:25
Chloride	8,540		40.0	100	mg/L	200	04-Apr-2024 00:30
Sulfate	24.9		2.00	5.00	mg/L	10	04-Apr-2024 00:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-19
 Collection Date: 28-Mar-2024 11:20

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:58
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:58
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 14:58
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:58
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:58
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 14:58
<i>Surr: 1,2-Dichloroethane-d4</i>	108			70-126	%REC	1	04-Apr-2024 14:58
<i>Surr: 4-Bromofluorobenzene</i>	85.7			77-113	%REC	1	04-Apr-2024 14:58
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	04-Apr-2024 14:58
<i>Surr: Toluene-d8</i>	96.5			82-127	%REC	1	04-Apr-2024 14:58
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 09:59
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 09:59
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 09:59
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	74.0			70-130	%REC	1	04-Apr-2024 09:59
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	77.8			70-130	%REC	1	04-Apr-2024 09:59
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 23:30
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 23:30
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 23:30
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 23:30
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 23:30
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 23:30
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 23:30
<i>Surr: 1-Chlorooctadecane</i>	66.4			40-140	%REC	1	04-Apr-2024 23:30
<i>Surr: 2-Bromonaphthalene</i>	91.2			40-140	%REC	1	04-Apr-2024 23:30
<i>Surr: 2-Fluorobiphenyl</i>	102			40-140	%REC	1	04-Apr-2024 23:30
<i>Surr: o-Terphenyl</i>	76.9			40-140	%REC	1	04-Apr-2024 23:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-19
 Collection Date: 28-Mar-2024 11:20

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.00272		0.000400	0.00200	mg/L	1	03-Apr-2024 23:32
Barium	0.0379		0.00190	0.00400	mg/L	1	03-Apr-2024 23:32
Calcium	112		0.0340	0.500	mg/L	1	03-Apr-2024 23:32
Chromium	0.000985	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:32
Iron	0.769		0.0120	0.200	mg/L	1	03-Apr-2024 23:32
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:32
Magnesium	12.4		0.0100	0.200	mg/L	1	03-Apr-2024 23:32
Manganese	0.0348		0.000700	0.00500	mg/L	1	03-Apr-2024 23:32
Nickel	0.00229		0.000600	0.00200	mg/L	1	03-Apr-2024 23:32
Potassium	0.619		0.0180	0.200	mg/L	1	03-Apr-2024 23:32
Sodium	168		0.0140	0.200	mg/L	1	03-Apr-2024 23:32
Strontium	0.709		0.000200	0.00500	mg/L	1	03-Apr-2024 23:32
Vanadium	0.00378	J	0.000600	0.00500	mg/L	1	03-Apr-2024 23:32
Zinc	0.0198		0.00200	0.00400	mg/L	1	03-Apr-2024 23:32
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 13:58
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	864		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	71.4		3.50	5.00	mg/L	1	05-Apr-2024 11:04
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 11:04
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	8.13	H	0.100	0.100	pH Units	1	05-Apr-2024 16:36
Temp Deg C @pH	21.0	H	0	0	°C	1	05-Apr-2024 16:36
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	04-Apr-2024 00:36
Chloride	171		2.00	5.00	mg/L	10	04-Apr-2024 00:42
Sulfate	478		2.00	5.00	mg/L	10	04-Apr-2024 00:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-09
 Collection Date: 28-Mar-2024 11:45

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 15:20
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 15:20
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 15:20
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 15:20
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 15:20
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 15:20
<i>Surr: 1,2-Dichloroethane-d4</i>	109			70-126	%REC	1	04-Apr-2024 15:20
<i>Surr: 4-Bromofluorobenzene</i>	86.0			77-113	%REC	1	04-Apr-2024 15:20
<i>Surr: Dibromofluoromethane</i>	107			77-123	%REC	1	04-Apr-2024 15:20
<i>Surr: Toluene-d8</i>	97.3			82-127	%REC	1	04-Apr-2024 15:20
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 10:43
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 10:43
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 10:43
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	77.2			70-130	%REC	1	04-Apr-2024 10:43
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	72.3			70-130	%REC	1	04-Apr-2024 10:43
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 23:59
Aliphatics >C12 - C16	0.0176		0.00200	0.00200	mg/L	1	04-Apr-2024 23:59
Aliphatics >C16 - C35	0.0319		0.00800	0.00800	mg/L	1	04-Apr-2024 23:59
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 23:59
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 23:59
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 23:59
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 23:59
<i>Surr: 1-Chlorooctadecane</i>	62.9			40-140	%REC	1	04-Apr-2024 23:59
<i>Surr: 2-Bromonaphthalene</i>	93.3			40-140	%REC	1	04-Apr-2024 23:59
<i>Surr: 2-Fluorobiphenyl</i>	102			40-140	%REC	1	04-Apr-2024 23:59
<i>Surr: o-Terphenyl</i>	68.7			40-140	%REC	1	04-Apr-2024 23:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-09
 Collection Date: 28-Mar-2024 11:45

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.00212		0.000400	0.00200	mg/L	1	03-Apr-2024 23:36
Barium	0.0233		0.00190	0.00400	mg/L	1	03-Apr-2024 23:36
Calcium	113		0.0340	0.500	mg/L	1	03-Apr-2024 23:36
Chromium	0.000866	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:36
Iron	1.24		0.0120	0.200	mg/L	1	03-Apr-2024 23:36
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:36
Magnesium	12.7		0.0100	0.200	mg/L	1	03-Apr-2024 23:36
Manganese	0.135		0.000700	0.00500	mg/L	1	03-Apr-2024 23:36
Nickel	0.00230		0.000600	0.00200	mg/L	1	03-Apr-2024 23:36
Potassium	0.669		0.0180	0.200	mg/L	1	03-Apr-2024 23:36
Sodium	166		0.0140	0.200	mg/L	1	03-Apr-2024 23:36
Strontium	0.711		0.000200	0.00500	mg/L	1	03-Apr-2024 23:36
Vanadium	0.00316	J	0.000600	0.00500	mg/L	1	03-Apr-2024 23:36
Zinc	0.00406		0.00200	0.00400	mg/L	1	03-Apr-2024 23:36
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 14:00
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	890		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	63.6		3.50	5.00	mg/L	1	05-Apr-2024 11:09
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 11:09
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	8.02	H	0.100	0.100	pH Units	1	05-Apr-2024 16:39
Temp Deg C @pH	21.1	H	0	0	°C	1	05-Apr-2024 16:39
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	04-Apr-2024 01:18
Chloride	175		2.00	5.00	mg/L	10	04-Apr-2024 01:24
Sulfate	503		2.00	5.00	mg/L	10	04-Apr-2024 01:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-1603
 Collection Date: 28-Mar-2024 13:45

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 15:42
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 15:42
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 15:42
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 15:42
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 15:42
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 15:42
<i>Surr: 1,2-Dichloroethane-d4</i>	108			70-126	%REC	1	04-Apr-2024 15:42
<i>Surr: 4-Bromofluorobenzene</i>	86.7			77-113	%REC	1	04-Apr-2024 15:42
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	04-Apr-2024 15:42
<i>Surr: Toluene-d8</i>	96.6			82-127	%REC	1	04-Apr-2024 15:42
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 12:54
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 12:54
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 12:54
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	76.5			70-130	%REC	1	04-Apr-2024 12:54
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	80.7			70-130	%REC	1	04-Apr-2024 12:54
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	05-Apr-2024 00:28
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	05-Apr-2024 00:28
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	05-Apr-2024 00:28
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	05-Apr-2024 00:28
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	05-Apr-2024 00:28
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	05-Apr-2024 00:28
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	05-Apr-2024 00:28
<i>Surr: 1-Chlorooctadecane</i>	73.4			40-140	%REC	1	05-Apr-2024 00:28
<i>Surr: 2-Bromonaphthalene</i>	85.8			40-140	%REC	1	05-Apr-2024 00:28
<i>Surr: 2-Fluorobiphenyl</i>	96.7			40-140	%REC	1	05-Apr-2024 00:28
<i>Surr: o-Terphenyl</i>	79.6			40-140	%REC	1	05-Apr-2024 00:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-1603
 Collection Date: 28-Mar-2024 13:45

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.00194	J	0.000400	0.00200	mg/L	1	03-Apr-2024 23:38
Barium	0.391		0.00190	0.00400	mg/L	1	03-Apr-2024 23:38
Calcium	27.2		0.0340	0.500	mg/L	1	03-Apr-2024 23:38
Chromium	0.00134	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:38
Iron	44.8		0.0120	0.200	mg/L	1	03-Apr-2024 23:38
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:38
Magnesium	8.35		0.0100	0.200	mg/L	1	03-Apr-2024 23:38
Manganese	0.492		0.000700	0.00500	mg/L	1	03-Apr-2024 23:38
Nickel	0.00320		0.000600	0.00200	mg/L	1	03-Apr-2024 23:38
Potassium	2.60		0.0180	0.200	mg/L	1	03-Apr-2024 23:38
Sodium	26.8		0.0140	0.200	mg/L	1	03-Apr-2024 23:38
Strontium	0.247		0.000200	0.00500	mg/L	1	03-Apr-2024 23:38
Vanadium	0.00224	J	0.000600	0.00500	mg/L	1	03-Apr-2024 23:38
Zinc	0.0720		0.00200	0.00400	mg/L	1	03-Apr-2024 23:38
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 14:02
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	202		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	118		3.50	5.00	mg/L	1	05-Apr-2024 11:25
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 11:25
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.59	H	0.100	0.100	pH Units	1	05-Apr-2024 16:41
Temp Deg C @pH	21.1	H	0	0	°C	1	05-Apr-2024 16:41
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	04-Apr-2024 01:30
Chloride	23.3		0.200	0.500	mg/L	1	04-Apr-2024 01:30
Sulfate	6.82		0.200	0.500	mg/L	1	04-Apr-2024 01:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-995
 Collection Date: 28-Mar-2024 13:20

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 16:04
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 16:04
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 16:04
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 16:04
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 16:04
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 16:04
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>111</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 16:04</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>87.8</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 16:04</i>
<i>Surr: Dibromofluoromethane</i>	<i>108</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 16:04</i>
<i>Surr: Toluene-d8</i>	<i>101</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 16:04</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 13:38
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 13:38
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 13:38
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>80.6</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:38</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>85.5</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:38</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	05-Apr-2024 00:57
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	05-Apr-2024 00:57
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	05-Apr-2024 00:57
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	05-Apr-2024 00:57
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	05-Apr-2024 00:57
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	05-Apr-2024 00:57
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	05-Apr-2024 00:57
<i>Surr: 1-Chlorooctadecane</i>	<i>62.4</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>05-Apr-2024 00:57</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>81.4</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>05-Apr-2024 00:57</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>90.9</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>05-Apr-2024 00:57</i>
<i>Surr: o-Terphenyl</i>	<i>70.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>05-Apr-2024 00:57</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-995
 Collection Date: 28-Mar-2024 13:20

ANALYTICAL REPORT
 WorkOrder:HS24040024
 Lab ID:HS24040024-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 01-Apr-2024		Analyst: MSC	
Arsenic	0.000900	J	0.000400	0.00200	mg/L	1	03-Apr-2024 23:41
Barium	0.195		0.00190	0.00400	mg/L	1	03-Apr-2024 23:41
Calcium	23.4		0.0340	0.500	mg/L	1	03-Apr-2024 23:41
Chromium	0.00196	J	0.000400	0.00400	mg/L	1	03-Apr-2024 23:41
Iron	0.907		0.0120	0.200	mg/L	1	03-Apr-2024 23:41
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 23:41
Magnesium	7.23		0.0100	0.200	mg/L	1	03-Apr-2024 23:41
Manganese	0.235		0.000700	0.00500	mg/L	1	03-Apr-2024 23:41
Nickel	0.000682	J	0.000600	0.00200	mg/L	1	03-Apr-2024 23:41
Potassium	2.51		0.0180	0.200	mg/L	1	03-Apr-2024 23:41
Sodium	26.2		0.0140	0.200	mg/L	1	03-Apr-2024 23:41
Strontium	0.203		0.000200	0.00500	mg/L	1	03-Apr-2024 23:41
Vanadium	0.00474	J	0.000600	0.00500	mg/L	1	03-Apr-2024 23:41
Zinc	0.00606		0.00200	0.00400	mg/L	1	03-Apr-2024 23:41
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 05-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	05-Apr-2024 14:03
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	04-Apr-2024 15:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	164		5.00	10.0	mg/L	1	03-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	110		3.50	5.00	mg/L	1	05-Apr-2024 11:30
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	05-Apr-2024 11:30
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	04-Apr-2024 13:33
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.57	H	0.100	0.100	pH Units	1	05-Apr-2024 16:44
Temp Deg C @pH	21.0	H	0	0	°C	1	05-Apr-2024 16:44
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	04-Apr-2024 01:36
Chloride	23.0		0.200	0.500	mg/L	1	04-Apr-2024 01:36
Sulfate	4.25		0.200	0.500	mg/L	1	04-Apr-2024 01:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

Batch ID: 209729 **Start Date:** 01 Apr 2024 15:00 **End Date:** 01 Apr 2024 15:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040024-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-08		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 209839 **Start Date:** 03 Apr 2024 11:31 **End Date:** 03 Apr 2024 11:31
Method: MA EPH EXTRACTION-FRACTIONATION **Prep Code:** MA EPH_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040024-01	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-02	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-03	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-04	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-05	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-06	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-07	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040024-08	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2

Batch ID: 210021 **Start Date:** 05 Apr 2024 08:00 **End Date:** 05 Apr 2024 08:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040024-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040024-08		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 209729 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15		01 Apr 2024 15:00	03 Apr 2024 23:18	1
HS24040024-02	019-580	28 Mar 2024 08:20		01 Apr 2024 15:00	03 Apr 2024 23:20	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45		01 Apr 2024 15:00	03 Apr 2024 23:22	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15		01 Apr 2024 15:00	04 Apr 2024 13:20	1000
HS24040024-04	PPB No.7B	28 Mar 2024 09:15		01 Apr 2024 15:00	03 Apr 2024 23:30	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20		01 Apr 2024 15:00	03 Apr 2024 23:32	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45		01 Apr 2024 15:00	03 Apr 2024 23:36	1
HS24040024-07	019-1603	28 Mar 2024 13:45		01 Apr 2024 15:00	03 Apr 2024 23:38	1
HS24040024-08	019-995	28 Mar 2024 13:20		01 Apr 2024 15:00	03 Apr 2024 23:41	1
Batch ID: 209839 (0)		Test Name : MASSACHUSETTS EPH R2.1, DEC 2019			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15		03 Apr 2024 11:31	04 Apr 2024 21:35	1
HS24040024-02	019-580	28 Mar 2024 08:20		03 Apr 2024 11:31	04 Apr 2024 22:04	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45		03 Apr 2024 11:31	04 Apr 2024 22:33	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15		03 Apr 2024 11:31	04 Apr 2024 23:01	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20		03 Apr 2024 11:31	04 Apr 2024 23:30	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45		03 Apr 2024 11:31	04 Apr 2024 23:59	1
HS24040024-07	019-1603	28 Mar 2024 13:45		03 Apr 2024 11:31	05 Apr 2024 00:28	1
HS24040024-08	019-995	28 Mar 2024 13:20		03 Apr 2024 11:31	05 Apr 2024 00:57	1
Batch ID: 209839 (1)		Test Name : MASSACHUSETTS EPH R2.1, DEC 2019			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15		03 Apr 2024 11:31	04 Apr 2024 21:35	1
HS24040024-02	019-580	28 Mar 2024 08:20		03 Apr 2024 11:31	04 Apr 2024 22:04	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45		03 Apr 2024 11:31	04 Apr 2024 22:33	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15		03 Apr 2024 11:31	04 Apr 2024 23:01	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20		03 Apr 2024 11:31	04 Apr 2024 23:30	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45		03 Apr 2024 11:31	04 Apr 2024 23:59	1
HS24040024-07	019-1603	28 Mar 2024 13:45		03 Apr 2024 11:31	05 Apr 2024 00:28	1
HS24040024-08	019-995	28 Mar 2024 13:20		03 Apr 2024 11:31	05 Apr 2024 00:57	1
Batch ID: 210021 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15		05 Apr 2024 08:00	05 Apr 2024 13:45	1
HS24040024-02	019-580	28 Mar 2024 08:20		05 Apr 2024 08:00	05 Apr 2024 13:53	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45		05 Apr 2024 08:00	05 Apr 2024 13:55	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15		05 Apr 2024 08:00	05 Apr 2024 13:56	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20		05 Apr 2024 08:00	05 Apr 2024 13:58	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45		05 Apr 2024 08:00	05 Apr 2024 14:00	1
HS24040024-07	019-1603	28 Mar 2024 13:45		05 Apr 2024 08:00	05 Apr 2024 14:02	1
HS24040024-08	019-995	28 Mar 2024 13:20		05 Apr 2024 08:00	05 Apr 2024 14:03	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463003 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			03 Apr 2024 10:00	1
HS24040024-02	019-580	28 Mar 2024 08:20			03 Apr 2024 10:00	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			03 Apr 2024 10:00	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			03 Apr 2024 10:00	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			03 Apr 2024 10:00	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			03 Apr 2024 10:00	1
HS24040024-07	019-1603	28 Mar 2024 13:45			03 Apr 2024 10:00	1
HS24040024-08	019-995	28 Mar 2024 13:20			03 Apr 2024 10:00	1
Batch ID: R463013 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			04 Apr 2024 07:04	1
HS24040024-02	019-580	28 Mar 2024 08:20			04 Apr 2024 07:48	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			04 Apr 2024 08:32	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 09:16	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 09:59	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 10:43	1
HS24040024-07	019-1603	28 Mar 2024 13:45			04 Apr 2024 12:54	1
HS24040024-08	019-995	28 Mar 2024 13:20			04 Apr 2024 13:38	1
Batch ID: R463015 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			04 Apr 2024 07:04	1
HS24040024-02	019-580	28 Mar 2024 08:20			04 Apr 2024 07:48	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			04 Apr 2024 08:32	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 09:16	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 09:59	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 10:43	1
HS24040024-07	019-1603	28 Mar 2024 13:45			04 Apr 2024 12:54	1
HS24040024-08	019-995	28 Mar 2024 13:20			04 Apr 2024 13:38	1
Batch ID: R463032 (0)		Test Name : ANIONS BY SW9056A			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			03 Apr 2024 23:07	1
HS24040024-02	019-580	28 Mar 2024 08:20			04 Apr 2024 00:07	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			03 Apr 2024 23:13	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 00:30	200
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 00:25	10
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 00:42	10
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 00:36	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 01:24	10
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 01:18	1
HS24040024-07	019-1603	28 Mar 2024 13:45			04 Apr 2024 01:30	1
HS24040024-08	019-995	28 Mar 2024 13:20			04 Apr 2024 01:36	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463071 (0)		Test Name : SULFIDE BY SM4500 S2-F-2011			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			04 Apr 2024 13:33	1
HS24040024-02	019-580	28 Mar 2024 08:20			04 Apr 2024 13:33	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			04 Apr 2024 13:33	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 13:33	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 13:33	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 13:33	1
HS24040024-07	019-1603	28 Mar 2024 13:45			04 Apr 2024 13:33	1
HS24040024-08	019-995	28 Mar 2024 13:20			04 Apr 2024 13:33	1
Batch ID: R463081 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			04 Apr 2024 13:30	1
HS24040024-02	019-580	28 Mar 2024 08:20			04 Apr 2024 13:52	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			04 Apr 2024 14:14	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 14:36	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 14:58	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 15:20	1
HS24040024-07	019-1603	28 Mar 2024 13:45			04 Apr 2024 15:42	1
HS24040024-08	019-995	28 Mar 2024 13:20			04 Apr 2024 16:04	1
Batch ID: R463103 (0)		Test Name : HYDROGEN SULFIDE BY E376.1			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			04 Apr 2024 15:28	1
HS24040024-02	019-580	28 Mar 2024 08:20			04 Apr 2024 15:28	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			04 Apr 2024 15:28	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			04 Apr 2024 15:28	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			04 Apr 2024 15:28	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			04 Apr 2024 15:28	1
HS24040024-07	019-1603	28 Mar 2024 13:45			04 Apr 2024 15:28	1
HS24040024-08	019-995	28 Mar 2024 13:20			04 Apr 2024 15:28	1
Batch ID: R463216 (0)		Test Name : ALKALINITY BY -2011			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			05 Apr 2024 10:43	1
HS24040024-02	019-580	28 Mar 2024 08:20			05 Apr 2024 10:48	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			05 Apr 2024 10:54	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			05 Apr 2024 10:59	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			05 Apr 2024 11:04	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			05 Apr 2024 11:09	1
HS24040024-07	019-1603	28 Mar 2024 13:45			05 Apr 2024 11:25	1
HS24040024-08	019-995	28 Mar 2024 13:20			05 Apr 2024 11:30	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463237 (0)		Test Name : PH BY SM4500H+ B-2011			Matrix: Water	
HS24040024-01	019-582	28 Mar 2024 08:15			05 Apr 2024 16:27	1
HS24040024-02	019-580	28 Mar 2024 08:20			05 Apr 2024 16:30	1
HS24040024-03	Cottages Well	28 Mar 2024 08:45			05 Apr 2024 16:32	1
HS24040024-04	PPB No.7B	28 Mar 2024 09:15			05 Apr 2024 16:34	1
HS24040024-05	LDNR-19	28 Mar 2024 11:20			05 Apr 2024 16:36	1
HS24040024-06	LDNR-09	28 Mar 2024 11:45			05 Apr 2024 16:39	1
HS24040024-07	019-1603	28 Mar 2024 13:45			05 Apr 2024 16:41	1
HS24040024-08	019-995	28 Mar 2024 13:20			05 Apr 2024 16:44	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 209839 (0)	Instrument: FID23	Method: MASSACHUSETTS EPH R2.1, DEC 2019
MBLK Sample ID: MBLK-209839	Units: mg/L	Analysis Date: 04-Apr-2024 13:55
Client ID:	Run ID: FID23_463178	SeqNo: 7930232 PrepDate: 03-Apr-2024 DF: 1
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Aliphatics >C10 - C12	U	0.00100							
Aliphatics >C12 - C16	U	0.00200							
Aliphatics >C16 - C35	U	0.00800							
<i>Surr: 1-Chlorooctadecane</i>	<i>0.01886</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>47.1</i>	<i>40 - 140</i>			

LCS Sample ID: LCS-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:21
Client ID:	Run ID: FID23_463178	SeqNo: 7930234 PrepDate: 03-Apr-2024 DF: 1
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Aliphatics >C10 - C12	0.04901	0.00100	0.05	0	98.0	40 - 140			
Aliphatics >C12 - C16	0.1052	0.00200	0.1	0	105	40 - 140			
Aliphatics >C16 - C35	0.4188	0.00800	0.4	0	105	40 - 140			
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02744</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>68.6</i>	<i>40 - 140</i>			

LCSD Sample ID: LCSD-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:50
Client ID:	Run ID: FID23_463178	SeqNo: 7930235 PrepDate: 03-Apr-2024 DF: 1
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Aliphatics >C10 - C12	0.04768	0.00100	0.05	0	95.4	40 - 140	0.04901	2.73	50
Aliphatics >C12 - C16	0.1017	0.00200	0.1	0	102	40 - 140	0.1052	3.43	50
Aliphatics >C16 - C35	0.414	0.00800	0.4	0	104	40 - 140	0.4188	1.15	50
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02702</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>67.5</i>	<i>40 - 140</i>	<i>0.02744</i>	<i>1.55</i>	<i>50</i>

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 209839 (1)	Instrument: FID-22	Method: MASSACHUSETTS EPH R2.1, DEC 2019
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MBLK	Sample ID: MBLK-209839	Units: mg/L	Analysis Date: 04-Apr-2024 13:55							
Client ID:	Run ID: FID-22_463181	SeqNo: 7930283	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	U	0.00100								
Aromatics >C12 - C16	U	0.00400								
Aromatics >C16 - C21	U	0.00300								
Aromatics >C21 - C35	U	0.00900								
Surr: 2-Bromonaphthalene	0.03597	0	0.04	0	89.9	40 - 140				
Surr: 2-Fluorobiphenyl	0.03874	0	0.04	0	96.8	40 - 140				
Surr: o-Terphenyl	0.02688	0	0.04	0	67.2	40 - 140				

LCS	Sample ID: LCS-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:21							
Client ID:	Run ID: FID-22_463181	SeqNo: 7930285	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.05284	0.00100	0.05	0	106	40 - 140				
Aromatics >C12 - C16	0.2061	0.00400	0.2	0	103	40 - 140				
Aromatics >C16 - C21	0.1613	0.00300	0.15	0	108	40 - 140				
Aromatics >C21 - C35	0.4544	0.00900	0.45	0	101	40 - 140				
Surr: 2-Bromonaphthalene	0.03736	0	0.04	0	93.4	40 - 140				
Surr: 2-Fluorobiphenyl	0.04069	0	0.04	0	102	40 - 140				
Surr: o-Terphenyl	0.03293	0	0.04	0	82.3	40 - 140				

LCSD	Sample ID: LCSD-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:50							
Client ID:	Run ID: FID-22_463181	SeqNo: 7930286	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.04999	0.00100	0.05	0	100.0	40 - 140	0.05284	5.54	50	
Aromatics >C12 - C16	0.198	0.00400	0.2	0	99.0	40 - 140	0.2061	3.99	50	
Aromatics >C16 - C21	0.1585	0.00300	0.15	0	106	40 - 140	0.1613	1.74	50	
Aromatics >C21 - C35	0.454	0.00900	0.45	0	101	40 - 140	0.4544	0.102	50	
Surr: 2-Bromonaphthalene	0.03874	0	0.04	0	96.9	40 - 140	0.03736	3.63	50	
Surr: 2-Fluorobiphenyl	0.04239	0	0.04	0	106	40 - 140	0.04069	4.08	50	
Surr: o-Terphenyl	0.03243	0	0.04	0	81.1	40 - 140	0.03293	1.53	50	

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463013 (0) **Instrument:** FID-14 **Method:** MASSACHUSETTS VPH, FEB 2018, REV 2.1

MBLK		Sample ID: MBLK-240403		Units: mg/L		Analysis Date: 03-Apr-2024 20:51			
Client ID:		Run ID: FID-14_463013		SeqNo: 7926510		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aliphatics >C6 - C8	U	0.0100							
Aliphatics >C8 - C10	U	0.0100							
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>0.206</i>	<i>0.0100</i>	<i>0.25</i>	<i>0</i>	<i>82.4</i>	<i>70 - 130</i>			

LCS		Sample ID: LCS-240403		Units: mg/L		Analysis Date: 03-Apr-2024 19:24			
Client ID:		Run ID: FID-14_463013		SeqNo: 7926508		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aliphatics >C6 - C8	0.02869	0.0100	0.025	0	115	70 - 130			
Aliphatics >C8 - C10	0.02519	0.0100	0.025	0	101	70 - 130			
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>0.2166</i>	<i>0.0100</i>	<i>0.25</i>	<i>0</i>	<i>86.6</i>	<i>70 - 130</i>			

LCSD		Sample ID: LCSD-240403		Units: mg/L		Analysis Date: 03-Apr-2024 20:07			
Client ID:		Run ID: FID-14_463013		SeqNo: 7926509		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aliphatics >C6 - C8	0.02475	0.0100	0.025	0	99.0	70 - 130	0.02869	14.7	25
Aliphatics >C8 - C10	0.03055	0.0100	0.025	0	122	70 - 130	0.02519	19.3	25
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>0.2147</i>	<i>0.0100</i>	<i>0.25</i>	<i>0</i>	<i>85.9</i>	<i>70 - 130</i>	<i>0.2166</i>	<i>0.885</i>	<i>25</i>

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463015 (0)		Instrument: FID-15		Method: MASSACHUSETTS VPH, FEB 2018, REV 2.1					
MBLK	Sample ID: MBLK-240403	Units: mg/L			Analysis Date: 03-Apr-2024 20:51				
Client ID:		Run ID: FID-15_463015		SeqNo: 7926529		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Aromatics >C8 - C10	U	0.0100							
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.2181	0.0100	0.25	0	87.3	70 - 130			

LCS	Sample ID: LCS-240403	Units: mg/L			Analysis Date: 03-Apr-2024 19:24				
Client ID:		Run ID: FID-15_463015		SeqNo: 7926527		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Aromatics >C8 - C10	0.08706	0.0100	0.1	0	87.1	70 - 130			
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.2051	0.0100	0.25	0	82.0	70 - 130			

LCSD	Sample ID: LCSD-240403	Units: mg/L			Analysis Date: 03-Apr-2024 20:07				
Client ID:		Run ID: FID-15_463015		SeqNo: 7926528		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Aromatics >C8 - C10	0.08802	0.0100	0.1	0	88.0	70 - 130	0.08706	1.1	25
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.2092	0.0100	0.25	0	83.7	70 - 130	0.2051	1.97	25

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 209729 (0)		Instrument: ICPMS07		Method: ICP-MS METALS BY SW6020A						
MBLK	Sample ID: MBLK-209729	Units: mg/L			Analysis Date: 02-Apr-2024 11:44					
Client ID:	Run ID: ICPMS07_462808	SeqNo: 7922330		PrepDate: 01-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Arsenic	U	0.00200								
Barium	U	0.00400								
Calcium	U	0.500								
Chromium	U	0.00400								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	U	0.200								
Manganese	U	0.00500								
Nickel	U	0.00200								
Potassium	U	0.200								
Sodium	U	0.200								
Strontium	U	0.00500								
Vanadium	U	0.00500								
Zinc	U	0.00400								

LCS	Sample ID: LCS-209729	Units: mg/L			Analysis Date: 02-Apr-2024 11:51				
Client ID:	Run ID: ICPMS07_462808	SeqNo: 7922331		PrepDate: 01-Apr-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.04634	0.00200	0.05	0	92.7	80 - 120			
Barium	0.04578	0.00400	0.05	0	91.6	80 - 120			
Calcium	4.664	0.500	5	0	93.3	80 - 120			
Chromium	0.04404	0.00400	0.05	0	88.1	80 - 120			
Iron	4.708	0.200	5	0	94.2	80 - 120			
Lead	0.04586	0.00200	0.05	0	91.7	80 - 120			
Magnesium	4.896	0.200	5	0	97.9	80 - 120			
Manganese	0.04395	0.00500	0.05	0	87.9	80 - 120			
Nickel	0.04613	0.00200	0.05	0	92.3	80 - 120			
Potassium	4.821	0.200	5	0	96.4	80 - 120			
Sodium	4.794	0.200	5	0	95.9	80 - 120			
Strontium	0.09867	0.00500	0.1	0	98.7	80 - 120			
Vanadium	0.04463	0.00500	0.05	0	89.3	80 - 120			
Zinc	0.04704	0.00400	0.05	0	94.1	80 - 120			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 209729 (0)		Instrument: ICPMS07			Method: ICP-MS METALS BY SW6020A					
MS	Sample ID: HS24031762-09MS	Units: mg/L			Analysis Date: 03-Apr-2024 23:01					
Client ID:	Run ID: ICPMS05_462982	SeqNo: 7926136		PrepDate: 01-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1415	0.00200	0.05	0.09206	98.9	80 - 120				
Barium	0.3261	0.00400	0.05	0.2663	120	80 - 120				O
Calcium	71.92	0.500	5	64.53	148	80 - 120				SO
Chromium	0.04668	0.00400	0.05	0.000732	91.9	80 - 120				
Iron	14.57	0.200	5	9.45	102	80 - 120				
Lead	0.0513	0.00200	0.05	0.003305	96.0	80 - 120				
Magnesium	64.95	0.200	5	58.64	126	80 - 120				SO
Manganese	0.5839	0.00500	0.05	0.5176	133	80 - 120				SO
Nickel	0.0479	0.00200	0.05	0.002812	90.2	80 - 120				
Potassium	4.96	0.200	5	0.2063	95.1	80 - 120				
Sodium	208.4	0.200	5	194.3	281	80 - 120				SEO
Strontium	0.7324	0.00500	0.1	0.6018	131	80 - 120				SO
Vanadium	0.04874	0.00500	0.05	0.001597	94.3	80 - 120				
Zinc	0.04989	0.00400	0.05	0.005622	88.5	80 - 120				

MSD	Sample ID: HS24031762-09MSD	Units: mg/L			Analysis Date: 03-Apr-2024 23:03					
Client ID:	Run ID: ICPMS05_462982	SeqNo: 7926137		PrepDate: 01-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1428	0.00200	0.05	0.09206	102	80 - 120	0.1415	0.915	20	
Barium	0.3268	0.00400	0.05	0.2663	121	80 - 120	0.3261	0.206	20	SO
Calcium	71.46	0.500	5	64.53	138	80 - 120	71.92	0.645	20	SO
Chromium	0.0482	0.00400	0.05	0.000732	94.9	80 - 120	0.04668	3.2	20	
Iron	14.62	0.200	5	9.45	103	80 - 120	14.57	0.36	20	
Lead	0.05365	0.00200	0.05	0.003305	101	80 - 120	0.0513	4.49	20	
Magnesium	64.13	0.200	5	58.64	110	80 - 120	64.95	1.26	20	O
Manganese	0.5856	0.00500	0.05	0.5176	136	80 - 120	0.5839	0.282	20	SO
Nickel	0.04943	0.00200	0.05	0.002812	93.2	80 - 120	0.0479	3.14	20	
Potassium	4.987	0.200	5	0.2063	95.6	80 - 120	4.96	0.549	20	
Sodium	206.8	0.200	5	194.3	249	80 - 120	208.4	0.76	20	SEO
Strontium	0.7245	0.00500	0.1	0.6018	123	80 - 120	0.7324	1.09	20	SO
Vanadium	0.04968	0.00500	0.05	0.001597	96.2	80 - 120	0.04874	1.92	20	
Zinc	0.0572	0.00400	0.05	0.005622	103	80 - 120	0.04989	13.7	20	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 209729 (0)		Instrument: ICPMS07		Method: ICP-MS METALS BY SW6020A						
PDS	Sample ID: HS24031762-09PDS	Units: mg/L			Analysis Date: 03-Apr-2024 23:05					
Client ID:	Run ID: ICPMS05_462982	SeqNo: 7926138		PrepDate: 01-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Arsenic	0.1879	0.00200	0.1	0.09206	95.8	75 - 125				
Barium	0.3669	0.00400	0.1	0.2663	101	75 - 125				
Calcium	74.83	0.500	10	64.53	103	75 - 125			O	
Chromium	0.09382	0.00400	0.1	0.000732	93.1	75 - 125				
Iron	19.04	0.200	10	9.45	95.9	75 - 125				
Lead	0.09962	0.00200	0.1	0.003305	96.3	75 - 125				
Magnesium	68.76	0.200	10	58.64	101	75 - 125			O	
Manganese	0.6168	0.00500	0.1	0.5176	99.2	75 - 125			O	
Nickel	0.09384	0.00200	0.1	0.002812	91.0	75 - 125				
Potassium	9.821	0.200	10	0.2063	96.1	75 - 125				
Strontium	0.7594	0.00500	0.1	0.6018	158	75 - 125			SO	
Vanadium	0.09556	0.00500	0.1	0.001597	94.0	75 - 125				
Zinc	0.09846	0.00400	0.1	0.005622	92.8	75 - 125				

PDS	Sample ID: HS24031762-09PDS	Units: mg/L			Analysis Date: 04-Apr-2024 13:16				
Client ID:	Run ID: ICPMS05_463053	SeqNo: 7927578		PrepDate: 01-Apr-2024		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Sodium	701.9	10.0	500	215.4	97.3	75 - 125			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 209729 (0)		Instrument: ICPMS07		Method: ICP-MS METALS BY SW6020A						
SD	Sample ID: HS24031762-09SD	Units: mg/L			Analysis Date: 03-Apr-2024 22:59					
Client ID:	Run ID: ICPMS05_462982	SeqNo: 7926135		PrepDate: 01-Apr-2024		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual	
Arsenic	0.0899	0.0100					0.09206	2.34	10	
Barium	0.2632	0.0200					0.2663	1.15	10	
Calcium	64.35	2.50					64.53	0.277	10	
Chromium	U	0.0200					0.000732	0	10	
Iron	9.763	1.00					9.45	3.31	10	
Lead	0.003595	0.0100					0.003305	0	10 J	
Magnesium	59.4	1.00					58.64	1.3	10	
Manganese	0.5233	0.0250					0.5176	1.09	10	
Nickel	U	0.0100					0.002812	0	10	
Potassium	0.2266	1.00					0.2063	0	10 J	
Strontium	0.5943	0.0250					0.6018	1.25	10	
Vanadium	0.003875	0.0250					0.001597	0	10 J	
Zinc	U	0.0200					0.005622	0	10	

SD	Sample ID: HS24031762-09SD	Units: mg/L			Analysis Date: 04-Apr-2024 13:14				
Client ID:	Run ID: ICPMS05_463053	SeqNo: 7927577		PrepDate: 01-Apr-2024		DF: 250			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Sodium	219.6	50.0					215.4	1.93	10

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: 210021 (0)	Instrument: HG04	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-210021	Units: mg/L	Analysis Date: 05-Apr-2024 13:08							
Client ID:	Run ID: HG04_463223	SeqNo: 7931106	PrepDate: 05-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury U 0.000200

LCS	Sample ID: LCS-210021	Units: mg/L	Analysis Date: 05-Apr-2024 13:10							
Client ID:	Run ID: HG04_463223	SeqNo: 7931107	PrepDate: 05-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00518 0.000200 0.005 0 104 80 - 120

MS	Sample ID: HS24031725-01MS	Units: mg/L	Analysis Date: 05-Apr-2024 13:40							
Client ID:	Run ID: HG04_463223	SeqNo: 7931120	PrepDate: 05-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00505 0.000200 0.005 0.00004 100 75 - 125

MSD	Sample ID: HS24031725-01MSD	Units: mg/L	Analysis Date: 05-Apr-2024 13:42							
Client ID:	Run ID: HG04_463223	SeqNo: 7931121	PrepDate: 05-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00506 0.000200 0.005 0.00004 100 75 - 125 0.00505 0.198 20

The following samples were analyzed in this batch:	HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
	HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463081 (0)		Instrument: VOA11		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-240404	Units: ug/L			Analysis Date: 04-Apr-2024 10:53				
Client ID:	Run ID: VOA11_463081	SeqNo: 7927720		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	1.0							
Ethylbenzene	U	1.0							
m,p-Xylene	U	2.0							
o-Xylene	U	1.0							
Toluene	U	1.0							
Xylenes, Total	U	3.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>50.19</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>45.15</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>90.3</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>49.14</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>98.3</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>49.13</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>98.3</i>	<i>81 - 120</i>			

LCS	Sample ID: VLCSW-240404	Units: ug/L			Analysis Date: 04-Apr-2024 09:46				
Client ID:	Run ID: VOA11_463081	SeqNo: 7927718		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	20.24	1.0	20	0	101	74 - 120			
Ethylbenzene	20.79	1.0	20	0	104	77 - 117			
m,p-Xylene	42.89	2.0	40	0	107	77 - 122			
o-Xylene	22.09	1.0	20	0	110	75 - 119			
Toluene	20.17	1.0	20	0	101	77 - 118			
Xylenes, Total	64.98	3.0	60	0	108	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>46.56</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>93.1</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>43.23</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>86.5</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>48.12</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>96.2</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>49.64</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.3</i>	<i>81 - 120</i>			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463081 (0) **Instrument:** VOA11 **Method:** LOW LEVEL VOLATILES BY SW8260C

LCSD		Sample ID: VLCSDW-240404			Units: ug/L		Analysis Date: 04-Apr-2024 10:08			
Client ID:		Run ID: VOA11_463081			SeqNo: 7927719		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.07	1.0	20	0	95.4	74 - 120	20.24	5.94	20	
Ethylbenzene	19.15	1.0	20	0	95.8	77 - 117	20.79	8.18	20	
m,p-Xylene	39.45	2.0	40	0	98.6	77 - 122	42.89	8.35	20	
o-Xylene	20.35	1.0	20	0	102	75 - 119	22.09	8.23	20	
Toluene	18.83	1.0	20	0	94.1	77 - 118	20.17	6.89	20	
Xylenes, Total	59.8	3.0	60	0	99.7	75 - 122	64.98	8.31	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>48.67</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>97.3</i>	<i>70 - 123</i>	<i>46.56</i>	<i>4.43</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.77</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>93.5</i>	<i>77 - 113</i>	<i>43.23</i>	<i>7.86</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>49.89</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.8</i>	<i>73 - 126</i>	<i>48.12</i>	<i>3.61</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>49.87</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.7</i>	<i>81 - 120</i>	<i>49.64</i>	<i>0.466</i>	<i>20</i>	

MS		Sample ID: HS24040144-02MS			Units: ug/L		Analysis Date: 04-Apr-2024 18:44			
Client ID:		Run ID: VOA11_463081			SeqNo: 7929519		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	200.4	10	200	0	100	70 - 127				
Ethylbenzene	198.1	10	200	0	99.0	70 - 124				
m,p-Xylene	410.2	20	400	0	103	70 - 130				
o-Xylene	206.2	10	200	0	103	70 - 124				
Toluene	198.7	10	200	0	99.3	70 - 123				
Xylenes, Total	616.4	30	600	0	103	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>491.3</i>	<i>10</i>	<i>500</i>	<i>0</i>	<i>98.3</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>484.3</i>	<i>10</i>	<i>500</i>	<i>0</i>	<i>96.9</i>	<i>77 - 113</i>				
<i>Surr: Dibromofluoromethane</i>	<i>499.7</i>	<i>10</i>	<i>500</i>	<i>0</i>	<i>99.9</i>	<i>77 - 123</i>				
<i>Surr: Toluene-d8</i>	<i>521.6</i>	<i>10</i>	<i>500</i>	<i>0</i>	<i>104</i>	<i>82 - 127</i>				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463081 (0) **Instrument:** VOA11 **Method:** LOW LEVEL VOLATILES BY SW8260C

MSD		Sample ID: HS24040144-02MSD		Units: ug/L		Analysis Date: 04-Apr-2024 19:06				
Client ID:		Run ID: VOA11_463081		SeqNo: 7929520		PrepDate:		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	188.7	10	200	0	94.4	70 - 127	200.4	6	20	
Ethylbenzene	181.7	10	200	0	90.8	70 - 124	198.1	8.65	20	
m,p-Xylene	370.2	20	400	0	92.5	70 - 130	410.2	10.3	20	
o-Xylene	188.5	10	200	0	94.2	70 - 124	206.2	8.99	20	
Toluene	179.8	10	200	0	89.9	70 - 123	198.7	10	20	
Xylenes, Total	558.6	30	600	0	93.1	70 - 130	616.4	9.83	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	482.6	10	500	0	96.5	70 - 126	491.3	1.79	20	
<i>Surr: 4-Bromofluorobenzene</i>	471.1	10	500	0	94.2	77 - 113	484.3	2.75	20	
<i>Surr: Dibromofluoromethane</i>	502.9	10	500	0	101	77 - 123	499.7	0.623	20	
<i>Surr: Toluene-d8</i>	496.7	10	500	0	99.3	82 - 127	521.6	4.89	20	

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463003 (0)		Instrument: Balance1		Method: TOTAL DISSOLVED SOLIDS BY SM2540C-2011						
MBLK	Sample ID: WMBLK-04032024	Units: mg/L		Analysis Date: 03-Apr-2024 10:00						
Client ID:	Run ID: Balance1_463003	SeqNo: 7926391		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		U	10.0							
LCS	Sample ID: WLCS-04032024	Units: mg/L		Analysis Date: 03-Apr-2024 10:00						
Client ID:	Run ID: Balance1_463003	SeqNo: 7926390		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		916	10.0	1000	0	91.6	85 - 115			
DUP	Sample ID: HS24040091-01 DUP	Units: mg/L		Analysis Date: 03-Apr-2024 10:00						
Client ID:	Run ID: Balance1_463003	SeqNo: 7926388		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		740	10.0				736	0.542	20	
DUP	Sample ID: HS24040042-01 DUP	Units: mg/L		Analysis Date: 03-Apr-2024 10:00						
Client ID:	Run ID: Balance1_463003	SeqNo: 7926378		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		312	10.0				358	13.7	20	
The following samples were analyzed in this batch:				HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04			
				HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463032 (0)	Instrument: ICS-Integrion	Method: ANIONS BY SW9056A
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MBLK	Sample ID: MBLK	Units: mg/L	Analysis Date: 03-Apr-2024 22:14							
Client ID:	Run ID: ICS-Integrion_463032	SeqNo: 7926894	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	U	0.100								
Chloride	U	0.500								
Sulfate	U	0.500								

LCS	Sample ID: LCS	Units: mg/L	Analysis Date: 03-Apr-2024 22:20							
Client ID:	Run ID: ICS-Integrion_463032	SeqNo: 7926895	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.888	0.100	4	0	97.2	80 - 120				
Chloride	19.61	0.500	20	0	98.1	80 - 120				
Sulfate	20.8	0.500	20	0	104	80 - 120				

MS	Sample ID: HS24040024-02MS	Units: mg/L	Analysis Date: 04-Apr-2024 00:13							
Client ID: 019-580	Run ID: ICS-Integrion_463032	SeqNo: 7926908	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.908	0.100	2	0	95.4	80 - 120				
Chloride	32.2	0.500	10	22.52	96.8	80 - 120				
Sulfate	14.79	0.500	10	4.464	103	80 - 120				

MSD	Sample ID: HS24040024-02MSD	Units: mg/L	Analysis Date: 04-Apr-2024 00:19							
Client ID: 019-580	Run ID: ICS-Integrion_463032	SeqNo: 7926909	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.923	0.100	2	0	96.1	80 - 120	1.908	0.741	20	
Chloride	32.18	0.500	10	22.52	96.6	80 - 120	32.2	0.0559	20	
Sulfate	14.77	0.500	10	4.464	103	80 - 120	14.79	0.146	20	

The following samples were analyzed in this batch:	HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
	HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463071 (0) **Instrument:** WetChem_HS **Method:** SULFIDE BY SM4500 S2-F-2011

MBLK Sample ID: **MBLK-R463071** Units: **mg/L** Analysis Date: **04-Apr-2024 13:33**
 Client ID: Run ID: **WetChem_HS_463071** SeqNo: **7927571** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide U 2.00

LCS Sample ID: **LCS-R463071** Units: **mg/L** Analysis Date: **04-Apr-2024 13:33**
 Client ID: Run ID: **WetChem_HS_463071** SeqNo: **7927570** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide 22.32 2.00 25 0 89.3 85 - 115

LCSD Sample ID: **LCSD-R463071** Units: **mg/L** Analysis Date: **04-Apr-2024 13:33**
 Client ID: Run ID: **WetChem_HS_463071** SeqNo: **7927569** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide 22.12 2.00 25 0 88.5 85 - 115 22.32 0.9 20

MS Sample ID: **HS24040024-01MS** Units: **mg/L** Analysis Date: **04-Apr-2024 13:33**
 Client ID: **019-582** Run ID: **WetChem_HS_463071** SeqNo: **7927574** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide 22.12 2.00 25 -1.48 94.4 80 - 120

The following samples were analyzed in this batch: HS24040024-01 HS24040024-02 HS24040024-03 HS24040024-04
 HS24040024-05 HS24040024-06 HS24040024-07 HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463103 (0)	Instrument: WetChem_HS	Method: HYDROGEN SULFIDE BY E376.1
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MBLK	Sample ID: MBLK-R463103	Units: mg/L	Analysis Date: 04-Apr-2024 15:28							
Client ID:	Run ID: WetChem_HS_463103	SeqNo: 7928217	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide U 1.00

LCS	Sample ID: LCS-R463103	Units: mg/L	Analysis Date: 04-Apr-2024 15:28							
Client ID:	Run ID: WetChem_HS_463103	SeqNo: 7928216	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide 23.72 1.00 26.56 0 89.3 80 - 120

LCSD	Sample ID: LCSD-R463103	Units: mg/L	Analysis Date: 04-Apr-2024 15:28							
Client ID:	Run ID: WetChem_HS_463103	SeqNo: 7928215	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide 23.5 1.00 26.56 0 88.5 80 - 120 23.72 0.9 20

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463216 (0)	Instrument: Skalar 03	Method: ALKALINITY BY -2011
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MBLK	Sample ID: MBLK	Units: mg/L	Analysis Date: 05-Apr-2024 10:19							
Client ID:	Run ID: Skalar 03_463216	SeqNo: 7930922	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.00								
Alkalinity, Carbonate (As CaCO3)	U	5.00								

LCS	Sample ID: LCS-04052024	Units: mg/L	Analysis Date: 05-Apr-2024 10:26							
Client ID:	Run ID: Skalar 03_463216	SeqNo: 7930923	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	905.8	5.00	1000	0	90.6	85 - 115				

LCSD	Sample ID: LCSD-04052024	Units: mg/L	Analysis Date: 05-Apr-2024 10:32							
Client ID:	Run ID: Skalar 03_463216	SeqNo: 7930924	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	902.8	5.00	1000	0	90.3	85 - 115	905.8	0.332	20	

DUP	Sample ID: HS24040024-08DUP	Units: mg/L	Analysis Date: 05-Apr-2024 11:36							
Client ID: 019-995	Run ID: Skalar 03_463216	SeqNo: 7930935	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	111.9	5.00					109.7	1.99	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

QC BATCH REPORT

Batch ID: R463237 (0)	Instrument: Skalar 03	Method: PH BY SM4500H+ B-2011
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DUP	Sample ID: HS24031253-01DUP	Units: pH Units	Analysis Date: 05-Apr-2024 16:03							
Client ID:	Run ID: Skalar 03_463237	SeqNo: 7931415	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.2	0.100					8.16	0.489	10	
Temp Deg C @pH	20.9	0					21.1	0.952	10	

The following samples were analyzed in this batch:

HS24040024-01	HS24040024-02	HS24040024-03	HS24040024-04
HS24040024-05	HS24040024-06	HS24040024-07	HS24040024-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040024

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919; 2024	30-Apr-2024
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624 - 2024	31-Dec-2024
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-32	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

Sample Receipt Checklist

Work Order ID: HS24040024

Date/Time Received: **29-Mar-2024 11:45**

Client Name: ERMSW-HOU

Received by: **Monica Smith**

Completed By: <u>/S/ Kaycee Rogers</u>	01-Apr-2024 12:41	Reviewed by: <u>/S/ Bernadette A. Fini</u>	01-Apr-2024 15:24
eSignature	Date/Time	eSignature	Date/Time

Matrices: **W**

Carrier name: **Client**

- | | | | |
|---|---|--|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | COC IDs:311113 |
| Samplers name present on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Temperature(s)/Thermometer(s):	1.1UC/1.5C, 3.0UC/3.4C, 2.4UC/2.8C	IR 33
Cooler(s)/Kit(s):	51498, 52141, Blue	
Date/Time sample(s) sent to storage:	04/01/2024 12:44	

- | | | | |
|--|---|--|---|
| Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |

pH adjusted by:

Login Notes:

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Fort Collins, CO
+1 970 490 1511

Everett, WA
+1 425 356 2600

Holland, MI
+1 616 399 6070

Chain of Custody For

Page 1 of 1

COC ID: **311113**

HS24040024

Environmental Resources Mgmt.
Sulphur Dome

HR, WV
8

0

ALS Project Manager:



Customer Information		Project Information	
Purchase Order	0722101	Project Name	Sulphur Dome
Work Order		Project Number	
Company Name	Environmental Resources Mgmt.	Bill To Company	Environmental Resources Mgmt.
Send Report To	Scott Himes	Invoice Attn	Accounts Payable
Address	CityCentre Four	Address	CityCentre Four
	840 W. Sam Houston Pkwy., Suite 6		840 W. Sam Houston Pkwy., Suite 6
City/State/Zip	Houston, TX 77024	City/State/Zip	Houston TX 77024
Phone	(281) 600-1000	Phone	(281) 600-1000
Fax	(281) 600-1001	Fax	(281) 600-1001
e-Mail Address	scott.himes@erm.com	e-Mail Address	ERMNAAccountsPayable@erm.com

A	8260_LL_W (Low Level VOC (8260) BTEX)
B	ICP:As,Ba,Ca,Cr,Fe,Pb,Mg,Mn,K,Na,Sr,Zn,Ni,V)
C	HG_W (Mercury)
D	MA EPH_W La (MA EPH)
E	MA VPH_LA_W (MA VPH)
F	9056_anions_W (Cl,SO4,Br) / pH
G	ALK_W 2320B (carb. bicarb)
H	H2S_W (H2S)
I	SULFD_4500S F (Sulfide)
J	TDS_W 2540C (TDS)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	019-582	3/28/24	8:15	W	12,8	12	X	X	X	X	X	X	X	X	X	X	
2	019-580		8:20														
3	Cottages		8:45														
4	WPB PPB No. 7B		9:15														
5	LDNR-19		11:20														
6	LDNR-09		11:45														
7	019-1603		13:45														
8	019-995		13:20														
9																	
10																	

Sampler(s) Please Print & Sign: Taylor Brown Taylor Brown

Shipment Method: _____ Required Turnaround Time: (Check Box) 5 wk. Days Other _____ 2 wk. Days 24-hour

Results Due Date: _____

Relinquished by: Taylor Brown Date: 3/29/24 Time: 11:45 Received by: _____

Relinquished by: Taylor Brown Date: 3/29/24 Time: 11:45 Received by Laboratory: MS

Logged by (Laboratory): _____ Date: _____ Time: _____ Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Notes: ERM Sulphur Dome

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
S1495	1.1	<input checked="" type="checkbox"/> Level II: SMI CC	<input type="checkbox"/> TRRP Checklist
S1497	3.0	<input type="checkbox"/> Level III: SMI CC/Pass Date	<input type="checkbox"/> TRRP Level IV
Blue	2.9	<input type="checkbox"/> Level IV: MWH SCLP	

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. This Chain of Custody is a legal document. All information must be completed accurately.

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April 05, 2024

Scott Himes
Environmental Resources Mgmt.
CityCentre Four
840 W. Sam Houston Pkwy., Suite 600
Houston, TX 77024

Work Order: **HS24040061**

Laboratory Results for: **Sulphur Dome**

Dear Scott Himes,

ALS Environmental received 27 sample(s) on Mar 28, 2024 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

Bernadette A. Fini
Project Manager

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040061

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24040061-01	MW-2-500'	Water		26-Mar-2024 14:50	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-02	MW-1-700'	Water		26-Mar-2024 16:10	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-03	MW-1-500'	Water		27-Mar-2024 08:35	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-04	MW-1-200'	Water		27-Mar-2024 09:55	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-05	MW-3-700'	Water		27-Mar-2024 12:35	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-06	MW-3-200'	Water		27-Mar-2024 15:35	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-07	MW-3-500'	Water		27-Mar-2024 17:25	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-08	LDNR-23	Water		27-Mar-2024 09:15	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-09	LDNR-25	Water		27-Mar-2024 09:45	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-10	LDNR-14	Water		27-Mar-2024 10:20	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-11	LDNR-13	Water		27-Mar-2024 12:20	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-12	LDNR-12	Water		27-Mar-2024 13:15	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-13	LDNR-07	Water		27-Mar-2024 13:30	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-14	LDNR-08	Water		27-Mar-2024 14:30	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-15	LDNR-01	Water		26-Mar-2024 09:00	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-16	MW-2-700'	Water		26-Mar-2024 09:50	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-17	MW-2-200'	Water		26-Mar-2024 13:20	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-18	LDNR-04	Water		26-Mar-2024 10:20	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-19	LDNR-03	Water		26-Mar-2024 10:45	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-20	LDNR-24	Water		26-Mar-2024 11:00	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-21	LDNR-17	Water		26-Mar-2024 12:45	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-22	LDNR-05	Water		26-Mar-2024 13:00	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-23	LDNR-18	Water		26-Mar-2024 13:15	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-24	LDNR-21	Water		26-Mar-2024 15:15	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-25	LDNR-22	Water		26-Mar-2024 15:30	28-Mar-2024 10:52	<input type="checkbox"/>
HS24040061-26	LDNR-06	Water		26-Mar-2024 16:00	28-Mar-2024 10:52	<input type="checkbox"/>

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040061

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24040061-27	LDNR-26	Water		26-Mar-2024 17:00	28-Mar-2024 10:52	<input type="checkbox"/>

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040061

CASE NARRATIVE

Work Order Comments

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Work Order Comments

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Work Order Comments

- Login notes:
Sample time differ: LDNR-25 COC=0945 label=0915, MW-2-700` COC=0950 Label=0955
Sample LDNR-22 COC=12 containers, only received 11

GC Semivolatiles by Method MA EPH

Batch ID: 209784,209839

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method MA VPH

Batch ID: R462914,R462915,R463013,R463015

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R462906

Sample ID: HS24031685-01MS

- MS and MSD are for an unrelated sample

Batch ID: R463001

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R463029

Sample ID: HS24031692-01MS

- MS and MSD are for an unrelated sample

Batch ID: R463096

Sample ID: VLCSW-240404

- Insufficient sample received to perform MS/MSD. An LCS/LCSD was performed as batch quality control.

Metals by Method SW7470A

Batch ID: 209872,209875,209879

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040061

CASE NARRATIVE

Metals by Method SW6020A**Batch ID: 209765****Sample ID: HS24040062-04MS**

- MS and MSD are for an unrelated sample

Sample ID: HS24040062-04PDS

- PDS is for an unrelated sample

Batch ID: 209772**Sample ID: MW-2-500' (HS24040061-01SD)**

- The percent difference between the results of the sample and the serial dilution were greater than 10%. (Sodium)

Sample ID: MW-2-500' (HS24040061-01MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. Barium

Batch ID: 209817**Sample ID: LDNR-05 (HS24040061-22MS)**

- Barium failed for MS but passed on MSD and PDS
- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Calcium, Magnesium, Manganese, Sodium, Strontium)

Sample ID: LDNR-05 (HS24040061-22PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. (Calcium)

WetChemistry by Method SW9056**Batch ID: R463024,R463032**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B**Batch ID: R463100,R463116**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500H+ B**Batch ID: R462930,R462933**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2540C**Batch ID: R462885,R462886**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24040061

CASE NARRATIVE

WetChemistry by Method E376.1

Batch ID: R462813,R462931

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SM4500 S2-F

Batch ID: R462810,R462926

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-500'
 Collection Date: 26-Mar-2024 14:50

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 04:58
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 04:58
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 04:58
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 04:58
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 04:58
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 04:58
<i>Surr: 1,2-Dichloroethane-d4</i>	112			70-126	%REC	1	03-Apr-2024 04:58
<i>Surr: 4-Bromofluorobenzene</i>	101			77-113	%REC	1	03-Apr-2024 04:58
<i>Surr: Dibromofluoromethane</i>	108			77-123	%REC	1	03-Apr-2024 04:58
<i>Surr: Toluene-d8</i>	111			82-127	%REC	1	03-Apr-2024 04:58
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 01:52
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 01:52
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 01:52
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	79.7			70-130	%REC	1	03-Apr-2024 01:52
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	78.9			70-130	%REC	1	03-Apr-2024 01:52
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 14:22
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 14:22
Aliphatics >C16 - C35	0.0289		0.00800	0.00800	mg/L	1	03-Apr-2024 14:22
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 14:22
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 14:22
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 14:22
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 14:22
<i>Surr: 1-Chlorooctadecane</i>	77.8			40-140	%REC	1	03-Apr-2024 14:22
<i>Surr: 2-Bromonaphthalene</i>	92.2			40-140	%REC	1	03-Apr-2024 14:22
<i>Surr: 2-Fluorobiphenyl</i>	103			40-140	%REC	1	03-Apr-2024 14:22
<i>Surr: o-Terphenyl</i>	65.0			40-140	%REC	1	03-Apr-2024 14:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-500'
 Collection Date: 26-Mar-2024 14:50

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00396		0.000400	0.00200	mg/L	1	03-Apr-2024 12:29
Barium	0.143		0.00190	0.00400	mg/L	1	03-Apr-2024 12:29
Calcium	19.3		0.0340	0.500	mg/L	1	03-Apr-2024 12:29
Chromium	0.00454		0.000400	0.00400	mg/L	1	03-Apr-2024 12:29
Iron	3.65		0.0120	0.200	mg/L	1	03-Apr-2024 12:29
Lead	U		0.000600	0.00200	mg/L	1	03-Apr-2024 12:29
Magnesium	4.06		0.0100	0.200	mg/L	1	03-Apr-2024 12:29
Manganese	0.0912		0.000700	0.00500	mg/L	1	03-Apr-2024 12:29
Nickel	0.00294		0.000600	0.00200	mg/L	1	03-Apr-2024 12:29
Potassium	3.21		0.0180	0.200	mg/L	1	03-Apr-2024 12:29
Sodium	70.0		0.0140	0.200	mg/L	1	03-Apr-2024 12:29
Strontium	0.230		0.000200	0.00500	mg/L	1	03-Apr-2024 12:29
Vanadium	0.00106	J	0.000600	0.00500	mg/L	1	03-Apr-2024 12:29
Zinc	0.00813		0.00200	0.00400	mg/L	1	03-Apr-2024 12:29
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	03-Apr-2024 17:20
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	296		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	169		3.50	5.00	mg/L	1	04-Apr-2024 12:03
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	04-Apr-2024 12:03
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	8.09	H	0.100	0.100	pH Units	1	03-Apr-2024 11:05
Temp Deg C @pH	21.9	H	0	0	°C	1	03-Apr-2024 11:05
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	03-Apr-2024 15:18
Chloride	36.6		0.200	0.500	mg/L	1	03-Apr-2024 15:18
Sulfate	14.4		0.200	0.500	mg/L	1	03-Apr-2024 15:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-700'
 Collection Date: 26-Mar-2024 16:10

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 05:21
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 05:21
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 05:21
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 05:21
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 05:21
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 05:21
<i>Surr: 1,2-Dichloroethane-d4</i>	113			70-126	%REC	1	03-Apr-2024 05:21
<i>Surr: 4-Bromofluorobenzene</i>	102			77-113	%REC	1	03-Apr-2024 05:21
<i>Surr: Dibromofluoromethane</i>	109			77-123	%REC	1	03-Apr-2024 05:21
<i>Surr: Toluene-d8</i>	112			82-127	%REC	1	03-Apr-2024 05:21
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 02:36
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 02:36
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 02:36
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	81.3			70-130	%REC	1	03-Apr-2024 02:36
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	73.8			70-130	%REC	1	03-Apr-2024 02:36
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 14:51
Aliphatics >C12 - C16	0.00282		0.00200	0.00200	mg/L	1	03-Apr-2024 14:51
Aliphatics >C16 - C35	0.0138		0.00800	0.00800	mg/L	1	03-Apr-2024 14:51
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 14:51
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 14:51
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 14:51
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 14:51
<i>Surr: 1-Chlorooctadecane</i>	85.3			40-140	%REC	1	03-Apr-2024 14:51
<i>Surr: 2-Bromonaphthalene</i>	88.5			40-140	%REC	1	03-Apr-2024 14:51
<i>Surr: 2-Fluorobiphenyl</i>	100			40-140	%REC	1	03-Apr-2024 14:51
<i>Surr: o-Terphenyl</i>	70.6			40-140	%REC	1	03-Apr-2024 14:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-700'
 Collection Date: 26-Mar-2024 16:10

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00134	J	0.000400	0.00200	mg/L	1	03-Apr-2024 12:48
Barium	0.0616		0.00190	0.00400	mg/L	1	03-Apr-2024 12:48
Calcium	4.60		0.0340	0.500	mg/L	1	03-Apr-2024 12:48
Chromium	0.0150		0.000400	0.00400	mg/L	1	03-Apr-2024 12:48
Iron	0.530		0.0120	0.200	mg/L	1	03-Apr-2024 12:48
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 12:48
Magnesium	0.215		0.0100	0.200	mg/L	1	03-Apr-2024 12:48
Manganese	0.00804		0.000700	0.00500	mg/L	1	03-Apr-2024 12:48
Nickel	0.00838		0.000600	0.00200	mg/L	1	03-Apr-2024 12:48
Potassium	2.79		0.0180	0.200	mg/L	1	03-Apr-2024 12:48
Sodium	175		0.0140	0.200	mg/L	1	03-Apr-2024 12:48
Strontium	0.0652		0.000200	0.00500	mg/L	1	03-Apr-2024 12:48
Vanadium	0.00368	J	0.000600	0.00500	mg/L	1	03-Apr-2024 12:48
Zinc	0.00292	J	0.00200	0.00400	mg/L	1	03-Apr-2024 12:48
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:22
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	494		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	238		3.50	5.00	mg/L	1	04-Apr-2024 12:14
Alkalinity, Carbonate (As CaCO3)	56.0		3.50	5.00	mg/L	1	04-Apr-2024 12:14
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	9.12	H	0.100	0.100	pH Units	1	03-Apr-2024 11:06
Temp Deg C @pH	21.9	H	0	0	°C	1	03-Apr-2024 11:06
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 15:24
Chloride	105		2.00	5.00	mg/L	10	03-Apr-2024 15:30
Sulfate	13.9		0.200	0.500	mg/L	1	03-Apr-2024 15:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-500'
 Collection Date: 27-Mar-2024 08:35

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 05:43
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 05:43
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 05:43
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 05:43
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 05:43
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 05:43
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>111</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 05:43</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>99.9</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 05:43</i>
<i>Surr: Dibromofluoromethane</i>	<i>105</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 05:43</i>
<i>Surr: Toluene-d8</i>	<i>108</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 05:43</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 04:47
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 04:47
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 04:47
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>78.3</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 04:47</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>84.4</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 04:47</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 15:20
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 15:20
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 15:20
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 15:20
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 15:20
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 15:20
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 15:20
<i>Surr: 1-Chlorooctadecane</i>	<i>88.7</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 15:20</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>93.5</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 15:20</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>105</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 15:20</i>
<i>Surr: o-Terphenyl</i>	<i>88.9</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 15:20</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-500'
 Collection Date: 27-Mar-2024 08:35

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00493		0.000400	0.00200	mg/L	1	03-Apr-2024 12:50
Barium	0.108		0.00190	0.00400	mg/L	1	03-Apr-2024 12:50
Calcium	18.0		0.0340	0.500	mg/L	1	03-Apr-2024 12:50
Chromium	0.00257	J	0.000400	0.00400	mg/L	1	03-Apr-2024 12:50
Iron	1.89		0.0120	0.200	mg/L	1	03-Apr-2024 12:50
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 12:50
Magnesium	4.65		0.0100	0.200	mg/L	1	03-Apr-2024 12:50
Manganese	0.0774		0.000700	0.00500	mg/L	1	03-Apr-2024 12:50
Nickel	0.00153	J	0.000600	0.00200	mg/L	1	03-Apr-2024 12:50
Potassium	2.93		0.0180	0.200	mg/L	1	03-Apr-2024 12:50
Sodium	67.0		0.0140	0.200	mg/L	1	03-Apr-2024 12:50
Strontium	0.218		0.000200	0.00500	mg/L	1	03-Apr-2024 12:50
Vanadium	0.00206	J	0.000600	0.00500	mg/L	1	03-Apr-2024 12:50
Zinc	0.00577		0.00200	0.00400	mg/L	1	03-Apr-2024 12:50
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:24
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	296		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	208		3.50	5.00	mg/L	1	04-Apr-2024 12:19
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 12:19
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	8.17	H	0.100	0.100	pH Units	1	03-Apr-2024 11:07
Temp Deg C @pH	21.9	H	0	0	°C	1	03-Apr-2024 11:07
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 16:12
Chloride	24.8		0.200	0.500	mg/L	1	03-Apr-2024 16:12
Sulfate	5.65		0.200	0.500	mg/L	1	03-Apr-2024 16:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-200'
 Collection Date: 27-Mar-2024 09:55

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 06:06
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 06:06
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 06:06
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 06:06
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 06:06
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 06:06
<i>Surr: 1,2-Dichloroethane-d4</i>	115			70-126	%REC	1	03-Apr-2024 06:06
<i>Surr: 4-Bromofluorobenzene</i>	102			77-113	%REC	1	03-Apr-2024 06:06
<i>Surr: Dibromofluoromethane</i>	106			77-123	%REC	1	03-Apr-2024 06:06
<i>Surr: Toluene-d8</i>	113			82-127	%REC	1	03-Apr-2024 06:06
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 05:31
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 05:31
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 05:31
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	81.2			70-130	%REC	1	03-Apr-2024 05:31
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	86.3			70-130	%REC	1	03-Apr-2024 05:31
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 15:49
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 15:49
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 15:49
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 15:49
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 15:49
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 15:49
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 15:49
<i>Surr: 1-Chlorooctadecane</i>	80.1			40-140	%REC	1	03-Apr-2024 15:49
<i>Surr: 2-Bromonaphthalene</i>	93.6			40-140	%REC	1	03-Apr-2024 15:49
<i>Surr: 2-Fluorobiphenyl</i>	105			40-140	%REC	1	03-Apr-2024 15:49
<i>Surr: o-Terphenyl</i>	72.0			40-140	%REC	1	03-Apr-2024 15:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-200'
 Collection Date: 27-Mar-2024 09:55

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.0137		0.000400	0.00200	mg/L	1	03-Apr-2024 12:52
Barium	0.187		0.00190	0.00400	mg/L	1	03-Apr-2024 12:52
Calcium	16.9		0.0340	0.500	mg/L	1	03-Apr-2024 12:52
Chromium	U		0.000400	0.00400	mg/L	1	03-Apr-2024 12:52
Iron	0.179	J	0.0120	0.200	mg/L	1	03-Apr-2024 12:52
Lead	U		0.000600	0.00200	mg/L	1	03-Apr-2024 12:52
Magnesium	7.74		0.0100	0.200	mg/L	1	03-Apr-2024 12:52
Manganese	0.0321		0.000700	0.00500	mg/L	1	03-Apr-2024 12:52
Nickel	U		0.000600	0.00200	mg/L	1	03-Apr-2024 12:52
Potassium	2.81		0.0180	0.200	mg/L	1	03-Apr-2024 12:52
Sodium	95.4		0.0140	0.200	mg/L	1	03-Apr-2024 12:52
Strontium	0.224		0.000200	0.00500	mg/L	1	03-Apr-2024 12:52
Vanadium	0.00163	J	0.000600	0.00500	mg/L	1	03-Apr-2024 12:52
Zinc	0.00272	J	0.00200	0.00400	mg/L	1	03-Apr-2024 12:52
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury	0.000293		0.0000300	0.000200	mg/L	1	03-Apr-2024 17:25
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	328		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	250		3.50	5.00	mg/L	1	04-Apr-2024 12:25
Alkalinity, Carbonate (As CaCO3)	6.20		3.50	5.00	mg/L	1	04-Apr-2024 12:25
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	8.40	H	0.100	0.100	pH Units	1	03-Apr-2024 11:08
Temp Deg C @pH	22.0	H	0	0	°C	1	03-Apr-2024 11:08
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	03-Apr-2024 15:36
Chloride	40.7		0.200	0.500	mg/L	1	03-Apr-2024 15:36
Sulfate	0.871		0.200	0.500	mg/L	1	03-Apr-2024 15:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-700'
 Collection Date: 27-Mar-2024 12:35

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 06:29
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 06:29
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 06:29
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 06:29
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 06:29
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 06:29
<i>Surr: 1,2-Dichloroethane-d4</i>	115			70-126	%REC	1	03-Apr-2024 06:29
<i>Surr: 4-Bromofluorobenzene</i>	105			77-113	%REC	1	03-Apr-2024 06:29
<i>Surr: Dibromofluoromethane</i>	107			77-123	%REC	1	03-Apr-2024 06:29
<i>Surr: Toluene-d8</i>	113			82-127	%REC	1	03-Apr-2024 06:29
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 06:15
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 06:15
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 06:15
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	82.2			70-130	%REC	1	03-Apr-2024 06:15
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	78.2			70-130	%REC	1	03-Apr-2024 06:15
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 16:18
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 16:18
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 16:18
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 16:18
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 16:18
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 16:18
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 16:18
<i>Surr: 1-Chlorooctadecane</i>	83.5			40-140	%REC	1	03-Apr-2024 16:18
<i>Surr: 2-Bromonaphthalene</i>	93.0			40-140	%REC	1	03-Apr-2024 16:18
<i>Surr: 2-Fluorobiphenyl</i>	105			40-140	%REC	1	03-Apr-2024 16:18
<i>Surr: o-Terphenyl</i>	74.6			40-140	%REC	1	03-Apr-2024 16:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-700'
 Collection Date: 27-Mar-2024 12:35

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000760	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:06
Barium	2.46		0.190	0.400	mg/L	100	05-Apr-2024 12:08
Calcium	207		3.40	50.0	mg/L	100	05-Apr-2024 12:08
Chromium	0.00175	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:06
Iron	2.21		0.0120	0.200	mg/L	1	03-Apr-2024 13:06
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:06
Magnesium	36.6		0.0100	0.200	mg/L	1	03-Apr-2024 13:06
Manganese	0.613		0.000700	0.00500	mg/L	1	03-Apr-2024 13:06
Nickel	0.00164	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:06
Potassium	18.7		0.0180	0.200	mg/L	1	03-Apr-2024 13:06
Sodium	1,320		1.40	20.0	mg/L	100	05-Apr-2024 12:08
Strontium	4.31		0.0200	0.500	mg/L	100	05-Apr-2024 12:08
Vanadium	0.00141	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:06
Zinc	0.0581		0.00200	0.00400	mg/L	1	03-Apr-2024 13:06
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:32
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	4,320		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	163		3.50	5.00	mg/L	1	04-Apr-2024 12:30
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 12:30
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.89	H	0.100	0.100	pH Units	1	03-Apr-2024 11:09
Temp Deg C @pH	22.0	H	0	0	°C	1	03-Apr-2024 11:09
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	3.41		0.0600	0.200	mg/L	2	03-Apr-2024 16:30
Chloride	2,750		10.0	25.0	mg/L	50	03-Apr-2024 16:36
Sulfate	2.81		0.400	1.00	mg/L	2	03-Apr-2024 16:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-200'
 Collection Date: 27-Mar-2024 15:35

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 06:51
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 06:51
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 06:51
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 06:51
Toluene	6.2		0.20	1.0	ug/L	1	03-Apr-2024 06:51
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 06:51
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>110</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 06:51</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>106</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 06:51</i>
<i>Surr: Dibromofluoromethane</i>	<i>104</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 06:51</i>
<i>Surr: Toluene-d8</i>	<i>115</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 06:51</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 06:59
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 06:59
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 06:59
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>83.8</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 06:59</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>76.1</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 06:59</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 16:47
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 16:47
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 16:47
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 16:47
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 16:47
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 16:47
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 16:47
<i>Surr: 1-Chlorooctadecane</i>	<i>93.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 16:47</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>94.8</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 16:47</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>107</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 16:47</i>
<i>Surr: o-Terphenyl</i>	<i>83.5</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 16:47</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-200'
 Collection Date: 27-Mar-2024 15:35

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 02-Apr-2024		Analyst: MSC
Arsenic	0.00364		0.000400	0.00200	mg/L	1	04-Apr-2024 13:43
Barium	0.0225		0.00380	0.00800	mg/L	2	02-Apr-2024 23:48
Calcium	2.02		0.0680	1.00	mg/L	2	02-Apr-2024 23:48
Chromium	0.00249	J	0.000400	0.00400	mg/L	1	04-Apr-2024 13:43
Iron	0.506		0.0240	0.400	mg/L	2	02-Apr-2024 23:48
Lead		U	0.000600	0.00200	mg/L	1	04-Apr-2024 13:43
Magnesium	0.227		0.0100	0.200	mg/L	1	04-Apr-2024 13:43
Manganese	0.00270	J	0.000700	0.00500	mg/L	1	04-Apr-2024 13:43
Nickel	0.00203		0.000600	0.00200	mg/L	1	04-Apr-2024 13:43
Potassium	62.3		0.0360	0.400	mg/L	2	02-Apr-2024 23:48
Sodium	139		0.0280	0.400	mg/L	2	02-Apr-2024 23:48
Strontium	0.0947		0.000400	0.0100	mg/L	2	02-Apr-2024 23:48
Vanadium	0.0100		0.00120	0.0100	mg/L	2	02-Apr-2024 23:48
Zinc	0.00474		0.00200	0.00400	mg/L	1	04-Apr-2024 13:43
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 03-Apr-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 19:20
HYDROGEN SULFIDE BY E376.1		Method:E376.1					Analyst: CD
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C					Analyst: HB
Total Dissolved Solids (Residue, Filterable)	552		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B					Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 12:35
Alkalinity, Carbonate (As CaCO3)	221		3.50	5.00	mg/L	1	04-Apr-2024 12:35
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F					Analyst: CD
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B					Analyst: MR
pH	11.1	H	0.100	0.100	pH Units	1	03-Apr-2024 11:10
Temp Deg C @pH	22.1	H	0	0	°C	1	03-Apr-2024 11:10
ANIONS BY SW9056A		Method:SW9056					Analyst: TH
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 16:42
Chloride	31.4		0.200	0.500	mg/L	1	03-Apr-2024 16:42
Sulfate	116		0.400	1.00	mg/L	2	03-Apr-2024 20:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-500'
 Collection Date: 27-Mar-2024 17:25

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	1.7		0.20	1.0	ug/L	1	03-Apr-2024 07:14
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 07:14
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 07:14
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 07:14
Toluene	10		0.20	1.0	ug/L	1	03-Apr-2024 07:14
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 07:14
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>111</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 07:14</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>103</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 07:14</i>
<i>Surr: Dibromofluoromethane</i>	<i>107</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 07:14</i>
<i>Surr: Toluene-d8</i>	<i>111</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 07:14</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	0.419		0.0100	0.0100	mg/L	1	03-Apr-2024 07:43
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 07:43
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 07:43
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>89.2</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 07:43</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>94.7</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 07:43</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 18:13
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 18:13
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 18:13
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 18:13
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 18:13
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 18:13
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 18:13
<i>Surr: 1-Chlorooctadecane</i>	<i>77.4</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 18:13</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>87.3</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 18:13</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>97.6</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 18:13</i>
<i>Surr: o-Terphenyl</i>	<i>68.2</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 18:13</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-500'
 Collection Date: 27-Mar-2024 17:25

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 02-Apr-2024		Analyst: MSC
Arsenic	0.000750	J	0.000400	0.00200	mg/L	1	04-Apr-2024 13:45
Barium	0.215		0.00380	0.00800	mg/L	2	02-Apr-2024 23:50
Calcium	170		0.0680	1.00	mg/L	2	02-Apr-2024 23:50
Chromium	0.00154	J	0.000400	0.00400	mg/L	1	04-Apr-2024 13:45
Iron	1.15		0.0240	0.400	mg/L	2	02-Apr-2024 23:50
Lead		U	0.000600	0.00200	mg/L	1	04-Apr-2024 13:45
Magnesium	22.0		0.0200	0.400	mg/L	2	02-Apr-2024 23:50
Manganese	0.0823		0.00140	0.0100	mg/L	2	02-Apr-2024 23:50
Nickel	0.000670	J	0.000600	0.00200	mg/L	1	04-Apr-2024 13:45
Potassium	15.1		0.0360	0.400	mg/L	2	02-Apr-2024 23:50
Sodium	666		2.80	40.0	mg/L	200	04-Apr-2024 13:18
Strontium	4.52		0.0400	1.00	mg/L	200	04-Apr-2024 13:18
Vanadium	0.00421	J	0.000600	0.00500	mg/L	1	04-Apr-2024 13:45
Zinc	0.00327	J	0.00200	0.00400	mg/L	1	04-Apr-2024 13:45
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 03-Apr-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 19:22
HYDROGEN SULFIDE BY E376.1		Method:E376.1					Analyst: CD
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C					Analyst: HB
Total Dissolved Solids (Residue, Filterable)	2,220		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B					Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	36.3		3.50	5.00	mg/L	1	04-Apr-2024 12:51
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 12:51
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F					Analyst: CD
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B					Analyst: MR
pH	7.75	H	0.100	0.100	pH Units	1	03-Apr-2024 11:11
Temp Deg C @pH	21.9	H	0	0	°C	1	03-Apr-2024 11:11
ANIONS BY SW9056A		Method:SW9056					Analyst: TH
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 16:47
Chloride	1,260		4.00	10.0	mg/L	20	03-Apr-2024 16:53
Sulfate	603		4.00	10.0	mg/L	20	03-Apr-2024 16:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-23
 Collection Date: 27-Mar-2024 09:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 07:36
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 07:36
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 07:36
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 07:36
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 07:36
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 07:36
<i>Surr: 1,2-Dichloroethane-d4</i>	115			70-126	%REC	1	03-Apr-2024 07:36
<i>Surr: 4-Bromofluorobenzene</i>	103			77-113	%REC	1	03-Apr-2024 07:36
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	03-Apr-2024 07:36
<i>Surr: Toluene-d8</i>	112			82-127	%REC	1	03-Apr-2024 07:36
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 08:27
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 08:27
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 08:27
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	88.8			70-130	%REC	1	03-Apr-2024 08:27
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	96.6			70-130	%REC	1	03-Apr-2024 08:27
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 18:42
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 18:42
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 18:42
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 18:42
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 18:42
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 18:42
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 18:42
<i>Surr: 1-Chlorooctadecane</i>	89.2			40-140	%REC	1	03-Apr-2024 18:42
<i>Surr: 2-Bromonaphthalene</i>	93.0			40-140	%REC	1	03-Apr-2024 18:42
<i>Surr: 2-Fluorobiphenyl</i>	105			40-140	%REC	1	03-Apr-2024 18:42
<i>Surr: o-Terphenyl</i>	75.4			40-140	%REC	1	03-Apr-2024 18:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-23
 Collection Date: 27-Mar-2024 09:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00106	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:10
Barium	0.147		0.00190	0.00400	mg/L	1	03-Apr-2024 13:10
Calcium	126		0.0340	0.500	mg/L	1	03-Apr-2024 13:10
Chromium	0.000831	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:10
Iron	0.245		0.0120	0.200	mg/L	1	03-Apr-2024 13:10
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:10
Magnesium	25.7		0.0100	0.200	mg/L	1	03-Apr-2024 13:10
Manganese	0.148		0.000700	0.00500	mg/L	1	03-Apr-2024 13:10
Nickel	0.00155	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:10
Potassium	2.91		0.0180	0.200	mg/L	1	03-Apr-2024 13:10
Sodium	327		1.40	20.0	mg/L	100	05-Apr-2024 12:13
Strontium	0.849		0.000200	0.00500	mg/L	1	03-Apr-2024 13:10
Vanadium	0.00182	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:10
Zinc		U	0.00200	0.00400	mg/L	1	03-Apr-2024 13:10
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:34
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,250		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	112		3.50	5.00	mg/L	1	04-Apr-2024 12:56
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 12:56
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.77	H	0.100	0.100	pH Units	1	03-Apr-2024 11:13
Temp Deg C @pH	21.8	H	0	0	°C	1	03-Apr-2024 11:13
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 16:59
Chloride	489		2.00	5.00	mg/L	10	03-Apr-2024 17:05
Sulfate	328		2.00	5.00	mg/L	10	03-Apr-2024 17:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-25
 Collection Date: 27-Mar-2024 09:45

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 07:58
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 07:58
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 07:58
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 07:58
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 07:58
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 07:58
<i>Surr: 1,2-Dichloroethane-d4</i>	112			70-126	%REC	1	03-Apr-2024 07:58
<i>Surr: 4-Bromofluorobenzene</i>	103			77-113	%REC	1	03-Apr-2024 07:58
<i>Surr: Dibromofluoromethane</i>	107			77-123	%REC	1	03-Apr-2024 07:58
<i>Surr: Toluene-d8</i>	113			82-127	%REC	1	03-Apr-2024 07:58
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 09:11
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 09:11
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 09:11
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	77.1			70-130	%REC	1	03-Apr-2024 09:11
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	84.3			70-130	%REC	1	03-Apr-2024 09:11
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 19:11
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 19:11
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 19:11
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 19:11
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 19:11
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 19:11
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 19:11
<i>Surr: 1-Chlorooctadecane</i>	77.3			40-140	%REC	1	03-Apr-2024 19:11
<i>Surr: 2-Bromonaphthalene</i>	96.5			40-140	%REC	1	03-Apr-2024 19:11
<i>Surr: 2-Fluorobiphenyl</i>	108			40-140	%REC	1	03-Apr-2024 19:11
<i>Surr: o-Terphenyl</i>	67.8			40-140	%REC	1	03-Apr-2024 19:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-25
 Collection Date: 27-Mar-2024 09:45

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000945	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:12
Barium	0.145		0.00190	0.00400	mg/L	1	03-Apr-2024 13:12
Calcium	119		0.0340	0.500	mg/L	1	03-Apr-2024 13:12
Chromium	0.000726	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:12
Iron	0.0721	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:12
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:12
Magnesium	24.7		0.0100	0.200	mg/L	1	03-Apr-2024 13:12
Manganese	0.224		0.000700	0.00500	mg/L	1	03-Apr-2024 13:12
Nickel	0.00139	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:12
Potassium	2.79		0.0180	0.200	mg/L	1	03-Apr-2024 13:12
Sodium	313		1.40	20.0	mg/L	100	05-Apr-2024 12:15
Strontium	0.819		0.000200	0.00500	mg/L	1	03-Apr-2024 13:12
Vanadium	0.00214	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:12
Zinc	0.00222	J	0.00200	0.00400	mg/L	1	03-Apr-2024 13:12
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:36
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,140		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	111		3.50	5.00	mg/L	1	04-Apr-2024 13:01
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:01
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.75	H	0.100	0.100	pH Units	1	03-Apr-2024 11:14
Temp Deg C @pH	21.8	H	0	0	°C	1	03-Apr-2024 11:14
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 17:41
Chloride	509		2.00	5.00	mg/L	10	03-Apr-2024 17:47
Sulfate	340		2.00	5.00	mg/L	10	03-Apr-2024 17:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-14
 Collection Date: 27-Mar-2024 10:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-10
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 08:21
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 08:21
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 08:21
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 08:21
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 08:21
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 08:21
<i>Surr: 1,2-Dichloroethane-d4</i>	112			70-126	%REC	1	03-Apr-2024 08:21
<i>Surr: 4-Bromofluorobenzene</i>	101			77-113	%REC	1	03-Apr-2024 08:21
<i>Surr: Dibromofluoromethane</i>	107			77-123	%REC	1	03-Apr-2024 08:21
<i>Surr: Toluene-d8</i>	112			82-127	%REC	1	03-Apr-2024 08:21
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 09:55
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 09:55
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 09:55
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	85.0			70-130	%REC	1	03-Apr-2024 09:55
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	76.3			70-130	%REC	1	03-Apr-2024 09:55
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 19:40
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 19:40
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 19:40
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 19:40
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 19:40
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 19:40
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 19:40
<i>Surr: 1-Chlorooctadecane</i>	74.8			40-140	%REC	1	03-Apr-2024 19:40
<i>Surr: 2-Bromonaphthalene</i>	89.9			40-140	%REC	1	03-Apr-2024 19:40
<i>Surr: 2-Fluorobiphenyl</i>	101			40-140	%REC	1	03-Apr-2024 19:40
<i>Surr: o-Terphenyl</i>	70.1			40-140	%REC	1	03-Apr-2024 19:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-14
 Collection Date: 27-Mar-2024 10:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-10
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000983	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:14
Barium	0.142		0.00190	0.00400	mg/L	1	03-Apr-2024 13:14
Calcium	118		0.0340	0.500	mg/L	1	03-Apr-2024 13:14
Chromium	0.00251	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:14
Iron	0.107	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:14
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:14
Magnesium	24.2		0.0100	0.200	mg/L	1	03-Apr-2024 13:14
Manganese	0.234		0.000700	0.00500	mg/L	1	03-Apr-2024 13:14
Nickel	0.00200	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:14
Potassium	2.78		0.0180	0.200	mg/L	1	03-Apr-2024 13:14
Sodium	309		1.40	20.0	mg/L	100	05-Apr-2024 12:17
Strontium	0.786		0.000200	0.00500	mg/L	1	03-Apr-2024 13:14
Vanadium	0.00229	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:14
Zinc	0.00932		0.00200	0.00400	mg/L	1	03-Apr-2024 13:14
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:37
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,240		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	114		3.50	5.00	mg/L	1	04-Apr-2024 13:06
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:06
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.71	H	0.100	0.100	pH Units	1	03-Apr-2024 11:15
Temp Deg C @pH	21.7	H	0	0	°C	1	03-Apr-2024 11:15
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 17:53
Chloride	503		2.00	5.00	mg/L	10	03-Apr-2024 17:59
Sulfate	329		2.00	5.00	mg/L	10	03-Apr-2024 17:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-13
 Collection Date: 27-Mar-2024 12:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 08:43
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 08:43
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 08:43
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 08:43
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 08:43
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 08:43
<i>Surr: 1,2-Dichloroethane-d4</i>	112			70-126	%REC	1	03-Apr-2024 08:43
<i>Surr: 4-Bromofluorobenzene</i>	103			77-113	%REC	1	03-Apr-2024 08:43
<i>Surr: Dibromofluoromethane</i>	105			77-123	%REC	1	03-Apr-2024 08:43
<i>Surr: Toluene-d8</i>	111			82-127	%REC	1	03-Apr-2024 08:43
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 10:38
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 10:38
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 10:38
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	75.9			70-130	%REC	1	03-Apr-2024 10:38
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	75.1			70-130	%REC	1	03-Apr-2024 10:38
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 20:08
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 20:08
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 20:08
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 20:08
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 20:08
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 20:08
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 20:08
<i>Surr: 1-Chlorooctadecane</i>	77.4			40-140	%REC	1	03-Apr-2024 20:08
<i>Surr: 2-Bromonaphthalene</i>	90.3			40-140	%REC	1	03-Apr-2024 20:08
<i>Surr: 2-Fluorobiphenyl</i>	102			40-140	%REC	1	03-Apr-2024 20:08
<i>Surr: o-Terphenyl</i>	69.3			40-140	%REC	1	03-Apr-2024 20:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-13
 Collection Date: 27-Mar-2024 12:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00102	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:16
Barium	0.155		0.00190	0.00400	mg/L	1	03-Apr-2024 13:16
Calcium	123		0.0340	0.500	mg/L	1	03-Apr-2024 13:16
Chromium	0.00106	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:16
Iron	0.132	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:16
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:16
Magnesium	24.8		0.0100	0.200	mg/L	1	03-Apr-2024 13:16
Manganese	0.336		0.000700	0.00500	mg/L	1	03-Apr-2024 13:16
Nickel	0.00160	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:16
Potassium	2.88		0.0180	0.200	mg/L	1	03-Apr-2024 13:16
Sodium	318		1.40	20.0	mg/L	100	05-Apr-2024 12:20
Strontium	0.828		0.000200	0.00500	mg/L	1	03-Apr-2024 13:16
Vanadium	0.00311	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:16
Zinc	0.0111		0.00200	0.00400	mg/L	1	03-Apr-2024 13:16
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:42
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,190		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	120		3.50	5.00	mg/L	1	04-Apr-2024 13:11
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:11
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.58	H	0.100	0.100	pH Units	1	03-Apr-2024 11:16
Temp Deg C @pH	21.6	H	0	0	°C	1	03-Apr-2024 11:16
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 18:05
Chloride	493		2.00	5.00	mg/L	10	03-Apr-2024 18:11
Sulfate	316		2.00	5.00	mg/L	10	03-Apr-2024 18:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-12
 Collection Date: 27-Mar-2024 13:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 09:05
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 09:05
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 09:05
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 09:05
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 09:05
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 09:05
<i>Surr: 1,2-Dichloroethane-d4</i>	112			70-126	%REC	1	03-Apr-2024 09:05
<i>Surr: 4-Bromofluorobenzene</i>	100			77-113	%REC	1	03-Apr-2024 09:05
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	1	03-Apr-2024 09:05
<i>Surr: Toluene-d8</i>	109			82-127	%REC	1	03-Apr-2024 09:05
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 11:22
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 11:22
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 11:22
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	81.8			70-130	%REC	1	03-Apr-2024 11:22
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	78.7			70-130	%REC	1	03-Apr-2024 11:22
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 20:37
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	03-Apr-2024 20:37
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	03-Apr-2024 20:37
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 20:37
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 20:37
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 20:37
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 20:37
<i>Surr: 1-Chlorooctadecane</i>	76.4			40-140	%REC	1	03-Apr-2024 20:37
<i>Surr: 2-Bromonaphthalene</i>	88.0			40-140	%REC	1	03-Apr-2024 20:37
<i>Surr: 2-Fluorobiphenyl</i>	98.6			40-140	%REC	1	03-Apr-2024 20:37
<i>Surr: o-Terphenyl</i>	65.3			40-140	%REC	1	03-Apr-2024 20:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-12
 Collection Date: 27-Mar-2024 13:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00104	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:18
Barium	0.144		0.00190	0.00400	mg/L	1	03-Apr-2024 13:18
Calcium	121		0.0340	0.500	mg/L	1	03-Apr-2024 13:18
Chromium	0.000659	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:18
Iron	0.0544	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:18
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:18
Magnesium	24.8		0.0100	0.200	mg/L	1	03-Apr-2024 13:18
Manganese	0.140		0.000700	0.00500	mg/L	1	03-Apr-2024 13:18
Nickel	0.00148	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:18
Potassium	2.74		0.0180	0.200	mg/L	1	03-Apr-2024 13:18
Sodium	318		1.40	20.0	mg/L	100	05-Apr-2024 12:22
Strontium	0.829		0.000200	0.00500	mg/L	1	03-Apr-2024 13:18
Vanadium	0.00264	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:18
Zinc	0.0237		0.00200	0.00400	mg/L	1	03-Apr-2024 13:18
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:44
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,100		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	112		3.50	5.00	mg/L	1	04-Apr-2024 13:16
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:16
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.93	H	0.100	0.100	pH Units	1	03-Apr-2024 11:17
Temp Deg C @pH	21.6	H	0	0	°C	1	03-Apr-2024 11:17
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 18:17
Chloride	504		4.00	10.0	mg/L	20	03-Apr-2024 18:22
Sulfate	339		4.00	10.0	mg/L	20	03-Apr-2024 18:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-07
 Collection Date: 27-Mar-2024 13:30

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-13
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 09:28
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 09:28
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 09:28
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 09:28
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 09:28
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 09:28
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	03-Apr-2024 09:28
<i>Surr: 4-Bromofluorobenzene</i>	98.5			77-113	%REC	1	03-Apr-2024 09:28
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	1	03-Apr-2024 09:28
<i>Surr: Toluene-d8</i>	108			82-127	%REC	1	03-Apr-2024 09:28
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 13:34
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 13:34
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 13:34
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	75.7			70-130	%REC	1	03-Apr-2024 13:34
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	80.9			70-130	%REC	1	03-Apr-2024 13:34
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 21:06
Aliphatics >C12 - C16	0.0242		0.00200	0.00200	mg/L	1	03-Apr-2024 21:06
Aliphatics >C16 - C35	0.0483		0.00800	0.00800	mg/L	1	03-Apr-2024 21:06
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 21:06
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 21:06
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 21:06
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 21:06
<i>Surr: 1-Chlorooctadecane</i>	120			40-140	%REC	1	03-Apr-2024 21:06
<i>Surr: 2-Bromonaphthalene</i>	93.1			40-140	%REC	1	03-Apr-2024 21:06
<i>Surr: 2-Fluorobiphenyl</i>	104			40-140	%REC	1	03-Apr-2024 21:06
<i>Surr: o-Terphenyl</i>	102			40-140	%REC	1	03-Apr-2024 21:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-07
 Collection Date: 27-Mar-2024 13:30

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-13
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00108	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:20
Barium	0.136		0.00190	0.00400	mg/L	1	03-Apr-2024 13:20
Calcium	116		0.0340	0.500	mg/L	1	03-Apr-2024 13:20
Chromium	0.000719	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:20
Iron	0.0612	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:20
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:20
Magnesium	23.9		0.0100	0.200	mg/L	1	03-Apr-2024 13:20
Manganese	0.123		0.000700	0.00500	mg/L	1	03-Apr-2024 13:20
Nickel	0.00149	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:20
Potassium	2.64		0.0180	0.200	mg/L	1	03-Apr-2024 13:20
Sodium	302		1.40	20.0	mg/L	100	05-Apr-2024 12:34
Strontium	0.787		0.000200	0.00500	mg/L	1	03-Apr-2024 13:20
Vanadium	0.00274	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:20
Zinc	0.00401		0.00200	0.00400	mg/L	1	03-Apr-2024 13:20
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 17:54
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,180		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	118		3.50	5.00	mg/L	1	04-Apr-2024 13:21
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:21
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.99	H	0.100	0.100	pH Units	1	03-Apr-2024 11:19
Temp Deg C @pH	21.8	H	0	0	°C	1	03-Apr-2024 11:19
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 18:28
Chloride	476		4.00	10.0	mg/L	20	03-Apr-2024 18:34
Sulfate	319		4.00	10.0	mg/L	20	03-Apr-2024 18:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-08
 Collection Date: 27-Mar-2024 14:30

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-14
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 09:50
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 09:50
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 09:50
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 09:50
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 09:50
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 09:50
<i>Surr: 1,2-Dichloroethane-d4</i>	113			70-126	%REC	1	03-Apr-2024 09:50
<i>Surr: 4-Bromofluorobenzene</i>	103			77-113	%REC	1	03-Apr-2024 09:50
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	03-Apr-2024 09:50
<i>Surr: Toluene-d8</i>	110			82-127	%REC	1	03-Apr-2024 09:50
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 14:17
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 14:17
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 14:17
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	76.3			70-130	%REC	1	03-Apr-2024 14:17
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	82.4			70-130	%REC	1	03-Apr-2024 14:17
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	0.0125		0.00100	0.00100	mg/L	1	03-Apr-2024 21:36
Aliphatics >C12 - C16	0.0259		0.00200	0.00200	mg/L	1	03-Apr-2024 21:36
Aliphatics >C16 - C35	0.0406		0.00800	0.00800	mg/L	1	03-Apr-2024 21:36
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	03-Apr-2024 21:36
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	03-Apr-2024 21:36
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	03-Apr-2024 21:36
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	03-Apr-2024 21:36
<i>Surr: 1-Chlorooctadecane</i>	114			40-140	%REC	1	03-Apr-2024 21:36
<i>Surr: 2-Bromonaphthalene</i>	93.1			40-140	%REC	1	03-Apr-2024 21:36
<i>Surr: 2-Fluorobiphenyl</i>	103			40-140	%REC	1	03-Apr-2024 21:36
<i>Surr: o-Terphenyl</i>	99.3			40-140	%REC	1	03-Apr-2024 21:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-08
 Collection Date: 27-Mar-2024 14:30

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-14
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00104	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:06
Barium	0.125		0.00190	0.00400	mg/L	1	03-Apr-2024 15:06
Calcium	114		0.0340	0.500	mg/L	1	03-Apr-2024 15:06
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 15:06
Iron	0.0505	J	0.0120	0.200	mg/L	1	03-Apr-2024 15:06
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:06
Magnesium	22.6		0.0100	0.200	mg/L	1	03-Apr-2024 15:06
Manganese	0.113		0.000700	0.00500	mg/L	1	03-Apr-2024 15:06
Nickel	0.00139	J	0.000600	0.00200	mg/L	1	03-Apr-2024 15:06
Potassium	2.63		0.0180	0.200	mg/L	1	03-Apr-2024 15:06
Sodium	303		1.40	20.0	mg/L	100	05-Apr-2024 12:36
Strontium	0.712		0.000200	0.00500	mg/L	1	03-Apr-2024 15:06
Vanadium	0.00232	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:06
Zinc	0.00633		0.00200	0.00400	mg/L	1	03-Apr-2024 15:06
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:00
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	03-Apr-2024 13:26
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,160		5.00	10.0	mg/L	1	02-Apr-2024 11:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	113		3.50	5.00	mg/L	1	04-Apr-2024 13:26
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:26
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	03-Apr-2024 12:54
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.95	H	0.100	0.100	pH Units	1	03-Apr-2024 11:20
Temp Deg C @pH	21.9	H	0	0	°C	1	03-Apr-2024 11:20
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 19:10
Chloride	481		4.00	10.0	mg/L	20	03-Apr-2024 19:16
Sulfate	339		4.00	10.0	mg/L	20	03-Apr-2024 19:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-01
 Collection Date: 26-Mar-2024 09:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-15
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 10:13
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 10:13
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 10:13
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 10:13
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 10:13
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 10:13
<i>Surr: 1,2-Dichloroethane-d4</i>	113			70-126	%REC	1	03-Apr-2024 10:13
<i>Surr: 4-Bromofluorobenzene</i>	103			77-113	%REC	1	03-Apr-2024 10:13
<i>Surr: Dibromofluoromethane</i>	107			77-123	%REC	1	03-Apr-2024 10:13
<i>Surr: Toluene-d8</i>	113			82-127	%REC	1	03-Apr-2024 10:13
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 15:01
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 15:01
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 15:01
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	77.4			70-130	%REC	1	03-Apr-2024 15:01
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	76.0			70-130	%REC	1	03-Apr-2024 15:01
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 11:02
Aliphatics >C12 - C16	0.0354		0.00200	0.00200	mg/L	1	04-Apr-2024 11:02
Aliphatics >C16 - C35	0.117		0.00800	0.00800	mg/L	1	04-Apr-2024 11:02
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 11:02
Aromatics >C12 - C16	0.0153		0.00400	0.00400	mg/L	1	04-Apr-2024 11:02
Aromatics >C16 - C21	0.0281		0.00300	0.00300	mg/L	1	04-Apr-2024 11:02
Aromatics >C21 - C35	0.0470		0.00900	0.00900	mg/L	1	04-Apr-2024 11:02
<i>Surr: 1-Chlorooctadecane</i>	105			40-140	%REC	1	04-Apr-2024 11:02
<i>Surr: 2-Bromonaphthalene</i>	83.5			40-140	%REC	1	04-Apr-2024 11:02
<i>Surr: 2-Fluorobiphenyl</i>	97.3			40-140	%REC	1	04-Apr-2024 11:02
<i>Surr: o-Terphenyl</i>	94.0			40-140	%REC	1	04-Apr-2024 11:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-01
 Collection Date: 26-Mar-2024 09:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-15
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00261		0.000400	0.00200	mg/L	1	03-Apr-2024 15:08
Barium	0.172		0.00190	0.00400	mg/L	1	03-Apr-2024 15:08
Calcium	183		3.40	50.0	mg/L	100	05-Apr-2024 12:10
Chromium	U		0.000400	0.00400	mg/L	1	03-Apr-2024 15:08
Iron	2.30		0.0120	0.200	mg/L	1	03-Apr-2024 15:08
Lead	0.000678	J	0.000600	0.00200	mg/L	1	03-Apr-2024 15:08
Magnesium	48.7		0.0100	0.200	mg/L	1	03-Apr-2024 15:08
Manganese	2.76		0.0700	0.500	mg/L	100	05-Apr-2024 12:10
Nickel	0.00733		0.000600	0.00200	mg/L	1	03-Apr-2024 15:08
Potassium	3.79		0.0180	0.200	mg/L	1	03-Apr-2024 15:08
Sodium	288		1.40	20.0	mg/L	100	05-Apr-2024 12:10
Strontium	1.22		0.000200	0.00500	mg/L	1	03-Apr-2024 15:08
Vanadium	0.00222	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:08
Zinc	0.0386		0.00200	0.00400	mg/L	1	03-Apr-2024 15:08
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	03-Apr-2024 18:01
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,680		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	249		3.50	5.00	mg/L	1	04-Apr-2024 13:31
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	04-Apr-2024 13:31
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.41	H	0.100	0.100	pH Units	1	03-Apr-2024 11:21
Temp Deg C @pH	21.8	H	0	0	°C	1	03-Apr-2024 11:21
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	03-Apr-2024 19:28
Chloride	592		4.00	10.0	mg/L	20	03-Apr-2024 19:34
Sulfate	327		4.00	10.0	mg/L	20	03-Apr-2024 19:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-700'
 Collection Date: 26-Mar-2024 09:50

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-16
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 10:35
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 10:35
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 10:35
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 10:35
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 10:35
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 10:35
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>113</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 10:35</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>99.1</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 10:35</i>
<i>Surr: Dibromofluoromethane</i>	<i>105</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 10:35</i>
<i>Surr: Toluene-d8</i>	<i>112</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 10:35</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 15:45
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 15:45
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 15:45
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>82.3</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 15:45</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>88.7</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 15:45</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 11:31
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 11:31
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 11:31
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 11:31
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 11:31
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 11:31
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 11:31
<i>Surr: 1-Chlorooctadecane</i>	<i>76.4</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 11:31</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>89.9</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 11:31</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>100.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 11:31</i>
<i>Surr: o-Terphenyl</i>	<i>68.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 11:31</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-700'
 Collection Date: 26-Mar-2024 09:50

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-16
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00145	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:10
Barium	0.0507		0.00190	0.00400	mg/L	1	03-Apr-2024 15:10
Calcium	32.4		0.0340	0.500	mg/L	1	03-Apr-2024 15:10
Chromium	0.00399	J	0.000400	0.00400	mg/L	1	03-Apr-2024 15:10
Iron	0.272		0.0120	0.200	mg/L	1	03-Apr-2024 15:10
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:10
Magnesium	0.104	J	0.0100	0.200	mg/L	1	03-Apr-2024 15:10
Manganese	0.00404	J	0.000700	0.00500	mg/L	1	03-Apr-2024 15:10
Nickel	0.00274		0.000600	0.00200	mg/L	1	03-Apr-2024 15:10
Potassium	7.38		0.0180	0.200	mg/L	1	03-Apr-2024 15:10
Sodium	168		0.0140	0.200	mg/L	1	03-Apr-2024 15:10
Strontium	0.231		0.000200	0.00500	mg/L	1	03-Apr-2024 15:10
Vanadium	0.0304		0.000600	0.00500	mg/L	1	03-Apr-2024 15:10
Zinc	0.00286	J	0.00200	0.00400	mg/L	1	03-Apr-2024 15:10
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:03
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	594		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:36
Alkalinity, Carbonate (As CaCO3)	144		3.50	5.00	mg/L	1	04-Apr-2024 13:36
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	11.1	H	0.100	0.100	pH Units	1	03-Apr-2024 11:22
Temp Deg C @pH	21.6	H	0	0	°C	1	03-Apr-2024 11:22
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 19:40
Chloride	138		2.00	5.00	mg/L	10	03-Apr-2024 19:46
Sulfate	82.0		0.200	0.500	mg/L	1	03-Apr-2024 19:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-200'
 Collection Date: 26-Mar-2024 13:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-17
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 07:15
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 07:15
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 07:15
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 07:15
Toluene	0.86	J	0.20	1.0	ug/L	1	04-Apr-2024 07:15
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 07:15
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>111</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 07:15</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>93.8</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 07:15</i>
<i>Surr: Dibromofluoromethane</i>	<i>109</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 07:15</i>
<i>Surr: Toluene-d8</i>	<i>92.1</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 07:15</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 21:35
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 21:35
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 21:35
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>76.6</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 21:35</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>79.8</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 21:35</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 12:00
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 12:00
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 12:00
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 12:00
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 12:00
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 12:00
Aromatics >C21 - C35	0.00939		0.00900	0.00900	mg/L	1	04-Apr-2024 12:00
<i>Surr: 1-Chlorooctadecane</i>	<i>70.6</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 12:00</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>82.6</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 12:00</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>93.7</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 12:00</i>
<i>Surr: o-Terphenyl</i>	<i>65.9</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 12:00</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-200'
 Collection Date: 26-Mar-2024 13:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-17
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000644	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:12
Barium	0.0571		0.00190	0.00400	mg/L	1	03-Apr-2024 15:12
Calcium	10.7		0.0340	0.500	mg/L	1	03-Apr-2024 15:12
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 15:12
Iron	2.04		0.0120	0.200	mg/L	1	03-Apr-2024 15:12
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:12
Magnesium	0.102	J	0.0100	0.200	mg/L	1	03-Apr-2024 15:12
Manganese	0.0134		0.000700	0.00500	mg/L	1	03-Apr-2024 15:12
Nickel		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:12
Potassium	6.55		0.0180	0.200	mg/L	1	03-Apr-2024 15:12
Sodium	63.8		0.0140	0.200	mg/L	1	03-Apr-2024 15:12
Strontium	0.328		0.000200	0.00500	mg/L	1	03-Apr-2024 15:12
Vanadium	0.000810	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:12
Zinc	0.00260	J	0.00200	0.00400	mg/L	1	03-Apr-2024 15:12
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:05
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	260		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	14.8		3.50	5.00	mg/L	1	04-Apr-2024 13:53
Alkalinity, Carbonate (As CaCO3)	17.0		3.50	5.00	mg/L	1	04-Apr-2024 13:53
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	9.68	H	0.100	0.100	pH Units	1	03-Apr-2024 11:41
Temp Deg C @pH	21.5	H	0	0	°C	1	03-Apr-2024 11:41
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 19:22
Chloride	38.4		0.200	0.500	mg/L	1	03-Apr-2024 19:22
Sulfate	146		1.00	2.50	mg/L	5	04-Apr-2024 01:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-04
 Collection Date: 26-Mar-2024 10:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-18
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 06:54
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 06:54
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 06:54
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 06:54
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 06:54
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 06:54
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	04-Apr-2024 06:54
<i>Surr: 4-Bromofluorobenzene</i>	93.4			77-113	%REC	1	04-Apr-2024 06:54
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	04-Apr-2024 06:54
<i>Surr: Toluene-d8</i>	95.1			82-127	%REC	1	04-Apr-2024 06:54
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 22:18
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 22:18
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 22:18
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	70.6			70-130	%REC	1	03-Apr-2024 22:18
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	75.4			70-130	%REC	1	03-Apr-2024 22:18
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 12:29
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 12:29
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 12:29
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 12:29
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 12:29
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 12:29
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 12:29
<i>Surr: 1-Chlorooctadecane</i>	78.5			40-140	%REC	1	04-Apr-2024 12:29
<i>Surr: 2-Bromonaphthalene</i>	85.3			40-140	%REC	1	04-Apr-2024 12:29
<i>Surr: 2-Fluorobiphenyl</i>	95.1			40-140	%REC	1	04-Apr-2024 12:29
<i>Surr: o-Terphenyl</i>	67.0			40-140	%REC	1	04-Apr-2024 12:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-04
 Collection Date: 26-Mar-2024 10:20

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-18
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00125	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:14
Barium	0.139		0.00190	0.00400	mg/L	1	03-Apr-2024 15:14
Calcium	111		0.0340	0.500	mg/L	1	03-Apr-2024 15:14
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 15:14
Iron	0.904		0.0120	0.200	mg/L	1	03-Apr-2024 15:14
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:14
Magnesium	22.1		0.0100	0.200	mg/L	1	03-Apr-2024 15:14
Manganese	0.477		0.000700	0.00500	mg/L	1	03-Apr-2024 15:14
Nickel	0.00132	J	0.000600	0.00200	mg/L	1	03-Apr-2024 15:14
Potassium	2.77		0.0180	0.200	mg/L	1	03-Apr-2024 15:14
Sodium	288		1.40	20.0	mg/L	100	05-Apr-2024 12:39
Strontium	0.720		0.000200	0.00500	mg/L	1	03-Apr-2024 15:14
Vanadium	0.00316	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:14
Zinc	0.0150		0.00200	0.00400	mg/L	1	03-Apr-2024 15:14
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:06
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,230		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	113		3.50	5.00	mg/L	1	04-Apr-2024 13:58
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 13:58
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.45	H	0.100	0.100	pH Units	1	03-Apr-2024 11:43
Temp Deg C @pH	21.5	H	0	0	°C	1	03-Apr-2024 11:43
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 19:51
Chloride	462		2.00	5.00	mg/L	10	03-Apr-2024 19:57
Sulfate	311		2.00	5.00	mg/L	10	03-Apr-2024 19:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-03
 Collection Date: 26-Mar-2024 10:45

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-19
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 20:29
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 20:29
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 20:29
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 20:29
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 20:29
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 20:29
<i>Surr: 1,2-Dichloroethane-d4</i>	111			70-126	%REC	1	03-Apr-2024 20:29
<i>Surr: 4-Bromofluorobenzene</i>	106			77-113	%REC	1	03-Apr-2024 20:29
<i>Surr: Dibromofluoromethane</i>	105			77-123	%REC	1	03-Apr-2024 20:29
<i>Surr: Toluene-d8</i>	113			82-127	%REC	1	03-Apr-2024 20:29
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-Apr-2024 23:02
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 23:02
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-Apr-2024 23:02
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	76.3			70-130	%REC	1	03-Apr-2024 23:02
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	81.0			70-130	%REC	1	03-Apr-2024 23:02
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 12:58
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 12:58
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 12:58
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 12:58
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 12:58
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 12:58
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 12:58
<i>Surr: 1-Chlorooctadecane</i>	75.6			40-140	%REC	1	04-Apr-2024 12:58
<i>Surr: 2-Bromonaphthalene</i>	89.2			40-140	%REC	1	04-Apr-2024 12:58
<i>Surr: 2-Fluorobiphenyl</i>	101			40-140	%REC	1	04-Apr-2024 12:58
<i>Surr: o-Terphenyl</i>	66.4			40-140	%REC	1	04-Apr-2024 12:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-03
 Collection Date: 26-Mar-2024 10:45

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-19
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000986	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:16
Barium	0.127		0.00190	0.00400	mg/L	1	03-Apr-2024 15:16
Calcium	108		0.0340	0.500	mg/L	1	03-Apr-2024 15:16
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 15:16
Iron	0.628		0.0120	0.200	mg/L	1	03-Apr-2024 15:16
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:16
Magnesium	21.2		0.0100	0.200	mg/L	1	03-Apr-2024 15:16
Manganese	0.195		0.000700	0.00500	mg/L	1	03-Apr-2024 15:16
Nickel	0.00120	J	0.000600	0.00200	mg/L	1	03-Apr-2024 15:16
Potassium	2.61		0.0180	0.200	mg/L	1	03-Apr-2024 15:16
Sodium	288		1.40	20.0	mg/L	100	05-Apr-2024 12:41
Strontium	0.709		0.000200	0.00500	mg/L	1	03-Apr-2024 15:16
Vanadium	0.00275	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:16
Zinc	0.00319	J	0.00200	0.00400	mg/L	1	03-Apr-2024 15:16
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:08
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,200		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	110		3.50	5.00	mg/L	1	04-Apr-2024 14:04
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 14:04
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.50	H	0.100	0.100	pH Units	1	03-Apr-2024 11:44
Temp Deg C @pH	21.6	H	0	0	°C	1	03-Apr-2024 11:44
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 20:33
Chloride	472		2.00	5.00	mg/L	10	03-Apr-2024 20:39
Sulfate	324		2.00	5.00	mg/L	10	03-Apr-2024 20:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-24
 Collection Date: 26-Mar-2024 11:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-20
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene		U	0.20	1.0	ug/L	1	03-Apr-2024 20:51
Ethylbenzene		U	0.30	1.0	ug/L	1	03-Apr-2024 20:51
m,p-Xylene		U	0.50	2.0	ug/L	1	03-Apr-2024 20:51
o-Xylene		U	0.30	1.0	ug/L	1	03-Apr-2024 20:51
Toluene		U	0.20	1.0	ug/L	1	03-Apr-2024 20:51
Xylenes, Total		U	0.30	3.0	ug/L	1	03-Apr-2024 20:51
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>111</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 20:51</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>102</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 20:51</i>
<i>Surr: Dibromofluoromethane</i>	<i>101</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 20:51</i>
<i>Surr: Toluene-d8</i>	<i>109</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 20:51</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	0.0125		0.0100	0.0100	mg/L	1	03-Apr-2024 23:46
Aliphatics >C8 - C10		U	0.0100	0.0100	mg/L	1	03-Apr-2024 23:46
Aromatics >C8 - C10		U	0.0100	0.0100	mg/L	1	03-Apr-2024 23:46
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>75.4</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 23:46</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>80.2</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-Apr-2024 23:46</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 02-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12		U	0.00100	0.00100	mg/L	1	04-Apr-2024 13:26
Aliphatics >C12 - C16		U	0.00200	0.00200	mg/L	1	04-Apr-2024 13:26
Aliphatics >C16 - C35		U	0.00800	0.00800	mg/L	1	04-Apr-2024 13:26
Aromatics >C10 - C12		U	0.00100	0.00100	mg/L	1	04-Apr-2024 13:26
Aromatics >C12 - C16		U	0.00400	0.00400	mg/L	1	04-Apr-2024 13:26
Aromatics >C16 - C21		U	0.00300	0.00300	mg/L	1	04-Apr-2024 13:26
Aromatics >C21 - C35		U	0.00900	0.00900	mg/L	1	04-Apr-2024 13:26
<i>Surr: 1-Chlorooctadecane</i>	<i>119</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:26</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>90.5</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:26</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>100</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:26</i>
<i>Surr: o-Terphenyl</i>	<i>107</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>04-Apr-2024 13:26</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-24
 Collection Date: 26-Mar-2024 11:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-20
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00105	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:18
Barium	0.122		0.00190	0.00400	mg/L	1	03-Apr-2024 15:18
Calcium	99.7		0.0340	0.500	mg/L	1	03-Apr-2024 15:18
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 15:18
Iron	0.554		0.0120	0.200	mg/L	1	03-Apr-2024 15:18
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:18
Magnesium	19.5		0.0100	0.200	mg/L	1	03-Apr-2024 15:18
Manganese	0.177		0.000700	0.00500	mg/L	1	03-Apr-2024 15:18
Nickel	0.00144	J	0.000600	0.00200	mg/L	1	03-Apr-2024 15:18
Potassium	2.37		0.0180	0.200	mg/L	1	03-Apr-2024 15:18
Sodium	272		1.40	20.0	mg/L	100	05-Apr-2024 12:43
Strontium	0.666		0.000200	0.00500	mg/L	1	03-Apr-2024 15:18
Vanadium	0.00331	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:18
Zinc	0.102		0.00200	0.00400	mg/L	1	03-Apr-2024 15:18
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:10
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,150		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	111		3.50	5.00	mg/L	1	04-Apr-2024 14:09
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 14:09
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.45	H	0.100	0.100	pH Units	1	03-Apr-2024 11:45
Temp Deg C @pH	21.7	H	0	0	°C	1	03-Apr-2024 11:45
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 20:45
Chloride	480		2.00	5.00	mg/L	10	03-Apr-2024 20:51
Sulfate	323		2.00	5.00	mg/L	10	03-Apr-2024 20:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-17
 Collection Date: 26-Mar-2024 12:45

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-21
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 21:13
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 21:13
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 21:13
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 21:13
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 21:13
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 21:13
<i>Surr: 1,2-Dichloroethane-d4</i>	108			70-126	%REC	1	03-Apr-2024 21:13
<i>Surr: 4-Bromofluorobenzene</i>	100			77-113	%REC	1	03-Apr-2024 21:13
<i>Surr: Dibromofluoromethane</i>	101			77-123	%REC	1	03-Apr-2024 21:13
<i>Surr: Toluene-d8</i>	110			82-127	%REC	1	03-Apr-2024 21:13
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 00:30
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 00:30
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 00:30
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	71.4			70-130	%REC	1	04-Apr-2024 00:30
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	80.0			70-130	%REC	1	04-Apr-2024 00:30
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 17:16
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 17:16
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 17:16
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 17:16
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 17:16
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 17:16
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 17:16
<i>Surr: 1-Chlorooctadecane</i>	53.6			40-140	%REC	1	04-Apr-2024 17:16
<i>Surr: 2-Bromonaphthalene</i>	93.2			40-140	%REC	1	04-Apr-2024 17:16
<i>Surr: 2-Fluorobiphenyl</i>	105			40-140	%REC	1	04-Apr-2024 17:16
<i>Surr: o-Terphenyl</i>	65.1			40-140	%REC	1	04-Apr-2024 17:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-17
 Collection Date: 26-Mar-2024 12:45

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-21
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000926	J	0.000400	0.00200	mg/L	1	03-Apr-2024 15:20
Barium	0.114		0.00190	0.00400	mg/L	1	03-Apr-2024 15:20
Calcium	101		0.0340	0.500	mg/L	1	03-Apr-2024 15:20
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 15:20
Iron	0.181	J	0.0120	0.200	mg/L	1	03-Apr-2024 15:20
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 15:20
Magnesium	20.2		0.0100	0.200	mg/L	1	03-Apr-2024 15:20
Manganese	0.171		0.000700	0.00500	mg/L	1	03-Apr-2024 15:20
Nickel	0.00122	J	0.000600	0.00200	mg/L	1	03-Apr-2024 15:20
Potassium	2.36		0.0180	0.200	mg/L	1	03-Apr-2024 15:20
Sodium	269		1.40	20.0	mg/L	100	05-Apr-2024 12:46
Strontium	0.663		0.000200	0.00500	mg/L	1	03-Apr-2024 15:20
Vanadium	0.00273	J	0.000600	0.00500	mg/L	1	03-Apr-2024 15:20
Zinc	0.0156		0.00200	0.00400	mg/L	1	03-Apr-2024 15:20
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:16
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,170		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	114		3.50	5.00	mg/L	1	04-Apr-2024 15:13
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 15:13
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.66	H	0.100	0.100	pH Units	1	03-Apr-2024 11:46
Temp Deg C @pH	21.9	H	0	0	°C	1	03-Apr-2024 11:46
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 21:03
Chloride	428		2.00	5.00	mg/L	10	03-Apr-2024 21:09
Sulfate	292		2.00	5.00	mg/L	10	03-Apr-2024 21:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-05
 Collection Date: 26-Mar-2024 13:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-22
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 13:53
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 13:53
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 13:53
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 13:53
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 13:53
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 13:53
<i>Surr: 1,2-Dichloroethane-d4</i>	111			70-126	%REC	1	04-Apr-2024 13:53
<i>Surr: 4-Bromofluorobenzene</i>	96.3			77-113	%REC	1	04-Apr-2024 13:53
<i>Surr: Dibromofluoromethane</i>	109			77-123	%REC	1	04-Apr-2024 13:53
<i>Surr: Toluene-d8</i>	94.8			82-127	%REC	1	04-Apr-2024 13:53
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 01:13
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 01:13
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 01:13
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	75.2			70-130	%REC	1	04-Apr-2024 01:13
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	75.6			70-130	%REC	1	04-Apr-2024 01:13
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	0.00830		0.00100	0.00100	mg/L	1	04-Apr-2024 17:44
Aliphatics >C12 - C16	0.0177		0.00200	0.00200	mg/L	1	04-Apr-2024 17:44
Aliphatics >C16 - C35	0.0341		0.00800	0.00800	mg/L	1	04-Apr-2024 17:44
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 17:44
Aromatics >C12 - C16	0.0167		0.00400	0.00400	mg/L	1	04-Apr-2024 17:44
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 17:44
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 17:44
<i>Surr: 1-Chlorooctadecane</i>	78.3			40-140	%REC	1	04-Apr-2024 17:44
<i>Surr: 2-Bromonaphthalene</i>	91.9			40-140	%REC	1	04-Apr-2024 17:44
<i>Surr: 2-Fluorobiphenyl</i>	103			40-140	%REC	1	04-Apr-2024 17:44
<i>Surr: o-Terphenyl</i>	73.3			40-140	%REC	1	04-Apr-2024 17:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-05
 Collection Date: 26-Mar-2024 13:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-22
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00105	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:30
Barium	0.134		0.00190	0.00400	mg/L	1	03-Apr-2024 13:30
Calcium	114		0.0340	0.500	mg/L	1	03-Apr-2024 13:30
Chromium	0.000460	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:30
Iron	0.217		0.0120	0.200	mg/L	1	03-Apr-2024 13:30
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:30
Magnesium	23.5		0.0100	0.200	mg/L	1	03-Apr-2024 13:30
Manganese	0.206		0.000700	0.00500	mg/L	1	03-Apr-2024 13:30
Nickel	0.00160	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:30
Potassium	2.66		0.0180	0.200	mg/L	1	03-Apr-2024 13:30
Sodium	275		1.40	20.0	mg/L	100	03-Apr-2024 18:22
Strontium	0.761		0.000200	0.00500	mg/L	1	03-Apr-2024 13:30
Vanadium	0.00274	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:30
Zinc	0.0176		0.00200	0.00400	mg/L	1	03-Apr-2024 13:30
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:18
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,160		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	107		3.50	5.00	mg/L	1	04-Apr-2024 15:23
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 15:23
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.81	H	0.100	0.100	pH Units	1	03-Apr-2024 11:47
Temp Deg C @pH	21.8	H	0	0	°C	1	03-Apr-2024 11:47
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 21:15
Chloride	507		4.00	10.0	mg/L	20	03-Apr-2024 21:21
Sulfate	356		4.00	10.0	mg/L	20	03-Apr-2024 21:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-18
 Collection Date: 26-Mar-2024 13:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-23
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:14
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:14
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 14:14
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:14
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:14
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 14:14
<i>Surr: 1,2-Dichloroethane-d4</i>	109			70-126	%REC	1	04-Apr-2024 14:14
<i>Surr: 4-Bromofluorobenzene</i>	89.4			77-113	%REC	1	04-Apr-2024 14:14
<i>Surr: Dibromofluoromethane</i>	109			77-123	%REC	1	04-Apr-2024 14:14
<i>Surr: Toluene-d8</i>	93.7			82-127	%REC	1	04-Apr-2024 14:14
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 01:57
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 01:57
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 01:57
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	70.9			70-130	%REC	1	04-Apr-2024 01:57
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	78.2			70-130	%REC	1	04-Apr-2024 01:57
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 18:13
Aliphatics >C12 - C16	0.0148		0.00200	0.00200	mg/L	1	04-Apr-2024 18:13
Aliphatics >C16 - C35	0.0278		0.00800	0.00800	mg/L	1	04-Apr-2024 18:13
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 18:13
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 18:13
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 18:13
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 18:13
<i>Surr: 1-Chlorooctadecane</i>	112			40-140	%REC	1	04-Apr-2024 18:13
<i>Surr: 2-Bromonaphthalene</i>	92.9			40-140	%REC	1	04-Apr-2024 18:13
<i>Surr: 2-Fluorobiphenyl</i>	103			40-140	%REC	1	04-Apr-2024 18:13
<i>Surr: o-Terphenyl</i>	126			40-140	%REC	1	04-Apr-2024 18:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-18
 Collection Date: 26-Mar-2024 13:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-23
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00102	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:40
Barium	0.126		0.00190	0.00400	mg/L	1	03-Apr-2024 13:40
Calcium	109		0.0340	0.500	mg/L	1	03-Apr-2024 13:40
Chromium	0.00128	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:40
Iron	0.111	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:40
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:40
Magnesium	22.7		0.0100	0.200	mg/L	1	03-Apr-2024 13:40
Manganese	0.113		0.000700	0.00500	mg/L	1	03-Apr-2024 13:40
Nickel	0.00150	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:40
Potassium	2.55		0.0180	0.200	mg/L	1	03-Apr-2024 13:40
Sodium	287		1.40	20.0	mg/L	100	03-Apr-2024 18:28
Strontium	0.743		0.000200	0.00500	mg/L	1	03-Apr-2024 13:40
Vanadium	0.00194	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:40
Zinc	0.0119		0.00200	0.00400	mg/L	1	03-Apr-2024 13:40
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:19
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	1.15		0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,130		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	111		3.50	5.00	mg/L	1	04-Apr-2024 15:28
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 15:28
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.85	H	0.100	0.100	pH Units	1	03-Apr-2024 11:48
Temp Deg C @pH	21.7	H	0	0	°C	1	03-Apr-2024 11:48
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 21:26
Chloride	475		2.00	5.00	mg/L	10	03-Apr-2024 21:32
Sulfate	322		2.00	5.00	mg/L	10	03-Apr-2024 21:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-21
 Collection Date: 26-Mar-2024 15:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-24
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:35
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:35
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 14:35
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:35
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:35
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 14:35
<i>Surr: 1,2-Dichloroethane-d4</i>	108			70-126	%REC	1	04-Apr-2024 14:35
<i>Surr: 4-Bromofluorobenzene</i>	92.2			77-113	%REC	1	04-Apr-2024 14:35
<i>Surr: Dibromofluoromethane</i>	105			77-123	%REC	1	04-Apr-2024 14:35
<i>Surr: Toluene-d8</i>	90.1			82-127	%REC	1	04-Apr-2024 14:35
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 04:09
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 04:09
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 04:09
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	80.0			70-130	%REC	1	04-Apr-2024 04:09
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	79.6			70-130	%REC	1	04-Apr-2024 04:09
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 18:42
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 18:42
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 18:42
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 18:42
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 18:42
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 18:42
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 18:42
<i>Surr: 1-Chlorooctadecane</i>	65.4			40-140	%REC	1	04-Apr-2024 18:42
<i>Surr: 2-Bromonaphthalene</i>	86.4			40-140	%REC	1	04-Apr-2024 18:42
<i>Surr: 2-Fluorobiphenyl</i>	95.2			40-140	%REC	1	04-Apr-2024 18:42
<i>Surr: o-Terphenyl</i>	60.7			40-140	%REC	1	04-Apr-2024 18:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-21
 Collection Date: 26-Mar-2024 15:15

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-24
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000873	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:42
Barium	0.126		0.00190	0.00400	mg/L	1	03-Apr-2024 13:42
Calcium	110		0.0340	0.500	mg/L	1	03-Apr-2024 13:42
Chromium	0.00239	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:42
Iron	0.145	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:42
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:42
Magnesium	23.0		0.0100	0.200	mg/L	1	03-Apr-2024 13:42
Manganese	0.152		0.000700	0.00500	mg/L	1	03-Apr-2024 13:42
Nickel	0.00219		0.000600	0.00200	mg/L	1	03-Apr-2024 13:42
Potassium	2.53		0.0180	0.200	mg/L	1	03-Apr-2024 13:42
Sodium	296		1.40	20.0	mg/L	100	03-Apr-2024 18:30
Strontium	0.741		0.000200	0.00500	mg/L	1	03-Apr-2024 13:42
Vanadium	0.00254	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:42
Zinc	0.0319		0.00200	0.00400	mg/L	1	03-Apr-2024 13:42
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:21
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,220		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	106		3.50	5.00	mg/L	1	04-Apr-2024 15:53
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 15:53
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.82	H	0.100	0.100	pH Units	1	03-Apr-2024 11:49
Temp Deg C @pH	21.6	H	0	0	°C	1	03-Apr-2024 11:49
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 22:32
Chloride	460		2.00	5.00	mg/L	10	03-Apr-2024 22:38
Sulfate	312		2.00	5.00	mg/L	10	03-Apr-2024 22:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-22
 Collection Date: 26-Mar-2024 15:30

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-25
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 17:52
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 17:52
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 17:52
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 17:52
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 17:52
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 17:52
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	03-Apr-2024 17:52
<i>Surr: 4-Bromofluorobenzene</i>	104			77-113	%REC	1	03-Apr-2024 17:52
<i>Surr: Dibromofluoromethane</i>	102			77-123	%REC	1	03-Apr-2024 17:52
<i>Surr: Toluene-d8</i>	115			82-127	%REC	1	03-Apr-2024 17:52
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 04:52
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 04:52
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 04:52
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	72.1			70-130	%REC	1	04-Apr-2024 04:52
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	72.8			70-130	%REC	1	04-Apr-2024 04:52
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 19:11
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 19:11
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 19:11
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 19:11
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 19:11
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 19:11
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 19:11
<i>Surr: 1-Chlorooctadecane</i>	50.3			40-140	%REC	1	04-Apr-2024 19:11
<i>Surr: 2-Bromonaphthalene</i>	90.7			40-140	%REC	1	04-Apr-2024 19:11
<i>Surr: 2-Fluorobiphenyl</i>	101			40-140	%REC	1	04-Apr-2024 19:11
<i>Surr: o-Terphenyl</i>	75.4			40-140	%REC	1	04-Apr-2024 19:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-22
 Collection Date: 26-Mar-2024 15:30

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-25
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.000841	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:44
Barium	0.121		0.00190	0.00400	mg/L	1	03-Apr-2024 13:44
Calcium	102		0.0340	0.500	mg/L	1	03-Apr-2024 13:44
Chromium		U	0.000400	0.00400	mg/L	1	03-Apr-2024 13:44
Iron	0.0693	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:44
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:44
Magnesium	21.1		0.0100	0.200	mg/L	1	03-Apr-2024 13:44
Manganese	0.120		0.000700	0.00500	mg/L	1	03-Apr-2024 13:44
Nickel	0.00940		0.000600	0.00200	mg/L	1	03-Apr-2024 13:44
Potassium	2.35		0.0180	0.200	mg/L	1	03-Apr-2024 13:44
Sodium	268		1.40	20.0	mg/L	100	03-Apr-2024 18:32
Strontium	0.690		0.000200	0.00500	mg/L	1	03-Apr-2024 13:44
Vanadium	0.00232	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:44
Zinc	0.00793		0.00200	0.00400	mg/L	1	03-Apr-2024 13:44
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:23
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,250		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	108		3.50	5.00	mg/L	1	04-Apr-2024 15:59
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 15:59
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.82	H	0.100	0.100	pH Units	1	03-Apr-2024 11:50
Temp Deg C @pH	21.7	H	0	0	°C	1	03-Apr-2024 11:50
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 22:44
Chloride	476		2.00	5.00	mg/L	10	03-Apr-2024 22:50
Sulfate	320		2.00	5.00	mg/L	10	03-Apr-2024 22:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-06
 Collection Date: 26-Mar-2024 16:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-26
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	03-Apr-2024 18:15
Ethylbenzene	U		0.30	1.0	ug/L	1	03-Apr-2024 18:15
m,p-Xylene	U		0.50	2.0	ug/L	1	03-Apr-2024 18:15
o-Xylene	U		0.30	1.0	ug/L	1	03-Apr-2024 18:15
Toluene	U		0.20	1.0	ug/L	1	03-Apr-2024 18:15
Xylenes, Total	U		0.30	3.0	ug/L	1	03-Apr-2024 18:15
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	03-Apr-2024 18:15
<i>Surr: 4-Bromofluorobenzene</i>	100			77-113	%REC	1	03-Apr-2024 18:15
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	03-Apr-2024 18:15
<i>Surr: Toluene-d8</i>	110			82-127	%REC	1	03-Apr-2024 18:15
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 05:36
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 05:36
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 05:36
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	70.6			70-130	%REC	1	04-Apr-2024 05:36
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	74.9			70-130	%REC	1	04-Apr-2024 05:36
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 19:40
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 19:40
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 19:40
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 19:40
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 19:40
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 19:40
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 19:40
<i>Surr: 1-Chlorooctadecane</i>	62.5			40-140	%REC	1	04-Apr-2024 19:40
<i>Surr: 2-Bromonaphthalene</i>	96.1			40-140	%REC	1	04-Apr-2024 19:40
<i>Surr: 2-Fluorobiphenyl</i>	108			40-140	%REC	1	04-Apr-2024 19:40
<i>Surr: o-Terphenyl</i>	73.4			40-140	%REC	1	04-Apr-2024 19:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-06
 Collection Date: 26-Mar-2024 16:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-26
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00106	J	0.000400	0.00200	mg/L	1	03-Apr-2024 13:46
Barium	0.129		0.00190	0.00400	mg/L	1	03-Apr-2024 13:46
Calcium	113		0.0340	0.500	mg/L	1	03-Apr-2024 13:46
Chromium	0.000500	J	0.000400	0.00400	mg/L	1	03-Apr-2024 13:46
Iron	0.0920	J	0.0120	0.200	mg/L	1	03-Apr-2024 13:46
Lead		U	0.000600	0.00200	mg/L	1	03-Apr-2024 13:46
Magnesium	23.1		0.0100	0.200	mg/L	1	03-Apr-2024 13:46
Manganese	0.0905		0.000700	0.00500	mg/L	1	03-Apr-2024 13:46
Nickel	0.00129	J	0.000600	0.00200	mg/L	1	03-Apr-2024 13:46
Potassium	2.60		0.0180	0.200	mg/L	1	03-Apr-2024 13:46
Sodium	300		1.40	20.0	mg/L	100	03-Apr-2024 18:33
Strontium	0.760		0.000200	0.00500	mg/L	1	03-Apr-2024 13:46
Vanadium	0.00235	J	0.000600	0.00500	mg/L	1	03-Apr-2024 13:46
Zinc	0.0604		0.00200	0.00400	mg/L	1	03-Apr-2024 13:46
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	03-Apr-2024 18:25
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	1,220		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	109		3.50	5.00	mg/L	1	04-Apr-2024 16:03
Alkalinity, Carbonate (As CaCO3)		U	3.50	5.00	mg/L	1	04-Apr-2024 16:03
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	8.07	H	0.100	0.100	pH Units	1	03-Apr-2024 11:51
Temp Deg C @pH	21.7	H	0	0	°C	1	03-Apr-2024 11:51
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	03-Apr-2024 22:56
Chloride	464		2.00	5.00	mg/L	10	03-Apr-2024 23:01
Sulfate	309		2.00	5.00	mg/L	10	03-Apr-2024 23:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-26
 Collection Date: 26-Mar-2024 17:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-27
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:56
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:56
m,p-Xylene	U		0.50	2.0	ug/L	1	04-Apr-2024 14:56
o-Xylene	U		0.30	1.0	ug/L	1	04-Apr-2024 14:56
Toluene	U		0.20	1.0	ug/L	1	04-Apr-2024 14:56
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Apr-2024 14:56
<i>Surr: 1,2-Dichloroethane-d4</i>	111			70-126	%REC	1	04-Apr-2024 14:56
<i>Surr: 4-Bromofluorobenzene</i>	90.8			77-113	%REC	1	04-Apr-2024 14:56
<i>Surr: Dibromofluoromethane</i>	108			77-123	%REC	1	04-Apr-2024 14:56
<i>Surr: Toluene-d8</i>	94.7			82-127	%REC	1	04-Apr-2024 14:56
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	04-Apr-2024 06:20
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 06:20
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	04-Apr-2024 06:20
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	75.6			70-130	%REC	1	04-Apr-2024 06:20
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	78.2			70-130	%REC	1	04-Apr-2024 06:20
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 03-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 20:08
Aliphatics >C12 - C16	U		0.00200	0.00200	mg/L	1	04-Apr-2024 20:08
Aliphatics >C16 - C35	U		0.00800	0.00800	mg/L	1	04-Apr-2024 20:08
Aromatics >C10 - C12	U		0.00100	0.00100	mg/L	1	04-Apr-2024 20:08
Aromatics >C12 - C16	U		0.00400	0.00400	mg/L	1	04-Apr-2024 20:08
Aromatics >C16 - C21	U		0.00300	0.00300	mg/L	1	04-Apr-2024 20:08
Aromatics >C21 - C35	U		0.00900	0.00900	mg/L	1	04-Apr-2024 20:08
<i>Surr: 1-Chlorooctadecane</i>	53.5			40-140	%REC	1	04-Apr-2024 20:08
<i>Surr: 2-Bromonaphthalene</i>	89.0			40-140	%REC	1	04-Apr-2024 20:08
<i>Surr: 2-Fluorobiphenyl</i>	98.9			40-140	%REC	1	04-Apr-2024 20:08
<i>Surr: o-Terphenyl</i>	55.8			40-140	%REC	1	04-Apr-2024 20:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: LDNR-26
 Collection Date: 26-Mar-2024 17:00

ANALYTICAL REPORT
 WorkOrder:HS24040061
 Lab ID:HS24040061-27
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 02-Apr-2024		Analyst: MSC	
Arsenic	0.00166	J	0.000400	0.00200	mg/L	1	03-Apr-2024 14:30
Barium	0.400		0.00190	0.00400	mg/L	1	03-Apr-2024 14:30
Calcium	8.50		0.0340	0.500	mg/L	1	03-Apr-2024 14:30
Chromium	U		0.000400	0.00400	mg/L	1	03-Apr-2024 14:30
Iron	0.149	J	0.0120	0.200	mg/L	1	03-Apr-2024 14:30
Lead	U		0.000600	0.00200	mg/L	1	03-Apr-2024 14:30
Magnesium	1.53		0.0100	0.200	mg/L	1	03-Apr-2024 14:30
Manganese	0.0264		0.000700	0.00500	mg/L	1	03-Apr-2024 14:30
Nickel	0.000764	J	0.000600	0.00200	mg/L	1	03-Apr-2024 14:30
Potassium	1.15		0.0180	0.200	mg/L	1	03-Apr-2024 14:30
Sodium	27.6		0.0140	0.200	mg/L	1	03-Apr-2024 14:30
Strontium	0.123		0.000200	0.00500	mg/L	1	03-Apr-2024 14:30
Vanadium	0.00314	J	0.000600	0.00500	mg/L	1	03-Apr-2024 14:30
Zinc	0.00694		0.00200	0.00400	mg/L	1	03-Apr-2024 14:30
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 03-Apr-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	03-Apr-2024 18:26
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	02-Apr-2024 11:45
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: HB	
Total Dissolved Solids (Residue, Filterable)	150		5.00	10.0	mg/L	1	02-Apr-2024 10:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: JAC	
Alkalinity, Bicarbonate (As CaCO3)	38.3		3.50	5.00	mg/L	1	04-Apr-2024 16:19
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	04-Apr-2024 16:19
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	02-Apr-2024 11:40
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: MR	
pH	7.50	H	0.100	0.100	pH Units	1	03-Apr-2024 11:52
Temp Deg C @pH	21.7	H	0	0	°C	1	03-Apr-2024 11:52
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	03-Apr-2024 23:49
Chloride	33.6		0.200	0.500	mg/L	1	03-Apr-2024 23:49
Sulfate	24.6		0.200	0.500	mg/L	1	03-Apr-2024 23:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

Batch ID: 209765	Start Date: 02 Apr 2024 12:30	End Date: 02 Apr 2024 12:30
Method: DISS METALS PREP - WATER - SW3010A		Prep Code: 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-07		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 209772	Start Date: 02 Apr 2024 10:00	End Date: 02 Apr 2024 10:00
Method: WATER - SW3010A		Prep Code: 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-14		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-15		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-16		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-17		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-18		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-19		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-20		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-21		10 (mL)	10 (mL)	1	120 plastic HNO3

Weight / Prep Log

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

Batch ID: 209784 **Start Date:** 02 Apr 2024 12:22 **End Date:** 02 Apr 2024 12:22
Method: MA EPH EXTRACTION-FRACTIONATION **Prep Code:** MA EPH_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-01	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-02	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-03	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-04	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-05	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-06	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-07	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-08	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-09	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-10	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-11	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-12	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-13	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-14	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-15	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-16	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-17	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-18	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-19	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-20	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2

Batch ID: 209817 **Start Date:** 02 Apr 2024 14:00 **End Date:** 02 Apr 2024 14:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-22		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-23		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-24		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-25		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-26		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-27		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 209839 **Start Date:** 03 Apr 2024 11:31 **End Date:** 03 Apr 2024 11:31
Method: MA EPH EXTRACTION-FRACTIONATION **Prep Code:** MA EPH_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-21	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-22	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-23	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-24	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-25	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-26	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2
HS24040061-27	1	1000 (mL)	2 (mL)	0.002	1-litre amber glass, HCL to pH <2

Weight / Prep Log

Client: Environmental Resources Mgmt.

Project: Sulphur Dome

WorkOrder: HS24040061

Batch ID: 209872	Start Date: 03 Apr 2024 10:00	End Date: 03 Apr 2024 10:00
Method: MERCURY PREP BY 7470A- WATER	Prep Code: HG_WPR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-10		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 209875	Start Date: 03 Apr 2024 10:30	End Date: 03 Apr 2024 10:30
Method: MERCURY PREP BY 7470A- WATER	Prep Code: HG_WPR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-14		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-15		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-16		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-17		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-18		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-19		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-20		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-21		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-22		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-23		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-24		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-25		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-26		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-27		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 209879	Start Date: 03 Apr 2024 10:30	End Date: 03 Apr 2024 10:30
Method: MERCURY PREP BY 7470A - DISSOLVED	Prep Code: HG_W_DISSPR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24040061-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24040061-07		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 209765 (0)		Test Name : DISSOLVED METALS BY SW6020A			Matrix: Water	
HS24040061-06	MW-3-200'	27 Mar 2024 15:35		02 Apr 2024 12:30	04 Apr 2024 13:43	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35		02 Apr 2024 12:30	02 Apr 2024 23:48	2
HS24040061-07	MW-3-500'	27 Mar 2024 17:25		02 Apr 2024 12:30	04 Apr 2024 13:45	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25		02 Apr 2024 12:30	04 Apr 2024 13:18	200
HS24040061-07	MW-3-500'	27 Mar 2024 17:25		02 Apr 2024 12:30	02 Apr 2024 23:50	2
Batch ID: 209772 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50		02 Apr 2024 10:00	03 Apr 2024 12:29	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10		02 Apr 2024 10:00	03 Apr 2024 12:48	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35		02 Apr 2024 10:00	03 Apr 2024 12:50	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55		02 Apr 2024 10:00	03 Apr 2024 12:52	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35		02 Apr 2024 10:00	05 Apr 2024 12:08	100
HS24040061-05	MW-3-700'	27 Mar 2024 12:35		02 Apr 2024 10:00	03 Apr 2024 13:06	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15		02 Apr 2024 10:00	05 Apr 2024 12:13	100
HS24040061-08	LDNR-23	27 Mar 2024 09:15		02 Apr 2024 10:00	03 Apr 2024 13:10	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45		02 Apr 2024 10:00	05 Apr 2024 12:15	100
HS24040061-09	LDNR-25	27 Mar 2024 09:45		02 Apr 2024 10:00	03 Apr 2024 13:12	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20		02 Apr 2024 10:00	05 Apr 2024 12:17	100
HS24040061-10	LDNR-14	27 Mar 2024 10:20		02 Apr 2024 10:00	03 Apr 2024 13:14	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20		02 Apr 2024 10:00	05 Apr 2024 12:20	100
HS24040061-11	LDNR-13	27 Mar 2024 12:20		02 Apr 2024 10:00	03 Apr 2024 13:16	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15		02 Apr 2024 10:00	05 Apr 2024 12:22	100
HS24040061-12	LDNR-12	27 Mar 2024 13:15		02 Apr 2024 10:00	03 Apr 2024 13:18	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30		02 Apr 2024 10:00	05 Apr 2024 12:34	100
HS24040061-13	LDNR-07	27 Mar 2024 13:30		02 Apr 2024 10:00	03 Apr 2024 13:20	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30		02 Apr 2024 10:00	05 Apr 2024 12:36	100
HS24040061-14	LDNR-08	27 Mar 2024 14:30		02 Apr 2024 10:00	03 Apr 2024 15:06	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00		02 Apr 2024 10:00	05 Apr 2024 12:10	100
HS24040061-15	LDNR-01	26 Mar 2024 09:00		02 Apr 2024 10:00	03 Apr 2024 15:08	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50		02 Apr 2024 10:00	03 Apr 2024 15:10	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20		02 Apr 2024 10:00	03 Apr 2024 15:12	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20		02 Apr 2024 10:00	05 Apr 2024 12:39	100
HS24040061-18	LDNR-04	26 Mar 2024 10:20		02 Apr 2024 10:00	03 Apr 2024 15:14	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45		02 Apr 2024 10:00	05 Apr 2024 12:41	100
HS24040061-19	LDNR-03	26 Mar 2024 10:45		02 Apr 2024 10:00	03 Apr 2024 15:16	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00		02 Apr 2024 10:00	05 Apr 2024 12:43	100
HS24040061-20	LDNR-24	26 Mar 2024 11:00		02 Apr 2024 10:00	03 Apr 2024 15:18	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45		02 Apr 2024 10:00	05 Apr 2024 12:46	100
HS24040061-21	LDNR-17	26 Mar 2024 12:45		02 Apr 2024 10:00	03 Apr 2024 15:20	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 209784 (0)		Test Name : MASSACHUSETTS EPH R2.1, DEC 2019			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50		02 Apr 2024 12:22	03 Apr 2024 14:22	1
HS24040061-01	MW-2-500'	26 Mar 2024 14:50		02 Apr 2024 12:22	03 Apr 2024 14:22	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10		02 Apr 2024 12:22	03 Apr 2024 14:51	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10		02 Apr 2024 12:22	03 Apr 2024 14:51	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35		02 Apr 2024 12:22	03 Apr 2024 15:20	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35		02 Apr 2024 12:22	03 Apr 2024 15:20	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55		02 Apr 2024 12:22	03 Apr 2024 15:49	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55		02 Apr 2024 12:22	03 Apr 2024 15:49	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35		02 Apr 2024 12:22	03 Apr 2024 16:18	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35		02 Apr 2024 12:22	03 Apr 2024 16:18	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35		02 Apr 2024 12:22	03 Apr 2024 16:47	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35		02 Apr 2024 12:22	03 Apr 2024 16:47	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25		02 Apr 2024 12:22	03 Apr 2024 18:13	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25		02 Apr 2024 12:22	03 Apr 2024 18:13	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15		02 Apr 2024 12:22	03 Apr 2024 18:42	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15		02 Apr 2024 12:22	03 Apr 2024 18:42	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45		02 Apr 2024 12:22	03 Apr 2024 19:11	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45		02 Apr 2024 12:22	03 Apr 2024 19:11	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20		02 Apr 2024 12:22	03 Apr 2024 19:40	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20		02 Apr 2024 12:22	03 Apr 2024 19:40	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20		02 Apr 2024 12:22	03 Apr 2024 20:08	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20		02 Apr 2024 12:22	03 Apr 2024 20:08	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15		02 Apr 2024 12:22	03 Apr 2024 20:37	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15		02 Apr 2024 12:22	03 Apr 2024 20:37	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30		02 Apr 2024 12:22	03 Apr 2024 21:06	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30		02 Apr 2024 12:22	03 Apr 2024 21:06	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30		02 Apr 2024 12:22	03 Apr 2024 21:36	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30		02 Apr 2024 12:22	03 Apr 2024 21:36	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00		02 Apr 2024 12:22	04 Apr 2024 11:02	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00		02 Apr 2024 12:22	04 Apr 2024 11:02	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50		02 Apr 2024 12:22	04 Apr 2024 11:31	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50		02 Apr 2024 12:22	04 Apr 2024 11:31	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20		02 Apr 2024 12:22	04 Apr 2024 12:00	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20		02 Apr 2024 12:22	04 Apr 2024 12:00	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20		02 Apr 2024 12:22	04 Apr 2024 12:29	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20		02 Apr 2024 12:22	04 Apr 2024 12:29	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45		02 Apr 2024 12:22	04 Apr 2024 12:58	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45		02 Apr 2024 12:22	04 Apr 2024 12:58	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00		02 Apr 2024 12:22	04 Apr 2024 13:26	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
HS24040061-20	LDNR-24	26 Mar 2024 11:00		02 Apr 2024 12:22	04 Apr 2024 13:26	1
Batch ID: 209817 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS24040061-22	LDNR-05	26 Mar 2024 13:00		02 Apr 2024 14:00	03 Apr 2024 18:22	100
HS24040061-22	LDNR-05	26 Mar 2024 13:00		02 Apr 2024 14:00	03 Apr 2024 13:30	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15		02 Apr 2024 14:00	03 Apr 2024 18:28	100
HS24040061-23	LDNR-18	26 Mar 2024 13:15		02 Apr 2024 14:00	03 Apr 2024 13:40	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15		02 Apr 2024 14:00	03 Apr 2024 18:30	100
HS24040061-24	LDNR-21	26 Mar 2024 15:15		02 Apr 2024 14:00	03 Apr 2024 13:42	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30		02 Apr 2024 14:00	03 Apr 2024 18:32	100
HS24040061-25	LDNR-22	26 Mar 2024 15:30		02 Apr 2024 14:00	03 Apr 2024 13:44	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00		02 Apr 2024 14:00	03 Apr 2024 18:33	100
HS24040061-26	LDNR-06	26 Mar 2024 16:00		02 Apr 2024 14:00	03 Apr 2024 13:46	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00		02 Apr 2024 14:00	03 Apr 2024 14:30	1
Batch ID: 209839 (0)		Test Name : MASSACHUSETTS EPH R2.1, DEC 2019			Matrix: Water	
HS24040061-21	LDNR-17	26 Mar 2024 12:45		03 Apr 2024 11:31	04 Apr 2024 17:16	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00		03 Apr 2024 11:31	04 Apr 2024 17:44	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15		03 Apr 2024 11:31	04 Apr 2024 18:13	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15		03 Apr 2024 11:31	04 Apr 2024 18:42	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30		03 Apr 2024 11:31	04 Apr 2024 19:11	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00		03 Apr 2024 11:31	04 Apr 2024 19:40	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00		03 Apr 2024 11:31	04 Apr 2024 20:08	1
Batch ID: 209839 (1)		Test Name : MASSACHUSETTS EPH R2.1, DEC 2019			Matrix: Water	
HS24040061-21	LDNR-17	26 Mar 2024 12:45		03 Apr 2024 11:31	04 Apr 2024 17:16	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00		03 Apr 2024 11:31	04 Apr 2024 17:44	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15		03 Apr 2024 11:31	04 Apr 2024 18:13	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15		03 Apr 2024 11:31	04 Apr 2024 18:42	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30		03 Apr 2024 11:31	04 Apr 2024 19:11	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00		03 Apr 2024 11:31	04 Apr 2024 19:40	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00		03 Apr 2024 11:31	04 Apr 2024 20:08	1
Batch ID: 209872 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50		03 Apr 2024 10:00	03 Apr 2024 17:20	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10		03 Apr 2024 10:00	03 Apr 2024 17:22	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35		03 Apr 2024 10:00	03 Apr 2024 17:24	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55		03 Apr 2024 10:00	03 Apr 2024 17:25	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35		03 Apr 2024 10:00	03 Apr 2024 17:32	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15		03 Apr 2024 10:00	03 Apr 2024 17:34	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45		03 Apr 2024 10:00	03 Apr 2024 17:36	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20		03 Apr 2024 10:00	03 Apr 2024 17:37	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 209875 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS24040061-11	LDNR-13	27 Mar 2024 12:20		03 Apr 2024 10:30	03 Apr 2024 17:42	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15		03 Apr 2024 10:30	03 Apr 2024 17:44	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30		03 Apr 2024 10:30	03 Apr 2024 17:54	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30		03 Apr 2024 10:30	03 Apr 2024 18:00	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00		03 Apr 2024 10:30	03 Apr 2024 18:01	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50		03 Apr 2024 10:30	03 Apr 2024 18:03	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20		03 Apr 2024 10:30	03 Apr 2024 18:05	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20		03 Apr 2024 10:30	03 Apr 2024 18:06	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45		03 Apr 2024 10:30	03 Apr 2024 18:08	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00		03 Apr 2024 10:30	03 Apr 2024 18:10	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45		03 Apr 2024 10:30	03 Apr 2024 18:16	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00		03 Apr 2024 10:30	03 Apr 2024 18:18	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15		03 Apr 2024 10:30	03 Apr 2024 18:19	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15		03 Apr 2024 10:30	03 Apr 2024 18:21	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30		03 Apr 2024 10:30	03 Apr 2024 18:23	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00		03 Apr 2024 10:30	03 Apr 2024 18:25	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00		03 Apr 2024 10:30	03 Apr 2024 18:26	1
Batch ID: 209879 (0)		Test Name : DISSOLVED MERCURY BY SW7470A			Matrix: Water	
HS24040061-06	MW-3-200'	27 Mar 2024 15:35		03 Apr 2024 10:30	03 Apr 2024 19:20	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25		03 Apr 2024 10:30	03 Apr 2024 19:22	1
Batch ID: R462810 (0)		Test Name : SULFIDE BY SM4500 S2-F-2011			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			02 Apr 2024 11:40	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			02 Apr 2024 11:40	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			02 Apr 2024 11:40	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			02 Apr 2024 11:40	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			02 Apr 2024 11:40	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			02 Apr 2024 11:40	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			02 Apr 2024 11:40	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			02 Apr 2024 11:40	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			02 Apr 2024 11:40	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			02 Apr 2024 11:40	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			02 Apr 2024 11:40	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			02 Apr 2024 11:40	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			02 Apr 2024 11:40	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			02 Apr 2024 11:40	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			02 Apr 2024 11:40	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R462813 (0)		Test Name : HYDROGEN SULFIDE BY E376.1			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			02 Apr 2024 11:45	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			02 Apr 2024 11:45	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			02 Apr 2024 11:45	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			02 Apr 2024 11:45	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			02 Apr 2024 11:45	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			02 Apr 2024 11:45	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			02 Apr 2024 11:45	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			02 Apr 2024 11:45	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			02 Apr 2024 11:45	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			02 Apr 2024 11:45	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			02 Apr 2024 11:45	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			02 Apr 2024 11:45	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			02 Apr 2024 11:45	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			02 Apr 2024 11:45	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			02 Apr 2024 11:45	1
Batch ID: R462885 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			02 Apr 2024 10:00	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			02 Apr 2024 10:00	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			02 Apr 2024 10:00	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			02 Apr 2024 10:00	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			02 Apr 2024 10:00	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			02 Apr 2024 10:00	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			02 Apr 2024 10:00	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			02 Apr 2024 10:00	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			02 Apr 2024 10:00	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			02 Apr 2024 10:00	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			02 Apr 2024 10:00	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			02 Apr 2024 10:00	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			02 Apr 2024 10:00	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			02 Apr 2024 10:00	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			02 Apr 2024 10:00	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			02 Apr 2024 10:00	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			02 Apr 2024 10:00	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			02 Apr 2024 10:00	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			02 Apr 2024 10:00	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R462886 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011			Matrix: Water	
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			02 Apr 2024 11:00	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			02 Apr 2024 11:00	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			02 Apr 2024 11:00	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			02 Apr 2024 11:00	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			02 Apr 2024 11:00	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			02 Apr 2024 11:00	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			02 Apr 2024 11:00	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			02 Apr 2024 11:00	1
Batch ID: R462906 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			03 Apr 2024 04:58	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			03 Apr 2024 05:21	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 05:43	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 06:06	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 06:29	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 06:51	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 07:14	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 07:36	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 07:58	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 08:21	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 08:43	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 09:05	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 09:28	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 09:50	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			03 Apr 2024 10:13	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			03 Apr 2024 10:35	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R462914 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			03 Apr 2024 01:52	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			03 Apr 2024 02:36	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 04:47	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 05:31	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 06:15	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 06:59	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 07:43	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 08:27	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 09:11	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 09:55	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 10:38	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 11:22	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 13:34	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 14:17	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			03 Apr 2024 15:01	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			03 Apr 2024 15:45	1
Batch ID: R462915 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			03 Apr 2024 01:52	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			03 Apr 2024 02:36	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 04:47	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 05:31	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 06:15	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 06:59	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 07:43	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 08:27	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 09:11	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 09:55	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 10:38	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 11:22	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 13:34	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 14:17	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			03 Apr 2024 15:01	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			03 Apr 2024 15:45	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R462926 (0)		Test Name : SULFIDE BY SM4500 S2-F-2011			Matrix: Water	
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 12:54	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 12:54	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 12:54	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 12:54	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 12:54	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 12:54	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 12:54	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 12:54	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 12:54	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 12:54	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 12:54	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 12:54	1
Batch ID: R462930 (0)		Test Name : PH BY SM4500H+ B-2011			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			03 Apr 2024 11:05	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			03 Apr 2024 11:06	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 11:07	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 11:08	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 11:09	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 11:10	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 11:11	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 11:13	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 11:14	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 11:15	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 11:16	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 11:17	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 11:19	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 11:20	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			03 Apr 2024 11:21	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			03 Apr 2024 11:22	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R462931 (0)		Test Name : HYDROGEN SULFIDE BY E376.1			Matrix: Water	
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 13:26	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 13:26	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 13:26	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 13:26	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 13:26	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 13:26	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 13:26	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 13:26	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 13:26	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 13:26	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 13:26	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 13:26	1
Batch ID: R462933 (0)		Test Name : PH BY SM4500H+ B-2011			Matrix: Water	
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			03 Apr 2024 11:41	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			03 Apr 2024 11:43	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			03 Apr 2024 11:44	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			03 Apr 2024 11:45	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			03 Apr 2024 11:46	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			03 Apr 2024 11:47	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			03 Apr 2024 11:48	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			03 Apr 2024 11:49	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			03 Apr 2024 11:50	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			03 Apr 2024 11:51	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			03 Apr 2024 11:52	1
Batch ID: R463001 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24040061-19	LDNR-03	26 Mar 2024 10:45			03 Apr 2024 20:29	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			03 Apr 2024 20:51	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			03 Apr 2024 21:13	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			03 Apr 2024 17:52	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			03 Apr 2024 18:15	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463013 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			03 Apr 2024 21:35	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			03 Apr 2024 22:18	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			03 Apr 2024 23:02	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			03 Apr 2024 23:46	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			04 Apr 2024 00:30	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			04 Apr 2024 01:13	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			04 Apr 2024 01:57	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			04 Apr 2024 04:09	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			04 Apr 2024 04:52	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			04 Apr 2024 05:36	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			04 Apr 2024 06:20	1
Batch ID: R463015 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			03 Apr 2024 21:35	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			03 Apr 2024 22:18	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			03 Apr 2024 23:02	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			03 Apr 2024 23:46	1
HS24040061-21	LDNR-17	26 Mar 2024 12:45			04 Apr 2024 00:30	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			04 Apr 2024 01:13	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			04 Apr 2024 01:57	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			04 Apr 2024 04:09	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			04 Apr 2024 04:52	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			04 Apr 2024 05:36	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			04 Apr 2024 06:20	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463024 (0)		Test Name : ANIONS BY SW9056A			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			03 Apr 2024 15:18	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			03 Apr 2024 15:30	10
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			03 Apr 2024 15:24	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			03 Apr 2024 16:12	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			03 Apr 2024 15:36	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 16:36	50
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			03 Apr 2024 16:30	2
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 20:03	2
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			03 Apr 2024 16:42	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 16:53	20
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			03 Apr 2024 16:47	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 17:05	10
HS24040061-08	LDNR-23	27 Mar 2024 09:15			03 Apr 2024 16:59	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 17:47	10
HS24040061-09	LDNR-25	27 Mar 2024 09:45			03 Apr 2024 17:41	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 17:59	10
HS24040061-10	LDNR-14	27 Mar 2024 10:20			03 Apr 2024 17:53	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 18:11	10
HS24040061-11	LDNR-13	27 Mar 2024 12:20			03 Apr 2024 18:05	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 18:22	20
HS24040061-12	LDNR-12	27 Mar 2024 13:15			03 Apr 2024 18:17	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 18:34	20
HS24040061-13	LDNR-07	27 Mar 2024 13:30			03 Apr 2024 18:28	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 19:16	20
HS24040061-14	LDNR-08	27 Mar 2024 14:30			03 Apr 2024 19:10	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			03 Apr 2024 19:34	20
HS24040061-15	LDNR-01	26 Mar 2024 09:00			03 Apr 2024 19:28	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			03 Apr 2024 19:46	10
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			03 Apr 2024 19:40	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			04 Apr 2024 01:42	5
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			03 Apr 2024 19:22	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			03 Apr 2024 19:57	10
HS24040061-18	LDNR-04	26 Mar 2024 10:20			03 Apr 2024 19:51	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			03 Apr 2024 20:39	10
HS24040061-19	LDNR-03	26 Mar 2024 10:45			03 Apr 2024 20:33	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			03 Apr 2024 20:51	10
HS24040061-20	LDNR-24	26 Mar 2024 11:00			03 Apr 2024 20:45	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463029 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			04 Apr 2024 07:15	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			04 Apr 2024 06:54	1
Batch ID: R463032 (0)		Test Name : ANIONS BY SW9056A			Matrix: Water	
HS24040061-21	LDNR-17	26 Mar 2024 12:45			03 Apr 2024 21:09	10
HS24040061-21	LDNR-17	26 Mar 2024 12:45			03 Apr 2024 21:03	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			03 Apr 2024 21:21	20
HS24040061-22	LDNR-05	26 Mar 2024 13:00			03 Apr 2024 21:15	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			03 Apr 2024 21:32	10
HS24040061-23	LDNR-18	26 Mar 2024 13:15			03 Apr 2024 21:26	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			03 Apr 2024 22:38	10
HS24040061-24	LDNR-21	26 Mar 2024 15:15			03 Apr 2024 22:32	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			03 Apr 2024 22:50	10
HS24040061-25	LDNR-22	26 Mar 2024 15:30			03 Apr 2024 22:44	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			03 Apr 2024 23:01	10
HS24040061-26	LDNR-06	26 Mar 2024 16:00			03 Apr 2024 22:56	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			03 Apr 2024 23:49	1
Batch ID: R463096 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24040061-22	LDNR-05	26 Mar 2024 13:00			04 Apr 2024 13:53	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			04 Apr 2024 14:14	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			04 Apr 2024 14:35	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			04 Apr 2024 14:56	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R463100 (0)		Test Name : ALKALINITY BY -2011			Matrix: Water	
HS24040061-01	MW-2-500'	26 Mar 2024 14:50			04 Apr 2024 12:03	1
HS24040061-02	MW-1-700'	26 Mar 2024 16:10			04 Apr 2024 12:14	1
HS24040061-03	MW-1-500'	27 Mar 2024 08:35			04 Apr 2024 12:19	1
HS24040061-04	MW-1-200'	27 Mar 2024 09:55			04 Apr 2024 12:25	1
HS24040061-05	MW-3-700'	27 Mar 2024 12:35			04 Apr 2024 12:30	1
HS24040061-06	MW-3-200'	27 Mar 2024 15:35			04 Apr 2024 12:35	1
HS24040061-07	MW-3-500'	27 Mar 2024 17:25			04 Apr 2024 12:51	1
HS24040061-08	LDNR-23	27 Mar 2024 09:15			04 Apr 2024 12:56	1
HS24040061-09	LDNR-25	27 Mar 2024 09:45			04 Apr 2024 13:01	1
HS24040061-10	LDNR-14	27 Mar 2024 10:20			04 Apr 2024 13:06	1
HS24040061-11	LDNR-13	27 Mar 2024 12:20			04 Apr 2024 13:11	1
HS24040061-12	LDNR-12	27 Mar 2024 13:15			04 Apr 2024 13:16	1
HS24040061-13	LDNR-07	27 Mar 2024 13:30			04 Apr 2024 13:21	1
HS24040061-14	LDNR-08	27 Mar 2024 14:30			04 Apr 2024 13:26	1
HS24040061-15	LDNR-01	26 Mar 2024 09:00			04 Apr 2024 13:31	1
HS24040061-16	MW-2-700'	26 Mar 2024 09:50			04 Apr 2024 13:36	1
HS24040061-17	MW-2-200'	26 Mar 2024 13:20			04 Apr 2024 13:53	1
HS24040061-18	LDNR-04	26 Mar 2024 10:20			04 Apr 2024 13:58	1
HS24040061-19	LDNR-03	26 Mar 2024 10:45			04 Apr 2024 14:04	1
HS24040061-20	LDNR-24	26 Mar 2024 11:00			04 Apr 2024 14:09	1
Batch ID: R463116 (0)		Test Name : ALKALINITY BY -2011			Matrix: Water	
HS24040061-21	LDNR-17	26 Mar 2024 12:45			04 Apr 2024 15:13	1
HS24040061-22	LDNR-05	26 Mar 2024 13:00			04 Apr 2024 15:23	1
HS24040061-23	LDNR-18	26 Mar 2024 13:15			04 Apr 2024 15:28	1
HS24040061-24	LDNR-21	26 Mar 2024 15:15			04 Apr 2024 15:53	1
HS24040061-25	LDNR-22	26 Mar 2024 15:30			04 Apr 2024 15:59	1
HS24040061-26	LDNR-06	26 Mar 2024 16:00			04 Apr 2024 16:03	1
HS24040061-27	LDNR-26	26 Mar 2024 17:00			04 Apr 2024 16:19	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209784 (0)	Instrument: FID23	Method: MASSACHUSETTS EPH R2.1, DEC 2019
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MBLK	Sample ID: MBLK-209784	Units: mg/L	Analysis Date: 03-Apr-2024 12:56							
Client ID:	Run ID: FID23_463122	SeqNo: 7928747	PrepDate: 02-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aliphatics >C10 - C12	U	0.00100								
Aliphatics >C12 - C16	U	0.00200								
Aliphatics >C16 - C35	U	0.00800								
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02778</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>69.5</i>	<i>40 - 140</i>				

MBLK	Sample ID: MBLK-209784	Units: mg/L	Analysis Date: 03-Apr-2024 12:56							
Client ID:	Run ID: FID-22_463123	SeqNo: 7928780	PrepDate: 02-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	U	0.00100								
Aromatics >C12 - C16	U	0.00400								
Aromatics >C16 - C21	U	0.00300								
Aromatics >C21 - C35	U	0.00900								
<i>Surr: 2-Bromonaphthalene</i>	<i>0.03365</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>84.1</i>	<i>40 - 140</i>				
<i>Surr: 2-Fluorobiphenyl</i>	<i>0.03709</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>92.7</i>	<i>40 - 140</i>				
<i>Surr: o-Terphenyl</i>	<i>0.02252</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>56.3</i>	<i>40 - 140</i>				

LCS	Sample ID: LCS-209784	Units: mg/L	Analysis Date: 03-Apr-2024 13:25							
Client ID:	Run ID: FID23_463122	SeqNo: 7928748	PrepDate: 02-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aliphatics >C10 - C12	0.0413	0.00100	0.05	0	82.6	40 - 140				
Aliphatics >C12 - C16	0.08816	0.00200	0.1	0	88.2	40 - 140				
Aliphatics >C16 - C35	0.3594	0.00800	0.4	0	89.8	40 - 140				
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02853</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>71.3</i>	<i>40 - 140</i>				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209784 (0) **Instrument:** FID23 **Method:** MASSACHUSETTS EPH R2.1, DEC 2019

LCS		Sample ID: LCS-209784			Units: mg/L		Analysis Date: 03-Apr-2024 13:25			
Client ID:		Run ID: FID-22_463123			SeqNo: 7928781		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.03873	0.00100	0.05	0	77.5	40 - 140				
Aromatics >C12 - C16	0.1536	0.00400	0.2	0	76.8	40 - 140				
Aromatics >C16 - C21	0.1206	0.00300	0.15	0	80.4	40 - 140				
Aromatics >C21 - C35	0.3616	0.00900	0.45	0	80.4	40 - 140				
Surr: 2-Bromonaphthalene	0.03753	0	0.04	0	93.8	40 - 140				
Surr: 2-Fluorobiphenyl	0.04072	0	0.04	0	102	40 - 140				
Surr: o-Terphenyl	0.02557	0	0.04	0	63.9	40 - 140				

LCSD		Sample ID: LCSD-209784			Units: mg/L		Analysis Date: 03-Apr-2024 13:54			
Client ID:		Run ID: FID23_463122			SeqNo: 7928749		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aliphatics >C10 - C12	0.05515	0.00100	0.05	0	110	40 - 140	0.0413	28.7	50	
Aliphatics >C12 - C16	0.1152	0.00200	0.1	0	115	40 - 140	0.08816	26.6	50	
Aliphatics >C16 - C35	0.4595	0.00800	0.4	0	115	40 - 140	0.3594	24.5	50	
Surr: 1-Chlorooctadecane	0.03522	0	0.04	0	88.0	40 - 140	0.02853	21	50	

LCSD		Sample ID: LCSD-209784			Units: mg/L		Analysis Date: 03-Apr-2024 13:54			
Client ID:		Run ID: FID-22_463123			SeqNo: 7928782		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.0554	0.00100	0.05	0	111	40 - 140	0.03873	35.4	50	
Aromatics >C12 - C16	0.1879	0.00400	0.2	0	93.9	40 - 140	0.1536	20.1	50	
Aromatics >C16 - C21	0.1487	0.00300	0.15	0	99.1	40 - 140	0.1206	20.8	50	
Aromatics >C21 - C35	0.4417	0.00900	0.45	0	98.2	40 - 140	0.3616	19.9	50	
Surr: 2-Bromonaphthalene	0.03746	0	0.04	0	93.7	40 - 140	0.03753	0.17	50	
Surr: 2-Fluorobiphenyl	0.04176	0	0.04	0	104	40 - 140	0.04072	2.52	50	
Surr: o-Terphenyl	0.03026	0	0.04	0	75.7	40 - 140	0.02557	16.8	50	

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16
HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209839 (0)	Instrument: FID23	Method: MASSACHUSETTS EPH R2.1, DEC 2019								
MBLK	Sample ID: MBLK-209839	Units: mg/L	Analysis Date: 04-Apr-2024 13:55							
Client ID:	Run ID: FID23_463178	SeqNo: 7930232	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Aliphatics >C10 - C12	U	0.00100								
Aliphatics >C12 - C16	U	0.00200								
Aliphatics >C16 - C35	U	0.00800								
<i>Surr: 1-Chlorooctadecane</i>	<i>0.01886</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>47.1</i>	<i>40 - 140</i>				

LCS	Sample ID: LCS-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:21							
Client ID:	Run ID: FID23_463178	SeqNo: 7930234	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Aliphatics >C10 - C12	0.04901	0.00100	0.05	0	98.0	40 - 140				
Aliphatics >C12 - C16	0.1052	0.00200	0.1	0	105	40 - 140				
Aliphatics >C16 - C35	0.4188	0.00800	0.4	0	105	40 - 140				
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02744</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>68.6</i>	<i>40 - 140</i>				

LCSD	Sample ID: LCSD-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:50							
Client ID:	Run ID: FID23_463178	SeqNo: 7930235	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Aliphatics >C10 - C12	0.04768	0.00100	0.05	0	95.4	40 - 140	0.04901	2.73	50	
Aliphatics >C12 - C16	0.1017	0.00200	0.1	0	102	40 - 140	0.1052	3.43	50	
Aliphatics >C16 - C35	0.414	0.00800	0.4	0	104	40 - 140	0.4188	1.15	50	
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02702</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>67.5</i>	<i>40 - 140</i>	<i>0.02744</i>	<i>1.55</i>	<i>50</i>	

The following samples were analyzed in this batch:

HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209839 (1)	Instrument: FID-22	Method: MASSACHUSETTS EPH R2.1, DEC 2019
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MBLK	Sample ID: MBLK-209839	Units: mg/L	Analysis Date: 04-Apr-2024 13:55							
Client ID:	Run ID: FID-22_463181	SeqNo: 7930283	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	U	0.00100								
Aromatics >C12 - C16	U	0.00400								
Aromatics >C16 - C21	U	0.00300								
Aromatics >C21 - C35	U	0.00900								
Surr: 2-Bromonaphthalene	0.03597	0	0.04	0	89.9	40 - 140				
Surr: 2-Fluorobiphenyl	0.03874	0	0.04	0	96.8	40 - 140				
Surr: o-Terphenyl	0.02688	0	0.04	0	67.2	40 - 140				

LCS	Sample ID: LCS-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:21							
Client ID:	Run ID: FID-22_463181	SeqNo: 7930285	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.05284	0.00100	0.05	0	106	40 - 140				
Aromatics >C12 - C16	0.2061	0.00400	0.2	0	103	40 - 140				
Aromatics >C16 - C21	0.1613	0.00300	0.15	0	108	40 - 140				
Aromatics >C21 - C35	0.4544	0.00900	0.45	0	101	40 - 140				
Surr: 2-Bromonaphthalene	0.03736	0	0.04	0	93.4	40 - 140				
Surr: 2-Fluorobiphenyl	0.04069	0	0.04	0	102	40 - 140				
Surr: o-Terphenyl	0.03293	0	0.04	0	82.3	40 - 140				

LCSD	Sample ID: LCSD-209839	Units: mg/L	Analysis Date: 04-Apr-2024 15:50							
Client ID:	Run ID: FID-22_463181	SeqNo: 7930286	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.04999	0.00100	0.05	0	100.0	40 - 140	0.05284	5.54	50	
Aromatics >C12 - C16	0.198	0.00400	0.2	0	99.0	40 - 140	0.2061	3.99	50	
Aromatics >C16 - C21	0.1585	0.00300	0.15	0	106	40 - 140	0.1613	1.74	50	
Aromatics >C21 - C35	0.454	0.00900	0.45	0	101	40 - 140	0.4544	0.102	50	
Surr: 2-Bromonaphthalene	0.03874	0	0.04	0	96.9	40 - 140	0.03736	3.63	50	
Surr: 2-Fluorobiphenyl	0.04239	0	0.04	0	106	40 - 140	0.04069	4.08	50	
Surr: o-Terphenyl	0.03243	0	0.04	0	81.1	40 - 140	0.03293	1.53	50	

The following samples were analyzed in this batch:	HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
	HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462914 (0)	Instrument: FID-14	Method: MASSACHUSETTS VPH, FEB 2018, REV 2.1								
MBLK Sample ID: MBLK-240402	Units: mg/L	Analysis Date: 02-Apr-2024 20:46								
Client ID:	Run ID: FID-14_462914	SeqNo: 7923842 PrepDate: DF: 1								
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Aliphatics >C6 - C8	U	0.0100								
Aliphatics >C8 - C10	U	0.0100								
Surr: 2,5-Dibromotoluene (Aliphatic)	0.2167	0.0100	0.25	0	86.7	70 - 130				

LCS Sample ID: LCS-240402	Units: mg/L	Analysis Date: 02-Apr-2024 19:18								
Client ID:	Run ID: FID-14_462914	SeqNo: 7923840 PrepDate: DF: 1								
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Aliphatics >C6 - C8	0.02316	0.0100	0.025	0	92.6	70 - 130				
Aliphatics >C8 - C10	0.02922	0.0100	0.025	0	117	70 - 130				
Surr: 2,5-Dibromotoluene (Aliphatic)	0.2127	0.0100	0.25	0	85.1	70 - 130				

LCSD Sample ID: LCSD-240402	Units: mg/L	Analysis Date: 02-Apr-2024 20:02								
Client ID:	Run ID: FID-14_462914	SeqNo: 7923841 PrepDate: DF: 1								
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Aliphatics >C6 - C8	0.02844	0.0100	0.025	0	114	70 - 130	0.02316	20.5	25	
Aliphatics >C8 - C10	0.02767	0.0100	0.025	0	111	70 - 130	0.02922	5.46	25	
Surr: 2,5-Dibromotoluene (Aliphatic)	0.2208	0.0100	0.25	0	88.3	70 - 130	0.2127	3.74	25	

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462915 (0)	Instrument: FID-15	Method: MASSACHUSETTS VPH, FEB 2018, REV 2.1								
MBLK	Sample ID: MBLK-240402	Units: mg/L	Analysis Date: 02-Apr-2024 20:46							
Client ID:	Run ID: FID-15_462915	SeqNo: 7923857	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aromatics >C8 - C10	U	0.0100								
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.1952	0.0100	0.25	0	78.1	70 - 130				

LCS	Sample ID: LCS-240402	Units: mg/L	Analysis Date: 02-Apr-2024 19:18							
Client ID:	Run ID: FID-15_462915	SeqNo: 7923855	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aromatics >C8 - C10	0.09012	0.0100	0.1	0	90.1	70 - 130				
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.206	0.0100	0.25	0	82.4	70 - 130				

LCSD	Sample ID: LCSD-240402	Units: mg/L	Analysis Date: 02-Apr-2024 20:02							
Client ID:	Run ID: FID-15_462915	SeqNo: 7923856	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aromatics >C8 - C10	0.0877	0.0100	0.1	0	87.7	70 - 130	0.09012	2.73	25	
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.213	0.0100	0.25	0	85.2	70 - 130	0.206	3.35	25	

MS	Sample ID: HS24031062-01MS	Units: mg/L	Analysis Date: 02-Apr-2024 22:13							
Client ID:	Run ID: FID-15_462915	SeqNo: 7923859	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aromatics >C8 - C10	0.08023	0.0100	0.1	0	80.2	70 - 130				
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.1938	0.0100	0.25	0	77.5	70 - 130				

MSD	Sample ID: HS24031062-01MSD	Units: mg/L	Analysis Date: 02-Apr-2024 22:57							
Client ID:	Run ID: FID-15_462915	SeqNo: 7923860	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aromatics >C8 - C10	0.08157	0.0100	0.1	0	81.6	70 - 130	0.08023	1.65	25	
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.2	0.0100	0.25	0	80.0	70 - 130	0.1938	3.13	25	

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463013 (0)	Instrument: FID-14	Method: MASSACHUSETTS VPH, FEB 2018, REV 2.1								
MBLK	Sample ID: MBLK-240403	Units: mg/L	Analysis Date: 03-Apr-2024 20:51							
Client ID:	Run ID: FID-14_463013	SeqNo: 7926510	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aliphatics >C6 - C8	U	0.0100								
Aliphatics >C8 - C10	U	0.0100								
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	0.206	0.0100	0.25	0	82.4	70 - 130				

LCS	Sample ID: LCS-240403	Units: mg/L	Analysis Date: 03-Apr-2024 19:24							
Client ID:	Run ID: FID-14_463013	SeqNo: 7926508	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aliphatics >C6 - C8	0.02869	0.0100	0.025	0	115	70 - 130				
Aliphatics >C8 - C10	0.02519	0.0100	0.025	0	101	70 - 130				
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	0.2166	0.0100	0.25	0	86.6	70 - 130				

LCSD	Sample ID: LCSD-240403	Units: mg/L	Analysis Date: 03-Apr-2024 20:07							
Client ID:	Run ID: FID-14_463013	SeqNo: 7926509	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Aliphatics >C6 - C8	0.02475	0.0100	0.025	0	99.0	70 - 130	0.02869	14.7	25	
Aliphatics >C8 - C10	0.03055	0.0100	0.025	0	122	70 - 130	0.02519	19.3	25	
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	0.2147	0.0100	0.25	0	85.9	70 - 130	0.2166	0.885	25	

The following samples were analyzed in this batch:	HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20
	HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
	HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463015 (0) **Instrument:** FID-15 **Method:** MASSACHUSETTS VPH, FEB 2018, REV 2.1

MBLK Sample ID: **MBLK-240403** Units: **mg/L** Analysis Date: **03-Apr-2024 20:51**
 Client ID: Run ID: **FID-15_463015** SeqNo: **7926529** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Aromatics >C8 - C10	U	0.0100								
Surr: 2,5-Dibromotoluene (Aromatic)	0.2181	0.0100	0.25	0	87.3	70 - 130				

LCS Sample ID: **LCS-240403** Units: **mg/L** Analysis Date: **03-Apr-2024 19:24**
 Client ID: Run ID: **FID-15_463015** SeqNo: **7926527** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Aromatics >C8 - C10	0.08706	0.0100	0.1	0	87.1	70 - 130				
Surr: 2,5-Dibromotoluene (Aromatic)	0.2051	0.0100	0.25	0	82.0	70 - 130				

LCSD Sample ID: **LCSD-240403** Units: **mg/L** Analysis Date: **03-Apr-2024 20:07**
 Client ID: Run ID: **FID-15_463015** SeqNo: **7926528** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Aromatics >C8 - C10	0.08802	0.0100	0.1	0	88.0	70 - 130	0.08706	1.1	25
Surr: 2,5-Dibromotoluene (Aromatic)	0.2092	0.0100	0.25	0	83.7	70 - 130	0.2051	1.97	25

The following samples were analyzed in this batch:

HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20
HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209765 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
MBLK	Sample ID: MBLK-209765	Units: mg/L			Analysis Date: 02-Apr-2024 23:24					
Client ID:	Run ID: ICPMS06_462809	SeqNo: 7923177		PrepDate: 02-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00200								
Barium	U	0.00400								
Calcium	U	0.500								
Chromium	U	0.00400								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	U	0.200								
Manganese	U	0.00500								
Nickel	U	0.00200								
Potassium	U	0.200								
Sodium	U	0.200								
Strontium	U	0.00500								
Vanadium	U	0.00500								
Zinc	U	0.00400								

LCS	Sample ID: LCS-209765	Units: mg/L			Analysis Date: 02-Apr-2024 23:26					
Client ID:	Run ID: ICPMS06_462809	SeqNo: 7923178		PrepDate: 02-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04512	0.00200	0.05	0	90.2	80 - 120				
Barium	0.04446	0.00400	0.05	0	88.9	80 - 120				
Calcium	4.712	0.500	5	0	94.2	80 - 120				
Chromium	0.04572	0.00400	0.05	0	91.4	80 - 120				
Iron	4.685	0.200	5	0	93.7	80 - 120				
Lead	0.04367	0.00200	0.05	0	87.3	80 - 120				
Magnesium	4.866	0.200	5	0	97.3	80 - 120				
Manganese	0.04482	0.00500	0.05	0	89.6	80 - 120				
Nickel	0.04415	0.00200	0.05	0	88.3	80 - 120				
Potassium	4.824	0.200	5	0	96.5	80 - 120				
Sodium	4.627	0.200	5	0	92.5	80 - 120				
Strontium	0.0957	0.00500	0.1	0	95.7	80 - 120				
Vanadium	0.04433	0.00500	0.05	0	88.7	80 - 120				
Zinc	0.0456	0.00400	0.05	0	91.2	80 - 120				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209765 (0)		Instrument: ICPMS06			Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
MS		Sample ID: HS24040062-04MS			Units: mg/L		Analysis Date: 02-Apr-2024 23:36			
Client ID:		Run ID: ICPMS06_462809			SeqNo: 7923183		PrepDate: 02-Apr-2024		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.3342	0.00400	0.05	0.1562	356	75 - 125				S
Barium	0.06901	0.00800	0.05	0.02173	94.5	75 - 125				
Calcium	198.3	1.00	5	189.7	172	75 - 125				SO
Chromium	0.0466	0.00800	0.05	0.001973	89.2	75 - 125				
Iron	4.891	0.400	5	0.01719	97.5	75 - 125				
Lead	0.0465	0.00400	0.05	0.000116	92.8	75 - 125				
Magnesium	263	0.400	5	252.7	206	75 - 125				SO
Manganese	0.05014	0.0100	0.05	0.004393	91.5	75 - 125				
Nickel	0.04601	0.00400	0.05	0.000937	90.1	75 - 125				
Potassium	67.24	0.400	5	61.19	121	75 - 125				O
Sodium	1383	0.400	5	1372	212	75 - 125				SEO
Strontium	23.52	0.0100	0.05	22.9	1240	75 - 125				SEO
Vanadium	0.05369	0.0100	0.05	0.006262	94.9	75 - 125				
Zinc	0.04836	0.00800	0.05	0.001847	93.0	75 - 125				

MS		Sample ID: HS24040062-04MS			Units: mg/L		Analysis Date: 04-Apr-2024 13:37			
Client ID:		Run ID: ICPMS05_463053			SeqNo: 7927727		PrepDate: 02-Apr-2024		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Vanadium	0.05362	0.0100	0.05	0.006262	94.7	75 - 125				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209765 (0)		Instrument: ICPMS06			Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
MSD	Sample ID: HS24040062-04MSD	Units: mg/L			Analysis Date: 02-Apr-2024 23:38						
Client ID:	Run ID: ICPMS06_462809	SeqNo: 7923184		PrepDate: 02-Apr-2024		DF: 2					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	0.3246	0.00400	0.05	0.1562	337	75 - 125	0.3342	2.91	20	S	
Barium	0.06903	0.00800	0.05	0.02173	94.6	75 - 125	0.06901	0.0406	20		
Calcium	197.4	1.00	5	189.7	153	75 - 125	198.3	0.475	20	SO	
Chromium	0.04641	0.00800	0.05	0.001973	88.9	75 - 125	0.0466	0.413	20		
Iron	4.791	0.400	5	0.01719	95.5	75 - 125	4.891	2.06	20		
Lead	0.04641	0.00400	0.05	0.000116	92.6	75 - 125	0.0465	0.174	20		
Magnesium	262.9	0.400	5	252.7	204	75 - 125	263	0.0327	20	SO	
Manganese	0.04953	0.0100	0.05	0.004393	90.3	75 - 125	0.05014	1.23	20		
Nickel	0.04478	0.00400	0.05	0.000937	87.7	75 - 125	0.04601	2.71	20		
Potassium	67.58	0.400	5	61.19	128	75 - 125	67.24	0.499	20	SO	
Sodium	1391	0.400	5	1372	383	75 - 125	1383	0.615	20	SEO	
Strontium	23.58	0.0100	0.05	22.9	1350	75 - 125	23.52	0.243	20	SEO	
Vanadium	0.0525	0.0100	0.05	0.006262	92.5	75 - 125	0.05369	2.25	20		
Zinc	0.04896	0.00800	0.05	0.001847	94.2	75 - 125	0.04836	1.22	20		

MSD	Sample ID: HS24040062-04MSD	Units: mg/L			Analysis Date: 04-Apr-2024 13:39						
Client ID:	Run ID: ICPMS05_463053	SeqNo: 7927728		PrepDate: 02-Apr-2024		DF: 2					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Vanadium	0.05387	0.0100	0.05	0.006262	95.2	75 - 125	0.05369	0.338	20		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209765 (0)		Instrument: ICPMS06			Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
PDS		Sample ID: HS24040062-04PDS			Units: mg/L		Analysis Date: 02-Apr-2024 23:40			
Client ID:		Run ID: ICPMS06_462809			SeqNo: 7923185		PrepDate: 02-Apr-2024		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.3131	0.00400	0.2	0.1562	78.5	75 - 125				
Barium	0.1238	0.00800	0.1	0.02173	102	75 - 125				
Calcium	210.7	1.00	10	189.7	210	75 - 125				SO
Chromium	0.09864	0.00800	0.1	0.001973	96.7	75 - 125				
Iron	10.14	0.400	10	0	101	75 - 125				
Lead	0.09892	0.00400	0.1	0	98.9	75 - 125				
Magnesium	273.5	0.400	10	252.7	208	75 - 125				SO
Manganese	0.103	0.0100	0.1	0.004393	98.6	75 - 125				
Nickel	0.09486	0.00400	0.1	0	94.9	75 - 125				
Potassium	75.01	0.400	10	61.19	138	75 - 125				SO
Vanadium	0.107	0.0100	0.1	0.006262	101	75 - 125				
Zinc	0.1015	0.00800	0.1	0	102	75 - 125				
PDS		Sample ID: HS24040062-04PDS			Units: mg/L		Analysis Date: 04-Apr-2024 13:10			
Client ID:		Run ID: ICPMS05_463053			SeqNo: 7927597		PrepDate: 02-Apr-2024		DF: 200	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	3322	40.0	2000	1472	92.5	75 - 125				
Strontium	53.97	1.00	40	23.76	75.5	75 - 125				
PDS		Sample ID: HS24040062-04PDS			Units: mg/L		Analysis Date: 04-Apr-2024 13:41			
Client ID:		Run ID: ICPMS05_463053			SeqNo: 7927729		PrepDate: 02-Apr-2024		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Vanadium	0.108	0.0100	0.1	0.006262	102	75 - 125				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209765 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
SD	Sample ID: HS24040062-04SD	Units: mg/L			Analysis Date: 02-Apr-2024 23:34					
Client ID:	Run ID: ICPMS06_462809	SeqNo: 7923182		PrepDate: 02-Apr-2024		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual	
Arsenic	0.1583	0.0200					0.1562	1.37	10	
Barium	0.02041	0.0400					0.02173	0	10 J	
Calcium	196.3	5.00					189.7	3.46	10	
Chromium	U	0.0400					0.001973	0	10	
Iron	U	2.00					0.01719	0	10	
Lead	U	0.0200					0.000116	0	10	
Magnesium	261.6	2.00					252.7	3.54	10	
Manganese	U	0.0500					0.004393	0	10	
Nickel	U	0.0200					0.000937	0	10	
Potassium	65.42	2.00					61.19	6.91	10	
Zinc	U	0.0400					0.001847	0	10	

SD	Sample ID: HS24040062-04SD	Units: mg/L			Analysis Date: 04-Apr-2024 13:08				
Client ID:	Run ID: ICPMS05_463053	SeqNo: 7927596		PrepDate: 02-Apr-2024		DF: 1000			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Sodium	1470	200					1472	0.143	10
Strontium	23.84	5.00					23.76	0.339	10

SD	Sample ID: HS24040062-04SD	Units: mg/L			Analysis Date: 04-Apr-2024 13:35				
Client ID:	Run ID: ICPMS05_463053	SeqNo: 7927726		PrepDate: 02-Apr-2024		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Vanadium	0.0226	0.0500					0.006262	0	10 J

The following samples were analyzed in this batch: HS24040061-06 HS24040061-07

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209772 (0)		Instrument: ICPMS05		Method: ICP-MS METALS BY SW6020A						
MBLK	Sample ID: MBLK-209772	Units: mg/L			Analysis Date: 03-Apr-2024 11:54					
Client ID:	Run ID: ICPMS05_462917	SeqNo: 7924208		PrepDate: 02-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00200								
Barium	U	0.00400								
Calcium	U	0.500								
Chromium	U	0.00400								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	U	0.200								
Manganese	U	0.00500								
Nickel	U	0.00200								
Potassium	U	0.200								
Sodium	U	0.200								
Strontium	U	0.00500								
Vanadium	U	0.00500								
Zinc	U	0.00400								

LCS	Sample ID: LCS-209772	Units: mg/L			Analysis Date: 03-Apr-2024 12:04					
Client ID:	Run ID: ICPMS05_462917	SeqNo: 7924211		PrepDate: 02-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04674	0.00200	0.05	0	93.5	80 - 120				
Barium	0.04588	0.00400	0.05	0	91.8	80 - 120				
Calcium	4.808	0.500	5	0	96.2	80 - 120				
Chromium	0.04658	0.00400	0.05	0	93.2	80 - 120				
Iron	4.719	0.200	5	0	94.4	80 - 120				
Lead	0.0456	0.00200	0.05	0	91.2	80 - 120				
Magnesium	4.85	0.200	5	0	97.0	80 - 120				
Manganese	0.04676	0.00500	0.05	0	93.5	80 - 120				
Nickel	0.04775	0.00200	0.05	0	95.5	80 - 120				
Potassium	4.679	0.200	5	0	93.6	80 - 120				
Sodium	4.811	0.200	5	0	96.2	80 - 120				
Strontium	0.09156	0.00500	0.1	0	91.6	80 - 120				
Vanadium	0.04585	0.00500	0.05	0	91.7	80 - 120				
Zinc	0.04865	0.00400	0.05	0	97.3	80 - 120				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209772 (0)		Instrument: ICPMS05			Method: ICP-MS METALS BY SW6020A					
MS		Sample ID: HS24040061-01MS			Units: mg/L		Analysis Date: 03-Apr-2024 12:42			
Client ID: MW-2-500'		Run ID: ICPMS05_462917			SeqNo: 7924220		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0516	0.00200	0.05	0.003962	95.3	80 - 120				
Barium	0.187	0.00400	0.05	0.1431	87.7	80 - 120				
Calcium	24.21	0.500	5	19.25	99.2	80 - 120				
Chromium	0.0499	0.00400	0.05	0.004545	90.7	80 - 120				
Iron	8.313	0.200	5	3.653	93.2	80 - 120				
Lead	0.04428	0.00200	0.05	0.000292	88.0	80 - 120				
Magnesium	8.824	0.200	5	4.064	95.2	80 - 120				
Manganese	0.1382	0.00500	0.05	0.09117	94.0	80 - 120				
Nickel	0.04908	0.00200	0.05	0.002943	92.3	80 - 120				
Potassium	7.931	0.200	5	3.21	94.4	80 - 120				
Sodium	73.82	0.200	5	70.01	76.1	80 - 120				SO
Strontium	0.3229	0.00500	0.1	0.23	92.9	80 - 120				
Vanadium	0.047	0.00500	0.05	0.001064	91.9	80 - 120				
Zinc	0.05316	0.00400	0.05	0.008128	90.1	80 - 120				

MSD		Sample ID: HS24040061-01MSD			Units: mg/L		Analysis Date: 03-Apr-2024 12:44			
Client ID: MW-2-500'		Run ID: ICPMS05_462917			SeqNo: 7924221		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05037	0.00200	0.05	0.003962	92.8	80 - 120	0.0516	2.41	20	
Barium	0.1875	0.00400	0.05	0.1431	88.7	80 - 120	0.187	0.275	20	
Calcium	23.64	0.500	5	19.25	87.6	80 - 120	24.21	2.41	20	
Chromium	0.04882	0.00400	0.05	0.004545	88.5	80 - 120	0.0499	2.2	20	
Iron	8.122	0.200	5	3.653	89.4	80 - 120	8.313	2.32	20	
Lead	0.04519	0.00200	0.05	0.000292	89.8	80 - 120	0.04428	2.04	20	
Magnesium	8.781	0.200	5	4.064	94.3	80 - 120	8.824	0.485	20	
Manganese	0.1341	0.00500	0.05	0.09117	85.9	80 - 120	0.1382	2.99	20	
Nickel	0.04795	0.00200	0.05	0.002943	90.0	80 - 120	0.04908	2.32	20	
Potassium	7.814	0.200	5	3.21	92.1	80 - 120	7.931	1.49	20	
Sodium	73.16	0.200	5	70.01	63.0	80 - 120	73.82	0.893	20	SO
Strontium	0.3208	0.00500	0.1	0.23	90.8	80 - 120	0.3229	0.654	20	
Vanadium	0.04559	0.00500	0.05	0.001064	89.1	80 - 120	0.047	3.05	20	
Zinc	0.05184	0.00400	0.05	0.008128	87.4	80 - 120	0.05316	2.52	20	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209772 (0)		Instrument: ICPMS05		Method: ICP-MS METALS BY SW6020A						
PDS	Sample ID: HS24040061-01PDS	Units: mg/L			Analysis Date: 03-Apr-2024 12:46					
Client ID: MW-2-500'	Run ID: ICPMS05_462917	SeqNo: 7924222	PrepDate: 02-Apr-2024	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Arsenic	0.1054	0.00200	0.1	0.003962	101	75 - 125				
Barium	0.2379	0.00400	0.1	0.1431	94.8	75 - 125				
Calcium	28.82	0.500	10	19.25	95.6	75 - 125				
Chromium	0.1012	0.00400	0.1	0.004545	96.7	75 - 125				
Iron	13.36	0.200	10	3.653	97.1	75 - 125				
Lead	0.0972	0.00200	0.1	0	97.2	75 - 125				
Magnesium	14.28	0.200	10	4.064	102	75 - 125				
Manganese	0.1874	0.00500	0.1	0.09117	96.2	75 - 125				
Nickel	0.1011	0.00200	0.1	0.002943	98.2	75 - 125				
Potassium	13.44	0.200	10	3.21	102	75 - 125				
Sodium	78.28	0.200	10	70.01	82.7	75 - 125			O	
Strontium	0.4159	0.00500	0.2	0.23	92.9	75 - 125				
Vanadium	0.09956	0.00500	0.1	0.001064	98.5	75 - 125				
Zinc	0.1046	0.00400	0.1	0.008128	96.5	75 - 125				

SD	Sample ID: HS24040061-01SD	Units: mg/L			Analysis Date: 03-Apr-2024 13:08				
Client ID: MW-2-500'	Run ID: ICPMS05_462917	SeqNo: 7924411	PrepDate: 02-Apr-2024	DF: 5					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit Qual
Arsenic	0.002499	0.0100					0.003962	0	10 J
Chromium	U	0.0200					0.004545	0	10
Lead	U	0.0100					0	0	10
Nickel	U	0.0100					0.002943	0	10
Sodium	57.37	1.00					70.01	18	10 R
Vanadium	U	0.0250					0.001064	0	10
Zinc	U	0.0200					0.008128	0	10

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-08	HS24040061-09	HS24040061-10
HS24040061-11	HS24040061-12	HS24040061-13	HS24040061-14
HS24040061-15	HS24040061-16	HS24040061-17	HS24040061-18
HS24040061-19	HS24040061-20	HS24040061-21	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209817 (0)	Instrument: ICPMS05	Method: ICP-MS METALS BY SW6020A								
MBLK	Sample ID: MBLK-209817	Units: mg/L	Analysis Date: 03-Apr-2024 11:56							
Client ID:	Run ID: ICPMS05_462917	SeqNo: 7924209	PrepDate: 02-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	U	0.00200								
Barium	U	0.00400								
Calcium	U	0.500								
Chromium	U	0.00400								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	U	0.200								
Manganese	U	0.00500								
Nickel	U	0.00200								
Potassium	U	0.200								
Sodium	U	0.200								
Strontium	U	0.00500								
Vanadium	U	0.00500								
Zinc	U	0.00400								

LCS	Sample ID: LCS-209817	Units: mg/L	Analysis Date: 03-Apr-2024 12:02							
Client ID:	Run ID: ICPMS05_462917	SeqNo: 7924210	PrepDate: 02-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	0.04585	0.00200	0.05	0	91.7	80 - 120				
Barium	0.04539	0.00400	0.05	0	90.8	80 - 120				
Calcium	4.722	0.500	5	0	94.4	80 - 120				
Chromium	0.0458	0.00400	0.05	0	91.6	80 - 120				
Iron	4.659	0.200	5	0	93.2	80 - 120				
Lead	0.04538	0.00200	0.05	0	90.8	80 - 120				
Magnesium	4.735	0.200	5	0	94.7	80 - 120				
Manganese	0.04596	0.00500	0.05	0	91.9	80 - 120				
Nickel	0.04786	0.00200	0.05	0	95.7	80 - 120				
Potassium	4.579	0.200	5	0	91.6	80 - 120				
Sodium	4.704	0.200	5	0	94.1	80 - 120				
Strontium	0.09076	0.00500	0.1	0	90.8	80 - 120				
Vanadium	0.0454	0.00500	0.05	0	90.8	80 - 120				
Zinc	0.04864	0.00400	0.05	0	97.3	80 - 120				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209817 (0)		Instrument: ICPMS05			Method: ICP-MS METALS BY SW6020A					
MS		Sample ID: HS24040061-22MS			Units: mg/L		Analysis Date: 03-Apr-2024 21:13			
Client ID: LDNR-05		Run ID: ICPMS05_462982			SeqNo: 7926087		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04834	0.00200	0.05	0.00105	94.6	80 - 120				
Barium	0.1705	0.00400	0.05	0.1344	72.2	80 - 120				S
Calcium	113.1	0.500	5	113.6	-9.92	80 - 120				SO
Chromium	0.04554	0.00400	0.05	0.00046	90.2	80 - 120				
Iron	4.766	0.200	5	0.2172	91.0	80 - 120				
Lead	0.04525	0.00200	0.05	0	90.5	80 - 120				
Magnesium	26.75	0.200	5	23.51	64.9	80 - 120				SO
Manganese	0.2415	0.00500	0.05	0.2063	70.4	80 - 120				SO
Nickel	0.04698	0.00200	0.05	0.001599	90.8	80 - 120				
Potassium	7.144	0.200	5	2.656	89.8	80 - 120				
Sodium	266.3	0.200	5	274.8	-171	80 - 120				SEO
Strontium	0.8159	0.00500	0.1	0.7614	54.5	80 - 120				SO
Vanadium	0.04747	0.00500	0.05	0.002743	89.4	80 - 120				
Zinc	0.06443	0.00400	0.05	0.01765	93.6	80 - 120				

MSD		Sample ID: HS24040061-22MSD			Units: mg/L		Analysis Date: 03-Apr-2024 13:36			
Client ID: LDNR-05		Run ID: ICPMS05_462917			SeqNo: 7924424		PrepDate: 02-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04822	0.00200	0.05	0.00105	94.3	80 - 120	0.04834	0.24	20	
Barium	0.176	0.00400	0.05	0.1344	83.2	80 - 120	0.1705	3.2	20	
Calcium	113.3	0.500	5	113.6	-5.74	80 - 120	113.1	0.185	20	SO
Chromium	0.04488	0.00400	0.05	0.00046	88.8	80 - 120	0.04554	1.46	20	
Iron	4.709	0.200	5	0.2172	89.8	80 - 120	4.766	1.2	20	
Lead	0.04549	0.00200	0.05	0	91.0	80 - 120	0.04525	0.536	20	
Magnesium	27.13	0.200	5	23.51	72.4	80 - 120	26.75	1.4	20	SO
Manganese	0.2432	0.00500	0.05	0.2063	73.9	80 - 120	0.2415	0.73	20	SO
Nickel	0.04459	0.00200	0.05	0.001599	86.0	80 - 120	0.04698	5.22	20	
Potassium	7.075	0.200	5	2.656	88.4	80 - 120	7.144	0.972	20	
Sodium	266.7	0.200	5	274.8	-161	80 - 120	266.3	0.18	20	SEO
Strontium	0.8425	0.00500	0.1	0.7614	81.1	80 - 120	0.8159	3.21	20	O
Vanadium	0.04761	0.00500	0.05	0.002743	89.7	80 - 120	0.04747	0.301	20	
Zinc	0.06418	0.00400	0.05	0.01765	93.1	80 - 120	0.06443	0.39	20	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209817 (0)		Instrument: ICPMS05		Method: ICP-MS METALS BY SW6020A						
PDS		Sample ID: HS24040061-22PDS		Units: mg/L		Analysis Date: 03-Apr-2024 13:38				
Client ID: LDNR-05		Run ID: ICPMS05_462917		SeqNo: 7924427		PrepDate: 02-Apr-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Arsenic	0.1156	0.00200	0.1	0.00105	115	75 - 125				
Barium	0.2385	0.00400	0.1	0.1344	104	75 - 125				
Calcium	118.8	0.500	10	113.6	52.5	75 - 125			SO	
Chromium	0.1102	0.00400	0.1	0.00046	110	75 - 125				
Iron	11.25	0.200	10	0.2172	110	75 - 125				
Lead	0.1066	0.00200	0.1	0	107	75 - 125				
Magnesium	33.45	0.200	10	23.51	99.5	75 - 125				
Manganese	0.3058	0.00500	0.1	0.2063	99.6	75 - 125				
Nickel	0.1079	0.00200	0.1	0.001599	106	75 - 125				
Potassium	13.94	0.200	10	2.656	113	75 - 125				
Strontium	0.8842	0.00500	0.1	0.7614	123	75 - 125			O	
Vanadium	0.1119	0.00500	0.1	0.002743	109	75 - 125				
Zinc	0.1324	0.00400	0.1	0.01765	115	75 - 125				

PDS		Sample ID: HS24040061-22PDS		Units: mg/L		Analysis Date: 03-Apr-2024 18:26			
Client ID: LDNR-05		Run ID: ICPMS06_462920		SeqNo: 7925631		PrepDate: 02-Apr-2024		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Sodium	1351	20.0	1000	274.9	108	75 - 125			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209817 (0)		Instrument: ICPMS05		Method: ICP-MS METALS BY SW6020A						
SD	Sample ID: HS24040061-22SD	Units: mg/L			Analysis Date: 04-Apr-2024 14:05					
Client ID: LDNR-05	Run ID: ICPMS05_463053	SeqNo: 7927743		PrepDate: 02-Apr-2024		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual	
Arsenic	U	0.0100					0.00105	0	10	
Barium	0.1375	0.0200					0.1344	2.3	10	
Calcium	115.8	2.50					113.6	1.94	10	
Chromium	U	0.0200					0.00046	0	10	
Iron	0.2456	1.00					0.2172	0	10 J	
Lead	U	0.0100					0	0	10	
Magnesium	24.63	1.00					23.51	4.8	10	
Manganese	0.2149	0.0250					0.2063	4.21	10	
Nickel	U	0.0100					0.001599	0	10	
Potassium	2.854	1.00					2.656	7.49	10	
Sodium	269.1	1.00					274.8	2.08	10	
Strontium	0.7966	0.0250					0.7614	4.62	10	
Vanadium	0.02079	0.0250					0.002743	0	10 J	
Zinc	0.02093	0.0200					0.01765	0	10	

SD	Sample ID: HS24040061-22SD	Units: mg/L			Analysis Date: 03-Apr-2024 18:24				
Client ID: LDNR-05	Run ID: ICPMS06_462920	SeqNo: 7925630		PrepDate: 02-Apr-2024		DF: 500			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Sodium	287.3	100					274.9	4.53	10

The following samples were analyzed in this batch:

HS24040061-22	HS24040061-23	HS24040061-24	HS24040061-25
HS24040061-26	HS24040061-27		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209872 (0)	Instrument: HG04	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-209872	Units: mg/L	Analysis Date: 03-Apr-2024 16:45							
Client ID:	Run ID: HG04_462934	SeqNo: 7925689	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury U 0.000200

LCS	Sample ID: LCS-209872	Units: mg/L	Analysis Date: 03-Apr-2024 16:48							
Client ID:	Run ID: HG04_462934	SeqNo: 7925690	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00512 0.000200 0.005 0 102 80 - 120

MS	Sample ID: HS24031299-05MS	Units: mg/L	Analysis Date: 03-Apr-2024 16:52							
Client ID:	Run ID: HG04_462934	SeqNo: 7925692	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00498 0.000200 0.005 -0.000017 99.9 75 - 125

MSD	Sample ID: HS24031299-05MSD	Units: mg/L	Analysis Date: 03-Apr-2024 16:54							
Client ID:	Run ID: HG04_462934	SeqNo: 7925693	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00523 0.000200 0.005 -0.000017 105 75 - 125 0.00498 4.9 20

The following samples were analyzed in this batch: HS24040061-01 HS24040061-02 HS24040061-03 HS24040061-04
 HS24040061-05 HS24040061-08 HS24040061-09 HS24040061-10

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209875 (0)	Instrument: HG04	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-209875	Units: mg/L	Analysis Date: 03-Apr-2024 17:39							
Client ID:	Run ID: HG04_462934	SeqNo: 7925717	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury U 0.000200

LCS	Sample ID: LCS-209875	Units: mg/L	Analysis Date: 03-Apr-2024 17:48							
Client ID:	Run ID: HG04_462934	SeqNo: 7925721	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.0051 0.000200 0.005 0 102 80 - 120

MS	Sample ID: HS24040061-13MS	Units: mg/L	Analysis Date: 03-Apr-2024 17:56							
Client ID: LDNR-07	Run ID: HG04_462934	SeqNo: 7925725	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.00505 0.000200 0.005 0.000004 101 75 - 125

MSD	Sample ID: HS24040061-13MSD	Units: mg/L	Analysis Date: 03-Apr-2024 17:58							
Client ID: LDNR-07	Run ID: HG04_462934	SeqNo: 7925726	PrepDate: 03-Apr-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.00493 0.000200 0.005 0.000004 98.5 75 - 125 0.00505 2.4 20

The following samples were analyzed in this batch:

HS24040061-11	HS24040061-12	HS24040061-13	HS24040061-14
HS24040061-15	HS24040061-16	HS24040061-17	HS24040061-18
HS24040061-19	HS24040061-20	HS24040061-21	HS24040061-22
HS24040061-23	HS24040061-24	HS24040061-25	HS24040061-26
HS24040061-27			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: 209879 (0) **Instrument:** HG04 **Method:** DISSOLVED MERCURY BY SW7470A (DISSOLVED)

MBLK Sample ID: **MBLK-209879** Units: **mg/L** Analysis Date: **03-Apr-2024 19:17**
 Client ID: Run ID: **HG04_462934** SeqNo: **7925766** PrepDate: **03-Apr-2024** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury U 0.000200

LCS Sample ID: **LCS-209879** Units: **mg/L** Analysis Date: **03-Apr-2024 19:19**
 Client ID: Run ID: **HG04_462934** SeqNo: **7925767** PrepDate: **03-Apr-2024** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 0.00556 0.000200 0.005 0 111 80 - 120

MS Sample ID: **HS24040061-07MS** Units: **mg/L** Analysis Date: **03-Apr-2024 19:28**
 Client ID: **MW-3-500'** Run ID: **HG04_462934** SeqNo: **7925772** PrepDate: **03-Apr-2024** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 0.00493 0.000200 0.005 -0.000013 98.9 80 - 120

MSD Sample ID: **HS24040061-07MSD** Units: **mg/L** Analysis Date: **03-Apr-2024 19:30**
 Client ID: **MW-3-500'** Run ID: **HG04_462934** SeqNo: **7925773** PrepDate: **03-Apr-2024** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 0.00492 0.000200 0.005 -0.000013 98.7 80 - 120 0.00493 0.203 20

The following samples were analyzed in this batch: HS24040061-06 HS24040061-07

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462906 (0)	Instrument: VOA9	Method: LOW LEVEL VOLATILES BY SW8260C
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MBLK		Sample ID: VBLKW-240402			Units: ug/L		Analysis Date: 03-Apr-2024 01:57			
Client ID:		Run ID: VOA9_462906			SeqNo: 7923737		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Ethylbenzene	U	1.0								
m,p-Xylene	U	2.0								
o-Xylene	U	1.0								
Toluene	U	1.0								
Xylenes, Total	U	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	53.8	1.0	50	0	108	70 - 123				
<i>Surr: 4-Bromofluorobenzene</i>	50.53	1.0	50	0	101	77 - 113				
<i>Surr: Dibromofluoromethane</i>	51.59	1.0	50	0	103	73 - 126				
<i>Surr: Toluene-d8</i>	55.12	1.0	50	0	110	81 - 120				

LCS		Sample ID: VLCSW-240402			Units: ug/L		Analysis Date: 03-Apr-2024 01:12			
Client ID:		Run ID: VOA9_462906			SeqNo: 7923736		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.23	1.0	20	0	96.1	74 - 120				
Ethylbenzene	19.26	1.0	20	0	96.3	77 - 117				
m,p-Xylene	41.36	2.0	40	0	103	77 - 122				
o-Xylene	19.75	1.0	20	0	98.8	75 - 119				
Toluene	20.38	1.0	20	0	102	77 - 118				
Xylenes, Total	61.11	3.0	60	0	102	75 - 122				
<i>Surr: 1,2-Dichloroethane-d4</i>	54.51	1.0	50	0	109	70 - 123				
<i>Surr: 4-Bromofluorobenzene</i>	54.68	1.0	50	0	109	77 - 113				
<i>Surr: Dibromofluoromethane</i>	53.14	1.0	50	0	106	73 - 126				
<i>Surr: Toluene-d8</i>	56.3	1.0	50	0	113	81 - 120				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462906 (0)		Instrument: VOA9		Method: LOW LEVEL VOLATILES BY SW8260C						
MS	Sample ID: HS24031685-01MS	Units: ug/L			Analysis Date: 03-Apr-2024 03:05					
Client ID:	Run ID: VOA9_462906	SeqNo: 7923739		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	396	20	400	0	99.0	70 - 127				
Ethylbenzene	418	20	400	0	104	70 - 124				
m,p-Xylene	842.9	40	800	0	105	70 - 130				
o-Xylene	445.5	20	400	0	111	70 - 124				
Toluene	452.5	20	400	32.92	105	70 - 123				
Xylenes, Total	1288	60	1200	0	107	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1097</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>110</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>1142</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>114</i>	<i>77 - 113</i>				S
<i>Surr: Dibromofluoromethane</i>	<i>1103</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>110</i>	<i>77 - 123</i>				
<i>Surr: Toluene-d8</i>	<i>1118</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>112</i>	<i>82 - 127</i>				

MSD	Sample ID: HS24031685-01MSD	Units: ug/L			Analysis Date: 03-Apr-2024 03:28					
Client ID:	Run ID: VOA9_462906	SeqNo: 7923740		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	397.9	20	400	0	99.5	70 - 127	396	0.483	20	
Ethylbenzene	400.3	20	400	0	100	70 - 124	418	4.32	20	
m,p-Xylene	855.1	40	800	0	107	70 - 130	842.9	1.44	20	
o-Xylene	453.2	20	400	0	113	70 - 124	445.5	1.71	20	
Toluene	441.4	20	400	32.92	102	70 - 123	452.5	2.49	20	
Xylenes, Total	1308	60	1200	0	109	70 - 130	1288	1.53	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1121</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>112</i>	<i>70 - 126</i>	<i>1097</i>	<i>2.16</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>1132</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>113</i>	<i>77 - 113</i>	<i>1142</i>	<i>0.854</i>	<i>20</i>	S
<i>Surr: Dibromofluoromethane</i>	<i>1078</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>108</i>	<i>77 - 123</i>	<i>1103</i>	<i>2.31</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>1128</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>113</i>	<i>82 - 127</i>	<i>1118</i>	<i>0.882</i>	<i>20</i>	

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463001 (0)		Instrument: VOA9		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-240403	Units: ug/L			Analysis Date: 03-Apr-2024 17:30				
Client ID:	Run ID: VOA9_463001	SeqNo: 7926307		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	1.0							
Ethylbenzene	U	1.0							
m,p-Xylene	U	2.0							
o-Xylene	U	1.0							
Toluene	U	1.0							
Xylenes, Total	U	3.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>54.82</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.97</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>53.23</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>56.49</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>113</i>	<i>81 - 120</i>			

LCS	Sample ID: VLCSW-240403	Units: ug/L			Analysis Date: 03-Apr-2024 16:45				
Client ID:	Run ID: VOA9_463001	SeqNo: 7926306		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	17.5	1.0	20	0	87.5	74 - 120			
Ethylbenzene	17.09	1.0	20	0	85.4	77 - 117			
m,p-Xylene	37.47	2.0	40	0	93.7	77 - 122			
o-Xylene	18.66	1.0	20	0	93.3	75 - 119			
Toluene	18.25	1.0	20	0	91.3	77 - 118			
Xylenes, Total	56.13	3.0	60	0	93.6	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>53.66</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>107</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>54.58</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>109</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>52.81</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>55.84</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>112</i>	<i>81 - 120</i>			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463001 (0) **Instrument:** VOA9 **Method:** LOW LEVEL VOLATILES BY SW8260C

MS		Sample ID: HS24040051-03MS		Units: ug/L		Analysis Date: 03-Apr-2024 19:44			
Client ID:		Run ID: VOA9_463001		SeqNo: 7926313		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	18.24	1.0	20	0	91.2	70 - 127			
Ethylbenzene	18.13	1.0	20	0	90.6	70 - 124			
m,p-Xylene	38.57	2.0	40	0	96.4	70 - 130			
o-Xylene	18.6	1.0	20	0	93.0	70 - 124			
Toluene	18.84	1.0	20	0	94.2	70 - 123			
Xylenes, Total	57.17	3.0	60	0	95.3	70 - 130			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>53.83</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>108</i>	<i>70 - 126</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>55.31</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>111</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>54.85</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>77 - 123</i>			
<i>Surr: Toluene-d8</i>	<i>55.91</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>112</i>	<i>82 - 127</i>			

MSD		Sample ID: HS24040051-03MSD		Units: ug/L		Analysis Date: 03-Apr-2024 20:06			
Client ID:		Run ID: VOA9_463001		SeqNo: 7926314		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	17.41	1.0	20	0	87.1	70 - 127	18.24	4.66	20
Ethylbenzene	18.38	1.0	20	0	91.9	70 - 124	18.13	1.4	20
m,p-Xylene	37.75	2.0	40	0	94.4	70 - 130	38.57	2.15	20
o-Xylene	18.29	1.0	20	0	91.5	70 - 124	18.6	1.68	20
Toluene	18.12	1.0	20	0	90.6	70 - 123	18.84	3.9	20
Xylenes, Total	56.04	3.0	60	0	93.4	70 - 130	57.17	2	20
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>52.71</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>105</i>	<i>70 - 126</i>	<i>53.83</i>	<i>2.1</i>	<i>20</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>52.96</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>77 - 113</i>	<i>55.31</i>	<i>4.34</i>	<i>20</i>
<i>Surr: Dibromofluoromethane</i>	<i>52.05</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>77 - 123</i>	<i>54.85</i>	<i>5.24</i>	<i>20</i>
<i>Surr: Toluene-d8</i>	<i>54.77</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>82 - 127</i>	<i>55.91</i>	<i>2.06</i>	<i>20</i>

The following samples were analyzed in this batch:

HS24040061-19	HS24040061-20	HS24040061-21	HS24040061-25
HS24040061-26			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463029 (0) **Instrument:** VOA10 **Method:** LOW LEVEL VOLATILES BY SW8260C

MBLK Sample ID: **VBLKW-240403** Units: **ug/L** Analysis Date: **03-Apr-2024 22:51**
 Client ID: Run ID: **VOA10_463029** SeqNo: **7926842** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Benzene	U	1.0								
Ethylbenzene	U	1.0								
m,p-Xylene	U	2.0								
o-Xylene	U	1.0								
Toluene	U	1.0								
Xylenes, Total	U	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>54.93</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>70 - 123</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.75</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>93.5</i>	<i>77 - 113</i>				
<i>Surr: Dibromofluoromethane</i>	<i>54.89</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>73 - 126</i>				
<i>Surr: Toluene-d8</i>	<i>47.13</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>94.3</i>	<i>81 - 120</i>				

LCS Sample ID: **VLCSW-240403** Units: **ug/L** Analysis Date: **03-Apr-2024 21:48**
 Client ID: Run ID: **VOA10_463029** SeqNo: **7926840** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Benzene	20.09	1.0	20	0	100	74 - 120				
Ethylbenzene	19.96	1.0	20	0	99.8	77 - 117				
m,p-Xylene	39.43	2.0	40	0	98.6	77 - 122				
o-Xylene	20.49	1.0	20	0	102	75 - 119				
Toluene	19.58	1.0	20	0	97.9	77 - 118				
Xylenes, Total	59.91	3.0	60	0	99.9	75 - 122				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>51.78</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>70 - 123</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>44.37</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>88.7</i>	<i>77 - 113</i>				
<i>Surr: Dibromofluoromethane</i>	<i>50.89</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>73 - 126</i>				
<i>Surr: Toluene-d8</i>	<i>45.5</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>91.0</i>	<i>81 - 120</i>				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463029 (0) **Instrument:** VOA10 **Method:** LOW LEVEL VOLATILES BY SW8260C

LCSD		Sample ID: VLCS DW-240403			Units: ug/L		Analysis Date: 03-Apr-2024 22:09			
Client ID:		Run ID: VOA10_463029			SeqNo: 7926841		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.86	1.0	20	0	94.3	74 - 120	20.09	6.27	20	
Ethylbenzene	19.21	1.0	20	0	96.1	77 - 117	19.96	3.79	20	
m,p-Xylene	38.47	2.0	40	0	96.2	77 - 122	39.43	2.45	20	
o-Xylene	19.36	1.0	20	0	96.8	75 - 119	20.49	5.63	20	
Toluene	18.67	1.0	20	0	93.3	77 - 118	19.58	4.79	20	
Xylenes, Total	57.84	3.0	60	0	96.4	75 - 122	59.91	3.53	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>54.32</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>109</i>	<i>70 - 123</i>	<i>51.78</i>	<i>4.78</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>47.44</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>94.9</i>	<i>77 - 113</i>	<i>44.37</i>	<i>6.68</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>52.26</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>105</i>	<i>73 - 126</i>	<i>50.89</i>	<i>2.65</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>48.29</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>96.6</i>	<i>81 - 120</i>	<i>45.5</i>	<i>5.94</i>	<i>20</i>	

MS		Sample ID: HS24031692-01MS			Units: ug/L		Analysis Date: 03-Apr-2024 23:54			
Client ID:		Run ID: VOA10_463029			SeqNo: 7926844		PrepDate:		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	398.1	20	400	25.72	93.1	70 - 127				
Ethylbenzene	1423	20	400	0	356	70 - 124				S
m,p-Xylene	5449	40	800	0	681	70 - 130				S
o-Xylene	2937	20	400	0	734	70 - 124				S
Toluene	437.4	20	400	0	109	70 - 123				
Xylenes, Total	8386	60	1200	0	699	70 - 130				S
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>855.7</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>85.6</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>1007</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>77 - 113</i>				
<i>Surr: Dibromofluoromethane</i>	<i>857</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>85.7</i>	<i>77 - 123</i>				
<i>Surr: Toluene-d8</i>	<i>906.2</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>90.6</i>	<i>82 - 127</i>				

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463029 (0)		Instrument: VOA10		Method: LOW LEVEL VOLATILES BY SW8260C						
MSD	Sample ID: HS24031692-01MSD	Units: ug/L			Analysis Date: 04-Apr-2024 00:15					
Client ID:	Run ID: VOA10_463029	SeqNo: 7926845		PrepDate:			DF: 20			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	383.4	20	400	25.72	89.4	70 - 127	398.1	3.78	20	
Ethylbenzene	1356	20	400	0	339	70 - 124	1423	4.79	20	S
m,p-Xylene	5161	40	800	0	645	70 - 130	5449	5.42	20	S
o-Xylene	2812	20	400	0	703	70 - 124	2937	4.34	20	S
Toluene	415.1	20	400	0	104	70 - 123	437.4	5.24	20	
Xylenes, Total	7973	60	1200	0	664	70 - 130	8386	5.04	20	S
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>902.9</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>90.3</i>	<i>70 - 126</i>	<i>855.7</i>	<i>5.37</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>988.9</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>98.9</i>	<i>77 - 113</i>	<i>1007</i>	<i>1.85</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>843.6</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>84.4</i>	<i>77 - 123</i>	<i>857</i>	<i>1.58</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>887.4</i>	<i>20</i>	<i>1000</i>	<i>0</i>	<i>88.7</i>	<i>82 - 127</i>	<i>906.2</i>	<i>2.09</i>	<i>20</i>	

The following samples were analyzed in this batch: HS24040061-17 HS24040061-18

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463096 (0)	Instrument: VOA10	Method: LOW LEVEL VOLATILES BY SW8260C
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MBLK		Sample ID: VBLKW-240404		Units: ug/L		Analysis Date: 04-Apr-2024 11:04			
Client ID:		Run ID: VOA10_463096		SeqNo: 7928058		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	1.0							
Ethylbenzene	U	1.0							
m,p-Xylene	U	2.0							
o-Xylene	U	1.0							
Toluene	U	1.0							
Xylenes, Total	U	3.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>56.84</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>114</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>45.64</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>91.3</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>56.18</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>112</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>46.65</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>93.3</i>	<i>81 - 120</i>			

LCS		Sample ID: VLCSW-240404		Units: ug/L		Analysis Date: 04-Apr-2024 10:01			
Client ID:		Run ID: VOA10_463096		SeqNo: 7928056		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	20.33	1.0	20	0	102	74 - 120			
Ethylbenzene	20.81	1.0	20	0	104	77 - 117			
m,p-Xylene	41	2.0	40	0	103	77 - 122			
o-Xylene	20.56	1.0	20	0	103	75 - 119			
Toluene	20.25	1.0	20	0	101	77 - 118			
Xylenes, Total	61.57	3.0	60	0	103	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>55.9</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>112</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>45.27</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>90.5</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>53.1</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>46.68</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>93.4</i>	<i>81 - 120</i>			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463096 (0) **Instrument:** VOA10 **Method:** LOW LEVEL VOLATILES BY SW8260C

LCSD Sample ID: **VLCS DW-240404** Units: **ug/L** Analysis Date: **04-Apr-2024 10:22**
 Client ID: Run ID: **VOA10_463096** SeqNo: **7928057** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Benzene	19.37	1.0	20	0	96.8	74 - 120	20.33	4.86	20
Ethylbenzene	19.84	1.0	20	0	99.2	77 - 117	20.81	4.76	20
m,p-Xylene	39.09	2.0	40	0	97.7	77 - 122	41	4.78	20
o-Xylene	19.75	1.0	20	0	98.8	75 - 119	20.56	4.02	20
Toluene	19.08	1.0	20	0	95.4	77 - 118	20.25	5.97	20
Xylenes, Total	58.84	3.0	60	0	98.1	75 - 122	61.57	4.53	20
<i>Surr: 1,2-Dichloroethane-d4</i>	56.4	1.0	50	0	113	70 - 123	55.9	0.896	20
<i>Surr: 4-Bromofluorobenzene</i>	48	1.0	50	0	96.0	77 - 113	45.27	5.85	20
<i>Surr: Dibromofluoromethane</i>	53.88	1.0	50	0	108	73 - 126	53.1	1.46	20
<i>Surr: Toluene-d8</i>	49.52	1.0	50	0	99.0	81 - 120	46.68	5.91	20

The following samples were analyzed in this batch: HS24040061-22 HS24040061-23 HS24040061-24 HS24040061-27

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462810 (0)	Instrument: WetChem_HS	Method: SULFIDE BY SM4500 S2-F-2011
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MBLK	Sample ID: MBLK-R462810	Units: mg/L	Analysis Date: 02-Apr-2024 11:40							
Client ID:	Run ID: WetChem_HS_462810	SeqNo: 7921346	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 2.00

LCS	Sample ID: LCS-R462810	Units: mg/L	Analysis Date: 02-Apr-2024 11:40							
Client ID:	Run ID: WetChem_HS_462810	SeqNo: 7921345	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.32 2.00 25 0 89.3 85 - 115

LCSD	Sample ID: LCSD-R462810	Units: mg/L	Analysis Date: 02-Apr-2024 11:40							
Client ID:	Run ID: WetChem_HS_462810	SeqNo: 7921344	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.12 2.00 25 0 88.5 85 - 115 22.32 0.9 20

MS	Sample ID: HS24040061-01MS	Units: mg/L	Analysis Date: 02-Apr-2024 11:40							
Client ID: MW-2-500'	Run ID: WetChem_HS_462810	SeqNo: 7921347	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.12 2.00 25 -1.28 93.6 80 - 120

The following samples were analyzed in this batch:	HS24040061-01	HS24040061-02	HS24040061-15	HS24040061-16
	HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20
	HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
	HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462813 (0)	Instrument: WetChem_HS	Method: HYDROGEN SULFIDE BY E376.1
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MBLK	Sample ID: MBLK-R462813	Units: mg/L	Analysis Date: 02-Apr-2024 11:45							
Client ID:	Run ID: WetChem_HS_462813	SeqNo: 7921416	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide U 1.00

LCS	Sample ID: LCS-R462813	Units: mg/L	Analysis Date: 02-Apr-2024 11:45							
Client ID:	Run ID: WetChem_HS_462813	SeqNo: 7921415	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide 23.72 1.00 26.56 0 89.3 80 - 120

LCSD	Sample ID: LCSD-R462813	Units: mg/L	Analysis Date: 02-Apr-2024 11:45							
Client ID:	Run ID: WetChem_HS_462813	SeqNo: 7921414	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide 22.99 1.00 26.56 0 86.6 80 - 120 23.72 3.09 20

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-15	HS24040061-16
HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20
HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462885 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WMBLK-04022024** Units: **mg/L** Analysis Date: **02-Apr-2024 10:00**
 Client ID: Run ID: **Balance1_462885** SeqNo: **7923336** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

LCS Sample ID: **WLCS-04022024** Units: **mg/L** Analysis Date: **02-Apr-2024 10:00**
 Client ID: Run ID: **Balance1_462885** SeqNo: **7923335** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 945.6 10.0 1000 0 94.6 85 - 115

DUP Sample ID: **HS24040061-21 DUP** Units: **mg/L** Analysis Date: **02-Apr-2024 10:00**
 Client ID: **LDNR-17** Run ID: **Balance1_462885** SeqNo: **7923328** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 1168 10.0 1172 0.342 20

DUP Sample ID: **HS24040061-04 DUP** Units: **mg/L** Analysis Date: **02-Apr-2024 10:00**
 Client ID: **MW-1-200'** Run ID: **Balance1_462885** SeqNo: **7923318** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 316 10.0 328 3.73 20

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-15	HS24040061-16
HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20
HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID:	R462886 (0)	Instrument:	Balance1	Method:	TOTAL DISSOLVED SOLIDS BY SM2540C-2011					
MBLK	Sample ID: WMBLK-04022024	Units:	mg/L	Analysis Date:	02-Apr-2024 11:00					
Client ID:	Run ID: Balance1_462886	SeqNo:	7923360	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		U	10.0							
LCS	Sample ID: WLCS-04022024	Units:	mg/L	Analysis Date:	02-Apr-2024 11:00					
Client ID:	Run ID: Balance1_462886	SeqNo:	7923359	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		936	10.0	1000	0	93.6	85 - 115			
DUP	Sample ID: HS24040049-01DUP	Units:	mg/L	Analysis Date:	02-Apr-2024 11:00					
Client ID:	Run ID: Balance1_462886	SeqNo:	7923343	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		1372	10.0			1388	1.16	20		
DUP	Sample ID: HS24031767-04DUP	Units:	mg/L	Analysis Date:	02-Apr-2024 11:00					
Client ID:	Run ID: Balance1_462886	SeqNo:	7923338	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		U	10.0			-2	0	20		
The following samples were analyzed in this batch:		HS24040061-07	HS24040061-08	HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12	HS24040061-13	HS24040061-14	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462926 (0)	Instrument: WetChem_HS	Method: SULFIDE BY SM4500 S2-F-2011
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MBLK	Sample ID: MBLK-R462926	Units: mg/L	Analysis Date: 03-Apr-2024 12:54							
Client ID:	Run ID: WetChem_HS_462926	SeqNo: 7924182	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 2.00

LCS	Sample ID: LCS-R462926	Units: mg/L	Analysis Date: 03-Apr-2024 12:54							
Client ID:	Run ID: WetChem_HS_462926	SeqNo: 7924181	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 21.8 2.00 25 0 87.2 85 - 115

LCSD	Sample ID: LCSD-R462926	Units: mg/L	Analysis Date: 03-Apr-2024 12:54							
Client ID:	Run ID: WetChem_HS_462926	SeqNo: 7924180	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 21.6 2.00 25 0 86.4 85 - 115 21.8 0.922 20

MS	Sample ID: HS24040061-03MS	Units: mg/L	Analysis Date: 03-Apr-2024 12:54							
Client ID: MW-1-500'	Run ID: WetChem_HS_462926	SeqNo: 7924183	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 21.6 2.00 25 -1.6 92.8 80 - 120

The following samples were analyzed in this batch:	HS24040061-03	HS24040061-04	HS24040061-05	HS24040061-06
	HS24040061-07	HS24040061-08	HS24040061-09	HS24040061-10
	HS24040061-11	HS24040061-12	HS24040061-13	HS24040061-14

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462930 (0) **Instrument:** WetChem_HS **Method:** PH BY SM4500H+ B-2011

DUP Sample ID: **HS24040061-12DUP** Units: **pH Units** Analysis Date: **03-Apr-2024 11:18**
 Client ID: **LDNR-12** Run ID: **WetChem_HS_462930** SeqNo: **7924342** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

pH	7.94	0.100						7.93	0.126	10
Temp Deg C @pH	21.6	0						21.6	0	10

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462931 (0) **Instrument:** WetChem_HS **Method:** HYDROGEN SULFIDE BY E376.1

MBLK	Sample ID: MBLK-R462931	Units: mg/L		Analysis Date: 03-Apr-2024 13:26						
Client ID:	Run ID: WetChem_HS_462931	SeqNo: 7924360	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide U 1.00

LCS	Sample ID: LCS-R462931	Units: mg/L		Analysis Date: 03-Apr-2024 13:26						
Client ID:	Run ID: WetChem_HS_462931	SeqNo: 7924359	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide 23.16 1.00 26.56 0 87.2 80 - 120

LCSD	Sample ID: LCSD-R462931	Units: mg/L		Analysis Date: 03-Apr-2024 13:26						
Client ID:	Run ID: WetChem_HS_462931	SeqNo: 7924358	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Hydrogen Sulfide 22.99 1.00 26.56 0 86.6 80 - 120 23.16 0.737 20

The following samples were analyzed in this batch:

HS24040061-03	HS24040061-04	HS24040061-05	HS24040061-06
HS24040061-07	HS24040061-08	HS24040061-09	HS24040061-10
HS24040061-11	HS24040061-12	HS24040061-13	HS24040061-14

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R462933 (0) **Instrument:** WetChem_HS **Method:** PH BY SM4500H+ B-2011

DUP Sample ID: **HS24031384-02DUP** Units: **pH Units** Analysis Date: **03-Apr-2024 11:34**
 Client ID: Run ID: **WetChem_HS_462933** SeqNo: **7924402** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

pH	7.88	0.100						7.87	0.127	10
Temp Deg C @pH	21.5	0						21.4	0.466	10

The following samples were analyzed in this batch:

HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20
HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463024 (0)	Instrument: ICS-Integrion	Method: ANIONS BY SW9056A
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MBLK	Sample ID: MBLK	Units: mg/L	Analysis Date: 03-Apr-2024 15:01							
Client ID:	Run ID: ICS-Integrion_463024	SeqNo: 7926744	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	U	0.100								
Chloride	U	0.500								
Sulfate	U	0.500								

LCS	Sample ID: LCS	Units: mg/L	Analysis Date: 03-Apr-2024 15:12							
Client ID:	Run ID: ICS-Integrion_463024	SeqNo: 7926745	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.774	0.100	4	0	94.4	80 - 120				
Chloride	20.16	0.500	20	0	101	80 - 120				
Sulfate	21	0.500	20	0	105	80 - 120				

MS	Sample ID: HS24040061-03MS	Units: mg/L	Analysis Date: 03-Apr-2024 16:18							
Client ID: MW-1-500'	Run ID: ICS-Integrion_463024	SeqNo: 7926753	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.63	0.100	2	0	81.5	80 - 120				
Chloride	33.58	0.500	10	24.76	88.1	80 - 120				
Sulfate	15.31	0.500	10	5.647	96.6	80 - 120				

MSD	Sample ID: HS24040061-03MSD	Units: mg/L	Analysis Date: 03-Apr-2024 16:24							
Client ID: MW-1-500'	Run ID: ICS-Integrion_463024	SeqNo: 7926754	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.615	0.100	2	0	80.8	80 - 120	1.63	0.881	20	
Chloride	33.67	0.500	10	24.76	89.0	80 - 120	33.58	0.271	20	
Sulfate	15.35	0.500	10	5.647	97.0	80 - 120	15.31	0.272	20	

The following samples were analyzed in this batch:	HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
	HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
	HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
	HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16
	HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463032 (0)	Instrument: ICS-Integrion	Method: ANIONS BY SW9056A
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MBLK	Sample ID: MBLK	Units: mg/L	Analysis Date: 03-Apr-2024 22:14							
Client ID:	Run ID: ICS-Integrion_463032	SeqNo: 7926894	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	U	0.100								
Chloride	U	0.500								
Sulfate	U	0.500								

LCS	Sample ID: LCS	Units: mg/L	Analysis Date: 03-Apr-2024 22:20							
Client ID:	Run ID: ICS-Integrion_463032	SeqNo: 7926895	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	3.888	0.100	4	0	97.2	80 - 120				
Chloride	19.61	0.500	20	0	98.1	80 - 120				
Sulfate	20.8	0.500	20	0	104	80 - 120				

MS	Sample ID: HS24040024-02MS	Units: mg/L	Analysis Date: 04-Apr-2024 00:13							
Client ID:	Run ID: ICS-Integrion_463032	SeqNo: 7926908	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.908	0.100	2	0	95.4	80 - 120				
Chloride	32.2	0.500	10	22.52	96.8	80 - 120				
Sulfate	14.79	0.500	10	4.464	103	80 - 120				

MSD	Sample ID: HS24040024-02MSD	Units: mg/L	Analysis Date: 04-Apr-2024 00:19							
Client ID:	Run ID: ICS-Integrion_463032	SeqNo: 7926909	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.923	0.100	2	0	96.1	80 - 120	1.908	0.741	20	
Chloride	32.18	0.500	10	22.52	96.6	80 - 120	32.2	0.0559	20	
Sulfate	14.77	0.500	10	4.464	103	80 - 120	14.79	0.146	20	

The following samples were analyzed in this batch:	HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
	HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463100 (0)		Instrument: Skalar 03		Method: ALKALINITY BY -2011					
MBLK	Sample ID: MBLK	Units: mg/L		Analysis Date: 04-Apr-2024 11:45					
Client ID:	Run ID: Skalar 03_463100	SeqNo: 7928112		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Alkalinity, Bicarbonate (As CaCO3)	U	5.00							
Alkalinity, Carbonate (As CaCO3)	U	5.00							

LCS	Sample ID: LCS 04042024	Units: mg/L		Analysis Date: 04-Apr-2024 11:52					
Client ID:	Run ID: Skalar 03_463100	SeqNo: 7928113		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Alkalinity, Carbonate (As CaCO3)	947.4	5.00	1000	0	94.7	85 - 115			
----------------------------------	-------	------	------	---	------	----------	--	--	--

LCSD	Sample ID: LCSD 04042024	Units: mg/L		Analysis Date: 04-Apr-2024 11:58					
Client ID:	Run ID: Skalar 03_463100	SeqNo: 7928114		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Alkalinity, Carbonate (As CaCO3)	958.2	5.00	1000	0	95.8	85 - 115	947.4	1.13	20
----------------------------------	-------	------	------	---	------	----------	-------	------	----

DUP	Sample ID: HS24040061-01 DUP	Units: mg/L		Analysis Date: 04-Apr-2024 12:09					
Client ID: MW-2-500'	Run ID: Skalar 03_463100	SeqNo: 7928116		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Alkalinity, Bicarbonate (As CaCO3)	168	5.00					168.6	0.357	20
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20

The following samples were analyzed in this batch:

HS24040061-01	HS24040061-02	HS24040061-03	HS24040061-04
HS24040061-05	HS24040061-06	HS24040061-07	HS24040061-08
HS24040061-09	HS24040061-10	HS24040061-11	HS24040061-12
HS24040061-13	HS24040061-14	HS24040061-15	HS24040061-16
HS24040061-17	HS24040061-18	HS24040061-19	HS24040061-20

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

QC BATCH REPORT

Batch ID: R463116 (0)	Instrument: Skalar 03	Method: ALKALINITY BY -2011
--------------------------------	------------------------------	------------------------------------

MBLK	Sample ID: MBLK	Units: mg/L	Analysis Date: 04-Apr-2024 14:55							
Client ID:	Run ID: Skalar 03_463116	SeqNo: 7928523	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.00								
Alkalinity, Carbonate (As CaCO3)	U	5.00								

LCS	Sample ID: LCS-04042024	Units: mg/L	Analysis Date: 04-Apr-2024 15:02							
Client ID:	Run ID: Skalar 03_463116	SeqNo: 7928524	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	950	5.00	1000	0	95.0	85 - 115				

LCSD	Sample ID: LCSD-04042024	Units: mg/L	Analysis Date: 04-Apr-2024 15:08							
Client ID:	Run ID: Skalar 03_463116	SeqNo: 7928525	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	941.4	5.00	1000	0	94.1	85 - 115	950	0.909	20	

DUP	Sample ID: HS24040061-21DUP	Units: mg/L	Analysis Date: 04-Apr-2024 15:18							
Client ID: LDNR-17	Run ID: Skalar 03_463116	SeqNo: 7928527	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	110.9	5.00					113.6	2.41	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	

The following samples were analyzed in this batch:

HS24040061-21	HS24040061-22	HS24040061-23	HS24040061-24
HS24040061-25	HS24040061-26	HS24040061-27	

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24040061

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919; 2024	30-Apr-2024
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624 - 2024	31-Dec-2024
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-32	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

Sample Receipt Checklist

Work Order ID: HS24040061
Client Name: ERMSW-HOU

Date/Time Received: 28-Mar-2024 10:52
Received by: Monica Smith

Completed By: /S/ Jacob Coronado 01-Apr-2024 18:07
Reviewed by: /S/ Bernadette A. Fini 02-Apr-2024 10:54

Matrices: w

Carrier name: Client

- Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on shipping container/cooler? Yes [] No [] Not Present [checked]
Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]
VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes [] No [] Not Present [checked]
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Samplers name present on COC? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [] No [checked]
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? Yes [checked] No []
Container/Temp Blank temperature in compliance? Yes [checked] No []

3 Page(s)
COC IDs:309147, 309152, 309146

Temperature(s)/Thermometer(s): 0.7/1.1,3.4/3.8,1.9/2.3,2.0/2.42.6/3.0,3.0/3.4,2.0/2.4 lr33
Cooler(s)/Kit(s): 51988,24579,red,red,blue,50799,47912
Date/Time sample(s) sent to storage: 04/01/2024 1811

- Water - VOA vials have zero headspace? Yes [checked] No [] No VOA vials submitted []
Water - pH acceptable upon receipt? Yes [checked] No [] N/A []
pH adjusted? Yes [] No [checked] N/A []
pH adjusted by:

Login Notes: Sample time differ: LDNR-25 COC=0945 label=0915, MW-2-700' COC=0950 Label=0955
Sample LDNR-22 COC=12 containers, only received 11

Client Contacted: Date Contacted: Person Contacted:
Contacted By: Regarding:
Comments:
Corrective Action:



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Chain of Custody Form

HS24040061

W

Page 1 of 3

COC ID: 309147

Environmental Resources Mgmt.
Sulphur Dome



ALS Project Manager:

Customer Information		Project Information		
Purchase Order	9722141	Project Name	Sulphur Dome	A 823C_LL_VL (Low Level VUL) (21% BTEX)
Work Order		Project Number		B 80FAS_DW (Soil/Facility) (Soil/Facility)
Company Name	Environmental Resources Mgmt.	Bill To Company	Environmental Resources Mgmt.	C 135_W (Water)
Send Report To	Scott Himes	Invoice Attn	Accounts Payable	D MA EP (Water) (MA EP)
Address	CityCentre Plaza 840 W. Sam Houston Pkwy Suite 6	Address	CityCentre Plaza 840 W. Sam Houston Pkwy Suite 6	E MA VP (Water) (MA VP)
City/State/Zip	Houston, TX 77024	City/State/Zip	Houston, TX 77024	F 805C_Station (Water) (805C)
Phone	(281) 600-1000	Phone	(281) 600-1000	G ALK_W (Soil) (ALK)
Fax	(281) 600-1000	Fax	(281) 600-1000	H 120_W (H2S)
e-Mail Address	scott.himes@eremgmt.com	e-Mail Address	EREMAAccountsPayable@eremgmt.com	I SULPH_40065 (Soil)
				J TDS_W (Water)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-2-500'	3/26/24	14:50	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	
2	MW-1-700'	↓	16:10														
3	MW-1-500'	3/27/24	08:35														
4	MW-1-200'	↓	09:55														
5	MW-3-700'	↓	12:35				X										
6	MW-3-200'	↓	15:35					X									
7	MW-3-500'	↓	17:25					X									
8																	
9																	
10																	

was filtered -
quartz disperse
metals
was filtered
run for 30 minutes

Sampler(s) Please Print & Sign: R. Khawestran / Taylor Brown Shipment Method: Express Required Turnaround Time: (Check Box) 24 hours 48 hours 72 hours Results Due Date: _____

Relinquished by: Taylor Brown Date: 3/27/24 Time: 17:45 Received by: Scott Himes Date: 3/27/24 Time: 10:52 Notes: ERMI Sulphur Dome

Relinquished by: Scott Himes Date: 3/27/24 Time: 10:52 Received by (Laboratory): _____ Date: _____ Time: _____

Logged by (Laboratory): _____ Date: _____ Time: _____ Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Cooler ID: 51980 Cooler Temp.: 2.2 QC Package: (Check One Box Below) 1.9.2.0.2

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental. 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse. 3. The Chain of Custody is a legal document. All information must be completed accurately.

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as Blue 2.0
C-17410 2 R
IKH 53



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Chain of Custody Form

Page 2 of 3

COC ID: 309152

HS24040061

Environmental Resources Mgmt.
Sulphur Dome



ALS Project Manager:

Customer Information		Project Information		
Purchase Order	0-22101	Project Name	Sulphur Dome	A
Work Order		Project Number		B
Company Name	Environmental Resources Mgmt	Bill To Company	Environmental Resources Mgmt	C
Send Report To	Scott Brown	Invoice Attn	Accounts Payable	D
Address	City/State/Zip	Address	City/State/Zip	E
	840 W. San Houston Hwy., Suite 6		400 W. San Houston Hwy., Suite 6	F
City/State/Zip	Houston, TX 77024	City/State/Zip	Houston, TX 77024	G
Phone	713 636-8000	Phone	713 636-8000	H
Fax	713 636-1001	Fax	713 636-1001	I
e-Mail Address	scott.brown@erms.com	e-Mail Address	scott.brown@erms.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LDNR-23	3/27/24	9:15	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	
2	LDNR-25		9:45														
3	LDNR-14		10:20														
4	LDNR-13		12:20														
5	LDNR-12		13:15														
6	LDNR-07		13:30														
7	LDNR-08		14:30														
8	LDNR-01	3/20/24	09:00														
9	MW-2-700		09:50														
10	MW-2-200		13:20														

Sampler(s) Please Print & Sign: Michael Trach Shipment Method: _____ Required Turnaround Time: (Check Box) 24 hours 48 hours 72 hours Results Due Date: _____

Relinquished by: Taylor Brown Date: 3/27/24 Time: 17:45 Received by: Michael Trach Notes: ERM Sulphur Dome

Relinquished by: Michael Trach Date: 3/27/24 Time: 13:52 Received by (Laboratory): _____

Logged by (Laboratory): _____ Date: _____ Time: _____ Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Cooler ID: 51903 Cooler Temp.: 7 QC Package: (Check One Box Below) 1 2 3 4

24579 3.0
Bottle (3) 1.9, 2.0, 2.1

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental. 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse. 3. The Chain of Custody is a legal document. All information must be completed accurately.

ms: Blue (3) 3.0
24579 3.0
Bottle (3) 1.9, 2.0, 2.1

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Chain of Custody Form

Page 3 of 3

COC ID: 503146

HS24040061

Environmental Resources Mgmt.
Sulphur Dome



ALS Project Manager:

Customer Information		Project Information	
Purchase Order	0722109	Project Name	Sulphur Dome
Work Order		Project Number	
Company Name	Environmental Resources Mgmt	Bill To Company	Environmental Resources Mgmt
Send Report To	Scott Hines	Invoice Attn	Accounts Payable
Address	City/Centre Four	Address	City/Centre Four
	140 W. Sam Houston Pkwy., Suite 6		840 W. Sam Houston Pkwy. Suite 6
City/State/Zip	Houston, TX 77024	City/State/Zip	Houston, TX 77024
Phone	(281) 600-1001	Phone	(281) 600-1000
Fax	(281) 600-1001	Fax	(281) 600-1001
e-Mail Address	scott.hines@ermm.com	e-Mail Address	ERMM-AccountsPayable@ermm.com

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LDNR-04	3/26/24	10:20	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	
2	LDNR-03		10:45														
3	LDNR-24		11:00														
4	LDNR-17		12:45														
5	LDNR-05		13:00														
6	LDNR-18		13:15														
7	LDNR-21		15:15														
8	LDNR-22		15:30														
9	LDNR-06		16:00														
10	LDNR-20		17:00														

Sampler(s) Please Print & Sign: Richard Taylor / Richard Taylor Shipment Method: _____ Required Turnaround Time: (Check Box) 24 Hours 48 Hours 72 Hours Results Due Date: _____

Relinquished by: Richard Taylor Date: 3/27/24 Time: 17:45 Received by: Richard Taylor Notes: ERMM Sulphur Dome

Relinquished by: Richard Taylor Date: 3/28/24 Time: 10:52 Received by (Laboratory): _____ QC Package: (Check One Box Below)

Logged by (Laboratory): _____ Date: _____ Time: _____ Checked by (Laboratory): _____ Cooler ID: 51988 Cooler Temp.: 7

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035 Pre (3) 19,20,21

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental. 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse. 3. The Chain of Custody is a legal document. All information must be completed accurately.



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May 14, 2024

Scott Himes
Environmental Resources Mgmt.
CityCentre Four
840 W. Sam Houston Pkwy., Suite 600
Houston, TX 77024

Work Order: **HS24041854**

Laboratory Results for: **Sulphur Dome**

Dear Scott Himes,

ALS Environmental received 14 sample(s) on Apr 25, 2024 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: BERNADETTE.FINI

Bernadette A. Fini
Project Manager

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24041854

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24041854-01	MW-1-200	Water		22-Apr-2024 11:40	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-02	MW-1-500	Water		22-Apr-2024 13:30	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-03	MW-1-700	Water		22-Apr-2024 14:45	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-04	MW-2-500	Water		22-Apr-2024 17:00	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-05	MW-2-200	Water		23-Apr-2024 08:55	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-06	MW-2-700	Water		23-Apr-2024 10:15	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-07	MW-3-200	Water		23-Apr-2024 12:15	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-08	MW-3-500	Water		23-Apr-2024 14:30	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-09	019-1055	Water		23-Apr-2024 15:10	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-10	Cottages	Water		23-Apr-2024 15:40	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-11	019-995	Water		23-Apr-2024 16:10	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-12	019-580	Water		23-Apr-2024 16:30	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-13	MW-3-700	Water		24-Apr-2024 08:45	25-Apr-2024 12:00	<input type="checkbox"/>
HS24041854-14	019-582	Water		24-Apr-2024 09:40	25-Apr-2024 12:00	<input type="checkbox"/>

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24041854

CASE NARRATIVE

Work Order Comments

- Report revised on May 14, 2024 due to the MA EPH was reported with the incorrect MDLs.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Work Order Comments

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

GC Semivolatiles by Method MA EPH**Batch ID: 211188**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method MA VPH**Batch ID: R465787,R465788**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R465671****Sample ID: VLCSW-240501**

- Insufficient sample received to perform MS/MSD. An LCS/LCSD was performed as batch quality control.

Batch ID: R465602**Sample ID: MW-1-500 (HS24041854-02)**

- Surrogate failed outside control limits high. Sample is ND.

Sample ID: MW-2-500 (HS24041854-04)

- Surrogate failed outside control limits low. This surrogate is not associated with the target compounds.

Metals by Method SW7470A**Batch ID: 211313,211320,211322**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A**Batch ID: 211177**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 211170**Sample ID: MW-3-700 (HS24041854-13)**

- Sample ran at a 2X dilution due to high concentration of Sodium.

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
Work Order: HS24041854

CASE NARRATIVE

Metals by Method SW6020A

WetChemistry by Method SW9056

Batch ID: R465407

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SM4500H+ B

Batch ID: R465459

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SM2320B

Batch ID: R465432

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method M2540C

Batch ID: R465386

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method E376.1

Batch ID: R465352

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SM4500 S2-F

Batch ID: R465349

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-200
 Collection Date: 22-Apr-2024 11:40

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 12:24
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 12:24
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 12:24
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 12:24
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 12:24
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 12:24
<i>Surr: 1,2-Dichloroethane-d4</i>	105			70-126	%REC	1	01-May-2024 12:24
<i>Surr: 4-Bromofluorobenzene</i>	98.1			77-113	%REC	1	01-May-2024 12:24
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	1	01-May-2024 12:24
<i>Surr: Toluene-d8</i>	103			82-127	%REC	1	01-May-2024 12:24
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	02-May-2024 20:39
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 20:39
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 20:39
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	82.8			70-130	%REC	1	02-May-2024 20:39
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	83.2			70-130	%REC	1	02-May-2024 20:39
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 19:33
<i>Surr: 1-Chlorooctadecane</i>	76.1			40-140	%REC	1	30-Apr-2024 19:33
<i>Surr: 2-Bromonaphthalene</i>	99.0			40-140	%REC	1	30-Apr-2024 19:33
<i>Surr: 2-Fluorobiphenyl</i>	106			40-140	%REC	1	30-Apr-2024 19:33
<i>Surr: o-Terphenyl</i>	69.3			40-140	%REC	1	30-Apr-2024 19:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-200
 Collection Date: 22-Apr-2024 11:40

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	0.0146		0.000400	0.00200	mg/L	1	01-May-2024 20:19
Barium	0.245		0.00190	0.00400	mg/L	1	01-May-2024 20:19
Calcium	21.4		0.0340	0.500	mg/L	1	01-May-2024 20:19
Chromium	0.000540	J	0.000400	0.00400	mg/L	1	01-May-2024 20:19
Iron	0.360		0.0120	0.200	mg/L	1	01-May-2024 20:19
Lead	0.00193	J	0.000600	0.00200	mg/L	1	01-May-2024 20:19
Magnesium	9.54		0.0100	0.200	mg/L	1	01-May-2024 20:19
Manganese	0.0526		0.000700	0.00500	mg/L	1	01-May-2024 20:19
Nickel		U	0.000600	0.00200	mg/L	1	01-May-2024 20:19
Potassium	2.93		0.0180	0.200	mg/L	1	01-May-2024 20:19
Sodium	109		0.280	4.00	mg/L	20	02-May-2024 14:29
Strontium	0.274		0.000200	0.00500	mg/L	1	01-May-2024 20:19
Vanadium		U	0.000600	0.00500	mg/L	1	01-May-2024 20:19
Zinc	0.00675		0.00200	0.00400	mg/L	1	01-May-2024 20:19
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 14:50
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	310		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	249		3.00	5.00	mg/L	1	29-Apr-2024 12:26
Alkalinity, Carbonate (As CaCO3)	13.6		3.00	5.00	mg/L	1	29-Apr-2024 12:26
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	8.53	H	0.100	0.100	pH Units	1	30-Apr-2024 08:57
Temp Deg C @pH	22.1	H	0	0	°C	1	30-Apr-2024 08:57
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 08:06
Chloride	34.4		0.200	0.500	mg/L	1	29-Apr-2024 08:06
Sulfate	0.487	J	0.200	0.500	mg/L	1	29-Apr-2024 08:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-500
 Collection Date: 22-Apr-2024 13:30

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 09:04
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 09:04
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 09:04
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 09:04
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 09:04
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 09:04
<i>Surr: 1,2-Dichloroethane-d4</i>	104			70-126	%REC	1	01-May-2024 09:04
<i>Surr: 4-Bromofluorobenzene</i>	102			77-113	%REC	1	01-May-2024 09:04
<i>Surr: Dibromofluoromethane</i>	100			77-123	%REC	1	01-May-2024 09:04
<i>Surr: Toluene-d8</i>	130	S		82-127	%REC	1	01-May-2024 09:04
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	02-May-2024 21:23
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 21:23
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 21:23
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	87.6			70-130	%REC	1	02-May-2024 21:23
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	88.1			70-130	%REC	1	02-May-2024 21:23
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:04
<i>Surr: 1-Chlorooctadecane</i>	76.1			40-140	%REC	1	30-Apr-2024 20:04
<i>Surr: 2-Bromonaphthalene</i>	102			40-140	%REC	1	30-Apr-2024 20:04
<i>Surr: 2-Fluorobiphenyl</i>	110			40-140	%REC	1	30-Apr-2024 20:04
<i>Surr: o-Terphenyl</i>	72.1			40-140	%REC	1	30-Apr-2024 20:04

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-500
 Collection Date: 22-Apr-2024 13:30

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	0.00431		0.000400	0.00200	mg/L	1	01-May-2024 19:54
Barium	0.128		0.00190	0.00400	mg/L	1	01-May-2024 19:54
Calcium	20.2		0.0340	0.500	mg/L	1	01-May-2024 19:54
Chromium	U		0.000400	0.00400	mg/L	1	01-May-2024 19:54
Iron	1.91		0.0120	0.200	mg/L	1	01-May-2024 19:54
Lead	U		0.000600	0.00200	mg/L	1	01-May-2024 19:54
Magnesium	5.28		0.0100	0.200	mg/L	1	01-May-2024 19:54
Manganese	0.0725		0.000700	0.00500	mg/L	1	01-May-2024 19:54
Nickel	U		0.000600	0.00200	mg/L	1	01-May-2024 19:54
Potassium	3.28		0.0180	0.200	mg/L	1	01-May-2024 19:54
Sodium	69.9		0.0140	0.200	mg/L	1	01-May-2024 19:54
Strontium	0.259		0.000200	0.00500	mg/L	1	01-May-2024 19:54
Vanadium	U		0.000600	0.00500	mg/L	1	01-May-2024 19:54
Zinc	0.00489		0.00200	0.00400	mg/L	1	01-May-2024 19:54
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	01-May-2024 14:51
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	264		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	197		3.00	5.00	mg/L	1	29-Apr-2024 12:37
Alkalinity, Carbonate (As CaCO3)	U		3.00	5.00	mg/L	1	29-Apr-2024 12:37
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	8.21	H	0.100	0.100	pH Units	1	30-Apr-2024 08:59
Temp Deg C @pH	22.1	H	0	0	°C	1	30-Apr-2024 08:59
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	29-Apr-2024 08:12
Chloride	22.1		0.200	0.500	mg/L	1	29-Apr-2024 08:12
Sulfate	2.73		0.200	0.500	mg/L	1	29-Apr-2024 08:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-700
 Collection Date: 22-Apr-2024 14:45

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 11:41
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 11:41
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 11:41
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 11:41
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 11:41
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 11:41
<i>Surr: 1,2-Dichloroethane-d4</i>	103			70-126	%REC	1	01-May-2024 11:41
<i>Surr: 4-Bromofluorobenzene</i>	95.8			77-113	%REC	1	01-May-2024 11:41
<i>Surr: Dibromofluoromethane</i>	98.6			77-123	%REC	1	01-May-2024 11:41
<i>Surr: Toluene-d8</i>	105			82-127	%REC	1	01-May-2024 11:41
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	02-May-2024 22:07
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 22:07
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 22:07
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	85.7			70-130	%REC	1	02-May-2024 22:07
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	86.2			70-130	%REC	1	02-May-2024 22:07
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 20:35
<i>Surr: 1-Chlorooctadecane</i>	70.6			40-140	%REC	1	30-Apr-2024 20:35
<i>Surr: 2-Bromonaphthalene</i>	100			40-140	%REC	1	30-Apr-2024 20:35
<i>Surr: 2-Fluorobiphenyl</i>	107			40-140	%REC	1	30-Apr-2024 20:35
<i>Surr: o-Terphenyl</i>	70.2			40-140	%REC	1	30-Apr-2024 20:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-1-700
 Collection Date: 22-Apr-2024 14:45

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	0.00118	J	0.000400	0.00200	mg/L	1	01-May-2024 20:21
Barium	0.0716		0.00190	0.00400	mg/L	1	01-May-2024 20:21
Calcium	4.84		0.0340	0.500	mg/L	1	01-May-2024 20:21
Chromium	0.000471	J	0.000400	0.00400	mg/L	1	01-May-2024 20:21
Iron	0.574		0.0120	0.200	mg/L	1	01-May-2024 20:21
Lead	0.00150	J	0.000600	0.00200	mg/L	1	01-May-2024 20:21
Magnesium	0.387		0.0100	0.200	mg/L	1	01-May-2024 20:21
Manganese	0.00788		0.000700	0.00500	mg/L	1	01-May-2024 20:21
Nickel	U		0.000600	0.00200	mg/L	1	01-May-2024 20:21
Potassium	2.98		0.0180	0.200	mg/L	1	01-May-2024 20:21
Sodium	194		1.40	20.0	mg/L	100	02-May-2024 14:31
Strontium	0.0770		0.000200	0.00500	mg/L	1	01-May-2024 20:21
Vanadium	0.00306	J	0.000600	0.00500	mg/L	1	01-May-2024 20:21
Zinc	0.00653		0.00200	0.00400	mg/L	1	01-May-2024 20:21
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	01-May-2024 14:53
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	444		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	239		3.00	5.00	mg/L	1	29-Apr-2024 12:42
Alkalinity, Carbonate (As CaCO3)	48.6		3.00	5.00	mg/L	1	29-Apr-2024 12:42
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	8.98	H	0.100	0.100	pH Units	1	30-Apr-2024 09:01
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:01
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	29-Apr-2024 08:18
Chloride	99.9		0.200	0.500	mg/L	1	29-Apr-2024 08:18
Sulfate	11.2		0.200	0.500	mg/L	1	29-Apr-2024 08:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-500
 Collection Date: 22-Apr-2024 17:00

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 09:26
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 09:26
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 09:26
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 09:26
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 09:26
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 09:26
Surr: 1,2-Dichloroethane-d4	106			70-126	%REC	1	01-May-2024 09:26
Surr: 4-Bromofluorobenzene	75.7	S		77-113	%REC	1	01-May-2024 09:26
Surr: Dibromofluoromethane	101			77-123	%REC	1	01-May-2024 09:26
Surr: Toluene-d8	114			82-127	%REC	1	01-May-2024 09:26
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	02-May-2024 22:51
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 22:51
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 22:51
Surr: 2,5-Dibromotoluene (Aliphatic)	90.8			70-130	%REC	1	02-May-2024 22:51
Surr: 2,5-Dibromotoluene (Aromatic)	91.3			70-130	%REC	1	02-May-2024 22:51
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Aliphatics >C16 - C35	0.0567	J	0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:05
Surr: 1-Chlorooctadecane	79.7			40-140	%REC	1	30-Apr-2024 21:05
Surr: 2-Bromonaphthalene	99.3			40-140	%REC	1	30-Apr-2024 21:05
Surr: 2-Fluorobiphenyl	108			40-140	%REC	1	30-Apr-2024 21:05
Surr: o-Terphenyl	74.8			40-140	%REC	1	30-Apr-2024 21:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-500
 Collection Date: 22-Apr-2024 17:00

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 29-Apr-2024		Analyst: JC
Arsenic	0.00351		0.000400	0.00200	mg/L	1	30-Apr-2024 22:55
Barium	0.138		0.00190	0.00400	mg/L	1	30-Apr-2024 22:55
Calcium	20.0		0.0340	0.500	mg/L	1	30-Apr-2024 22:55
Chromium	0.000545	J	0.000400	0.00400	mg/L	1	30-Apr-2024 22:55
Iron	0.530		0.0120	0.200	mg/L	1	30-Apr-2024 22:55
Lead		U	0.000600	0.00200	mg/L	1	30-Apr-2024 22:55
Magnesium	4.12		0.0100	0.200	mg/L	1	30-Apr-2024 22:55
Manganese	0.0802		0.000700	0.00500	mg/L	1	30-Apr-2024 22:55
Nickel		U	0.000600	0.00200	mg/L	1	30-Apr-2024 22:55
Potassium	3.14		0.0180	0.200	mg/L	1	30-Apr-2024 22:55
Sodium	59.9		0.0140	0.200	mg/L	1	30-Apr-2024 22:55
Strontium	0.242		0.000200	0.00500	mg/L	1	30-Apr-2024 22:55
Vanadium		U	0.000600	0.00500	mg/L	1	30-Apr-2024 22:55
Zinc		U	0.00200	0.00400	mg/L	1	30-Apr-2024 22:55
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 01-May-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 16:07
HYDROGEN SULFIDE BY E376.1		Method:E376.1			Analyst: CD		
Hydrogen Sulfide	0.552	J	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C			Analyst: MH		
Total Dissolved Solids (Residue, Filterable)	240		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B			Analyst: AR		
Alkalinity, Bicarbonate (As CaCO3)	168		3.00	5.00	mg/L	1	29-Apr-2024 12:47
Alkalinity, Carbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 12:47
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F			Analyst: CD		
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B			Analyst: AR		
pH	8.09	H	0.100	0.100	pH Units	1	30-Apr-2024 09:03
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:03
ANIONS BY SW9056A		Method:SW9056			Analyst: TH		
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 08:24
Chloride	33.4		0.200	0.500	mg/L	1	29-Apr-2024 08:24
Sulfate	4.10		0.200	0.500	mg/L	1	29-Apr-2024 08:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-200
 Collection Date: 23-Apr-2024 08:55

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 16:21
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 16:21
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 16:21
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 16:21
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 16:21
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 16:21
<i>Surr: 1,2-Dichloroethane-d4</i>	106			70-126	%REC	1	01-May-2024 16:21
<i>Surr: 4-Bromofluorobenzene</i>	94.4			77-113	%REC	1	01-May-2024 16:21
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	1	01-May-2024 16:21
<i>Surr: Toluene-d8</i>	86.9			82-127	%REC	1	01-May-2024 16:21
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	02-May-2024 23:34
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 23:34
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	02-May-2024 23:34
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	92.9			70-130	%REC	1	02-May-2024 23:34
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	93.4			70-130	%REC	1	02-May-2024 23:34
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:37
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:37
Aliphatics >C16 - C35	0.0709	J	0.0250	0.100	mg/L	1	30-Apr-2024 21:37
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:37
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:37
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 21:37
Aromatics >C21 - C35	0.0302	J	0.0250	0.100	mg/L	1	30-Apr-2024 21:37
<i>Surr: 1-Chlorooctadecane</i>	79.1			40-140	%REC	1	30-Apr-2024 21:37
<i>Surr: 2-Bromonaphthalene</i>	104			40-140	%REC	1	30-Apr-2024 21:37
<i>Surr: 2-Fluorobiphenyl</i>	112			40-140	%REC	1	30-Apr-2024 21:37
<i>Surr: o-Terphenyl</i>	77.4			40-140	%REC	1	30-Apr-2024 21:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-200
 Collection Date: 23-Apr-2024 08:55

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 29-Apr-2024		Analyst: JC
Arsenic	0.000420	J	0.000400	0.00200	mg/L	1	30-Apr-2024 23:10
Barium	0.0490		0.00190	0.00400	mg/L	1	30-Apr-2024 23:10
Calcium	6.73		0.0340	0.500	mg/L	1	30-Apr-2024 23:10
Chromium	0.000561	J	0.000400	0.00400	mg/L	1	30-Apr-2024 23:10
Iron	0.175	J	0.0120	0.200	mg/L	1	30-Apr-2024 23:10
Lead		U	0.000600	0.00200	mg/L	1	30-Apr-2024 23:10
Magnesium	0.140	J	0.0100	0.200	mg/L	1	30-Apr-2024 23:10
Manganese	0.00112	J	0.000700	0.00500	mg/L	1	30-Apr-2024 23:10
Nickel		U	0.000600	0.00200	mg/L	1	30-Apr-2024 23:10
Potassium	5.95		0.0180	0.200	mg/L	1	30-Apr-2024 23:10
Sodium	66.8		0.0140	0.200	mg/L	1	30-Apr-2024 23:10
Strontium	0.319		0.000200	0.00500	mg/L	1	30-Apr-2024 23:10
Vanadium		U	0.000600	0.00500	mg/L	1	30-Apr-2024 23:10
Zinc		U	0.00200	0.00400	mg/L	1	30-Apr-2024 23:10
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 01-May-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 16:12
HYDROGEN SULFIDE BY E376.1		Method:E376.1			Analyst: CD		
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C			Analyst: MH		
Total Dissolved Solids (Residue, Filterable)	216		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B			Analyst: AR		
Alkalinity, Bicarbonate (As CaCO3)	18.0		3.00	5.00	mg/L	1	29-Apr-2024 12:54
Alkalinity, Carbonate (As CaCO3)	11.6		3.00	5.00	mg/L	1	29-Apr-2024 12:54
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F			Analyst: CD		
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B			Analyst: AR		
pH	9.28	H	0.100	0.100	pH Units	1	30-Apr-2024 09:10
Temp Deg C @pH	21.9	H	0	0	°C	1	30-Apr-2024 09:10
ANIONS BY SW9056A		Method:SW9056			Analyst: TH		
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 08:30
Chloride	34.6		0.200	0.500	mg/L	1	29-Apr-2024 08:30
Sulfate	119		0.400	1.00	mg/L	2	29-Apr-2024 10:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-700
 Collection Date: 23-Apr-2024 10:15

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 09:47
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 09:47
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 09:47
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 09:47
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 09:47
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 09:47
<i>Surr: 1,2-Dichloroethane-d4</i>	103			70-126	%REC	1	01-May-2024 09:47
<i>Surr: 4-Bromofluorobenzene</i>	97.8			77-113	%REC	1	01-May-2024 09:47
<i>Surr: Dibromofluoromethane</i>	93.9			77-123	%REC	1	01-May-2024 09:47
<i>Surr: Toluene-d8</i>	98.8			82-127	%REC	1	01-May-2024 09:47
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 00:18
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 00:18
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 00:18
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	91.9			70-130	%REC	1	03-May-2024 00:18
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	92.4			70-130	%REC	1	03-May-2024 00:18
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:08
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:08
Aliphatics >C16 - C35	0.0484	J	0.0250	0.100	mg/L	1	30-Apr-2024 22:08
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:08
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:08
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:08
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:08
<i>Surr: 1-Chlorooctadecane</i>	96.4			40-140	%REC	1	30-Apr-2024 22:08
<i>Surr: 2-Bromonaphthalene</i>	100			40-140	%REC	1	30-Apr-2024 22:08
<i>Surr: 2-Fluorobiphenyl</i>	109			40-140	%REC	1	30-Apr-2024 22:08
<i>Surr: o-Terphenyl</i>	83.0			40-140	%REC	1	30-Apr-2024 22:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-2-700
 Collection Date: 23-Apr-2024 10:15

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 29-Apr-2024		Analyst: JC
Arsenic	0.00229		0.000400	0.00200	mg/L	1	30-Apr-2024 23:12
Barium	0.0346		0.00190	0.00400	mg/L	1	30-Apr-2024 23:12
Calcium	22.4		0.0340	0.500	mg/L	1	30-Apr-2024 23:12
Chromium	0.000594	J	0.000400	0.00400	mg/L	1	30-Apr-2024 23:12
Iron	0.0258	J	0.0120	0.200	mg/L	1	30-Apr-2024 23:12
Lead		U	0.000600	0.00200	mg/L	1	30-Apr-2024 23:12
Magnesium	0.199	J	0.0100	0.200	mg/L	1	30-Apr-2024 23:12
Manganese		U	0.000700	0.00500	mg/L	1	30-Apr-2024 23:12
Nickel		U	0.000600	0.00200	mg/L	1	30-Apr-2024 23:12
Potassium	6.34		0.0180	0.200	mg/L	1	30-Apr-2024 23:12
Sodium	148		0.0140	0.200	mg/L	1	30-Apr-2024 23:12
Strontium	0.171		0.000200	0.00500	mg/L	1	30-Apr-2024 23:12
Vanadium	0.0257		0.000600	0.00500	mg/L	1	30-Apr-2024 23:12
Zinc		U	0.00200	0.00400	mg/L	1	30-Apr-2024 23:12
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 01-May-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 16:14
HYDROGEN SULFIDE BY E376.1		Method:E376.1					Analyst: CD
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C					Analyst: MH
Total Dissolved Solids (Residue, Filterable)	484		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B					Analyst: AR
Alkalinity, Bicarbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 13:10
Alkalinity, Carbonate (As CaCO3)	166		3.00	5.00	mg/L	1	29-Apr-2024 13:10
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F					Analyst: CD
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B					Analyst: AR
pH	10.5	H	0.100	0.100	pH Units	1	30-Apr-2024 09:12
Temp Deg C @pH	21.9	H	0	0	°C	1	30-Apr-2024 09:12
ANIONS BY SW9056A		Method:SW9056					Analyst: TH
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 08:36
Chloride	137		0.400	1.00	mg/L	2	29-Apr-2024 10:22
Sulfate	51.5		0.200	0.500	mg/L	1	29-Apr-2024 08:36

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-200
 Collection Date: 23-Apr-2024 12:15

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 16:43
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 16:43
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 16:43
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 16:43
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 16:43
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 16:43
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	01-May-2024 16:43
<i>Surr: 4-Bromofluorobenzene</i>	95.3			77-113	%REC	1	01-May-2024 16:43
<i>Surr: Dibromofluoromethane</i>	104			77-123	%REC	1	01-May-2024 16:43
<i>Surr: Toluene-d8</i>	106			82-127	%REC	1	01-May-2024 16:43
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 01:02
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 01:02
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 01:02
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	93.1			70-130	%REC	1	03-May-2024 01:02
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	93.6			70-130	%REC	1	03-May-2024 01:02
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	30-Apr-2024 22:38
<i>Surr: 1-Chlorooctadecane</i>	75.1			40-140	%REC	1	30-Apr-2024 22:38
<i>Surr: 2-Bromonaphthalene</i>	97.6			40-140	%REC	1	30-Apr-2024 22:38
<i>Surr: 2-Fluorobiphenyl</i>	104			40-140	%REC	1	30-Apr-2024 22:38
<i>Surr: o-Terphenyl</i>	71.6			40-140	%REC	1	30-Apr-2024 22:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-200
 Collection Date: 23-Apr-2024 12:15

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 29-Apr-2024		Analyst: JC
Arsenic	0.00334		0.000400	0.00200	mg/L	1	30-Apr-2024 23:14
Barium	0.0320		0.00190	0.00400	mg/L	1	30-Apr-2024 23:14
Calcium	2.99		0.0340	0.500	mg/L	1	30-Apr-2024 23:14
Chromium	0.000974	J	0.000400	0.00400	mg/L	1	30-Apr-2024 23:14
Iron	1.11		0.0120	0.200	mg/L	1	30-Apr-2024 23:14
Lead		U	0.000600	0.00200	mg/L	1	30-Apr-2024 23:14
Magnesium	0.0811	J	0.0100	0.200	mg/L	1	30-Apr-2024 23:14
Manganese	0.00657		0.000700	0.00500	mg/L	1	30-Apr-2024 23:14
Nickel	0.00117	J	0.000600	0.00200	mg/L	1	30-Apr-2024 23:14
Potassium	53.1		0.0180	0.200	mg/L	1	30-Apr-2024 23:14
Sodium	120		0.0140	0.200	mg/L	1	30-Apr-2024 23:14
Strontium	0.108		0.000200	0.00500	mg/L	1	30-Apr-2024 23:14
Vanadium	0.00171	J	0.000600	0.00500	mg/L	1	30-Apr-2024 23:14
Zinc	0.00294	J	0.00200	0.00400	mg/L	1	30-Apr-2024 23:14
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 01-May-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 16:16
HYDROGEN SULFIDE BY E376.1		Method:E376.1					Analyst: CD
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C					Analyst: MH
Total Dissolved Solids (Residue, Filterable)	488		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B					Analyst: AR
Alkalinity, Bicarbonate (As CaCO3)	16.9		3.00	5.00	mg/L	1	29-Apr-2024 13:15
Alkalinity, Carbonate (As CaCO3)	250		3.00	5.00	mg/L	1	29-Apr-2024 13:15
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F					Analyst: CD
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B					Analyst: AR
pH	10.4	H	0.100	0.100	pH Units	1	30-Apr-2024 09:14
Temp Deg C @pH	21.9	H	0	0	°C	1	30-Apr-2024 09:14
ANIONS BY SW9056A		Method:SW9056					Analyst: TH
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 08:42
Chloride	27.1		0.200	0.500	mg/L	1	29-Apr-2024 08:42
Sulfate	76.4		0.200	0.500	mg/L	1	29-Apr-2024 08:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-500
 Collection Date: 23-Apr-2024 14:30

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C			Method:SW8260		Analyst: TS		
Benzene	0.0016		0.00020	0.0010	mg/L	1	01-May-2024 17:04
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 17:04
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 17:04
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 17:04
Toluene	0.0031		0.00020	0.0010	mg/L	1	01-May-2024 17:04
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 17:04
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>107</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 17:04</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>95.5</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 17:04</i>
<i>Surr: Dibromofluoromethane</i>	<i>105</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 17:04</i>
<i>Surr: Toluene-d8</i>	<i>106</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 17:04</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1			Method:MA VPH		Analyst: TS		
Aliphatics >C6 - C8	0.164		0.100	0.100	mg/L	10	03-May-2024 12:00
Aliphatics >C8 - C10	U		0.100	0.100	mg/L	10	03-May-2024 12:00
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 03:14
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>87.5</i>			<i>70-130</i>	<i>%REC</i>	<i>10</i>	<i>03-May-2024 12:00</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>91.9</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-May-2024 03:14</i>
MASSACHUSETTS EPH R2.1, DEC 2019			Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 00:11
<i>Surr: 1-Chlorooctadecane</i>	<i>79.0</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 00:11</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>103</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 00:11</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>112</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 00:11</i>
<i>Surr: o-Terphenyl</i>	<i>77.4</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 00:11</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-500
 Collection Date: 23-Apr-2024 14:30

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	U		0.000400	0.00200	mg/L	1	01-May-2024 20:23
Barium	0.230		0.00190	0.00400	mg/L	1	01-May-2024 20:23
Calcium	165		3.40	50.0	mg/L	100	02-May-2024 14:55
Chromium	0.000775	J	0.000400	0.00400	mg/L	1	01-May-2024 20:23
Iron	6.25		0.0120	0.200	mg/L	1	01-May-2024 20:23
Lead	U		0.000600	0.00200	mg/L	1	01-May-2024 20:23
Magnesium	23.4		0.0100	0.200	mg/L	1	01-May-2024 20:23
Manganese	0.0586		0.000700	0.00500	mg/L	1	01-May-2024 20:23
Nickel	U		0.000600	0.00200	mg/L	1	01-May-2024 20:23
Potassium	20.7		0.0180	0.200	mg/L	1	01-May-2024 20:23
Sodium	671		1.40	20.0	mg/L	100	02-May-2024 14:55
Strontium	4.41		0.0200	0.500	mg/L	100	02-May-2024 14:55
Vanadium	U		0.000600	0.00500	mg/L	1	01-May-2024 20:23
Zinc	0.0160		0.00200	0.00400	mg/L	1	01-May-2024 20:23
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	01-May-2024 14:55
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	2,280		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	18.6		3.00	5.00	mg/L	1	29-Apr-2024 13:20
Alkalinity, Carbonate (As CaCO3)	U		3.00	5.00	mg/L	1	29-Apr-2024 13:20
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	7.83	H	0.100	0.100	pH Units	1	30-Apr-2024 09:16
Temp Deg C @pH	21.9	H	0	0	°C	1	30-Apr-2024 09:16
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	29-Apr-2024 08:48
Chloride	1,070		4.00	10.0	mg/L	20	29-Apr-2024 10:51
Sulfate	480		4.00	10.0	mg/L	20	29-Apr-2024 10:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-1055
 Collection Date: 23-Apr-2024 15:10

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 17:26
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 17:26
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 17:26
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 17:26
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 17:26
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 17:26
<i>Surr: 1,2-Dichloroethane-d4</i>	103			70-126	%REC	1	01-May-2024 17:26
<i>Surr: 4-Bromofluorobenzene</i>	99.3			77-113	%REC	1	01-May-2024 17:26
<i>Surr: Dibromofluoromethane</i>	99.5			77-123	%REC	1	01-May-2024 17:26
<i>Surr: Toluene-d8</i>	101			82-127	%REC	1	01-May-2024 17:26
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 03:58
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 03:58
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 03:58
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	101			70-130	%REC	1	03-May-2024 03:58
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	101			70-130	%REC	1	03-May-2024 03:58
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 00:42
<i>Surr: 1-Chlorooctadecane</i>	73.7			40-140	%REC	1	01-May-2024 00:42
<i>Surr: 2-Bromonaphthalene</i>	98.6			40-140	%REC	1	01-May-2024 00:42
<i>Surr: 2-Fluorobiphenyl</i>	106			40-140	%REC	1	01-May-2024 00:42
<i>Surr: o-Terphenyl</i>	73.2			40-140	%REC	1	01-May-2024 00:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-1055
 Collection Date: 23-Apr-2024 15:10

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	0.000483	J	0.000400	0.00200	mg/L	1	01-May-2024 20:25
Barium	0.236		0.00190	0.00400	mg/L	1	01-May-2024 20:25
Calcium	26.2		0.0340	0.500	mg/L	1	01-May-2024 20:25
Chromium	0.000408	J	0.000400	0.00400	mg/L	1	01-May-2024 20:25
Iron	2.81		0.0120	0.200	mg/L	1	01-May-2024 20:25
Lead		U	0.000600	0.00200	mg/L	1	01-May-2024 20:25
Magnesium	8.06		0.0100	0.200	mg/L	1	01-May-2024 20:25
Manganese	0.390		0.000700	0.00500	mg/L	1	01-May-2024 20:25
Nickel	0.000639	J	0.000600	0.00200	mg/L	1	01-May-2024 20:25
Potassium	2.79		0.0180	0.200	mg/L	1	01-May-2024 20:25
Sodium	31.8		0.280	4.00	mg/L	20	02-May-2024 14:33
Strontium	0.238		0.000200	0.00500	mg/L	1	01-May-2024 20:25
Vanadium		U	0.000600	0.00500	mg/L	1	01-May-2024 20:25
Zinc	0.0120		0.00200	0.00400	mg/L	1	01-May-2024 20:25
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 15:14
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	208		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	119		3.00	5.00	mg/L	1	29-Apr-2024 13:26
Alkalinity, Carbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 13:26
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	7.54	H	0.100	0.100	pH Units	1	30-Apr-2024 09:19
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:19
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 09:23
Chloride	33.2		0.200	0.500	mg/L	1	29-Apr-2024 09:23
Sulfate	3.97		0.200	0.500	mg/L	1	29-Apr-2024 09:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: Cottages
 Collection Date: 23-Apr-2024 15:40

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-10
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 17:48
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 17:48
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 17:48
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 17:48
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 17:48
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 17:48
<i>Surr: 1,2-Dichloroethane-d4</i>	98.9			70-126	%REC	1	01-May-2024 17:48
<i>Surr: 4-Bromofluorobenzene</i>	97.8			77-113	%REC	1	01-May-2024 17:48
<i>Surr: Dibromofluoromethane</i>	99.6			77-123	%REC	1	01-May-2024 17:48
<i>Surr: Toluene-d8</i>	92.8			82-127	%REC	1	01-May-2024 17:48
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 04:41
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 04:41
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 04:41
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	94.4			70-130	%REC	1	03-May-2024 04:41
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	94.9			70-130	%REC	1	03-May-2024 04:41
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 01:12
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 01:12
Aliphatics >C16 - C35	0.0433	J	0.0250	0.100	mg/L	1	01-May-2024 01:12
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 01:12
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 01:12
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 01:12
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 01:12
<i>Surr: 1-Chlorooctadecane</i>	87.5			40-140	%REC	1	01-May-2024 01:12
<i>Surr: 2-Bromonaphthalene</i>	96.4			40-140	%REC	1	01-May-2024 01:12
<i>Surr: 2-Fluorobiphenyl</i>	97.9			40-140	%REC	1	01-May-2024 01:12
<i>Surr: o-Terphenyl</i>	71.8			40-140	%REC	1	01-May-2024 01:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: Cottages
 Collection Date: 23-Apr-2024 15:40

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-10
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	U		0.000400	0.00200	mg/L	1	01-May-2024 20:27
Barium	0.211		0.00190	0.00400	mg/L	1	01-May-2024 20:27
Calcium	16.2		0.0340	0.500	mg/L	1	01-May-2024 20:27
Chromium	U		0.000400	0.00400	mg/L	1	01-May-2024 20:27
Iron	9.13		0.0120	0.200	mg/L	1	01-May-2024 20:27
Lead	U		0.000600	0.00200	mg/L	1	01-May-2024 20:27
Magnesium	4.53		0.0100	0.200	mg/L	1	01-May-2024 20:27
Manganese	0.259		0.000700	0.00500	mg/L	1	01-May-2024 20:27
Nickel	0.00185	J	0.000600	0.00200	mg/L	1	01-May-2024 20:27
Potassium	2.54		0.0180	0.200	mg/L	1	01-May-2024 20:27
Sodium	76.8		0.280	4.00	mg/L	20	02-May-2024 14:35
Strontium	0.193		0.000200	0.00500	mg/L	1	01-May-2024 20:27
Vanadium	U		0.000600	0.00500	mg/L	1	01-May-2024 20:27
Zinc	0.276		0.00200	0.00400	mg/L	1	01-May-2024 20:27
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	01-May-2024 15:21
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide	U		0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	234		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	138		3.00	5.00	mg/L	1	29-Apr-2024 13:31
Alkalinity, Carbonate (As CaCO3)	U		3.00	5.00	mg/L	1	29-Apr-2024 13:31
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide	U		1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	7.50	H	0.100	0.100	pH Units	1	30-Apr-2024 09:22
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:22
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide	0.0807	J	0.0300	0.100	mg/L	1	29-Apr-2024 09:29
Chloride	49.9		0.200	0.500	mg/L	1	29-Apr-2024 09:29
Sulfate	0.212	J	0.200	0.500	mg/L	1	29-Apr-2024 09:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-995
 Collection Date: 23-Apr-2024 16:10

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 18:09
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 18:09
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 18:09
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 18:09
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 18:09
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 18:09
<i>Surr: 1,2-Dichloroethane-d4</i>	106			70-126	%REC	1	01-May-2024 18:09
<i>Surr: 4-Bromofluorobenzene</i>	97.6			77-113	%REC	1	01-May-2024 18:09
<i>Surr: Dibromofluoromethane</i>	99.5			77-123	%REC	1	01-May-2024 18:09
<i>Surr: Toluene-d8</i>	102			82-127	%REC	1	01-May-2024 18:09
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 05:25
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 05:25
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 05:25
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	89.9			70-130	%REC	1	03-May-2024 05:25
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	90.4			70-130	%REC	1	03-May-2024 05:25
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 01:43
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 01:43
Aliphatics >C16 - C35	0.0535	J	0.0250	0.100	mg/L	1	01-May-2024 01:43
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 01:43
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 01:43
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 01:43
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 01:43
<i>Surr: 1-Chlorooctadecane</i>	86.4			40-140	%REC	1	01-May-2024 01:43
<i>Surr: 2-Bromonaphthalene</i>	104			40-140	%REC	1	01-May-2024 01:43
<i>Surr: 2-Fluorobiphenyl</i>	113			40-140	%REC	1	01-May-2024 01:43
<i>Surr: o-Terphenyl</i>	75.0			40-140	%REC	1	01-May-2024 01:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-995
 Collection Date: 23-Apr-2024 16:10

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic	0.000715	J	0.000400	0.00200	mg/L	1	01-May-2024 20:29
Barium	0.224		0.00190	0.00400	mg/L	1	01-May-2024 20:29
Calcium	25.9		0.0340	0.500	mg/L	1	01-May-2024 20:29
Chromium	0.000420	J	0.000400	0.00400	mg/L	1	01-May-2024 20:29
Iron	2.88		0.0120	0.200	mg/L	1	01-May-2024 20:29
Lead		U	0.000600	0.00200	mg/L	1	01-May-2024 20:29
Magnesium	8.01		0.0100	0.200	mg/L	1	01-May-2024 20:29
Manganese	0.399		0.000700	0.00500	mg/L	1	01-May-2024 20:29
Nickel		U	0.000600	0.00200	mg/L	1	01-May-2024 20:29
Potassium	2.69		0.0180	0.200	mg/L	1	01-May-2024 20:29
Sodium	26.3		0.280	4.00	mg/L	20	02-May-2024 14:37
Strontium	0.224		0.000200	0.00500	mg/L	1	01-May-2024 20:29
Vanadium		U	0.000600	0.00500	mg/L	1	01-May-2024 20:29
Zinc	0.00583		0.00200	0.00400	mg/L	1	01-May-2024 20:29
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 15:23
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	192		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	119		3.00	5.00	mg/L	1	29-Apr-2024 13:37
Alkalinity, Carbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 13:37
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	7.51	H	0.100	0.100	pH Units	1	30-Apr-2024 09:25
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:25
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 09:35
Chloride	23.2		0.200	0.500	mg/L	1	29-Apr-2024 09:35
Sulfate	4.26		0.200	0.500	mg/L	1	29-Apr-2024 09:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-580
 Collection Date: 23-Apr-2024 16:30

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 18:31
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 18:31
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 18:31
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 18:31
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 18:31
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 18:31
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>103</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 18:31</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>98.6</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 18:31</i>
<i>Surr: Dibromofluoromethane</i>	<i>105</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 18:31</i>
<i>Surr: Toluene-d8</i>	<i>104</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 18:31</i>
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 06:09
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 06:09
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 06:09
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	<i>87.5</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-May-2024 06:09</i>
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	<i>88.0</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>03-May-2024 06:09</i>
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 02:14
<i>Surr: 1-Chlorooctadecane</i>	<i>72.1</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 02:14</i>
<i>Surr: 2-Bromonaphthalene</i>	<i>96.9</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 02:14</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>106</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 02:14</i>
<i>Surr: o-Terphenyl</i>	<i>65.2</i>			<i>40-140</i>	<i>%REC</i>	<i>1</i>	<i>01-May-2024 02:14</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-580
 Collection Date: 23-Apr-2024 16:30

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic		U	0.000400	0.00200	mg/L	1	01-May-2024 21:08
Barium	0.208		0.00190	0.00400	mg/L	1	01-May-2024 21:08
Calcium	22.5		0.0340	0.500	mg/L	1	01-May-2024 21:08
Chromium	0.000926	J	0.000400	0.00400	mg/L	1	01-May-2024 21:08
Iron	3.57		0.0120	0.200	mg/L	1	01-May-2024 21:08
Lead	0.000870	J	0.000600	0.00200	mg/L	1	01-May-2024 21:08
Magnesium	6.97		0.0100	0.200	mg/L	1	01-May-2024 21:08
Manganese	0.370		0.000700	0.00500	mg/L	1	01-May-2024 21:08
Nickel		U	0.000600	0.00200	mg/L	1	01-May-2024 21:08
Potassium	2.44		0.0180	0.200	mg/L	1	01-May-2024 21:08
Sodium	23.9		0.0140	0.200	mg/L	1	01-May-2024 21:08
Strontium	0.196		0.000200	0.00500	mg/L	1	01-May-2024 21:08
Vanadium		U	0.000600	0.00500	mg/L	1	01-May-2024 21:08
Zinc	0.0106		0.00200	0.00400	mg/L	1	01-May-2024 21:08
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 15:25
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	182		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	112		3.00	5.00	mg/L	1	29-Apr-2024 13:42
Alkalinity, Carbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 13:42
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	7.45	H	0.100	0.100	pH Units	1	30-Apr-2024 09:27
Temp Deg C @pH	22.1	H	0	0	°C	1	30-Apr-2024 09:27
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 09:41
Chloride	22.2		0.200	0.500	mg/L	1	29-Apr-2024 09:41
Sulfate	4.39		0.200	0.500	mg/L	1	29-Apr-2024 09:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-700
 Collection Date: 24-Apr-2024 08:45

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-13
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 18:53
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 18:53
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 18:53
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 18:53
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 18:53
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 18:53
<i>Surr: 1,2-Dichloroethane-d4</i>	108			70-126	%REC	1	01-May-2024 18:53
<i>Surr: 4-Bromofluorobenzene</i>	93.8			77-113	%REC	1	01-May-2024 18:53
<i>Surr: Dibromofluoromethane</i>	105			77-123	%REC	1	01-May-2024 18:53
<i>Surr: Toluene-d8</i>	102			82-127	%REC	1	01-May-2024 18:53
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 06:53
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 06:53
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 06:53
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	92.1			70-130	%REC	1	03-May-2024 06:53
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	92.6			70-130	%REC	1	03-May-2024 06:53
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 02:45
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 02:45
Aliphatics >C16 - C35	0.275		0.0250	0.100	mg/L	1	01-May-2024 02:45
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 02:45
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 02:45
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 02:45
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 02:45
<i>Surr: 1-Chlorooctadecane</i>	87.5			40-140	%REC	1	01-May-2024 02:45
<i>Surr: 2-Bromonaphthalene</i>	99.2			40-140	%REC	1	01-May-2024 02:45
<i>Surr: 2-Fluorobiphenyl</i>	109			40-140	%REC	1	01-May-2024 02:45
<i>Surr: o-Terphenyl</i>	76.8			40-140	%REC	1	01-May-2024 02:45

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: MW-3-700
 Collection Date: 24-Apr-2024 08:45

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-13
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)			Prep:SW3010A / 29-Apr-2024		Analyst: JC
Arsenic		U	0.000800	0.00400	mg/L	2	01-May-2024 15:30
Barium	2.31		0.0380	0.0800	mg/L	20	01-May-2024 15:43
Calcium	181		0.680	10.0	mg/L	20	01-May-2024 15:43
Chromium	0.00387	J	0.000800	0.00800	mg/L	2	01-May-2024 15:30
Iron	0.274	J	0.0240	0.400	mg/L	2	01-May-2024 15:30
Lead		U	0.00120	0.00400	mg/L	2	01-May-2024 15:30
Magnesium	31.7		0.0200	0.400	mg/L	2	01-May-2024 15:30
Manganese	0.112		0.00140	0.0100	mg/L	2	01-May-2024 15:30
Nickel	0.00421		0.00120	0.00400	mg/L	2	01-May-2024 15:30
Potassium	26.2		0.0360	0.400	mg/L	2	01-May-2024 15:30
Sodium	1,100		0.280	4.00	mg/L	20	01-May-2024 15:43
Strontium	3.63		0.00400	0.100	mg/L	20	01-May-2024 15:43
Vanadium		U	0.00120	0.0100	mg/L	2	01-May-2024 15:30
Zinc		U	0.00400	0.00800	mg/L	2	01-May-2024 15:30
DISSOLVED MERCURY BY SW7470A		Method:SW7470A (dissolved)			Prep:SW7470A / 01-May-2024		Analyst: JS
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 16:17
HYDROGEN SULFIDE BY E376.1		Method:E376.1					Analyst: CD
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C					Analyst: MH
Total Dissolved Solids (Residue, Filterable)	4,800		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B					Analyst: AR
Alkalinity, Bicarbonate (As CaCO3)	29.7		3.00	5.00	mg/L	1	29-Apr-2024 13:48
Alkalinity, Carbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 13:48
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F					Analyst: CD
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B					Analyst: AR
pH	7.62	H	0.100	0.100	pH Units	1	30-Apr-2024 09:30
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:30
ANIONS BY SW9056A		Method:SW9056					Analyst: TH
Bromide	1.36		0.0300	0.100	mg/L	1	29-Apr-2024 09:47
Chloride	2,320		8.00	20.0	mg/L	40	29-Apr-2024 10:57
Sulfate	3.63		0.200	0.500	mg/L	1	29-Apr-2024 09:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-582
 Collection Date: 24-Apr-2024 09:40

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-14
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS			
Benzene	U		0.00020	0.0010	mg/L	1	01-May-2024 19:16
Ethylbenzene	U		0.00030	0.0010	mg/L	1	01-May-2024 19:16
m,p-Xylene	U		0.00050	0.0020	mg/L	1	01-May-2024 19:16
o-Xylene	U		0.00030	0.0010	mg/L	1	01-May-2024 19:16
Toluene	U		0.00020	0.0010	mg/L	1	01-May-2024 19:16
Xylenes, Total	U		0.00030	0.0030	mg/L	1	01-May-2024 19:16
<i>Surr: 1,2-Dichloroethane-d4</i>	110			70-126	%REC	1	01-May-2024 19:16
<i>Surr: 4-Bromofluorobenzene</i>	98.4			77-113	%REC	1	01-May-2024 19:16
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	1	01-May-2024 19:16
<i>Surr: Toluene-d8</i>	106			82-127	%REC	1	01-May-2024 19:16
MASSACHUSETTS VPH, FEB 2018, REV 2.1		Method:MA VPH		Analyst: TS			
Aliphatics >C6 - C8	U		0.0100	0.0100	mg/L	1	03-May-2024 07:37
Aliphatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 07:37
Aromatics >C8 - C10	U		0.0100	0.0100	mg/L	1	03-May-2024 07:37
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	96.4			70-130	%REC	1	03-May-2024 07:37
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	97.0			70-130	%REC	1	03-May-2024 07:37
MASSACHUSETTS EPH R2.1, DEC 2019		Method:MA EPH		Prep:SW3510 / 29-Apr-2024		Analyst: SAM	
Aliphatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
Aliphatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
Aliphatics >C16 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
Aromatics >C10 - C12	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
Aromatics >C12 - C16	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
Aromatics >C16 - C21	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
Aromatics >C21 - C35	U		0.0250	0.100	mg/L	1	01-May-2024 03:15
<i>Surr: 1-Chlorooctadecane</i>	76.3			40-140	%REC	1	01-May-2024 03:15
<i>Surr: 2-Bromonaphthalene</i>	98.9			40-140	%REC	1	01-May-2024 03:15
<i>Surr: 2-Fluorobiphenyl</i>	108			40-140	%REC	1	01-May-2024 03:15
<i>Surr: o-Terphenyl</i>	67.5			40-140	%REC	1	01-May-2024 03:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Environmental Resources Mgmt.
 Project: Sulphur Dome
 Sample ID: 019-582
 Collection Date: 24-Apr-2024 09:40

ANALYTICAL REPORT
 WorkOrder:HS24041854
 Lab ID:HS24041854-14
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 29-Apr-2024		Analyst: MSC	
Arsenic		U	0.000400	0.00200	mg/L	1	01-May-2024 21:10
Barium	0.189		0.00190	0.00400	mg/L	1	01-May-2024 21:10
Calcium	21.3		0.0340	0.500	mg/L	1	01-May-2024 21:10
Chromium		U	0.000400	0.00400	mg/L	1	01-May-2024 21:10
Iron	2.37		0.0120	0.200	mg/L	1	01-May-2024 21:10
Lead		U	0.000600	0.00200	mg/L	1	01-May-2024 21:10
Magnesium	6.67		0.0100	0.200	mg/L	1	01-May-2024 21:10
Manganese	0.343		0.000700	0.00500	mg/L	1	01-May-2024 21:10
Nickel		U	0.000600	0.00200	mg/L	1	01-May-2024 21:10
Potassium	2.30		0.0180	0.200	mg/L	1	01-May-2024 21:10
Sodium	22.8		0.0140	0.200	mg/L	1	01-May-2024 21:10
Strontium	0.187		0.000200	0.00500	mg/L	1	01-May-2024 21:10
Vanadium		U	0.000600	0.00500	mg/L	1	01-May-2024 21:10
Zinc	0.00814		0.00200	0.00400	mg/L	1	01-May-2024 21:10
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 01-May-2024		Analyst: JS	
Mercury		U	0.0000300	0.000200	mg/L	1	01-May-2024 15:26
HYDROGEN SULFIDE BY E376.1		Method:E376.1				Analyst: CD	
Hydrogen Sulfide		U	0.500	1.00	mg/L	1	29-Apr-2024 13:00
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C				Analyst: MH	
Total Dissolved Solids (Residue, Filterable)	180		5.00	10.0	mg/L	1	29-Apr-2024 09:00
ALKALINITY BY -2011		Method:SM2320B				Analyst: AR	
Alkalinity, Bicarbonate (As CaCO3)	110		3.00	5.00	mg/L	1	29-Apr-2024 13:54
Alkalinity, Carbonate (As CaCO3)		U	3.00	5.00	mg/L	1	29-Apr-2024 13:54
SULFIDE BY SM4500 S2-F-2011		Method:SM4500 S2-F				Analyst: CD	
Sulfide		U	1.20	2.00	mg/L	1	29-Apr-2024 12:44
PH BY SM4500H+ B-2011		Method:SM4500H+ B				Analyst: AR	
pH	7.45	H	0.100	0.100	pH Units	1	30-Apr-2024 09:32
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2024 09:32
ANIONS BY SW9056A		Method:SW9056				Analyst: TH	
Bromide		U	0.0300	0.100	mg/L	1	29-Apr-2024 09:53
Chloride	28.4		0.200	0.500	mg/L	1	29-Apr-2024 09:53
Sulfate	4.17		0.200	0.500	mg/L	1	29-Apr-2024 09:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Weight / Prep Log

Client: Environmental Resources Mgmt.

Project: Sulphur Dome

WorkOrder: HS24041854

Batch ID: 211170	Start Date: 29 Apr 2024 08:30	End Date: 29 Apr 2024 08:30
Method: DISS METALS PREP - WATER - SW3010A		Prep Code: 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24041854-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-13		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 211177	Start Date: 29 Apr 2024 11:00	End Date: 29 Apr 2024 11:00
Method: WATER - SW3010A		Prep Code: 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24041854-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-14		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 211188	Start Date: 29 Apr 2024 12:50	End Date: 29 Apr 2024 12:50
Method: MA EPH EXTRACTION-FRACTIONATION		Prep Code: MA EPH_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24041854-01	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-02	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-03	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-04	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-05	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-06	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-07	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-08	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-09	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-10	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-11	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-12	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-13	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2
HS24041854-14	1	1000 (mL)	2 (mL)	0.002	1-liter amber glass, HCl to pH <2

Batch ID: 211313	Start Date: 01 May 2024 09:00	End Date: 01 May 2024 09:00
Method: MERCURY PREP BY 7470A- WATER		Prep Code: HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24041854-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-08		10 (mL)	10 (mL)	1	120 plastic HNO3

Weight / Prep Log

Client: Environmental Resources Mgmt.

Project: Sulphur Dome

WorkOrder: HS24041854

Batch ID: 211320	Start Date: 01 May 2024 09:00	End Date: 01 May 2024 09:00
Method: MERCURY PREP BY 7470A- WATER		Prep Code: HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24041854-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-14		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 211322	Start Date: 01 May 2024 09:30	End Date: 01 May 2024 09:30
Method: MERCURY PREP BY 7470A - DISSOLVED		Prep Code: HG_W_DISSPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24041854-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS24041854-13		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 211170 (0)		Test Name : DISSOLVED METALS BY SW6020A			Matrix: Water	
HS24041854-04	MW-2-500	22 Apr 2024 17:00		29 Apr 2024 08:30	30 Apr 2024 22:55	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55		29 Apr 2024 08:30	30 Apr 2024 23:10	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15		29 Apr 2024 08:30	30 Apr 2024 23:12	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15		29 Apr 2024 08:30	30 Apr 2024 23:14	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45		29 Apr 2024 08:30	01 May 2024 15:43	20
HS24041854-13	MW-3-700	24 Apr 2024 08:45		29 Apr 2024 08:30	01 May 2024 15:30	2
Batch ID: 211177 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40		29 Apr 2024 11:00	02 May 2024 14:29	20
HS24041854-01	MW-1-200	22 Apr 2024 11:40		29 Apr 2024 11:00	01 May 2024 20:19	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30		29 Apr 2024 11:00	01 May 2024 19:54	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45		29 Apr 2024 11:00	02 May 2024 14:31	100
HS24041854-03	MW-1-700	22 Apr 2024 14:45		29 Apr 2024 11:00	01 May 2024 20:21	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30		29 Apr 2024 11:00	02 May 2024 14:55	100
HS24041854-08	MW-3-500	23 Apr 2024 14:30		29 Apr 2024 11:00	01 May 2024 20:23	1
HS24041854-09	019-1055	23 Apr 2024 15:10		29 Apr 2024 11:00	02 May 2024 14:33	20
HS24041854-09	019-1055	23 Apr 2024 15:10		29 Apr 2024 11:00	01 May 2024 20:25	1
HS24041854-10	Cottages	23 Apr 2024 15:40		29 Apr 2024 11:00	02 May 2024 14:35	20
HS24041854-10	Cottages	23 Apr 2024 15:40		29 Apr 2024 11:00	01 May 2024 20:27	1
HS24041854-11	019-995	23 Apr 2024 16:10		29 Apr 2024 11:00	02 May 2024 14:37	20
HS24041854-11	019-995	23 Apr 2024 16:10		29 Apr 2024 11:00	01 May 2024 20:29	1
HS24041854-12	019-580	23 Apr 2024 16:30		29 Apr 2024 11:00	01 May 2024 21:08	1
HS24041854-14	019-582	24 Apr 2024 09:40		29 Apr 2024 11:00	01 May 2024 21:10	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 211188 (0)		Test Name : MASSACHUSETTS EPH R2.1, DEC 2019			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40		29 Apr 2024 12:50	30 Apr 2024 19:33	1
HS24041854-01	MW-1-200	22 Apr 2024 11:40		29 Apr 2024 12:50	30 Apr 2024 19:33	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30		29 Apr 2024 12:50	30 Apr 2024 20:04	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30		29 Apr 2024 12:50	30 Apr 2024 20:04	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45		29 Apr 2024 12:50	30 Apr 2024 20:35	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45		29 Apr 2024 12:50	30 Apr 2024 20:35	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00		29 Apr 2024 12:50	30 Apr 2024 21:05	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00		29 Apr 2024 12:50	30 Apr 2024 21:05	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55		29 Apr 2024 12:50	30 Apr 2024 21:37	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55		29 Apr 2024 12:50	30 Apr 2024 21:37	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15		29 Apr 2024 12:50	30 Apr 2024 22:08	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15		29 Apr 2024 12:50	30 Apr 2024 22:08	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15		29 Apr 2024 12:50	30 Apr 2024 22:38	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15		29 Apr 2024 12:50	30 Apr 2024 22:38	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30		29 Apr 2024 12:50	01 May 2024 00:11	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30		29 Apr 2024 12:50	01 May 2024 00:11	1
HS24041854-09	019-1055	23 Apr 2024 15:10		29 Apr 2024 12:50	01 May 2024 00:42	1
HS24041854-09	019-1055	23 Apr 2024 15:10		29 Apr 2024 12:50	01 May 2024 00:42	1
HS24041854-10	Cottages	23 Apr 2024 15:40		29 Apr 2024 12:50	01 May 2024 01:12	1
HS24041854-10	Cottages	23 Apr 2024 15:40		29 Apr 2024 12:50	01 May 2024 01:12	1
HS24041854-11	019-995	23 Apr 2024 16:10		29 Apr 2024 12:50	01 May 2024 01:43	1
HS24041854-11	019-995	23 Apr 2024 16:10		29 Apr 2024 12:50	01 May 2024 01:43	1
HS24041854-12	019-580	23 Apr 2024 16:30		29 Apr 2024 12:50	01 May 2024 02:14	1
HS24041854-12	019-580	23 Apr 2024 16:30		29 Apr 2024 12:50	01 May 2024 02:14	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45		29 Apr 2024 12:50	01 May 2024 02:45	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45		29 Apr 2024 12:50	01 May 2024 02:45	1
HS24041854-14	019-582	24 Apr 2024 09:40		29 Apr 2024 12:50	01 May 2024 03:15	1
HS24041854-14	019-582	24 Apr 2024 09:40		29 Apr 2024 12:50	01 May 2024 03:15	1
Batch ID: 211313 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40		01 May 2024 09:00	01 May 2024 14:50	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30		01 May 2024 09:00	01 May 2024 14:51	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45		01 May 2024 09:00	01 May 2024 14:53	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30		01 May 2024 09:00	01 May 2024 14:55	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 211320 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS24041854-09	019-1055	23 Apr 2024 15:10		01 May 2024 09:00	01 May 2024 15:14	1
HS24041854-10	Cottages	23 Apr 2024 15:40		01 May 2024 09:00	01 May 2024 15:21	1
HS24041854-11	019-995	23 Apr 2024 16:10		01 May 2024 09:00	01 May 2024 15:23	1
HS24041854-12	019-580	23 Apr 2024 16:30		01 May 2024 09:00	01 May 2024 15:25	1
HS24041854-14	019-582	24 Apr 2024 09:40		01 May 2024 09:00	01 May 2024 15:26	1
Batch ID: 211322 (0)		Test Name : DISSOLVED MERCURY BY SW7470A			Matrix: Water	
HS24041854-04	MW-2-500	22 Apr 2024 17:00		01 May 2024 09:30	01 May 2024 16:07	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55		01 May 2024 09:30	01 May 2024 16:12	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15		01 May 2024 09:30	01 May 2024 16:14	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15		01 May 2024 09:30	01 May 2024 16:16	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45		01 May 2024 09:30	01 May 2024 16:17	1
Batch ID: R465349 (0)		Test Name : SULFIDE BY SM4500 S2-F-2011			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			29 Apr 2024 12:44	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			29 Apr 2024 12:44	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			29 Apr 2024 12:44	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			29 Apr 2024 12:44	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			29 Apr 2024 12:44	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			29 Apr 2024 12:44	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			29 Apr 2024 12:44	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			29 Apr 2024 12:44	1
HS24041854-09	019-1055	23 Apr 2024 15:10			29 Apr 2024 12:44	1
HS24041854-10	Cottages	23 Apr 2024 15:40			29 Apr 2024 12:44	1
HS24041854-11	019-995	23 Apr 2024 16:10			29 Apr 2024 12:44	1
HS24041854-12	019-580	23 Apr 2024 16:30			29 Apr 2024 12:44	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			29 Apr 2024 12:44	1
HS24041854-14	019-582	24 Apr 2024 09:40			29 Apr 2024 12:44	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R465352 (0)		Test Name : HYDROGEN SULFIDE BY E376.1			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			29 Apr 2024 13:00	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			29 Apr 2024 13:00	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			29 Apr 2024 13:00	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			29 Apr 2024 13:00	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			29 Apr 2024 13:00	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			29 Apr 2024 13:00	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			29 Apr 2024 13:00	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			29 Apr 2024 13:00	1
HS24041854-09	019-1055	23 Apr 2024 15:10			29 Apr 2024 13:00	1
HS24041854-10	Cottages	23 Apr 2024 15:40			29 Apr 2024 13:00	1
HS24041854-11	019-995	23 Apr 2024 16:10			29 Apr 2024 13:00	1
HS24041854-12	019-580	23 Apr 2024 16:30			29 Apr 2024 13:00	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			29 Apr 2024 13:00	1
HS24041854-14	019-582	24 Apr 2024 09:40			29 Apr 2024 13:00	1
Batch ID: R465386 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			29 Apr 2024 09:00	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			29 Apr 2024 09:00	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			29 Apr 2024 09:00	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			29 Apr 2024 09:00	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			29 Apr 2024 09:00	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			29 Apr 2024 09:00	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			29 Apr 2024 09:00	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			29 Apr 2024 09:00	1
HS24041854-09	019-1055	23 Apr 2024 15:10			29 Apr 2024 09:00	1
HS24041854-10	Cottages	23 Apr 2024 15:40			29 Apr 2024 09:00	1
HS24041854-11	019-995	23 Apr 2024 16:10			29 Apr 2024 09:00	1
HS24041854-12	019-580	23 Apr 2024 16:30			29 Apr 2024 09:00	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			29 Apr 2024 09:00	1
HS24041854-14	019-582	24 Apr 2024 09:40			29 Apr 2024 09:00	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R465407 (0)		Test Name : ANIONS BY SW9056A			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			29 Apr 2024 08:06	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			29 Apr 2024 08:12	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			29 Apr 2024 08:18	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			29 Apr 2024 08:24	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			29 Apr 2024 10:16	2
HS24041854-05	MW-2-200	23 Apr 2024 08:55			29 Apr 2024 08:30	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			29 Apr 2024 10:22	2
HS24041854-06	MW-2-700	23 Apr 2024 10:15			29 Apr 2024 08:36	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			29 Apr 2024 08:42	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			29 Apr 2024 10:51	20
HS24041854-08	MW-3-500	23 Apr 2024 14:30			29 Apr 2024 08:48	1
HS24041854-09	019-1055	23 Apr 2024 15:10			29 Apr 2024 09:23	1
HS24041854-10	Cottages	23 Apr 2024 15:40			29 Apr 2024 09:29	1
HS24041854-11	019-995	23 Apr 2024 16:10			29 Apr 2024 09:35	1
HS24041854-12	019-580	23 Apr 2024 16:30			29 Apr 2024 09:41	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			29 Apr 2024 10:57	40
HS24041854-13	MW-3-700	24 Apr 2024 08:45			29 Apr 2024 09:47	1
HS24041854-14	019-582	24 Apr 2024 09:40			29 Apr 2024 09:53	1
Batch ID: R465432 (0)		Test Name : ALKALINITY BY -2011			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			29 Apr 2024 12:26	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			29 Apr 2024 12:37	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			29 Apr 2024 12:42	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			29 Apr 2024 12:47	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			29 Apr 2024 12:54	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			29 Apr 2024 13:10	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			29 Apr 2024 13:15	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			29 Apr 2024 13:20	1
HS24041854-09	019-1055	23 Apr 2024 15:10			29 Apr 2024 13:26	1
HS24041854-10	Cottages	23 Apr 2024 15:40			29 Apr 2024 13:31	1
HS24041854-11	019-995	23 Apr 2024 16:10			29 Apr 2024 13:37	1
HS24041854-12	019-580	23 Apr 2024 16:30			29 Apr 2024 13:42	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			29 Apr 2024 13:48	1
HS24041854-14	019-582	24 Apr 2024 09:40			29 Apr 2024 13:54	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R465459 (0)		Test Name : PH BY SM4500H+ B-2011			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			30 Apr 2024 08:57	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			30 Apr 2024 08:59	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			30 Apr 2024 09:01	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			30 Apr 2024 09:03	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			30 Apr 2024 09:10	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			30 Apr 2024 09:12	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			30 Apr 2024 09:14	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			30 Apr 2024 09:16	1
HS24041854-09	019-1055	23 Apr 2024 15:10			30 Apr 2024 09:19	1
HS24041854-10	Cottages	23 Apr 2024 15:40			30 Apr 2024 09:22	1
HS24041854-11	019-995	23 Apr 2024 16:10			30 Apr 2024 09:25	1
HS24041854-12	019-580	23 Apr 2024 16:30			30 Apr 2024 09:27	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			30 Apr 2024 09:30	1
HS24041854-14	019-582	24 Apr 2024 09:40			30 Apr 2024 09:32	1
Batch ID: R465602 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			01 May 2024 12:24	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			01 May 2024 09:04	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			01 May 2024 11:41	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			01 May 2024 09:26	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			01 May 2024 09:47	1
Batch ID: R465671 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24041854-05	MW-2-200	23 Apr 2024 08:55			01 May 2024 16:21	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			01 May 2024 16:43	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			01 May 2024 17:04	1
HS24041854-09	019-1055	23 Apr 2024 15:10			01 May 2024 17:26	1
HS24041854-10	Cottages	23 Apr 2024 15:40			01 May 2024 17:48	1
HS24041854-11	019-995	23 Apr 2024 16:10			01 May 2024 18:09	1
HS24041854-12	019-580	23 Apr 2024 16:30			01 May 2024 18:31	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			01 May 2024 18:53	1
HS24041854-14	019-582	24 Apr 2024 09:40			01 May 2024 19:16	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R465787 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			02 May 2024 20:39	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			02 May 2024 21:23	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			02 May 2024 22:07	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			02 May 2024 22:51	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			02 May 2024 23:34	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			03 May 2024 00:18	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			03 May 2024 01:02	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			03 May 2024 12:00	10
HS24041854-09	019-1055	23 Apr 2024 15:10			03 May 2024 03:58	1
HS24041854-10	Cottages	23 Apr 2024 15:40			03 May 2024 04:41	1
HS24041854-11	019-995	23 Apr 2024 16:10			03 May 2024 05:25	1
HS24041854-12	019-580	23 Apr 2024 16:30			03 May 2024 06:09	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			03 May 2024 06:53	1
HS24041854-14	019-582	24 Apr 2024 09:40			03 May 2024 07:37	1
Batch ID: R465788 (0)		Test Name : MASSACHUSETTS VPH, FEB 2018, REV 2.1			Matrix: Water	
HS24041854-01	MW-1-200	22 Apr 2024 11:40			02 May 2024 20:39	1
HS24041854-02	MW-1-500	22 Apr 2024 13:30			02 May 2024 21:23	1
HS24041854-03	MW-1-700	22 Apr 2024 14:45			02 May 2024 22:07	1
HS24041854-04	MW-2-500	22 Apr 2024 17:00			02 May 2024 22:51	1
HS24041854-05	MW-2-200	23 Apr 2024 08:55			02 May 2024 23:34	1
HS24041854-06	MW-2-700	23 Apr 2024 10:15			03 May 2024 00:18	1
HS24041854-07	MW-3-200	23 Apr 2024 12:15			03 May 2024 01:02	1
HS24041854-08	MW-3-500	23 Apr 2024 14:30			03 May 2024 03:14	1
HS24041854-09	019-1055	23 Apr 2024 15:10			03 May 2024 03:58	1
HS24041854-10	Cottages	23 Apr 2024 15:40			03 May 2024 04:41	1
HS24041854-11	019-995	23 Apr 2024 16:10			03 May 2024 05:25	1
HS24041854-12	019-580	23 Apr 2024 16:30			03 May 2024 06:09	1
HS24041854-13	MW-3-700	24 Apr 2024 08:45			03 May 2024 06:53	1
HS24041854-14	019-582	24 Apr 2024 09:40			03 May 2024 07:37	1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211188 (0)		Instrument: FID-8		Method: MASSACHUSETTS EPH R2.1, DEC 2019						
MBLK	Sample ID: MBLK-211188	Units: mg/L			Analysis Date: 30-Apr-2024 18:00					
Client ID:	Run ID: FID-8_465688	SeqNo: 7987380		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Aliphatics >C10 - C12	U	0.100								
Aliphatics >C12 - C16	U	0.100								
Aliphatics >C16 - C35	U	0.100								
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02883</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>72.1</i>	<i>40 - 140</i>				
MBLK	Sample ID: MBLK-211188	Units: mg/L			Analysis Date: 30-Apr-2024 18:00					
Client ID:	Run ID: FID-7_465690	SeqNo: 7987536		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Aromatics >C10 - C12	U	0.100								
Aromatics >C12 - C16	U	0.100								
Aromatics >C16 - C21	U	0.100								
Aromatics >C21 - C35	U	0.100								
<i>Surr: 2-Bromonaphthalene</i>	<i>0.04035</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>101</i>	<i>40 - 140</i>				
<i>Surr: 2-Fluorobiphenyl</i>	<i>0.04312</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>108</i>	<i>40 - 140</i>				
<i>Surr: o-Terphenyl</i>	<i>0.02777</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>69.4</i>	<i>40 - 140</i>				
LCS	Sample ID: LCS-211188	Units: mg/L			Analysis Date: 01-May-2024 12:40					
Client ID:	Run ID: FID-8_465688	SeqNo: 7987376		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Aliphatics >C10 - C12	0.04911	0.100	0.05	0	98.2	40 - 140			J	
Aliphatics >C12 - C16	0.1122	0.100	0.1	0	112	40 - 140				
Aliphatics >C16 - C35	0.4167	0.100	0.4	0	104	40 - 140				
<i>Surr: 1-Chlorooctadecane</i>	<i>0.02823</i>	<i>0</i>	<i>0.04</i>	<i>0</i>	<i>70.6</i>	<i>40 - 140</i>				

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211188 (0)		Instrument: FID-8		Method: MASSACHUSETTS EPH R2.1, DEC 2019						
LCS	Sample ID: LCS-211188	Units: mg/L			Analysis Date: 01-May-2024 12:40					
Client ID:	Run ID: FID-7_465690	SeqNo: 7987532		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.04999	0.100	0.05	0	100.0	40 - 140				J
Aromatics >C12 - C16	0.2178	0.100	0.2	0	109	40 - 140				
Aromatics >C16 - C21	0.1801	0.100	0.15	0	120	40 - 140				
Aromatics >C21 - C35	0.4691	0.100	0.45	0	104	40 - 140				
Surr: 2-Bromonaphthalene	0.03131	0	0.04	0	78.3	40 - 140				
Surr: 2-Fluorobiphenyl	0.03322	0	0.04	0	83.0	40 - 140				
Surr: o-Terphenyl	0.02678	0	0.04	0	67.0	40 - 140				

LCSD	Sample ID: LCSD-211188	Units: mg/L			Analysis Date: 01-May-2024 13:11					
Client ID:	Run ID: FID-8_465688	SeqNo: 7987377		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aliphatics >C10 - C12	0.05568	0.100	0.05	0	111	40 - 140	0.04911	0	50	J
Aliphatics >C12 - C16	0.1259	0.100	0.1	0	126	40 - 140	0.1122	11.5	50	
Aliphatics >C16 - C35	0.4699	0.100	0.4	0	117	40 - 140	0.4167	12	50	
Surr: 1-Chlorooctadecane	0.03032	0	0.04	0	75.8	40 - 140	0.02823	7.12	50	

LCSD	Sample ID: LCSD-211188	Units: mg/L			Analysis Date: 01-May-2024 13:11					
Client ID:	Run ID: FID-7_465690	SeqNo: 7987533		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aromatics >C10 - C12	0.05296	0.100	0.05	0	106	40 - 140	0.04999	0	50	J
Aromatics >C12 - C16	0.2279	0.100	0.2	0	114	40 - 140	0.2178	4.55	50	
Aromatics >C16 - C21	0.1869	0.100	0.15	0	125	40 - 140	0.1801	3.69	50	
Aromatics >C21 - C35	0.4888	0.100	0.45	0	109	40 - 140	0.4691	4.11	50	
Surr: 2-Bromonaphthalene	0.03123	0	0.04	0	78.1	40 - 140	0.03131	0.247	50	
Surr: 2-Fluorobiphenyl	0.03312	0	0.04	0	82.8	40 - 140	0.03322	0.298	50	
Surr: o-Terphenyl	0.02661	0	0.04	0	66.5	40 - 140	0.02678	0.663	50	

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465787 (0) **Instrument:** FID-14 **Method:** MASSACHUSETTS VPH, FEB 2018, REV 2.1

MBLK		Sample ID: MBLK-240430		Units: mg/L		Analysis Date: 02-May-2024 19:55			
Client ID:		Run ID: FID-14_465787		SeqNo: 7989814		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aliphatics >C6 - C8	U	0.0100							
Aliphatics >C8 - C10	U	0.0100							
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	0.2219	0.0100	0.25	0	88.8	70 - 130			

LCS		Sample ID: LCS-240430		Units: mg/L		Analysis Date: 02-May-2024 18:28			
Client ID:		Run ID: FID-14_465787		SeqNo: 7989812		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aliphatics >C6 - C8	0.02362	0.0100	0.025	0	94.5	70 - 130			
Aliphatics >C8 - C10	0.02556	0.0100	0.025	0	102	70 - 130			
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	0.2358	0.0100	0.25	0	94.3	70 - 130			

LCSD		Sample ID: LCSD-240430		Units: mg/L		Analysis Date: 02-May-2024 19:12			
Client ID:		Run ID: FID-14_465787		SeqNo: 7989813		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Aliphatics >C6 - C8	0.02291	0.0100	0.025	0	91.6	70 - 130	0.02362	3.03	25
Aliphatics >C8 - C10	0.02545	0.0100	0.025	0	102	70 - 130	0.02556	0.455	25
<i>Surr: 2,5-Dibromotoluene (Aliphatic)</i>	0.2474	0.0100	0.25	0	99.0	70 - 130	0.2358	4.79	25

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465788 (0)		Instrument: FID-15		Method: MASSACHUSETTS VPH, FEB 2018, REV 2.1					
MBLK	Sample ID: MBLK-240430	Units: mg/L			Analysis Date: 02-May-2024 19:55				
Client ID:	Run ID: FID-15_465788	SeqNo: 7989834		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Aromatics >C8 - C10	U	0.0100							
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.2231	0.0100	0.25	0	89.2	70 - 130			

LCS	Sample ID: LCS-240430	Units: mg/L			Analysis Date: 02-May-2024 18:28				
Client ID:	Run ID: FID-15_465788	SeqNo: 7989832		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Aromatics >C8 - C10	0.1001	0.0100	0.1	0	100	70 - 130			
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.214	0.0100	0.25	0	85.6	70 - 130			

LCSD	Sample ID: LCSD-240430	Units: mg/L			Analysis Date: 02-May-2024 19:12				
Client ID:	Run ID: FID-15_465788	SeqNo: 7989833		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Aromatics >C8 - C10	0.1009	0.0100	0.1	0	101	70 - 130	0.1001	0.777	25
<i>Surr: 2,5-Dibromotoluene (Aromatic)</i>	0.2267	0.0100	0.25	0	90.7	70 - 130	0.214	5.77	25

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211170 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
MBLK	Sample ID: MBLK-211170	Units: mg/L			Analysis Date: 30-Apr-2024 22:51					
Client ID:	Run ID: ICPMS06_465466	SeqNo: 7983807		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00200								
Barium	U	0.00400								
Calcium	U	0.500								
Chromium	U	0.00400								
Iron	U	0.200								
Lead	U	0.00200								
Magnesium	U	0.200								
Manganese	U	0.00500								
Nickel	U	0.00200								
Potassium	U	0.200								
Sodium	0.05205	0.200								J
Strontium	U	0.00500								
Vanadium	U	0.00500								
Zinc	U	0.00400								

LCS	Sample ID: LCS-211170	Units: mg/L			Analysis Date: 30-Apr-2024 22:53					
Client ID:	Run ID: ICPMS06_465466	SeqNo: 7983808		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04709	0.00200	0.05	0	94.2	80 - 120				
Barium	0.04956	0.00400	0.05	0	99.1	80 - 120				
Calcium	5.167	0.500	5	0	103	80 - 120				
Chromium	0.04879	0.00400	0.05	0	97.6	80 - 120				
Iron	4.854	0.200	5	0	97.1	80 - 120				
Lead	0.04781	0.00200	0.05	0	95.6	80 - 120				
Magnesium	4.76	0.200	5	0	95.2	80 - 120				
Manganese	0.04964	0.00500	0.05	0	99.3	80 - 120				
Nickel	0.04956	0.00200	0.05	0	99.1	80 - 120				
Potassium	4.717	0.200	5	0	94.3	80 - 120				
Sodium	4.692	0.200	5	0	93.8	80 - 120				
Strontium	0.09278	0.00500	0.1	0	92.8	80 - 120				
Vanadium	0.0486	0.00500	0.05	0	97.2	80 - 120				
Zinc	0.04736	0.00400	0.05	0	94.7	80 - 120				

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211170 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
MS		Sample ID: HS24041854-04MS		Units: mg/L		Analysis Date: 30-Apr-2024 22:59				
Client ID: MW-2-500		Run ID: ICPMS06_465466		SeqNo: 7983811		PrepDate: 29-Apr-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Arsenic	0.04969	0.00200	0.05	0.003514	92.3	75 - 125				
Barium	0.1874	0.00400	0.05	0.1378	99.1	75 - 125				
Calcium	23.93	0.500	5	19.98	79.0	75 - 125				
Chromium	0.04698	0.00400	0.05	0.000545	92.9	75 - 125				
Iron	5.121	0.200	5	0.5302	91.8	75 - 125				
Lead	0.04664	0.00200	0.05	0	93.3	75 - 125				
Magnesium	8.525	0.200	5	4.118	88.2	75 - 125				
Manganese	0.124	0.00500	0.05	0.08021	87.6	75 - 125				
Nickel	0.04669	0.00200	0.05	0	93.4	75 - 125				
Potassium	7.612	0.200	5	3.136	89.5	75 - 125				
Sodium	64.66	0.200	5	59.9	95.2	75 - 125			O	
Strontium	0.3404	0.00500	0.1	0.2416	98.7	75 - 125				
Vanadium	0.04755	0.00500	0.05	0	95.1	75 - 125				
Zinc	0.04856	0.00400	0.05	0	97.1	75 - 125				

MSD		Sample ID: HS24041854-04MSD		Units: mg/L		Analysis Date: 30-Apr-2024 23:01			
Client ID: MW-2-500		Run ID: ICPMS06_465466		SeqNo: 7983812		PrepDate: 29-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.05063	0.00200	0.05	0.003514	94.2	75 - 125	0.04969	1.87	20
Barium	0.1869	0.00400	0.05	0.1378	98.3	75 - 125	0.1874	0.223	20
Calcium	24.41	0.500	5	19.98	88.6	75 - 125	23.93	1.99	20
Chromium	0.04802	0.00400	0.05	0.000545	95.0	75 - 125	0.04698	2.19	20
Iron	5.246	0.200	5	0.5302	94.3	75 - 125	5.121	2.41	20
Lead	0.04746	0.00200	0.05	0	94.9	75 - 125	0.04664	1.74	20
Magnesium	8.636	0.200	5	4.118	90.4	75 - 125	8.525	1.29	20
Manganese	0.1275	0.00500	0.05	0.08021	94.6	75 - 125	0.124	2.75	20
Nickel	0.04774	0.00200	0.05	0	95.5	75 - 125	0.04669	2.22	20
Potassium	7.802	0.200	5	3.136	93.3	75 - 125	7.612	2.45	20
Sodium	65.59	0.200	5	59.9	114	75 - 125	64.66	1.43	20 O
Strontium	0.3352	0.00500	0.1	0.2416	93.6	75 - 125	0.3404	1.52	20
Vanadium	0.04843	0.00500	0.05	0	96.9	75 - 125	0.04755	1.83	20
Zinc	0.04963	0.00400	0.05	0	99.3	75 - 125	0.04856	2.18	20

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211170 (0)		Instrument: ICPMS06			Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
PDS		Sample ID: HS24041854-04PDS			Units: mg/L		Analysis Date: 30-Apr-2024 23:02			
Client ID: MW-2-500		Run ID: ICPMS06_465466			SeqNo: 7983813		PrepDate: 29-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1015	0.00200	0.1	0.003514	98.0	75 - 125				
Barium	0.2353	0.00400	0.1	0.1378	97.5	75 - 125				
Calcium	29.87	0.500	10	19.98	98.9	75 - 125				
Chromium	0.0949	0.00400	0.1	0.000545	94.4	75 - 125				
Iron	10.36	0.200	10	0.5302	98.3	75 - 125				
Lead	0.09764	0.00200	0.1	0	97.6	75 - 125				
Magnesium	13.61	0.200	10	4.118	94.9	75 - 125				
Manganese	0.1812	0.00500	0.1	0.08021	101	75 - 125				
Nickel	0.09861	0.00200	0.1	0	98.6	75 - 125				
Potassium	12.77	0.200	10	3.136	96.3	75 - 125				
Sodium	70.9	0.200	10	59.9	110	75 - 125				O
Strontium	0.4328	0.00500	0.2	0.2416	95.6	75 - 125				
Vanadium	0.09516	0.00500	0.1	0	95.2	75 - 125				
Zinc	0.1072	0.00400	0.1	0	107	75 - 125				

SD		Sample ID: HS24041854-04SD			Units: mg/L		Analysis Date: 30-Apr-2024 22:57			
Client ID: MW-2-500		Run ID: ICPMS06_465466			SeqNo: 7983810		PrepDate: 29-Apr-2024		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit	Qual
Arsenic	0.003683	0.0100					0.003514	0	10	J
Barium	0.1422	0.0200					0.1378	3.17	10	
Calcium	20.94	2.50					19.98	4.8	10	
Chromium	U	0.0200					0.000545	0	10	
Iron	0.5637	1.00					0.5302	0	10	J
Lead	U	0.0100					0.000068	0	10	
Magnesium	4.328	1.00					4.118	5.1	10	
Manganese	0.08613	0.0250					0.08021	7.38	10	
Nickel	U	0.0100					0.000311	0	10	
Potassium	3.227	1.00					3.136	2.9	10	
Sodium	62.59	1.00					59.9	4.48	10	
Strontium	0.2471	0.0250					0.2416	2.27	10	
Vanadium	U	0.0250					0.000208	0	10	
Zinc	U	0.0200					0.001835	0	10	

The following samples were analyzed in this batch:

HS24041854-04	HS24041854-05	HS24041854-06	HS24041854-07
HS24041854-13			

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211177 (0)		Instrument: ICPMS05		Method: ICP-MS METALS BY SW6020A						
MBLK	Sample ID: MBLK-211177	Units: mg/L			Analysis Date: 01-May-2024 19:50					
Client ID:	Run ID: ICPMS05_465468	SeqNo: 7986652		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00200								
Barium	U	0.00400								
Calcium	U	0.500								
Chromium	U	0.00400								
Iron	0.01517	0.200								J
Lead	U	0.00200								
Magnesium	0.01607	0.200								J
Manganese	U	0.00500								
Nickel	U	0.00200								
Potassium	U	0.200								
Sodium	0.04695	0.200								J
Strontium	0.000323	0.00500								J
Vanadium	U	0.00500								
Zinc	U	0.00400								

LCS	Sample ID: LCS-211177	Units: mg/L			Analysis Date: 02-May-2024 13:44					
Client ID:	Run ID: ICPMS05_465712	SeqNo: 7988095		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05132	0.00200	0.05	0	103	80 - 120				
Barium	0.04941	0.00400	0.05	0	98.8	80 - 120				
Calcium	5.165	0.500	5	0	103	80 - 120				
Chromium	0.05236	0.00400	0.05	0	105	80 - 120				
Iron	5.228	0.200	5	0	105	80 - 120				
Lead	0.04884	0.00200	0.05	0	97.7	80 - 120				
Magnesium	5.311	0.200	5	0	106	80 - 120				
Manganese	0.05117	0.00500	0.05	0	102	80 - 120				
Nickel	0.05145	0.00200	0.05	0	103	80 - 120				
Potassium	5.162	0.200	5	0	103	80 - 120				
Vanadium	0.05162	0.00500	0.05	0	103	80 - 120				
Zinc	0.05292	0.00400	0.05	0	106	80 - 120				

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211177 (0) **Instrument:** ICPMS05 **Method:** ICP-MS METALS BY SW6020A

LCS		Sample ID: LCS-211177			Units: mg/L		Analysis Date: 02-May-2024 14:53			
Client ID:		Run ID: ICPMS06_465687			SeqNo: 7988353		PrepDate: 29-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	4.159	0.200	5	0	83.2	80 - 120				
Strontium	0.0889	0.00500	0.1	0	88.9	80 - 120				

MS		Sample ID: HS24041854-02MS			Units: mg/L		Analysis Date: 01-May-2024 19:58			
Client ID: MW-1-500		Run ID: ICPMS05_465468			SeqNo: 7986656		PrepDate: 29-Apr-2024		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05429	0.00200	0.05	0.004312	100.0	80 - 120				
Barium	0.1804	0.00400	0.05	0.128	105	80 - 120				
Calcium	25.24	0.500	5	20.19	101	80 - 120				O
Chromium	0.05041	0.00400	0.05	0.000314	100	80 - 120				
Iron	6.897	0.200	5	1.907	99.8	80 - 120				
Lead	0.05121	0.00200	0.05	0.000548	101	80 - 120				
Magnesium	10.36	0.200	5	5.28	102	80 - 120				
Manganese	0.1225	0.00500	0.05	0.07246	100	80 - 120				
Nickel	0.05069	0.00200	0.05	0.000461	100	80 - 120				
Potassium	8.326	0.200	5	3.281	101	80 - 120				
Sodium	75.58	0.200	5	69.92	113	80 - 120				O
Strontium	0.361	0.00500	0.1	0.2588	102	80 - 120				
Vanadium	0.0503	0.00500	0.05	0.000249	100	80 - 120				
Zinc	0.05562	0.00400	0.05	0.004886	101	80 - 120				

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211177 (0)		Instrument: ICPMS05			Method: ICP-MS METALS BY SW6020A					
MSD	Sample ID: HS24041854-02MSD	Units: mg/L			Analysis Date: 01-May-2024 20:00					
Client ID: MW-1-500	Run ID: ICPMS05_465468	SeqNo: 7986657		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05522	0.00200	0.05	0.004312	102	80 - 120	0.05429	1.71	20	
Barium	0.1807	0.00400	0.05	0.128	106	80 - 120	0.1804	0.169	20	
Calcium	25.35	0.500	5	20.19	103	80 - 120	25.24	0.446	20	O
Chromium	0.04992	0.00400	0.05	0.000314	99.2	80 - 120	0.05041	0.969	20	
Iron	6.881	0.200	5	1.907	99.5	80 - 120	6.897	0.231	20	
Lead	0.0516	0.00200	0.05	0.000548	102	80 - 120	0.05121	0.755	20	
Magnesium	10.12	0.200	5	5.28	96.9	80 - 120	10.36	2.26	20	
Manganese	0.1216	0.00500	0.05	0.07246	98.4	80 - 120	0.1225	0.695	20	
Nickel	0.05007	0.00200	0.05	0.000461	99.2	80 - 120	0.05069	1.22	20	
Potassium	8.199	0.200	5	3.281	98.4	80 - 120	8.326	1.53	20	
Sodium	75.24	0.200	5	69.92	107	80 - 120	75.58	0.441	20	O
Strontium	0.3576	0.00500	0.1	0.2588	98.8	80 - 120	0.361	0.924	20	
Vanadium	0.05011	0.00500	0.05	0.000249	99.7	80 - 120	0.0503	0.37	20	
Zinc	0.05438	0.00400	0.05	0.004886	99.0	80 - 120	0.05562	2.26	20	

PDS	Sample ID: HS24041854-02PDS	Units: mg/L			Analysis Date: 01-May-2024 20:02					
Client ID: MW-1-500	Run ID: ICPMS05_465468	SeqNo: 7986658		PrepDate: 29-Apr-2024		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1037	0.00200	0.1	0.004312	99.4	75 - 125				
Barium	0.23	0.00400	0.1	0.128	102	75 - 125				
Calcium	29.9	0.500	10	20.19	97.0	75 - 125				
Chromium	0.09892	0.00400	0.1	0	98.9	75 - 125				
Iron	11.82	0.200	10	1.907	99.2	75 - 125				
Lead	0.1013	0.00200	0.1	0	101	75 - 125				
Magnesium	14.9	0.200	10	5.28	96.2	75 - 125				
Manganese	0.1733	0.00500	0.1	0.07246	101	75 - 125				
Nickel	0.09963	0.00200	0.1	0	99.6	75 - 125				
Potassium	12.94	0.200	10	3.281	96.6	75 - 125				
Sodium	78.71	0.200	10	69.92	88.0	75 - 125				O
Strontium	0.4589	0.00500	0.2	0.2588	100	75 - 125				
Vanadium	0.09873	0.00500	0.1	0	98.7	75 - 125				
Zinc	0.1105	0.00400	0.1	0.004886	106	75 - 125				

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211177 (0)		Instrument: ICPMS05		Method: ICP-MS METALS BY SW6020A						
SD	Sample ID: HS24041854-02SD	Units: mg/L		Analysis Date: 01-May-2024 19:56						
Client ID: MW-1-500	Run ID: ICPMS05_465468	SeqNo: 7986655	PrepDate: 29-Apr-2024	DF: 5						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Arsenic	0.004238	0.0100					0.004312	0	10	J
Barium	0.1299	0.0200					0.128	1.51	10	
Calcium	20.58	2.50					20.19	1.9	10	
Chromium	U	0.0200					0.000314	0	10	
Iron	1.922	1.00					1.907	0.778	10	
Lead	U	0.0100					0.000548	0	10	
Magnesium	5.456	1.00					5.28	3.33	10	
Manganese	0.07491	0.0250					0.07246	3.38	10	
Nickel	U	0.0100					0.000461	0	10	
Potassium	3.347	1.00					3.281	2.01	10	
Sodium	71.85	1.00					69.92	2.76	10	
Strontium	0.263	0.0250					0.2588	1.62	10	
Vanadium	U	0.0250					0.000249	0	10	
Zinc	U	0.0200					0.004886	0	10	

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-14			

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211313 (0)	Instrument: HG04	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-211313	Units: mg/L	Analysis Date: 01-May-2024 14:07							
Client ID:	Run ID: HG04_465644	SeqNo: 7985914	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury U 0.000200

LCS	Sample ID: LCS-211313	Units: mg/L	Analysis Date: 01-May-2024 14:09							
Client ID:	Run ID: HG04_465644	SeqNo: 7985915	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.00521 0.000200 0.005 0 104 80 - 120

MS	Sample ID: HS24041295-06MS	Units: mg/L	Analysis Date: 01-May-2024 14:17							
Client ID:	Run ID: HG04_465644	SeqNo: 7985920	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.00454 0.000200 0.005 -0.000009 91.0 75 - 125

MSD	Sample ID: HS24041295-06MSD	Units: mg/L	Analysis Date: 01-May-2024 14:19							
Client ID:	Run ID: HG04_465644	SeqNo: 7985921	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.00448 0.000200 0.005 -0.000009 89.8 75 - 125 0.00454 1.33 20

The following samples were analyzed in this batch: HS24041854-01 HS24041854-02 HS24041854-03 HS24041854-08

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211320 (0)	Instrument: HG04	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-211320	Units: mg/L	Analysis Date: 01-May-2024 15:11							
Client ID:	Run ID: HG04_465644	SeqNo: 7985944	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury U 0.000200

LCS	Sample ID: LCS-211320	Units: mg/L	Analysis Date: 01-May-2024 15:13							
Client ID:	Run ID: HG04_465644	SeqNo: 7985945	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00518 0.000200 0.005 0 104 80 - 120

MS	Sample ID: HS24041854-09MS	Units: mg/L	Analysis Date: 01-May-2024 15:16							
Client ID: 019-1055	Run ID: HG04_465644	SeqNo: 7985947	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00521 0.000200 0.005 -0.000004 104 75 - 125

MSD	Sample ID: HS24041854-09MSD	Units: mg/L	Analysis Date: 01-May-2024 15:18							
Client ID: 019-1055	Run ID: HG04_465644	SeqNo: 7985948	PrepDate: 01-May-2024 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00528 0.000200 0.005 -0.000004 106 75 - 125 0.00521 1.33 20

The following samples were analyzed in this batch: HS24041854-09 HS24041854-10 HS24041854-11 HS24041854-12
 HS24041854-14

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: 211322 (0)		Instrument: HG04		Method: DISSOLVED MERCURY BY SW7470A (DISSOLVED)					
MBLK	Sample ID: MBLK-211322	Units: mg/L		Analysis Date: 01-May-2024 15:48					
Client ID:	Run ID: HG04_465644	SeqNo: 7985964		PrepDate: 01-May-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	RPD Limit Qual

Mercury U 0.000200

LCS		Sample ID: LCS-211322		Units: mg/L		Analysis Date: 01-May-2024 15:50			
Client ID:	Run ID: HG04_465644	SeqNo: 7985965		PrepDate: 01-May-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	RPD Limit Qual

Mercury 0.00511 0.000200 0.005 0 102 80 - 120

MS		Sample ID: HS24041854-04MS		Units: mg/L		Analysis Date: 01-May-2024 16:09			
Client ID: MW-2-500	Run ID: HG04_465644	SeqNo: 7985976		PrepDate: 01-May-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	RPD Limit Qual

Mercury 0.00513 0.000200 0.005 0 103 80 - 120

MSD		Sample ID: HS24041854-04MSD		Units: mg/L		Analysis Date: 01-May-2024 16:11			
Client ID: MW-2-500	Run ID: HG04_465644	SeqNo: 7985977		PrepDate: 01-May-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	RPD Limit Qual

Mercury 0.00511 0.000200 0.005 0 102 80 - 120 0.00513 0.391 20

The following samples were analyzed in this batch: HS24041854-04 HS24041854-05 HS24041854-06 HS24041854-07
 HS24041854-13

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465602 (0)	Instrument: VOA12	Method: LOW LEVEL VOLATILES BY SW8260C
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MBLK	Sample ID: VBLKW-240430	Units: mg/L	Analysis Date: 01-May-2024 02:32						
Client ID:	Run ID: VOA12_465602	SeqNo: 7984956	PrepDate: DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Benzene	U	0.0010							
Ethylbenzene	U	0.0010							
m,p-Xylene	U	0.0020							
o-Xylene	U	0.0010							
Toluene	U	0.0010							
Xylenes, Total	U	0.0030							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>0.056</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>111</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.049</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>97.7</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>0.050</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>100</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>104</i>	<i>81 - 120</i>			

LCS	Sample ID: VLCSW-240430	Units: mg/L	Analysis Date: 01-May-2024 01:21						
Client ID:	Run ID: VOA12_465602	SeqNo: 7984954	PrepDate: DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Benzene	0.019	0.0010	0.02	0	95.3	74 - 120			
Ethylbenzene	0.018	0.0010	0.02	0	89.8	77 - 117			
m,p-Xylene	0.037	0.0020	0.04	0	93.6	77 - 122			
o-Xylene	0.019	0.0010	0.02	0	94.6	75 - 119			
Toluene	0.018	0.0010	0.02	0	90.8	77 - 118			
Xylenes, Total	0.056	0.0030	0.06	0	93.9	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>0.054</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>108</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.049</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>97.2</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>103</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>0.051</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>101</i>	<i>81 - 120</i>			

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465602 (0)	Instrument: VOA12	Method: LOW LEVEL VOLATILES BY SW8260C
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LCSD		Sample ID: VLCSDW-240430			Units: mg/L		Analysis Date: 01-May-2024 01:45			
Client ID:		Run ID: VOA12_465602			SeqNo: 7984955		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	0.018	0.0010	0.02	0	92.2	74 - 120	0.01907	3.37	20	
Ethylbenzene	0.018	0.0010	0.02	0	92.2	77 - 117	0.01797	2.63	20	
m,p-Xylene	0.037	0.0020	0.04	0	91.5	77 - 122	0.03744	2.27	20	
o-Xylene	0.019	0.0010	0.02	0	92.6	75 - 119	0.01893	2.21	20	
Toluene	0.018	0.0010	0.02	0	89.9	77 - 118	0.01815	0.9	20	
Xylenes, Total	0.055	0.0030	0.06	0	91.9	75 - 122	0.05636	2.25	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>0.055</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>110</i>	<i>70 - 123</i>	<i>0.05410</i>	<i>1.49</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.050</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>99.2</i>	<i>77 - 113</i>	<i>0.04861</i>	<i>1.99</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>103</i>	<i>73 - 126</i>	<i>0.05173</i>	<i>0.0334</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>0.050</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>99.6</i>	<i>81 - 120</i>	<i>0.05057</i>	<i>1.53</i>	<i>20</i>	

MS		Sample ID: HS24041386-01MS			Units: mg/L		Analysis Date: 01-May-2024 03:43			
Client ID:		Run ID: VOA12_465602			SeqNo: 7984958		PrepDate:		DF: 200	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	3.6	0.20	4	0	88.8	70 - 127				
Ethylbenzene	6.6	0.20	4	2.805	93.8	70 - 124				
m,p-Xylene	18	0.40	8	10.18	91.7	70 - 130				
o-Xylene	7.8	0.20	4	3.813	100	70 - 124				
Toluene	3.5	0.20	4	0.09263	85.7	70 - 123				
Xylenes, Total	25	0.60	12	14.00	94.5	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>11</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>110</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>10</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>101</i>	<i>77 - 113</i>				
<i>Surr: Dibromofluoromethane</i>	<i>11</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>107</i>	<i>77 - 123</i>				
<i>Surr: Toluene-d8</i>	<i>10.0</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>99.7</i>	<i>82 - 127</i>				

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465602 (0) **Instrument:** VOA12 **Method:** LOW LEVEL VOLATILES BY SW8260C

MSD		Sample ID: HS24041386-01MSD			Units: mg/L		Analysis Date: 01-May-2024 04:07			
Client ID:		Run ID: VOA12_465602			SeqNo: 7984959		PrepDate:		DF: 200	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	3.6	0.20	4	0	89.2	70 - 127	3.551	0.505	20	
Ethylbenzene	6.7	0.20	4	2.805	96.7	70 - 124	6.556	1.76	20	
m,p-Xylene	17	0.40	8	10.18	90.1	70 - 130	17.52	0.743	20	
o-Xylene	7.3	0.20	4	3.813	87.5	70 - 124	7.816	6.68	20	
Toluene	3.5	0.20	4	0.09263	86.3	70 - 123	3.519	0.712	20	
Xylenes, Total	25	0.60	12	14.00	89.2	70 - 130	25.34	2.54	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	11	0.20	10	0	113	70 - 126	11.00	2.76	20	
<i>Surr: 4-Bromofluorobenzene</i>	10	0.20	10	0	101	77 - 113	10.12	0.117	20	
<i>Surr: Dibromofluoromethane</i>	11	0.20	10	0	106	77 - 123	10.74	1.16	20	
<i>Surr: Toluene-d8</i>	9.7	0.20	10	0	97.0	82 - 127	9.967	2.77	20	

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-06			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465671 (0)		Instrument: VOA12		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-240501	Units: mg/L			Analysis Date: 01-May-2024 15:38				
Client ID:	Run ID: VOA12_465671	SeqNo: 7987028		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	0.0010							
Ethylbenzene	U	0.0010							
m,p-Xylene	U	0.0020							
o-Xylene	U	0.0010							
Toluene	U	0.0010							
Xylenes, Total	U	0.0030							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>105</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.047</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>94.8</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>0.051</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>101</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>0.044</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>88.7</i>	<i>81 - 120</i>			

LCS	Sample ID: VLCSW-240501	Units: mg/L			Analysis Date: 01-May-2024 14:33				
Client ID:	Run ID: VOA12_465671	SeqNo: 7987026		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	0.022	0.0010	0.02	0	112	74 - 120			
Ethylbenzene	0.022	0.0010	0.02	0	110	77 - 117			
m,p-Xylene	0.043	0.0020	0.04	0	108	77 - 122			
o-Xylene	0.022	0.0010	0.02	0	112	75 - 119			
Toluene	0.022	0.0010	0.02	0	108	77 - 118			
Xylenes, Total	0.065	0.0030	0.06	0	109	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>104</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.048</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>95.1</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>0.053</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>107</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>0.051</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>103</i>	<i>81 - 120</i>			

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465671 (0) **Instrument:** VOA12 **Method:** LOW LEVEL VOLATILES BY SW8260C

LCSD	Sample ID: VLCS DW-240501	Units: mg/L			Analysis Date: 01-May-2024 14:54					
Client ID:	Run ID: VOA12_465671	SeqNo: 7987027	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	0.022	0.0010	0.02	0	109	74 - 120	0.02246	2.75	20	
Ethylbenzene	0.022	0.0010	0.02	0	110	77 - 117	0.02194	0.726	20	
m,p-Xylene	0.045	0.0020	0.04	0	112	77 - 122	0.04309	3.53	20	
o-Xylene	0.023	0.0010	0.02	0	115	75 - 119	0.02235	3.04	20	
Toluene	0.022	0.0010	0.02	0	110	77 - 118	0.02160	1.92	20	
Xylenes, Total	0.068	0.0030	0.06	0	113	75 - 122	0.06545	3.37	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>105</i>	<i>70 - 123</i>	<i>0.05222</i>	<i>0.447</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.047</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>94.8</i>	<i>77 - 113</i>	<i>0.04757</i>	<i>0.345</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>0.053</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>107</i>	<i>73 - 126</i>	<i>0.05343</i>	<i>0.119</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>0.052</i>	<i>0.0010</i>	<i>0.05</i>	<i>0</i>	<i>103</i>	<i>81 - 120</i>	<i>0.05129</i>	<i>0.723</i>	<i>20</i>	

The following samples were analyzed in this batch:

HS24041854-05	HS24041854-07	HS24041854-08	HS24041854-09
HS24041854-10	HS24041854-11	HS24041854-12	HS24041854-13
HS24041854-14			

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465349 (0) **Instrument:** WetChem_HS **Method:** SULFIDE BY SM4500 S2-F-2011

MBLK Sample ID: **MBLK-R465349** Units: **mg/L** Analysis Date: **29-Apr-2024 12:44**
 Client ID: Run ID: **WetChem_HS_465349** SeqNo: **7979178** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide U 2.00

LCS Sample ID: **LCS-R465349** Units: **mg/L** Analysis Date: **29-Apr-2024 12:44**
 Client ID: Run ID: **WetChem_HS_465349** SeqNo: **7979177** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide 22.52 2.00 25 0 90.1 85 - 115

LCSD Sample ID: **LCSD-R465349** Units: **mg/L** Analysis Date: **29-Apr-2024 12:44**
 Client ID: Run ID: **WetChem_HS_465349** SeqNo: **7979176** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide 22.32 2.00 25 0 89.3 85 - 115 22.52 0.892 20

MS Sample ID: **HS24041854-01MS** Units: **mg/L** Analysis Date: **29-Apr-2024 12:44**
 Client ID: **MW-1-200** Run ID: **WetChem_HS_465349** SeqNo: **7979179** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Sulfide 22.32 2.00 25 -0.88 92.8 80 - 120

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465352 (0) **Instrument:** WetChem_HS **Method:** HYDROGEN SULFIDE BY E376.1

MBLK Sample ID: **MBLK-R465352** Units: **mg/L** Analysis Date: **29-Apr-2024 13:00**
 Client ID: Run ID: **WetChem_HS_465352** SeqNo: **7979245** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Hydrogen Sulfide U 1.00

LCS Sample ID: **LCS-R465352** Units: **mg/L** Analysis Date: **29-Apr-2024 13:00**
 Client ID: Run ID: **WetChem_HS_465352** SeqNo: **7979244** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Hydrogen Sulfide 23.93 1.00 26.56 0 90.1 80 - 120

LCSD Sample ID: **LCSD-R465352** Units: **mg/L** Analysis Date: **29-Apr-2024 13:00**
 Client ID: Run ID: **WetChem_HS_465352** SeqNo: **7979243** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Hydrogen Sulfide 23.72 1.00 26.56 0 89.3 80 - 120 23.93 0.892 20

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465386 (0)		Instrument: Balance1		Method: TOTAL DISSOLVED SOLIDS BY SM2540C-2011					
MBLK	Sample ID: WMBLK-04292024	Units: mg/L		Analysis Date: 29-Apr-2024 09:00					
Client ID:	Run ID: Balance1_465386	SeqNo: 7979948		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

LCS	Sample ID: WLCS-04292024	Units: mg/L		Analysis Date: 29-Apr-2024 09:00					
Client ID:	Run ID: Balance1_465386	SeqNo: 7979947		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 942 10.0 1000 0 94.2 85 - 115

DUP	Sample ID: HS24041854-02 DUP	Units: mg/L		Analysis Date: 29-Apr-2024 09:00					
Client ID: MW-1-500	Run ID: Balance1_465386	SeqNo: 7979934		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 254 10.0 264 3.86 20

DUP	Sample ID: HS24041809-01 DUP	Units: mg/L		Analysis Date: 29-Apr-2024 09:00					
Client ID:	Run ID: Balance1_465386	SeqNo: 7979925		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 328 10.0 314 4.36 20

The following samples were analyzed in this batch:	HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
	HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
	HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
	HS24041854-13	HS24041854-14		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465407 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK		Sample ID: MBLK		Units: mg/L		Analysis Date: 29-Apr-2024 07:49			
Client ID:		Run ID: ICS-Integrion_465407		SeqNo: 7980537		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Bromide	U	0.100							
Chloride	U	0.500							
Sulfate	U	0.500							

LCS		Sample ID: LCS		Units: mg/L		Analysis Date: 29-Apr-2024 07:54			
Client ID:		Run ID: ICS-Integrion_465407		SeqNo: 7980538		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Bromide	3.933	0.100	4	0	98.3	80 - 120			
Chloride	20.57	0.500	20	0	103	80 - 120			
Sulfate	21.48	0.500	20	0	107	80 - 120			

MS		Sample ID: HS24041854-01MS		Units: mg/L		Analysis Date: 29-Apr-2024 10:04			
Client ID: MW-1-200		Run ID: ICS-Integrion_465407		SeqNo: 7980555		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Bromide	1.894	0.100	2	0	94.7	80 - 120			
Chloride	42.66	0.500	10	34.36	83.0	80 - 120			
Sulfate	10.33	0.500	10	0.4869	98.5	80 - 120			

MSD		Sample ID: HS24041854-01MSD		Units: mg/L		Analysis Date: 29-Apr-2024 10:10			
Client ID: MW-1-200		Run ID: ICS-Integrion_465407		SeqNo: 7980556		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Bromide	1.916	0.100	2	0	95.8	80 - 120	1.894	1.14	20
Chloride	42.66	0.500	10	34.36	83.1	80 - 120	42.66	0.0164	20
Sulfate	10.36	0.500	10	0.4869	98.8	80 - 120	10.33	0.308	20

The following samples were analyzed in this batch:	HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
	HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
	HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
	HS24041854-13	HS24041854-14		

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465432 (0) **Instrument:** Skalar 03 **Method:** ALKALINITY BY -2011

MBLK Sample ID: **MBLK-04292024** Units: **mg/L** Analysis Date: **29-Apr-2024 12:01**
 Client ID: Run ID: **Skalar 03_465432** SeqNo: **7981264** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Alkalinity, Bicarbonate (As CaCO3) U 5.00
 Alkalinity, Carbonate (As CaCO3) U 5.00

LCS Sample ID: **LCS-04292024** Units: **mg/L** Analysis Date: **29-Apr-2024 12:07**
 Client ID: Run ID: **Skalar 03_465432** SeqNo: **7981265** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Alkalinity, Carbonate (As CaCO3) 939.8 5.00 1000 0 94.0 85 - 115

LCSD Sample ID: **LCSD-04292024** Units: **mg/L** Analysis Date: **29-Apr-2024 12:13**
 Client ID: Run ID: **Skalar 03_465432** SeqNo: **7981266** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Alkalinity, Carbonate (As CaCO3) 935.6 5.00 1000 0 93.6 85 - 115 939.8 0.448 20

DUP Sample ID: **HS24041854-01DUP** Units: **mg/L** Analysis Date: **29-Apr-2024 12:32**
 Client ID: **MW-1-200** Run ID: **Skalar 03_465432** SeqNo: **7981269** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Alkalinity, Bicarbonate (As CaCO3) 248 5.00 248.7 0.282 20
 Alkalinity, Carbonate (As CaCO3) 15.6 5.00 13.6 13.7 20

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

QC BATCH REPORT

Batch ID: R465459 (0) **Instrument:** Skalar 03 **Method:** PH BY SM4500H+ B-2011

DUP	Sample ID: HS24041854-04DUP	Units: pH Units	Analysis Date: 30-Apr-2024 09:05							
Client ID: MW-2-500	Run ID: Skalar 03_465459	SeqNo: 7981732	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.05	0.100					8.09	0.496	10	
Temp Deg C @pH	21.9	0					22	0.456	10	

The following samples were analyzed in this batch:

HS24041854-01	HS24041854-02	HS24041854-03	HS24041854-04
HS24041854-05	HS24041854-06	HS24041854-07	HS24041854-08
HS24041854-09	HS24041854-10	HS24041854-11	HS24041854-12
HS24041854-13	HS24041854-14		

Revision: 1

Client: Environmental Resources Mgmt.
Project: Sulphur Dome
WorkOrder: HS24041854

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Kentucky	123043	30-Apr-2025
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624 - 2024	31-Dec-2024
Oklahoma	2023-140	31-Aug-2024
Tennessee	04016	30-Apr-2025
Texas	T104704231 TX-C24-00130	30-Apr-2025
Utah	TX026932023-14	31-Jul-2024

Sample Receipt Checklist

Work Order ID: HS24041854

Date/Time Received: 25-Apr-2024 12:00

Client Name: ERMSW-HOU

Received by: Si Ma

Completed By: /S/ <i>Monica Smith</i>	27-Apr-2024 14:40	Reviewed by: /S/ <i>Bernadette A. Fini</i>	29-Apr-2024 09:06
eSignature	Date/Time	eSignature	Date/Time

Matrices: **water**

Carrier name: **Client**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes No Not Present
- Chain of custody present? Yes No 2 Page(s)
- Chain of custody signed when relinquished and received? Yes No COC IDs:301539,301540
- Samplers name present on COC? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s):	4.0 uc/4.1 c; 3.6 uc/3.7 c;3.4 uc/3.5 c;5.0 uc/5.1 c;2.4 uc/2.5 c	IR31
Cooler(s)/Kit(s):	47506,46037,51700,49199,Red	
Date/Time sample(s) sent to storage:	04/27/2024 1442	

- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No N/A
- pH adjusted? Yes No N/A
- pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

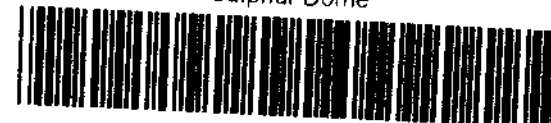
Page 1 of 2

COC ID: 301539

HS24041854

WV

Environmental Resources Mgmt.
Sulphur Dome



ALS Project Manager:

Customer Information		Project Information	
Purchase Order	477777 0732435	Project Name	Sulphur Dome
Work Order		Project Number	
Company Name	Environmental Resources Mgmt.	Bill To Company	Environmental Resources Mgmt.
Send Report To	Scott Hayes	Invoice Attn	Accounts Payable
Address	City Centre Four 340 W. Sam Houston Pkwy., Suite 6	Address	City Centre Four 340 W. Sam Houston Pkwy., Suite 6
City/State/Zip	Houston, TX 77024	City/State/Zip	Houston, TX 77024
Phone	(281) 630-1000	Phone	(281) 630-1000
Fax	(281) 630-1001	Fax	(281) 630-1001
e-Mail Address	scott@erms.com	e-Mail Address	ERMTIA@erms.com

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1-200	4/22/24	11:40	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	
2	MW-1-500		13:30														
3	MW-1-700		14:45														
4	MW-2-500		17:00					*									
5	MW-2-200	4/23/24	08:55					*									
6	MW-2-700		10:15					*									
7	MW-3-200		12:15					*									
8	MW-3-500		14:30														
9	019-1055		15:10														
10	Cottages		15:40														

Noted
* Samples
Field Filtered 0.45
um - run
dissolved
metals

Dissolve
metals
Dissolve
metals
Dissolve
metals
Dissolved
metals

Sampler(s) Please Print & Sign Taylor Brown		Shipment Method	Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> 24 hrs <input type="checkbox"/> 48 hrs <input type="checkbox"/> 72 hrs		Results Due Date:
Relinquished by: Taylor Brown	Date: 4/25/24	Time: 12:00	Received by:	Notes: ERM Sulphur Dome	
Relinquished by:	Date:	Time:	Received by (Laboratory): SM on 12/12/24	Cooler ID	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	47506	4.0
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				46837	3.6
				51700	3.4
				46199	5.0

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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2AM 3/ Red 2-4 12-10-1



Customer: OH
 #1 513 23 5336
 Everett, WA
 #1 425 356 2600

Core Collins, CO
 #1 970 690 1311
 Holland, MI
 #1 616 399 6070

Chain of Custody Form

Page 2 of 2

COC ID: 301540

HS24041854

Environmental Resources Mgmt

Sluipm Dome



Customer Information

Purchase Order: **0732435**

Project Information

Project Name: **11/11/2014**

ALS Project Manager:

Purchase Order:	0732435	Project Name:	11/11/2014
Work Order:		Project Number:	
Company Name:	Environmental Resources Mgmt	Bill To Company:	Environmental Resources Mgmt
Send Report To:	Scott Phipps	Invoice Attn:	Scott Phipps
Address:	10600 17th Ave SW Burien, WA 98148	Address:	35077 State 1 Highway, Suite 100 Henderson, TX 77024
City/State/Zip:	Burien, WA 98148	City/State/Zip:	Henderson, TX 77024
Phone:	206 835 7971	Phone:	1 833 333 4944
Fax:	206 835 7971	Fax:	1 833 333 4944
e-Mail Address:	scott@erresources.com	e-Mail Address:	11/11/2014

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	019-995	4/23/24	16:10	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	X
2	019-580	4/23/24	16:30	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	X
	MW-3-700	4/24/24	08:45	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	X
	019-582	4/24/24	09:40	W	1,2,8	12	X	X	X	X	X	X	X	X	X	X	X

*Noted
 * Sample
 Field Filtered 0.45 um
 for dissolved metals*

Dissolved metals

Prepared by: **Taylor Brown** Date: **4/25/24** Time: **12:00**

Received by (Laboratory): **SM Collins** Date: **4/25/24** Time: **12:00**

Checked by (Laboratory): **SM Collins** Date: **4/25/24** Time: **12:00**

Shipment Method: **Express**

Required Turnaround Time: (Check Box) **24 Hours**

Results Due Date: **4/25/24**

Notes: **QC Package (Check One Box Below)**

1- HCl 2- HNO₃ 3- H₂SO₄ 4- NaOH 5- Na₂SO₄ 6- NaHSO₄ 7- Other: B-4°C 9- 5035

Note: 1. Any changes must be made in writing once samples and COC form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Lab #: 916198 Job #: 58153 IS-102884 Co. Job#:
 Sample Name: LDNR-13 Co. Lab#:
 Company: Environmental Resources Management (ERM)
 API/Well:
 Container: IsoBag
 Field/Site Name: Westlake Sulphur Dome
 Location: Sulphur, LA
 Formation:
 Sampling Point:
 Date Sampled: 3/27/2024 12:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.370			
Oxygen -----	0.61			
Nitrogen -----	19.41			
Carbon Dioxide -----	6.77			
Methane -----	72.72	-67.98	-277.1	
Ethane -----	0.119			
Ethylene -----	nd			
Propane -----	0.0002			
Propylene -----	nd			
Iso-butane -----	0.0004			
N-butane -----	0.0001			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0008			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 739

Specific gravity, calculated: 0.707

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916199 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-22 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 15:30 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.875			
Oxygen -----	19.51			
Nitrogen -----	71.62			
Carbon Dioxide -----	0.12			
Methane -----	7.73	-38.67	-155.2	
Ethane -----	0.111			
Ethylene -----	0.0014			
Propane -----	0.0182			
Propylene -----	nd			
Iso-butane -----	0.0057			
N-butane -----	0.0050			
Iso-pentane -----	0.0024			
N-pentane -----	0.0017			
Hexanes + -----	0.0034			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:			81	
Specific gravity, calculated:	0.967			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916200 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-03 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 10:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.648			
Oxygen -----	14.22			
Nitrogen -----	52.31			
Carbon Dioxide -----	0.68			
Methane -----	31.77	-33.97	-141.1	
Ethane -----	0.221			
Ethylene -----	0.0075			
Propane -----	0.0619			
Propylene -----	nd			
Iso-butane -----	0.0238			
N-butane -----	0.0197			
Iso-pentane -----	0.0108			
N-pentane -----	0.0081			
Hexanes + -----	0.0154			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 330

Specific gravity, calculated: 0.863

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916201 Job #: 58153 IS-102884 Co. Job#:
Sample Name: PPG No.7A Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/28/2024 9:50 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.927			
Oxygen -----	20.72			
Nitrogen -----	76.20			
Carbon Dioxide -----	0.047			
Methane -----	2.08	-34.17	-141.9	
Ethane -----	0.0159			
Ethylene -----	nd			
Propane -----	0.0047			
Propylene -----	nd			
Iso-butane -----	0.0017			
N-butane -----	0.0006			
Iso-pentane -----	0.0001			
N-pentane -----	nd			
Hexanes + -----	0.0003			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	22			
Specific gravity, calculated:	0.991			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916202 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-10 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/28/2024 10:30 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.942			
Oxygen -----	21.12			
Nitrogen -----	77.75			
Carbon Dioxide -----	0.037			
Methane -----	0.148	-36.5		
Ethane -----	0.0006			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0004			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 2
Specific gravity, calculated: 1.000

Remarks: Insufficient methane concentration for dD analysis.
Methane carbon isotope data obtained online via GC-C-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916203 Job #: 58153 IS-102884 Co. Job#:
 Sample Name: LDNR-27 Co. Lab#:
 Company: Environmental Resources Management (ERM)
 API/Well:
 Container: IsoBag
 Field/Site Name: Westlake Sulphur Dome
 Location: Sulphur, LA
 Formation:
 Sampling Point:
 Date Sampled: 3/28/2024 10:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.942			
Oxygen -----	21.22			
Nitrogen -----	77.78			
Carbon Dioxide -----	0.052			
Methane -----	0.0063			
Ethane -----	nd			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0

Specific gravity, calculated: 1.001

Remarks: Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916204 Job #: 58153 IS-102884 Co. Job#:
Sample Name: BCKGRD ATM Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/28/2024 10:55 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.942			
Oxygen -----	21.22			
Nitrogen -----	77.79			
Carbon Dioxide -----	0.051			
Methane -----	0.0006			
Ethane -----	nd			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0002			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	0			
Specific gravity, calculated:	1.001			

Remarks: Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916205 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-28 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/28/2024 10:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.942			
Oxygen -----	21.21			
Nitrogen -----	77.75			
Carbon Dioxide -----	0.057			
Methane -----	0.0434			
Ethane -----	0.0003			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0002			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0

Specific gravity, calculated: 1.000

Remarks: Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916206 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-07 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/27/2024 13:30 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.140			
Oxygen -----	2.62			
Nitrogen -----	6.52			
Carbon Dioxide -----	0.47			
Methane -----	87.04	-43.87	-183.8	
Ethane -----	2.82			
Ethylene -----	nd			
Propane -----	0.235			
Propylene -----	nd			
Iso-butane -----	0.0631			
N-butane -----	0.0506			
Iso-pentane -----	0.0189			
N-pentane -----	0.0101			
Hexanes + -----	0.0148			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	944			
Specific gravity, calculated:	0.620			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916207 Job #: 58153 IS-102884 Co. Job#:
Sample Name: Cavern 2 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/28/2024 14:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	0.0136			
Argon -----	0.0411			
Oxygen -----	0.46			
Nitrogen -----	7.32			
Carbon Dioxide -----	1.99			
Methane -----	86.93	-34.22	-145.6	
Ethane -----	0.433			
Ethylene -----	nd			
Propane -----	0.135			
Propylene -----	nd			
Iso-butane -----	0.0955			
N-butane -----	0.466			
Iso-pentane -----	0.389			
N-pentane -----	0.622			
Hexanes + -----	1.10			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1004

Specific gravity, calculated: 0.664

Remarks: C6+ concentration is above the calibration range of the GC.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916208 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-18 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 13:15 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.895			
Oxygen -----	20.03			
Nitrogen -----	73.61			
Carbon Dioxide -----	0.086			
Methane -----	5.31	-35.54	-144.1	
Ethane -----	0.0470			
Ethylene -----	0.0019			
Propane -----	0.0125			
Propylene -----	nd			
Iso-butane -----	0.0038			
N-butane -----	0.0033			
Iso-pentane -----	0.0015			
N-pentane -----	0.0010			
Hexanes + -----	0.0030			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	55			
Specific gravity, calculated:	0.977			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916209 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-04 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 10:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.0872			
Oxygen -----	1.63			
Nitrogen -----	6.81			
Carbon Dioxide -----	1.39			
Methane -----	88.44	-37.29	-149.6	
Ethane -----	1.14			
Ethylene -----	0.0409			
Propane -----	0.250			
Propylene -----	nd			
Iso-butane -----	0.0723			
N-butane -----	0.0651			
Iso-pentane -----	0.0274			
N-pentane -----	0.0185			
Hexanes + -----	0.0265			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 931

Specific gravity, calculated: 0.617

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916210 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-06 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 16:00 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.873			
Oxygen -----	19.55			
Nitrogen -----	71.76			
Carbon Dioxide -----	0.13			
Methane -----	7.59	-33.32	-140.2	
Ethane -----	0.0549			
Ethylene -----	0.0030			
Propane -----	0.0185			
Propylene -----	nd			
Iso-butane -----	0.0067			
N-butane -----	0.0053			
Iso-pentane -----	0.0023			
N-pentane -----	0.0013			
Hexanes + -----	0.0028			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:			79	
Specific gravity, calculated:	0.967			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916211 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-12 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/27/2024 13:15 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.101			
Oxygen -----	1.74			
Nitrogen -----	5.25			
Carbon Dioxide -----	0.61			
Methane -----	88.92	-43.89	-179.9	
Ethane -----	2.98			
Ethylene -----	nd			
Propane -----	0.240			
Propylene -----	nd			
Iso-butane -----	0.0629			
N-butane -----	0.0487			
Iso-pentane -----	0.0185			
N-pentane -----	0.0096			
Hexanes + -----	0.0148			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 966

Specific gravity, calculated: 0.611

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916212 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-26 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 17:00 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0052			
Hydrogen -----	nd			
Argon -----	0.157			
Oxygen -----	1.23			
Nitrogen -----	8.79			
Carbon Dioxide -----	1.14			
Methane -----	87.76	-38.14	-153.6	
Ethane -----	0.748			
Ethylene -----	nd			
Propane -----	0.0634			
Propylene -----	nd			
Iso-butane -----	0.0779			
N-butane -----	0.0027			
Iso-pentane -----	0.0155			
N-pentane -----	0.0001			
Hexanes + -----	0.0074			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	908			
Specific gravity, calculated:	0.615			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916213 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-17 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 12:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.890			
Oxygen -----	19.89			
Nitrogen -----	73.23			
Carbon Dioxide -----	0.14			
Methane -----	5.73	-36.79	-151.9	
Ethane -----	0.0970			
Ethylene -----	nd			
Propane -----	0.0136			
Propylene -----	nd			
Iso-butane -----	0.0044			
N-butane -----	0.0033			
Iso-pentane -----	0.0016			
N-pentane -----	0.0010			
Hexanes + -----	0.0029			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	61			
Specific gravity, calculated:	0.976			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916214 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-08 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/27/2024 14:30 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.117			
Oxygen -----	1.92			
Nitrogen -----	5.57			
Carbon Dioxide -----	0.45			
Methane -----	88.62	-43.45	-184.2	
Ethane -----	2.92			
Ethylene -----	nd			
Propane -----	0.242			
Propylene -----	nd			
Iso-butane -----	0.0652			
N-butane -----	0.0521			
Iso-pentane -----	0.0199			
N-pentane -----	0.0108			
Hexanes + -----	0.0161			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 962

Specific gravity, calculated: 0.612

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916215 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-23 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/27/2024 9:15 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.0492			
Oxygen -----	0.34			
Nitrogen -----	2.41			
Carbon Dioxide -----	1.31			
Methane -----	94.26	-36.56	-153.0	
Ethane -----	1.13			
Ethylene -----	nd			
Propane -----	0.253			
Propylene -----	nd			
Iso-butane -----	0.0809			
N-butane -----	0.0690			
Iso-pentane -----	0.0352			
N-pentane -----	0.0246			
Hexanes + -----	0.0338			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 991

Specific gravity, calculated: 0.591

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916216 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-05 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 13:15 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.797			
Oxygen -----	17.71			
Nitrogen -----	64.69			
Carbon Dioxide -----	0.17			
Methane -----	16.34	-36.87	-146.6	
Ethane -----	0.192			
Ethylene -----	0.0132			
Propane -----	0.0495			
Propylene -----	nd			
Iso-butane -----	0.0134			
N-butane -----	0.0121			
Iso-pentane -----	0.0045			
N-pentane -----	0.0030			
Hexanes + -----	0.0054			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:			172	
Specific gravity, calculated:	0.929			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916217 Job #: 58153 IS-102884 Co. Job#:
Sample Name: LDNR-24 Co. Lab#:
Company: Environmental Resources Management (ERM)
API/Well:
Container: IsoBag
Field/Site Name: Westlake Sulphur Dome
Location: Sulphur, LA
Formation:
Sampling Point:
Date Sampled: 3/26/2024 11:00 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.491			
Oxygen -----	10.72			
Nitrogen -----	39.50			
Carbon Dioxide -----	1.23			
Methane -----	47.33	-35.56	-147.6	
Ethane -----	0.422			
Ethylene -----	0.0657			
Propane -----	0.123			
Propylene -----	nd			
Iso-butane -----	0.0388			
N-butane -----	0.0351			
Iso-pentane -----	0.0159			
N-pentane -----	0.0120			
Hexanes + -----	0.0188			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated:	496			
Specific gravity, calculated:	0.798			

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

SEND DATA TO:

Name: Scott Himes
 Company: ERM
 Address: 840 W. Sam Houston Pkwy W #660
 City/State: Houston, TX 77024
 Phone: 832-209-8811
 Email: Scott.Himes@ERM.com

SEND INVOICE TO: (if different from SEND DATA TO:)

Name: _____
 Company: _____
 Address: SAME
 City/State: _____
 Phone: _____
 Email: _____

Project: Westlake Sulphur Dome Purchase Order #: 0122101
 Location: Sulphur, LA Sampled By: Charles Trahan, Taylor
Brown, David Sanguine et al

Select One: Standard Priority Rush

Sample Description				Analyses Requested			Comments
Container Number	Sample Identification	Date Sampled	Time				
1	LDNR-13	3/27/24	1220	NG-1			
1	LDNR-22	3/26/24	1530				
1	LDNR-03	3/26/24	1045				
2	WPB PPR No 7A	3/28/24	950				
2	LDNR-10	3/28/24	1030				
2	LDNR-27	3/28/24	1045				
3	BCKGRD ATM	3/28/24	1055				
3	LDNR-28	3/28/24	1020				
3	LDNR-07	3/27/24	1330				
3	COVER 2	3/28/24	1445				

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by: <u>[Signature]</u>	<u>ERM</u>	<u>3/28/24</u>	<u>1720</u>
Received by: <u>Les Schluter/SR Isotech</u>		<u>4-1-24</u>	<u>9:10</u>
Relinquished by:			
Received by:			
Relinquished by:			
Received by:			

SEND DATA TO:

Name: Scott Himes
 Company: ERM
 Address: 840 W Sam Houston Pkwy N #600
 City/State: Houston, Tx 77024
 Phone: 832-209-8811
 Email: Scott.Himes@ERM.com

SEND INVOICE TO: (if different from SEND DATA TO:)

Name: _____
 Company: _____
 Address: SAME
 City/State: _____
 Phone: _____
 Email: _____

Project: Westlake Sulphw Done Purchase Order #: 0722101
 Location: Sulphw, LA Sampled By: Charles Trachen, Taylor Brown
David Sanguinetti

Select One: Standard Priority Rush

Sample Description				Analyses Requested			Comments
Container Number	Sample Identification	Date Sampled	Time				
4	LDNR-18	3/26/24	1315	NB-1 X			
4	LDNR-04	3/26/24	1020				
4	LDNR-06	3/26/24	1600				
5	LDNR-12	3/27/24	1315				
5	LDNR-26	3/26/24	1700				
5	LDNR-17	3/26/24	1245				
6	LDNR-08	3/27/24	1430				
6	LDNR-23	3/27/24	0915				
6	LDNR-05	3/26/24	1315				
7	LDNR-24	3/26/24	1100				

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by: <u>[Signature]</u>	<u>ERM</u>	<u>3/28/24</u>	<u>1720</u>
Received by: <u>Les Schluter/SR Isotech</u>		<u>4-24</u>	<u>9:10</u>
Relinquished by:			
Received by:			
Relinquished by:			
Received by:			

Lab #: 916174 Job #: 58149 IS-102884 Co. Job#:

Sample Name: PPG No.7B Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 9:15 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.40					
Oxygen -----	17.34					
Nitrogen -----	79.85					
Carbon Dioxide -----	0.64					
Methane -----	0.756	-74.1			0.28	0.19
Ethane -----	0.0011				0.00042	0.00052
Ethylene -----	nd					
Propane -----	0.0026				0.00099	0.0018
Propylene -----	nd					
Iso-butane -----	0.0026					
N-butane -----	0.0037					
Iso-pentane -----	0.0016					
N-pentane -----	0.0005					
Hexanes + -----	0.0011					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.81

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

Carbon isotopes obtained online via GC-C-IRMS.

Insufficient methane concentration for dD analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916175 Job #: 58149 IS-102884 Co. Job#:

Sample Name: 019-995 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 13:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.80					
Oxygen -----	4.57					
Nitrogen -----	77.39					
Carbon Dioxide -----	16.23					
Methane -----	0.0089				0.0017	0.0011
Ethane -----	nd				< 0.0002	< 0.0003
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0010					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.90

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen. Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916176 Job #: 58149 IS-102884 Co. Job#:

Sample Name: LDNR-09 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 11:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.27					
Oxygen -----	39.56					
Nitrogen -----	56.50					
Carbon Dioxide -----	1.58					
Methane -----	1.08	-31.2			0.31	0.21
Ethane -----	0.0070				0.0021	0.0026
Ethylene -----	nd					
Propane -----	0.0009				0.0003	0.0005
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	nd					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.88

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

Carbon isotopes obtained online via GC-C-IRMS.

Insufficient methane concentration for dD analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916177 Job #: 58149 IS-102884 Co. Job#:

Sample Name: 019-1603 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 13:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.95					
Oxygen -----	3.05					
Nitrogen -----	81.14					
Carbon Dioxide -----	13.83					
Methane -----	0.0268				0.0055	0.0037
Ethane -----	nd				< 0.0002	< 0.0003
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	nd					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.90

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen. Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916178 Job #: 58149 IS-102884 Co. Job#:
 Sample Name: Cottages Well Co. Lab#:
 Company: Environmental Resources Management (ERM)
 API/Well:
 Container: IsoFlask
 Field/Site Name: Westlake Sulphur Dome
 Location: Sulphur, LA
 Formation/Depth:
 Sampling Point:
 Date Sampled: 3/28/2024 8:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.26					
Oxygen -----	10.17					
Nitrogen -----	81.74					
Carbon Dioxide -----	5.71					
Methane -----	1.12	-89.7	-231		0.75	0.50
Ethane -----	nd				< 0.0002	< 0.0003
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0006					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.69

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

Methane isotopes obtained online via GC-C-IRMS/GC-P-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916179 Job #: 58149 IS-102884 Co. Job#:

Sample Name: LDNR-19 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 11:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.17					
Oxygen -----	38.25					
Nitrogen -----	58.83					
Carbon Dioxide -----	0.34					
Methane -----	1.40	-32.3	-120		0.48	0.32
Ethane -----	0.0089				0.0032	0.0041
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0006					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.82

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

Methane isotopes obtained online via GC-C-IRMS/GC-P-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916180 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-2-700 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/26/2024 9:55 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.80					
Oxygen -----	3.71					
Nitrogen -----	85.21					
Carbon Dioxide -----	nd					
Methane -----	9.27	-83.69	-193.6		2.2	1.5
Ethane -----	0.0027				0.00069	0.00086
Ethylene -----	nd					
Propane -----	0.0013				0.00033	0.00060
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0013					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.85

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916181 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-2-200 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/26/2024 13:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	0.331					
Oxygen -----	1.72					
Nitrogen -----	11.89					
Carbon Dioxide -----	nd					
Methane -----	85.97	-49.82	-183.6		39	26
Ethane -----	0.0690				0.033	0.042
Ethylene -----	nd					
Propane -----	0.0097				0.0045	0.0082
Propylene -----	nd					
Iso-butane -----	0.0050					
N-butane -----	0.0022					
Iso-pentane -----	0.0004					
N-pentane -----	nd					
Hexanes + -----	0.0004					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.72

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916182 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-3-500 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 17:25 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	0.873					
Oxygen -----	7.47					
Nitrogen -----	55.64					
Carbon Dioxide -----	0.32					
Methane -----	35.35	-44.75	-151.5		26	18
Ethane -----	0.299				0.23	0.29
Ethylene -----	0.0015					
Propane -----	0.0217				0.016	0.030
Propylene -----	nd					
Iso-butane -----	0.0066					
N-butane -----	0.0009					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0173					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.66

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916183 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-1-500 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 8:35 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.85					
Oxygen -----	3.31					
Nitrogen -----	84.03					
Carbon Dioxide -----	2.48					
Methane -----	8.33	-86.06	-353		1.8	1.2
Ethane -----	0.0009				0.0002	0.0003
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	nd					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.89

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

Methane hydrogen isotope data obtained online via GC-P-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916184 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-2-500 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/26/2024 14:50 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	2.01					
Oxygen -----	2.82					
Nitrogen -----	92.24					
Carbon Dioxide -----	2.19					
Methane -----	0.743	-62.1			0.15	0.10
Ethane -----	nd				< 0.0002	< 0.0002
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0003
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0018					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.89

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

Insufficient methane concentration for dD analysis.

Methane carbon isotope data obtained online via GC-C-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916185 Job #: 58149 IS-102884 Co. Job#:

Sample Name: 019-582 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 8:15 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.46					
Oxygen -----	8.46					
Nitrogen -----	81.68					
Carbon Dioxide -----	8.35					
Methane -----	0.0443				0.016	0.011
Ethane -----	nd				< 0.0002	< 0.0002
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0003
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0010					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.79

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen. Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916186 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-3-700 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 12:35 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.12					
Oxygen -----	10.21					
Nitrogen -----	63.14					
Carbon Dioxide -----	1.00					
Methane -----	24.48	-72.08	-193.5		11	7.4
Ethane -----	0.0466				0.022	0.028
Ethylene -----	nd					
Propane -----	0.0052				0.0024	0.0044
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0009					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.79

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916187 Job #: 58149 IS-102884 Co. Job#:

Sample Name: LDNR-01 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/26/2024 9:00 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.42					
Oxygen -----	nd					
Nitrogen -----	88.37					
Carbon Dioxide -----	10.05					
Methane -----	0.137				0.053	0.035
Ethane -----	0.0014				0.00058	0.00073
Ethylene -----	nd					
Propane -----	0.0075				0.0030	0.0054
Propylene -----	nd					
Iso-butane -----	0.0037					
N-butane -----	0.0028					
Iso-pentane -----	0.0014					
N-pentane -----	0.0005					
Hexanes + -----	0.0103					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.79

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen. Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916188 Job #: 58149 IS-102884 Co. Job#:

Sample Name: LDNR-14 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 10:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.65					
Oxygen -----	22.53					
Nitrogen -----	72.05					
Carbon Dioxide -----	3.55					
Methane -----	0.221				0.046	0.030
Ethane -----	0.0007				0.0002	0.0002
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0003
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0015					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.87

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen. Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916189 Job #: 58149 IS-102884 Co. Job#:

Sample Name: 019-580 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/28/2024 8:20 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.44					
Oxygen -----	8.42					
Nitrogen -----	82.49					
Carbon Dioxide -----	7.62					
Methane -----	0.0339				0.013	0.0086
Ethane -----	nd				< 0.0002	< 0.0002
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0003
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0009					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.77

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen. Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916190 Job #: 58149 IS-102884 Co. Job#:

Sample Name: LDNR-25 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 9:45 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	0.946					
Oxygen -----	14.82					
Nitrogen -----	41.82					
Carbon Dioxide -----	2.04					
Methane -----	39.39	-51.54	-191.4		16	10
Ethane -----	0.909				0.39	0.48
Ethylene -----	nd					
Propane -----	0.0432				0.018	0.032
Propylene -----	nd					
Iso-butane -----	0.0134					
N-butane -----	0.0072					
Iso-pentane -----	0.0021					
N-pentane -----	0.0010					
Hexanes + -----	0.0046					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.81

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916191 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-1-200 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 9:55 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	0.564					
Oxygen -----	8.34					
Nitrogen -----	39.44					
Carbon Dioxide -----	0.25					
Methane -----	51.39	-56.81	-191.1		84	56
Ethane -----	0.0194				0.034	0.042
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0003					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.31

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916192 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-3-200 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/27/2024 15:35 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	0.411					
Oxygen -----	0.92					
Nitrogen -----	17.82					
Carbon Dioxide -----	nd					
Methane -----	80.80	-48.64	-187.3		35	24
Ethane -----	0.0431				0.020	0.025
Ethylene -----	0.0005					
Propane -----	nd				< 0.0002	< 0.0004
Propylene -----	nd					
Iso-butane -----	nd					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0026					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.81

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 916193 Job #: 58149 IS-102884 Co. Job#:

Sample Name: MW-1-700 Co. Lab#:

Company: Environmental Resources Management (ERM)

API/Well:

Container: IsoFlask

Field/Site Name: Westlake Sulphur Dome

Location: Sulphur, LA

Formation/Depth:

Sampling Point:

Date Sampled: 3/26/2024 16:10 Date Received: 4/02/2024 Date Reported: 4/16/2024

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	Dissolved gas cc/L	Dissolved gas ppm
Carbon Monoxide -----	nd					
Helium -----	na					
Hydrogen -----	nd					
Argon -----	1.60					
Oxygen -----	2.01					
Nitrogen -----	75.24					
Carbon Dioxide -----	0.12					
Methane -----	21.02	-81.93	-208.3		5.8	3.9
Ethane -----	0.0043				0.0013	0.0016
Ethylene -----	nd					
Propane -----	nd				< 0.0002	< 0.0003
Propylene -----	nd					
Iso-butane -----	0.0006					
N-butane -----	nd					
Iso-pentane -----	nd					
N-pentane -----	nd					
Hexanes + -----	0.0067					

Remarks:

Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.84

*Addition of helium negates the ability to detect native helium and may negate the ability to detect hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

SEND DATA TO:

Name: Scott Himes
 Company: ERM
 Address: 840 W. Sam Houston Pkwy, N #600
 City/State: Houston, Tx 77024
 Phone: 832-209-8811
 Email: Scott.Himes@ERM.com

SEND INVOICE TO: (if different from SEND DATA TO:)

Name: _____
 Company: _____
 Address: SAME
 City/State: _____
 Phone: _____
 Email: _____

Project: Westlake Sulphur Dome Purchase Order #: 0722101
 Location: Sulphur, LA Sampled By: Charles Traham, Taylor
Raynor, David Singleton

Select One: Standard Priority Rush

Sample Description				Analyses Requested			Comments
Container Number	Sample Identification	Date Sampled	Time				
	WPB PFB No 73	3/28/24	0915	DG-1			
	019-995	3/28/24	1320				
	LDNR-09	3/28/24	1145				
	019-11003	3/28/24	1345				
	Cottages	3/28/24	0845				
	LDNR-19	3/28/24	1120				
	LDNR MW-2 (700')	09/3/24/24	0955				
	MW-2 (200')	3/26/24	1320				
	MW-3 (500')	3/27/24	1725				
	MW-1 (500')	3/27/24	0835				

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by <u>[Signature]</u>	<u>ERM</u>	<u>3/28/24</u>	<u>1705</u>
Received by <u>Les Schluter/SR Isotech</u>		<u>4-2-24</u>	<u>9:15</u>
Relinquished by			
Received by			
Relinquished by			
Received by			

SEND DATA TO:

Name: Scott Himes
 Company: ERM
 Address: 840 W. Sam Houston Pkwy W. #600
 City/State: Houston, Tx 77024
 Phone: 832-209-8811
 Email: Scott.Himes@ERM.com

SEND INVOICE TO: (if different from SEND DATA TO:)

Name: _____
 Company: _____
 Address: SAME
 City/State: _____
 Phone: _____
 Email: _____

Project: Westlake Sulphur Dome Purchase Order #: 0722101
 Location: N Sulphur, LA Sampled By: Charles Trahan, Taylor Brown, David Sanguinetti

Select One: Standard Priority Rush

Sample Description				Analyses Requested			Comments
Container Number	Sample Identification	Date Sampled	Time				
	<u>MW-2 (500)</u>	<u>3/26/24</u>	<u>1550</u>	DG-1			
	<u>019-582</u>	<u>3/28/24</u>	<u>0815</u>				
	<u>MW-3 (700)</u>	<u>3/27/24</u>	<u>1235</u>				
	<u>LDNR-01</u>	<u>3/26/24</u>	<u>0900</u>				
	<u>LDNR-14</u>	<u>3/27/24</u>	<u>1020</u>				
	<u>019-580</u>	<u>3/28/24</u>	<u>0820</u>				
	<u>LDNR-25</u>	<u>3/27/24</u>	<u>0945</u>				
	<u>MW-1 (200)</u>	<u>3/27/24</u>	<u>0955</u>				
	<u>MW-3 (200)</u>	<u>3/27/24</u>	<u>1535</u>				
	<u>MW-1 (700)</u>	<u>3/26/24</u>	<u>1610</u>				

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by <u>[Signature]</u>	<u>ERM</u>	<u>3/28/24</u>	<u>1705</u>
Received by <u>Les Schluter/SR Isotech</u>		<u>4-2-24</u>	<u>9:15</u>
Relinquished by			
Received by			
Relinquished by			
Received by			

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Lab #: 919961

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-1-200

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/22/2024 11:40

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	0.340				
Oxygen	1.41				
Nitrogen	14.49				
Carbon Dioxide	0.35				
Methane	83.37	-56.68	-195.8		
Ethane	0.0322				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 846 Specific gravity, calculated: 0.628

Remarks:

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Isotopic composition of oxygen is relative to VSMOW, except for carbon dioxide which is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol % is approximately equal to vol. %.

Lab #: 919962

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-1-500

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/22/2024 13:30

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.36				
Oxygen	3.67				
Nitrogen	60.04				
Carbon Dioxide	1.05				
Methane	33.87	-75.80	-319.9		
Ethane	nd				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 343 Specific gravity, calculated: 0.844

Remarks:

Lab #: 919963

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-1-700

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/22/2024 14:45

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.67				
Oxygen	3.12				
Nitrogen	73.73				
Carbon Dioxide	0.15				
Methane	21.32	-82.87	-210.6		
Ethane	0.0037				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	0.0010				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 216 Specific gravity, calculated: 0.891

Remarks:

Lab #: 919964

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-2-200

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 08:55

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	0.316				
Oxygen	0.84				
Nitrogen	11.09				
Carbon Dioxide	nd				
Methane	87.67	-49.33	-182.4		
Ethane	0.0685				
Ethylene	nd				
Propane	0.0094				
Propylene	nd				
Iso-butane	0.0051				
N-butane	0.0015				
Iso-pentane	0.0004				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 890 Specific gravity, calculated: 0.608

Remarks:

Lab #: 919965

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-2-500

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/22/2024 17:00

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.93				
Oxygen	3.13				
Nitrogen	86.68				
Carbon Dioxide	2.05				
Methane	6.21	-77.13	-319		
Ethane	0.0008				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	0.0013				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0018				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 63 Specific gravity, calculated: 0.965

Remarks: Methane hydrogen isotope data obtained online via GC-P-IRMS.

Lab #: 919966

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-2-700

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 10:15

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.83				
Oxygen	5.21				
Nitrogen	83.34				
Carbon Dioxide	nd				
Methane	9.62	-83.68	-187.8		
Ethane	0.0025				
Ethylene	nd				
Propane	0.0008				
Propylene	nd				
Iso-butane	0.0010				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0018				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 98 Specific gravity, calculated: 0.942

Remarks:

Lab #: 919967

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-3-200

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 12:15

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	0.324				
Oxygen	0.44				
Nitrogen	11.99				
Carbon Dioxide	nd				
Methane	87.19	-47.50	-186.8		
Ethane	0.0493				
Ethylene	0.0004				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0011				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 885 Specific gravity, calculated: 0.609

Remarks:

Lab #: 919968

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-3-500

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 14:30

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	0.859				
Oxygen	1.24				
Nitrogen	36.97				
Carbon Dioxide	0.020				
Methane	60.34	-44.71	-156.4		
Ethane	0.509				
Ethylene	0.0027				
Propane	0.0318				
Propylene	0.0004				
Iso-butane	0.0065				
N-butane	0.0007				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0199				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 622 Specific gravity, calculated: 0.724

Remarks:

Lab #: 919969

Job #: 58447

CoreTrac: IS-102884

Sample Name: 019-1055

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 15:10

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.55				
Oxygen	7.32				
Nitrogen	82.30				
Carbon Dioxide	8.57				
Methane	0.261	-52.8			
Ethane	0.0012				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0007				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 3 Specific gravity, calculated: 1.030

Remarks: Insufficient methane concentration for δD analysis. Methane carbon isotope data obtained online via GC-C-IRMS.

Lab #: 919970

Job #: 58447

CoreTrac: IS-102884

Sample Name: Cottages

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 15:40

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	0.0098				
Hydrogen	nd				
Argon	0.960				
Oxygen	18.84				
Nitrogen	78.29				
Carbon Dioxide	1.66				
Methane	0.241	-92.6	-258		
Ethane	nd				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0002				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 2 Specific gravity, calculated: 1.005

Remarks: Methane isotopes obtained online via GC-C-IRMS/GC-P-IRMS.

Lab #: 919971

Job #: 58447

CoreTrac: IS-102884

Sample Name: 019-580

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 16:30

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.79				
Oxygen	3.73				
Nitrogen	83.25				
Carbon Dioxide	11.18				
Methane	0.0550				
Ethane	0.0008				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	0.0011				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 1 Specific gravity, calculated: 1.041

Remarks: Insufficient methane concentration for isotopic analysis.

Lab #: 919972

Job #: 58447

CoreTrac: IS-102884

Sample Name: 019-995

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/23/2024 16:10

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.65				
Oxygen	7.24				
Nitrogen	82.06				
Carbon Dioxide	9.05				
Methane	0.0118				
Ethane	nd				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 0 Specific gravity, calculated: 1.034

Remarks: Insufficient methane concentration for isotopic analysis.

Lab #: 919973

Job #: 58447

CoreTrac: IS-102884

Sample Name: MW-3-700

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/24/2024 08:45

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.29				
Oxygen	5.51				
Nitrogen	53.69				
Carbon Dioxide	0.28				
Methane	39.16	-71.75	-200.7		
Ethane	0.0733				
Ethylene	nd				
Propane	0.0069				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 398 Specific gravity, calculated: 0.820

Remarks:

Lab #: 919974

Job #: 58447

CoreTrac: IS-102884

Sample Name: 019-582

Company: Environmental Resources Management (ERM)

Container: IsoFlask

Field/Site Name: Sulphur Dome

Location: Sulphur Louisiana

Date Sampled: 04/24/2024 09:40

Date Received: 04/29/2024 Date Reported: 05/14/2024

Component	Chemical mol%	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{18}\text{O}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide	nd				
Helium	na				
Hydrogen	nd				
Argon	1.41				
Oxygen	3.23				
Nitrogen	87.79				
Carbon Dioxide	7.52				
Methane	0.0469				
Ethane	0.0005				
Ethylene	nd				
Propane	nd				
Propylene	nd				
Iso-butane	nd				
N-butane	nd				
Iso-pentane	nd				
N-pentane	nd				
Hexanes +	nd				

Total BTU/cu.ft. dry @ 60° F & 14.73psia, calculated: 0 Specific gravity, calculated: 1.019

Remarks: Insufficient methane concentration for isotopic analysis.

SEND DATA TO:

Name: Scott Himes

Company: ERM

Address: 840 W. Sam Houston Pkwy N.
Ste 600
Houston, TX 77024

Phone: 832-209-8811

Email: scott.himes@erm.com

Project: Sulphur Dome

PO #: 0732435

Location: Sulphur Louisiana

Sampled By: Taylar Brown, Kurt Boehringer

SEND INVOICE TO (if different from SEND DATA TO):

Name:

Company:

Address:

Phone:

Email:

Standard

Priority

Rush

Analysis Requested

Sample Description

Container Number	Sample Identification	Date Sampled	Time	DC-1				Comments
1	MW-1-200	Apr-22-24	11:40 am	X				
1	MW-1-500	Apr-22-24	1:30 pm	X				
1	MW-1-700	Apr-22-24	2:45 pm	X				
1	MW-2-200	Apr-23-24	8:55 am	X				
1	MW-2-500	Apr-22-24	5:00 pm	X				
1	MW-2-700	Apr-23-24	10:15 am	X				
1	MW-3-200	Apr-23-24	12:15 pm	X				
1	MW-3-500	Apr-23-24	2:30 pm	X				

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by <i>[Signature]</i>	ERM	4/25/24	11:00
Received by <i>[Signature]</i>	Isotech	4/29/24	9:15
Relinquished by			
Received by			
Relinquished by			
Received by			

SEND DATA TO:

Name: Scott Himes
 Company: ERM
 Address: 840 W. Sam Houston Pkwy N.
 Ste 600
 Houston, TX 77024

 Phone: 832-209-8811
 Email: scott.himes@erm.com
 Project: Sulphur Dome
 PO #: 0732435
 Location: Sulphur Louisiana
 Sampled By: Taylar Brown, Kurt Boehringer

SEND INVOICE TO (if different from SEND DATA TO):

Name:
 Company:
 Address:

 Phone:
 Email:
 Standard Priority Rush
 Analysis Requested

Sample Description

Container Number	Sample Identification	Date Sampled	Time	DET				Comments
1	019-1055	Apr-23-24	3:10 pm	X				
1	Cottages	Apr-23-24	3:40 pm	X				
1	019-580	Apr-23-24	4:30 pm	X				
1	019-995	Apr-23-24	4:10 pm	X				
1	MW-3-700	Apr-24-24	8:45 am	X				
1	019-582	Apr-24-24	9:40 am	X				

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by <i>W. B. Baker</i>	ERM	4/25/24	11:00
Received by <i>Bob Baker</i>	Isotech	4/29/24	9:15
Relinquished by			
Received by			
Relinquished by			
Received by			