



November 20, 2022

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By Mike Buchanan at 3:06 pm, Jan 03, 2024

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Executive Summary – November 2022

Salty Dog Water Gathering System
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nCS1916853082
Abatement Plan No: AP-139

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Executive Summary – November 2022* report detailing activities performed between 2019 and 2022 associated with the Salty Dog Water Gathering System Pipeline release (Site). The Site is located approximately 1,146 feet south of the San Juan River on private land in Unit N of Section 18, Township 29 North, Range 13 West, in San Juan County, New Mexico (Figure 1). The activities summarized in this report date from August 2019 to September 2022 and include the most recent groundwater data collected during quarterly sampling events. Previous results and remediation activities were summarized and submitted in previous reports.

INITIAL RELEASE AND SITE BACKGROUND

A complete history of Site activities and information pertaining to the release are included in the *Stage 1 Abatement Plan* submitted to the NMOCD on December 20, 2019 and approved on October 21, 2022. The initial release was assigned incident number nCS1916853082 and the *Stage 1 Abatement Plan* has been assigned AP-139.

Since the submittal of the *Stage 1 Abatement Plan*, there have been two previous consultants responsible for remediation and monitoring activities at the Site. LT Environmental, Inc (LTE) conducted activities at the Site from the time of initial release until January 2020. WSP USA Inc (WSP) acquired LTE in January 2020 and assumed sampling responsibilities for the Site. Ensolum was retained by Hilcorp in March 2022 to conduct sampling activities at the Site.

2020 ADDITIONAL INVESTIGATION

After the submittal of the *Stage 1 Abatement Plan*, WSP conducted delineation drilling and sampling activities from February 5 to February 7, 2020. A total of seven borings (MW17, MW18, MW20, MW21, MW22, MW23, and MW24 shown on Figure 2) were advanced to continue delineation of impacted groundwater, investigate impacted soil, and assess background water quality conditions at the Site. Of note, MW19 was never advanced and does not exist. The soil borings were logged by a geologist who inspected the soil for the presence or absence of

petroleum hydrocarbon odor and/or staining. Soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Of the seven borings, three (MW17, MW18, and MW20) were advanced downgradient of the release and converted into permanent monitoring wells. The remaining four borings (MW21, MW22, MW23, and MW24) were advanced as temporary wells upgradient of the release in areas of historical gravel mining operations to assess background water quality conditions.

Groundwater monitoring wells were constructed by installing screened casing across the groundwater interface and solid casing to surface. Monitoring wells were constructed out of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 2-inch Schedule 40 PVC 0.010-inch slotted screen. Wells were completed with 10-20 silica sand pack to two feet above the screened interval, then two feet of hydrated bentonite seal, and then bentonite-cement slurry grout to ground surface. The wells were completed above ground with a locking, steel protective casing cemented into the ground.

After construction, LTE surveyed the new groundwater monitoring wells with a Trimble® GeoExplorer® 3000 series Global Positioning System (GPS) to determine the latitude and longitude of each location. Top-of-casing elevations were surveyed using a Dewalt® DW074 Rotary Laser Level to an accuracy of ($\pm$) 0.01 feet so that groundwater flow direction and gradient could be determined relative to mean seal level. Once the top of well casing was surveyed, the depth to groundwater below top of casing was measured with an oil/water interface probe. The wells were developed by purging a minimum of ten casing volumes, or until the well was purged dry. Boring/monitoring well locations from this drilling event are depicted on Figure 2. Soil boring logs and monitoring well construction diagrams are included as Appendix A.

Soil Sampling and Results

Two soil samples from each soil boring were submitted for laboratory analysis: one from the most impacted sample interval based on field screening techniques, and one from above the field-identified groundwater table. If groundwater was not encountered, the second sample was collected from the terminal depth of the boring. Soil samples were submitted to Hall Environmental Analysis Laboratory (Hall) for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) using United States Environmental Protection Agency (EPA) Method 8021, total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), diesel range organics (DRO), and motor-oil range organics (MRO) by EPA Method 8015, and chloride by EPA Method 300.0.

Analytical results indicated that concentrations of benzene, BTEX, and TPH were all below laboratory reporting limits and below the NMOCD Table I Closure Criteria. Two soil samples (MW20 @ 27.5-30' and MW23 @ 0-5') exceeded the NMOCD Table I Closure Criteria for chloride concentrations. The soil analytical results collected during the February 2020 drilling event are summarized in Table 1 and are presented on Figure 3. The laboratory analytical reports for the newly collected soil samples are included as Appendix B.

Background Groundwater Sampling and Results

Soil borings MW21, MW22, MW23, and MW24 were installed to assess background water quality in locations upgradient of the release. LTE collected grab samples of groundwater in February 2020 within the open borings by placing a temporary well screen and casing into the boring and



using a PVC bailer to collect water that accumulated into the temporary well. Analytical results for the background groundwater samples are further discussed below.

SITEWIDE GROUNDWATER MONITORING

As proposed in the *Stage 1 Abatement Plan*, quarterly groundwater monitoring and sampling has been conducted beginning in the fourth quarter of 2019. Static groundwater levels are measured quarterly in all 13 on-site permanent monitoring wells using an oil/water interface probe. The interface probe is decontaminated with Alconox™ soap and rinsed with deionized water prior to each measurement. Groundwater elevations at the Site are summarized on Table 2.

Groundwater monitoring wells were sampled by purging a minimum of three casing volumes or purging until the well bails dry. Water quality parameters are collected during the purging process from each well. Once purging is complete, groundwater samples are collected directly into laboratory provided containers. All samples are immediately placed on ice to maintain a temperature of approximately 4 degrees Celsius (°C) and sealed in a cooler for delivery to Hall for analysis. Samples are labeled with the date and time of collection, sample name, sampler's name, and parameters to be analyzed. Strict chain-of-custody procedures are documented and include the date and time sampled, sample number, type of sample, sampler's name and signature, preservative used, and analysis required. As requested by the NMOCD, groundwater samples analyzed for VOCs by EPA Method 8260B, general water chemistry (GWC) parameters including total dissolved solids (TDS) by EPA Standard Method (SM) 2540C, pH by EPA SM4500-H+B/9040C, anions (bromide, chloride, sulfate, fluoride, nitrite-nitrate, and phosphorus) by EPA Method 300.0, and cations (calcium, iron, magnesium, potassium, and sodium) by EPA Method 200.7.

Based on historical results, all concentrations of analyzed VOCs have been below New Mexico Water Quality Control Commission (NMWQCC) standards since the first quarter of 2020. Of the general water chemistry parameters sampled during quarterly events, concentrations of chloride, sulfate, and TDS are the only constituents with exceedances of the NMWQCC standards at the Site. In general, most water chemistry parameters have been stable over time. Of note, chloride concentrations have decreased in many of the Site wells since sampling began in 2019. Additionally, groundwater samples collected from MW21 through MW24 indicate that background concentrations of chloride, sulfate, and TDS are also present above NMWQCC standards at the Site. All groundwater analytical results received for the Site, including background sampling results from temporary wells MW21 through MW24, are summarized in Tables 3 and 4. Groundwater analytical results for benzene, chloride, and TDS from the 2022 quarterly sampling events are presented on Figure 4. Additionally, background groundwater concentrations collected during the February 2020 investigation are presented on Figure 5. Complete analytical reports are included as Appendix B.

In general, groundwater typically flows to the west/northwest at the Site with a trough near the area of the previous excavation. Figures 6, 7, and 8 depict groundwater elevations, inferred potentiometric contours, and estimated flow direction from the three most recent quarters of groundwater monitoring. Of note, seven of the thirteen wells at the Site were either dry or did not contain sufficient volumes of water to collect a groundwater sample during the September 2022 sampling event. Historically, many of the Site wells are dry and/or contain insufficient volumes of water to sample during the winter months as the groundwater table fluctuates with seasonal variations. However, as seen across much of the region, this trend has extended into spring and summer months as well, likely in response to the ongoing drought conditions present in the area.

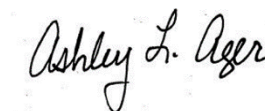
Ensolum appreciates the opportunity to provide this report to the NMOCD. Please direct any questions to the undersigned.

Sincerely,

Ensolum, LLC



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Senior Geologist
(970) 903-1607
shyde@ensolum.com



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Program Director, Geologist
(970) 946-1093
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Attachments:

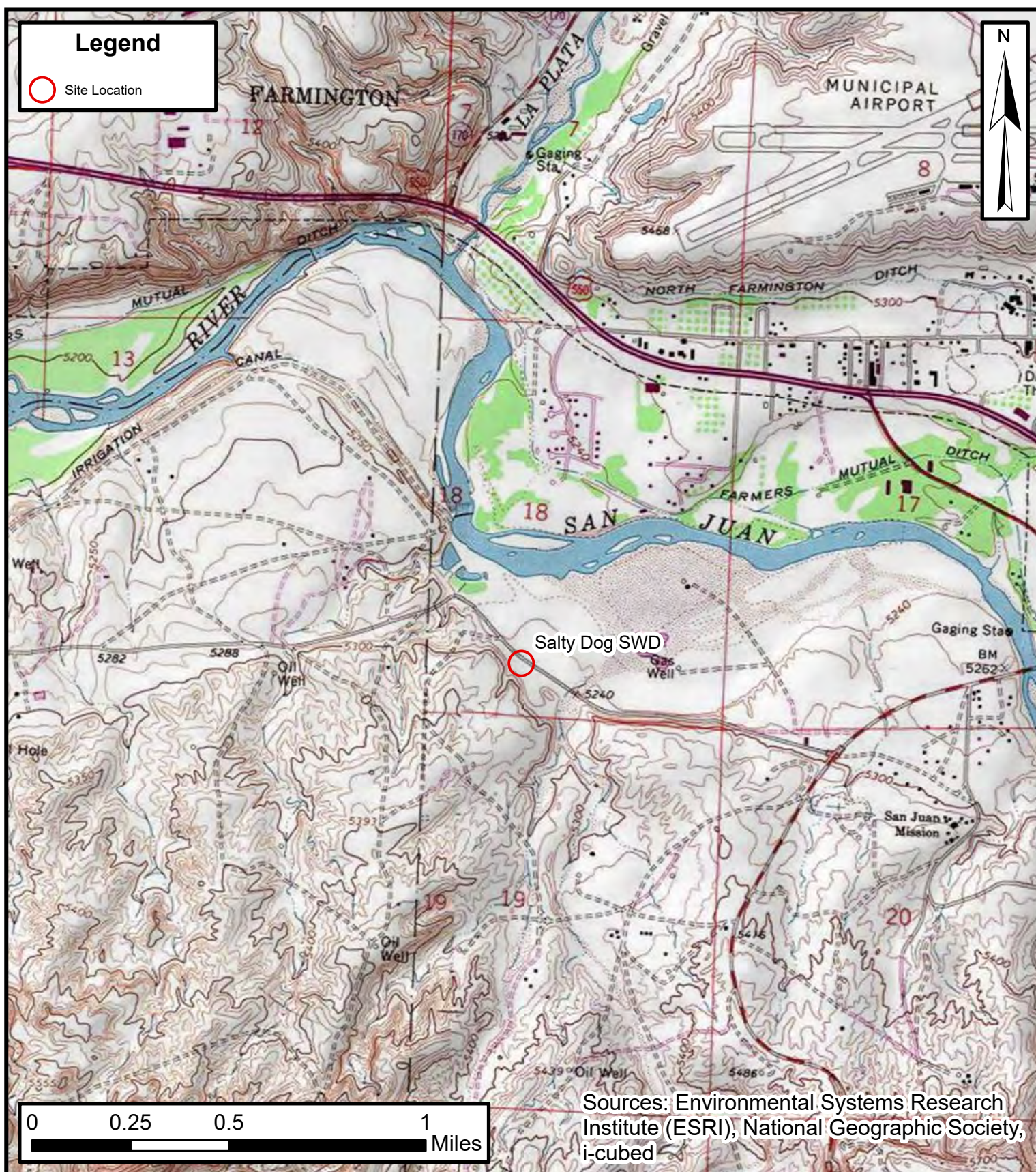
Figure 1: Site Location Map
Figure 2: Site Feature Map
Figure 3: Soil Analytical Results
Figure 4: Groundwater Analytical Results – Background Concentrations
Figure 5: Groundwater Elevation Contours – Q1 2022
Figure 6: Groundwater Elevation Contours – Q2 2022
Figure 7: Groundwater Elevation Contours – Q3 2022

Table 1: Soil Sample Analytical Results
Table 2: Groundwater Elevations
Table 3: Groundwater Analytical Results – Volatile Organic Compounds
Table 4: Groundwater Analytical Results - Inorganics

Appendix A: 2020 Boring Logs
Appendix B: Laboratory Analytical Reports



FIGURES



Site Location Map

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
1

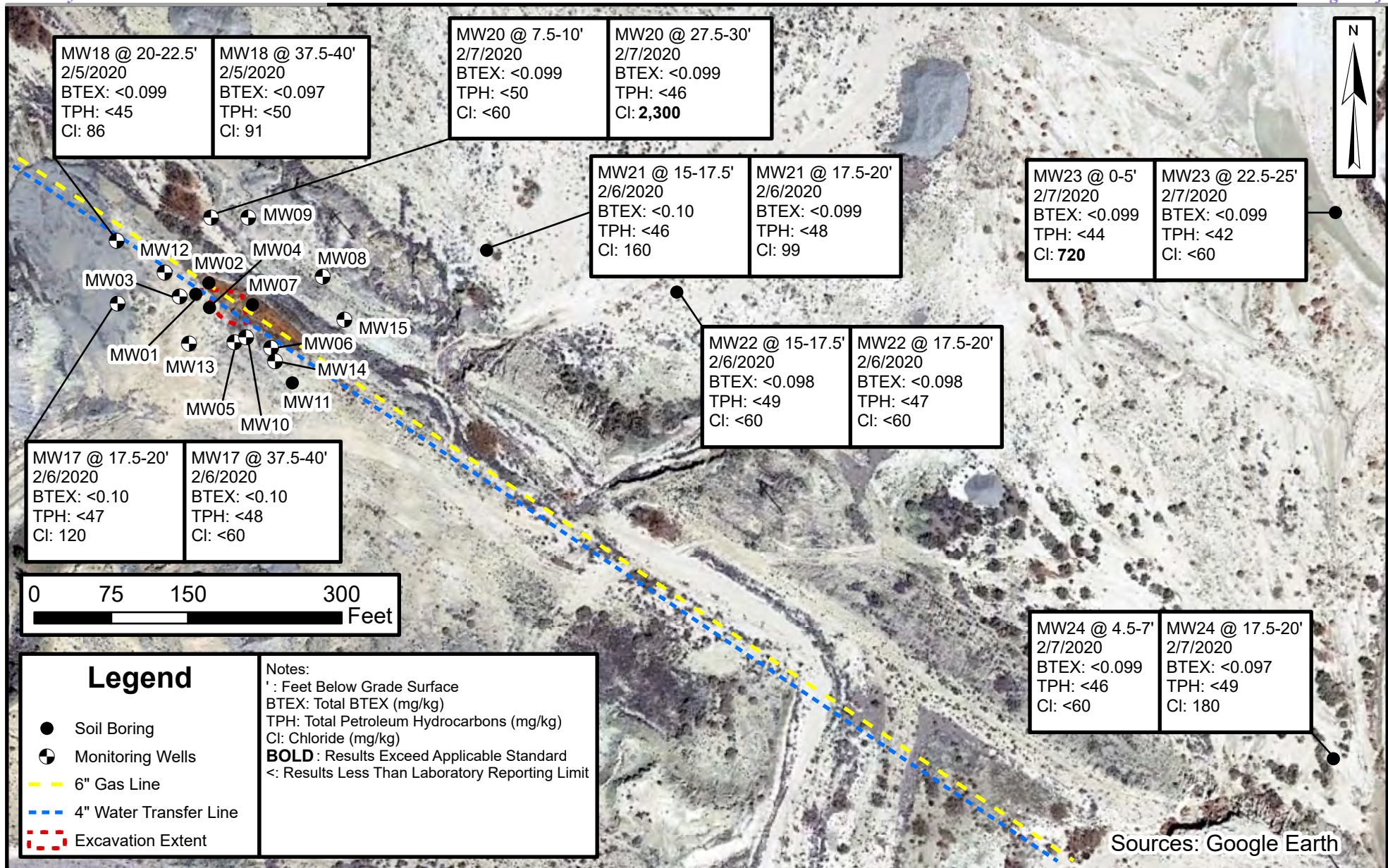


Monitoring Well and Soil Boring Location Map

Salty Dog Water Gathering System
Hilcorp Energy Company

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SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
2



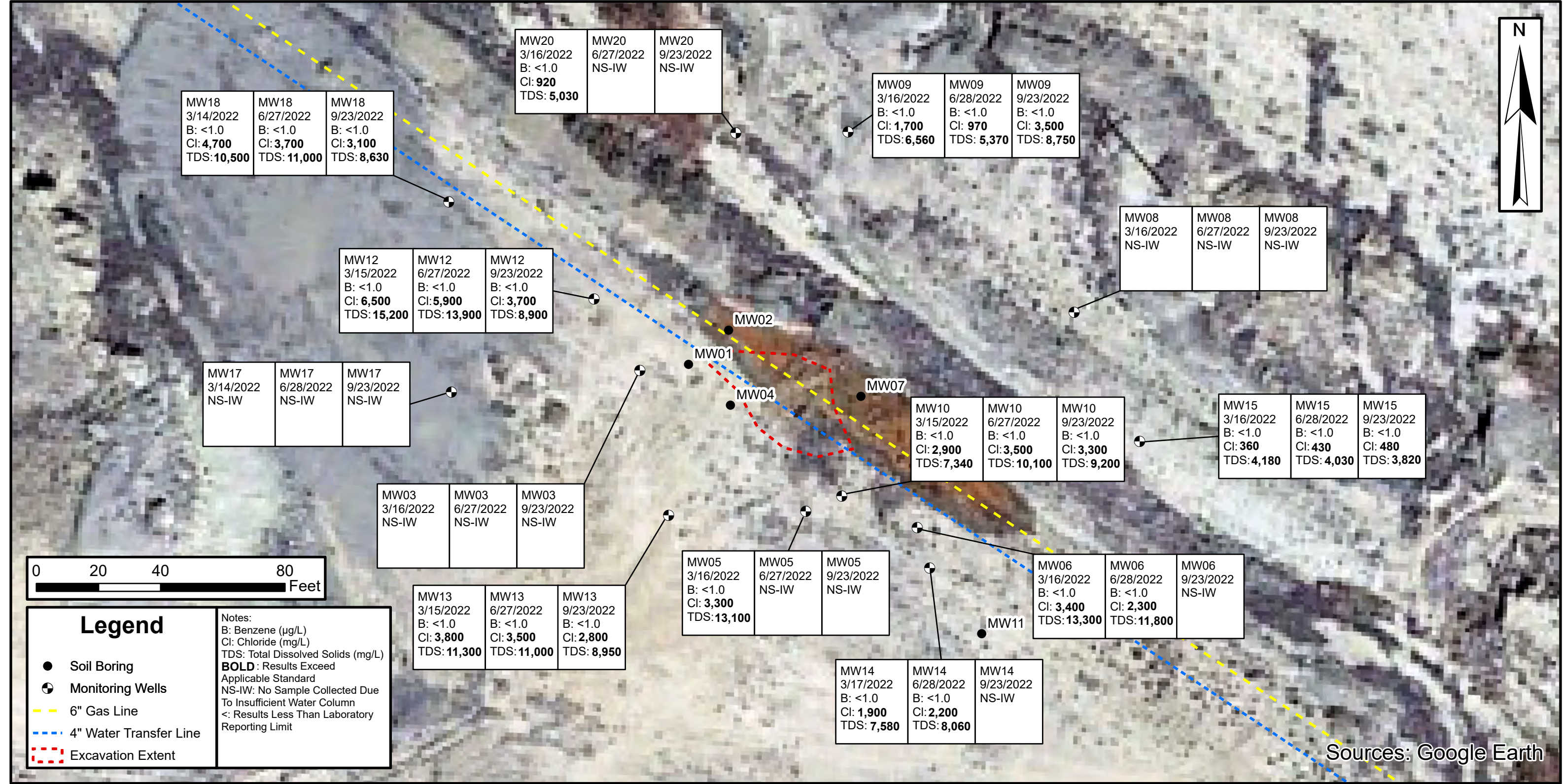
Soil Analytical Results

Salty Dog Water Gathering System
 Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
 SEC 18-T29N-R13W
 San Juan County, New Mexico

FIGURE
3

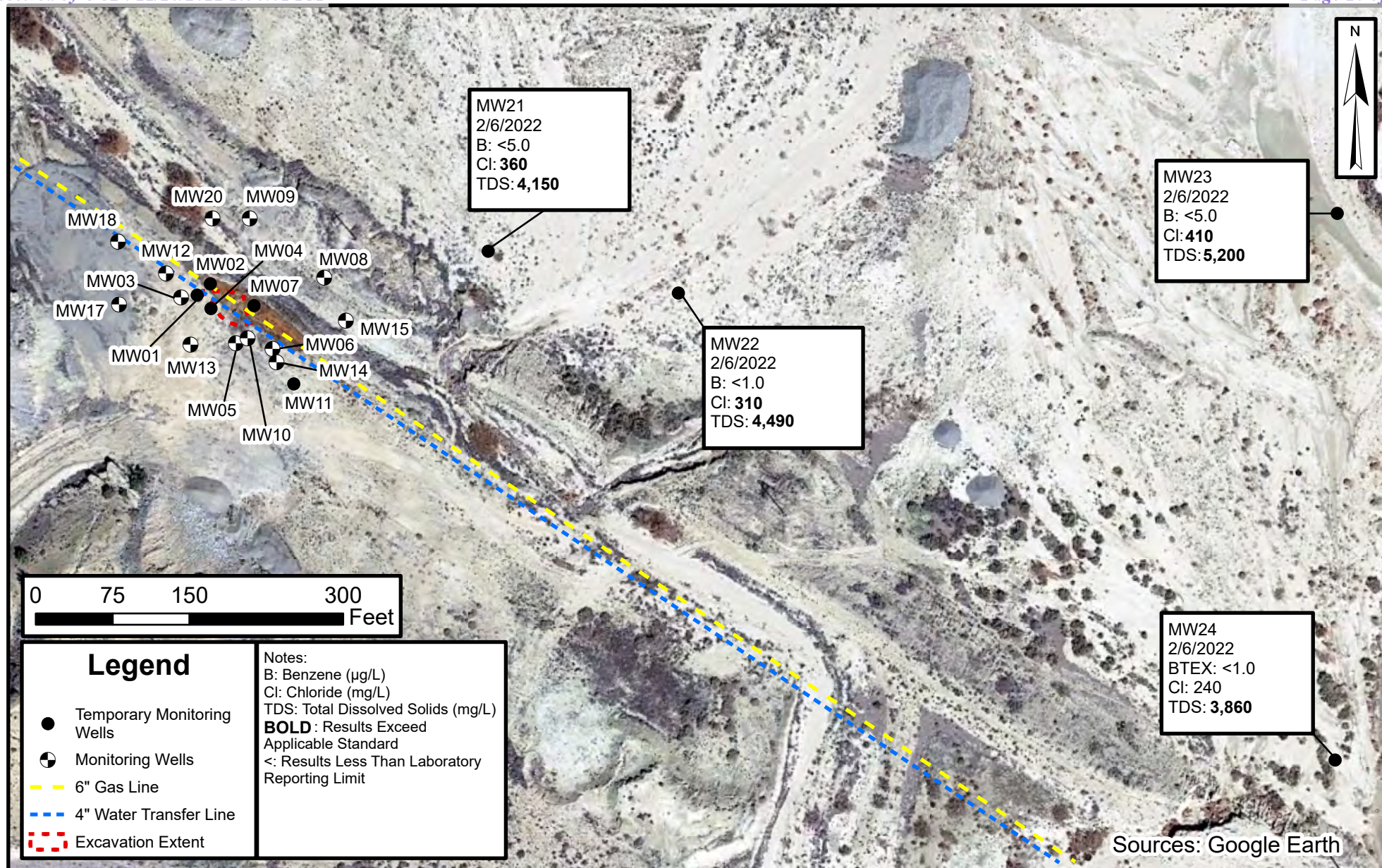




2022 Groundwater Analytical Results

Salty Dog Water Gathering System
Hilcorp Energy Company
NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
4

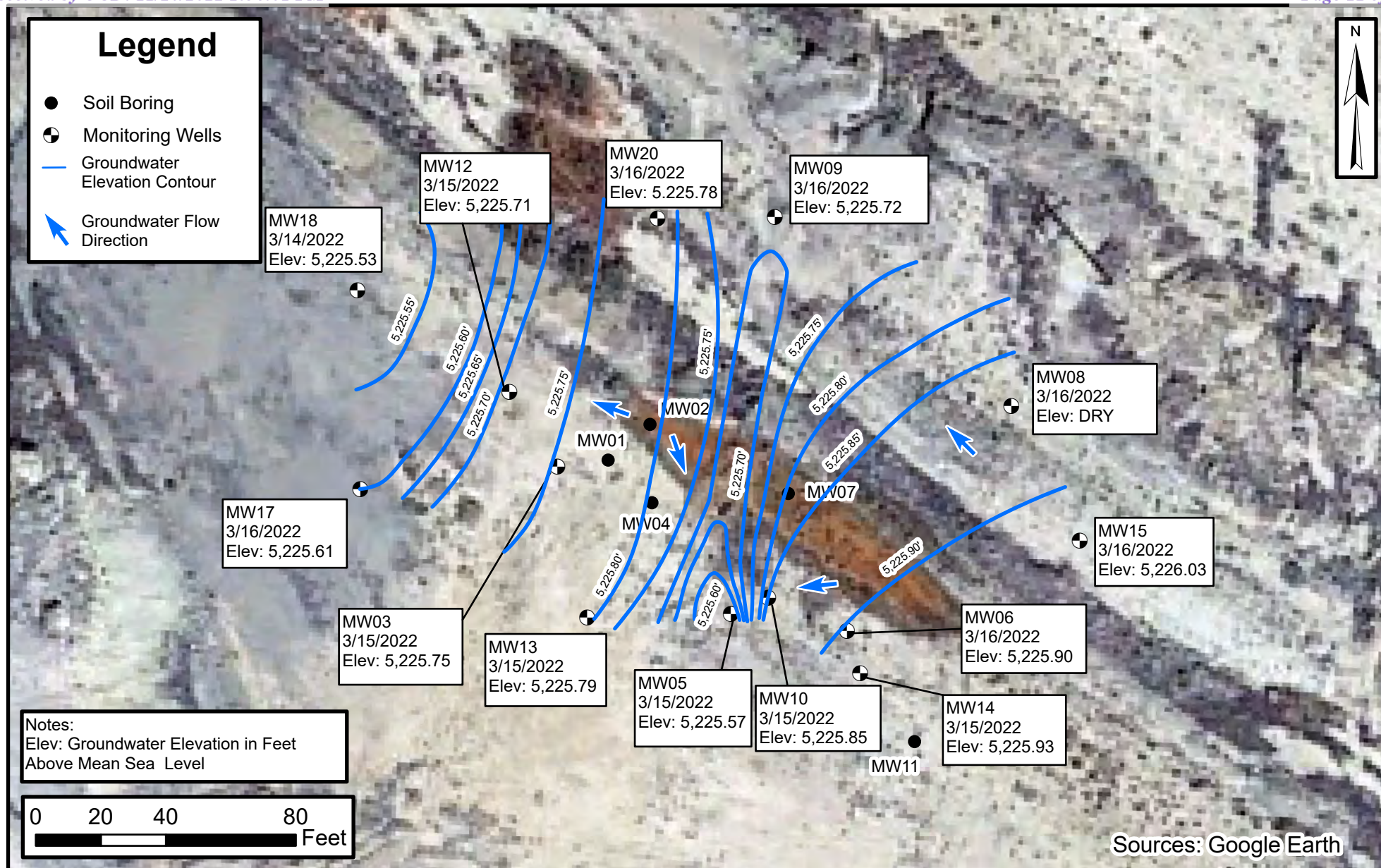


Groundwater Analytical Results - Background Concentrations

Salty Dog Water Gathering System
 Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
 SEC 18-T29N-R13W
 San Juan County, New Mexico

FIGURE
5



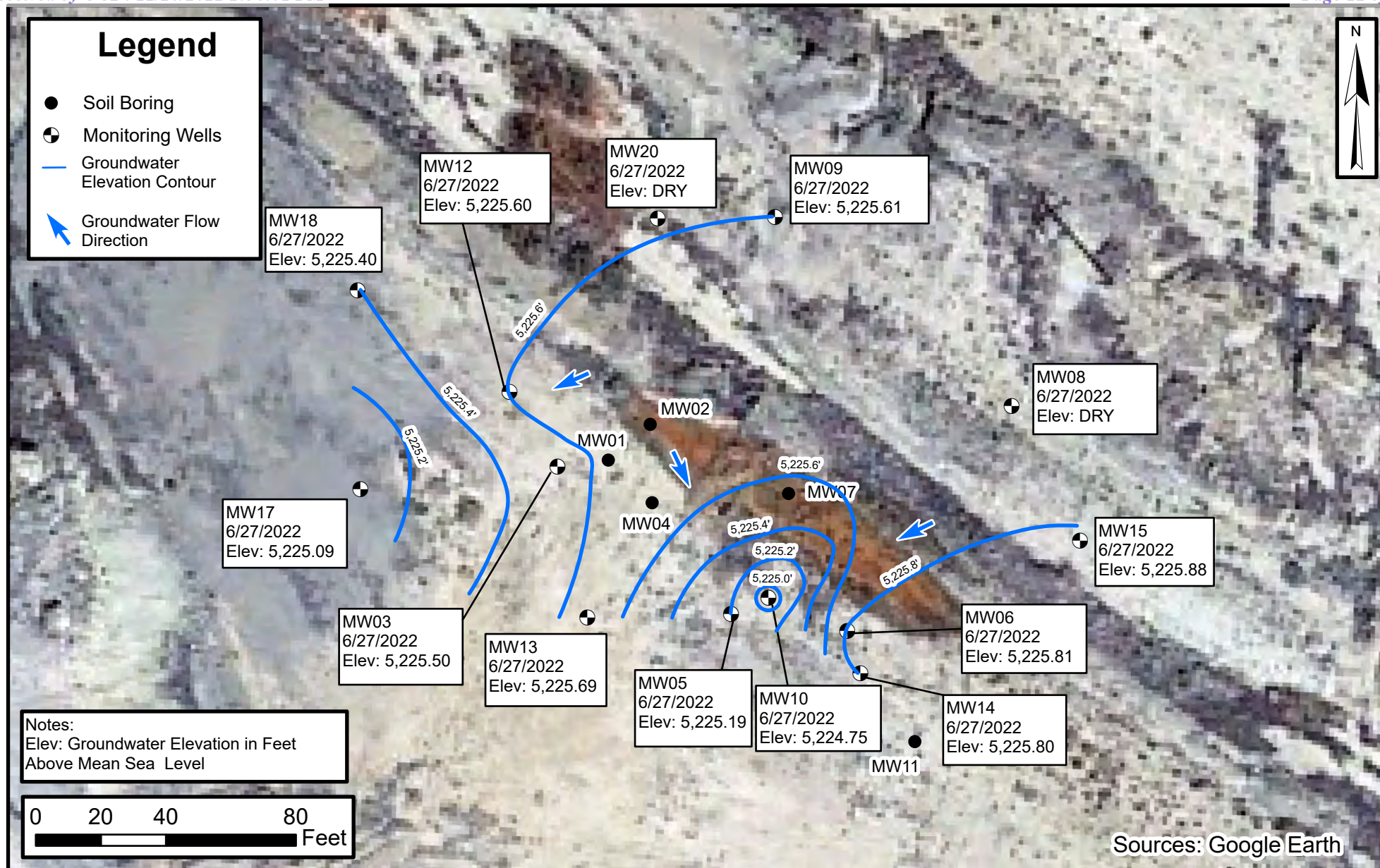
Groundwater Elevation Contours - Q1 2022

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
6

ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

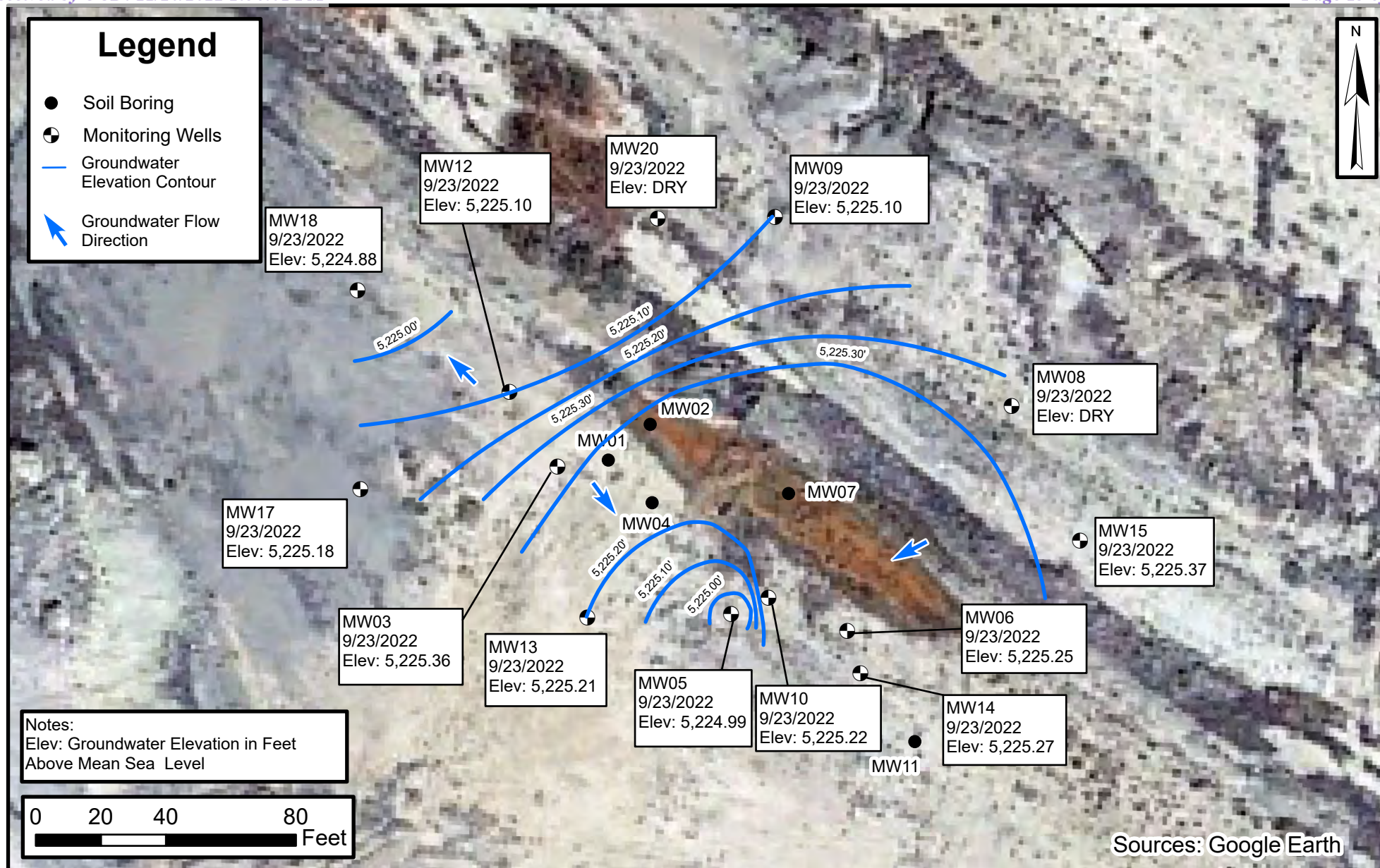


Groundwater Elevation Contours - Q2 2022

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
7



Groundwater Elevation Contours - Q3 2022

Salty Dog Water Gathering System
Hilcorp Energy Company

NMOCD Incident No: nCS1916853082
SEC 18-T29N-R13W
San Juan County, New Mexico

FIGURE
8



TABLES



TABLE 1 SOIL ANALYTICAL RESULTS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico													
Soil Sample Identification	Sample Date	Field Headspace (ppm)	Chloride Field Screening (ppm)**	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	TPH (mg/kg)
NMOCD Closure Criteria		NE	NE	600	10	NE	NE	NE	50	NE	NE	NE	100
Source Characterization Samples													
Ex. Bottom	8/28/2019	NA	NA	14,000	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.0	<45	<45
NE Wall of Ex	8/30/2019	NA	NA	6,300	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.5	<47	<47
SW Wall of Ex	8/30/2019	NA	NA	7,300	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.6	<48	<48
Red Surface Soil	10/21/2019	0.0	6,100	57,000	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	130	750	880
Soil Boring Samples													
MW01 @ 0' - 2'	8/30/2019	1.9	NA	<60	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<9.2	<46	<46
MW01 @ 8' - 10'	8/30/2019	1.0	NA	75	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.4	<47	<47
MW01 @ 10' - 12'	8/30/2019	1.0	NA	84	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.8	<49	<49
MW02 @ 2' - 4'	8/29/2019	9.1	NA	2,900	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<48	<48
MW02 @ 16' - 18'	8/29/2019	4.8	NA	1,800	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.6	<43	<43
MW02 @ 22' - 24'	8/29/2019	1.9	NA	2,400	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.7	<48	<48
MW03 @ 14' - 16'	8/29/2019	7.6	NA	190	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<8.7	<44	<44
MW03 @ 26' - 28'	8/29/2019	2.7	NA	<61	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.8	<44	<44
MW04 @ 2' - 4'	8/30/2019	0.4	NA	390	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.7	<48	<48
MW04 @ 16' - 18'	8/30/2019	1.1	NA	160	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<9.7	<49	<49
MW04 @ 18' - 20'	8/30/2019	1.2	NA	110	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.8	<49	<49
MW05 @ 25' - 30'	8/28/2019	5.0	NA	390	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.8	<49	<49
MW05 @ 30' - 35'	8/28/2019	1.9	NA	110	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.6	<48	<48
MW06 @ 25' - 30'	8/28/2019	1.9	NA	1,700	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.6	<48	<48
MW06 @ 30' - 35'	8/28/2019	0.8	NA	2,100	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<9.9	<50	<50
MW07 @ 2' - 4'	8/29/2019	5.0	NA	9,500	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	36	250	286
MW07 @ 22' - 24'	8/29/2019	5.0	NA	2,200	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.9	<50	<50
MW08 @ 2.5 - 5'	10/20/2019	0.2	<128	<60	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<8.2	<41	<41
MW08 @ 20 - 22.5'	10/20/2019	0.4	<128	<60	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.2	<46	<46
MW08 @ 22.5 - 25'	10/20/2019	0.3	<128	69	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.4	<42	<42
MW08 @ 27.5 - 30'	10/20/2019	0.4	<128	<60	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<8.9	<44	<44
MW09 @ 7.5 - 10'	10/20/2019	0.2	244	410	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.0	<45	<45
MW09 @ 12.5 - 15'	10/20/2019	0.2	356	370	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.6	<48	<48
MW09 @ 20 - 22.5'	10/23/2019	0.2	<128	<60	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.6	<48	<48
MW09 @ 22.5 - 25'	10/20/2019	0.2	1,148	1,100	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<7.2	<36	<36
MW09 @ 27.5 - 30'	10/20/2019	0.2	212	370	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.2	<46	<46



TABLE 1
SOIL ANALYTICAL RESULTS
 Salty Dog Water Gathering System
 Hilcorp Energy Company
 San Juan County, New Mexico

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Chloride Field Screening (ppm)**	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	TPH (mg/kg)
NMOCD Closure Criteria		NE	NE	600	10	NE	NE	NE	50	NE	NE	NE	100
MW10 @ 0 - 2.5'	10/21/2019	0.2	<128	68	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<10	<50	<50
MW10 @ 2.5 - 5'	10/21/2019	0.3	<128	120	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.3	<47	<47
MW10 @ 7.5 - 10'	10/21/2019	0.1	<128	63	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<8.5	<42	<42
MW10 @ 10 - 12.5'	10/21/2019	0.9	776	670	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.0	<45	<45
MW10 @ 12.5 - 15'	10/21/2019	0.6	<128	140	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<7.7	<39	<39
MW10 @ 15 - 17.5'	10/21/2019	0.6	<128	79	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<8.6	<43	<43
MW10 @ 17.5 - 20'	10/21/2019	0.4	184	190	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.1	<45	<45
MW10 @ 20 - 22.5'	10/21/2019	0.4	184	120	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<8.5	<43	<43
MW10 @ 22.5 - 25'	10/21/2019	0.2	<128	<60	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.5	<48	<48
MW10 @ 25 - 27.5'	10/21/2019	0.4	184	210	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<8.8	<44	<44
MW10 @ 27.5 - 30'	10/21/2019	0.7	988	350	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<8.9	<44	<44
MW10 @ 30 - 32.5'	10/21/2019	0.2	656	350	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<8.8	<44	<44
MW10 @ 32.5 - 35'	10/21/2019	0.2	1,148	2,000	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.5	<48	<48
MW10 @ 37.5 - 40'	10/21/2019	0.6	<128	240	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<8.4	<42	<42
MW11 @ 32.5 - 35'	10/21/2019	1.6	<128	130	<0.020	<0.039	<0.039	<0.079	<0.079	<3.9	<9.2	<46	<46
MW11 @ 37.5 - 40'	10/21/2019	0.7	<128	97	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.4	<47	<47
MW12 @ 15 - 17.5'	10/21/2019	0.5	280	80	<0.019	<0.038	<0.038	<0.076	<0.076	<3.8	<9.7	<48	<48
MW12 @ 20 - 22.5'	10/21/2019	0.3	356	180	<0.018	<0.036	<0.036	<0.071	<0.071	<3.6	<9.8	<49	<49
MW12 @ 35 - 37.5'	10/21/2019	0.3	280	200	<0.014	<0.027	<0.027	<0.055	<0.055	<2.7	<9.4	<47	<47
MW12 @ 37.5 - 40'	10/21/2019	0.3	5,420	3,400	<0.014	<0.028	<0.028	<0.056	<0.056	<2.8	<9.5	<47	<47
MW13 @ 10 - 12.5'	10/21/2019	0.3	212	210	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<8.9	<44	<44
MW13 @ 25 - 27.5'	10/21/2019	1.0	156	160	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.8	<49	<49
MW13 @ 32.5 - 35'	10/21/2019	0.4	2,472	3,000	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<10	<50	<50
MW13 @ 37.5 - 40'	10/21/2019	0.3	<128	<60	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.1	<46	<46
MW14 @ 5 - 7.5'	10/22/2019	0.8	<128	<60	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.2	<46	<46
MW14 @ 20 - 22.5'	10/22/2019	1.0	212	270	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<9.8	<49	<49
MW14 @ 25 - 27.5'	10/22/2019	2.5	184	75	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.7	<48	<48
MW14 @ 27.5 - 30'	10/22/2019	2.2	<128	<60	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.5	<47	<47
MW14 @ 30 - 32.5'	10/22/2019	2.1	128	230	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.1	<46	<46
MW15 @ 2.5 - 5'	10/22/2019	0.0	<128	<60	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<9.8	<49	<49
MW15 @ 22.5 - 25'	10/22/2019	0.0	400	1,200	<0.023	<0.047	<0.047	<0.093	<0.093	<4.7	<8.9	<44	<44
MW15 @ 27.5 - 30'	10/22/2019	0.0	988	2,000	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.7	<49	<49
MW15 @ 30 - 32.5'	10/23/2019	0.1	212	160	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.4	<47	<47
MW15 @ 32.5 - 35'	10/22/2019	0.0	2,472	2,300	<0.024	<0.048	<0.048	<0.095	<0.095	<4.8	<8.5	<42	<42
MW15 @ 37.5 - 40'	10/22/2019	0.0	<128	96	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<8.7	<43	<43
MW17 @ 17.5 - 20'	2/6/2020	2.4	<124	120	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.4	<47	<47
MW17 @ 37.5 - 40'	2/6/2020	0.9	<31	<60	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.5	<48	<48



TABLE 1 SOIL ANALYTICAL RESULTS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico													
Soil Sample Identification	Sample Date	Field Headspace (ppm)	Chloride Field Screening (ppm)**	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	TPH (mg/kg)
NMOCD Closure Criteria		NE	NE	600	10	NE	NE	NE	50	NE	NE	NE	100
MW18 @ 20 - 22.5'	2/5/2020	4.1	132	86	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.0	<45	<45
MW18 @ 37.5 - 40'	2/5/2020	0.9	<112	91	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	<10	<50	<50
MW20 @ 7.5 - 10'	2/7/2020	0.9	<112	<60	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<10	<50	<50
MW20 @ 27.5 - 30'	2/7/2020	0.0	964	2,300	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.3	<46	<46
MW21 @ 15 - 17.5'	2/6/2020	0.1	<124	160	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<9.1	<46	<46
MW21 @ 17.5 - 20'	2/6/2020	1.0	<124	99	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<9.6	<48	<48
MW22 @ 15 - 17.5'	2/6/2020	0.1	<124	<60	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<9.8	<49	<49
MW22 @ 17.5 - 20'	2/6/2020	0.2	<124	<60	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	<9.3	<47	<47
MW23 @ 0 - 5'	2/7/2020	0.5	892	720	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<8.7	<44	<44
MW23 @ 22.5 - 25'	2/7/2020	0.1	<28	<60	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<8.4	<42	<42
MW24 @ 4.5 - 7'	2/7/2020	1.5	<112	<60	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<9.2	<46	<46
MW24 @ 17.5 - 20'	2/7/2020	0.2	<112	180	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.8	<49	<49

Notes:

BTEX - benzene, toluene, ethylbenzene, and total xylenes analyzed by US EPA Method 8021B
DRO - diesel range organics analyzed by US EPA Method 8015D
GRO - gasoline range organics analyzed by US EPA Method 8015D
mg/kg - milligrams per kilogram
MRO - motor oil range organics analyzed by US EPA method 8015D
NA - not analyzed
NE - not established

NMOCD - New Mexico Oil Conservation Division
ppm - parts per million
TPH - total petroleum hydrocarbons (sum of GRO, DRO, and MRO)
BOLD - indicates value exceeds NMOCD closure criteria
< - indicates result is less than the stated laboratory reporting limit
** - chloride concentration using Hach Quantab titration strips



TABLE 2 GROUNDWATER ELEVATIONS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico				
Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW03	5,262.40	9/12/2019	33.62	5,228.78
		10/22/2019	33.92	5,228.48
		10/24/2019	33.98	5,228.42
		2/11/2020	33.66	5,228.74
		3/12/2020	33.52	5,228.88
		6/22/2020	33.83	5,228.57
		9/10/2020	34.60	5,227.80
		12/1/2020	35.22	5,227.18
		2/22/2021	35.43	5,226.97
		6/24/2021	35.60	5,226.80
		9/28/2021	36.23	5,226.17
		12/7/2021	37.12	5,225.28
		3/15/2022	36.65	5,225.75
		6/27/2022	36.90	5,225.50
		9/23/2022	37.04	5,225.36
MW05	5,262.11	9/12/2019	33.36	5,228.75
		10/22/2019	33.70	5,228.41
		10/24/2019	33.70	5,228.41
		2/11/2020	33.48	5,228.63
		3/12/2020	33.35	5,228.76
		6/22/2020	33.65	5,228.46
		9/10/2020	34.43	5,227.68
		11/30/2020	35.10	5,227.01
		2/19/2021	35.32	5,226.79
		6/24/2021	35.48	5,226.63
		9/28/2021	36.09	5,226.02
		12/7/2021	36.42	5,225.69
		3/15/2022	36.54	5,225.57
		6/27/2022	36.92	5,225.19
		9/23/2022	37.12	5,224.99
MW06	5,261.78	9/12/2019	32.74	5,229.04
		10/22/2019	33.05	5,228.73
		10/24/2019	33.08	5,228.70
		2/11/2020	32.87	5,228.91
		3/12/2020	32.76	5,229.02
		6/22/2020	33.00	5,228.78
		9/9/2020	33.73	5,228.05
		11/30/2020	34.42	5,227.36
		2/18/2021	34.64	5,227.14
		6/24/2021	34.81	5,226.97
		9/27/2021	35.47	5,226.31
		12/7/2021	35.79	5,225.99
		3/16/2022	35.88	5,225.90
		6/27/2022	35.97	5,225.81
		9/23/2022	36.53	5,225.25



TABLE 2 GROUNDWATER ELEVATIONS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico				
Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW08	5,252.50	10/22/2019	23.80	5,228.70
		10/24/2019	23.81	5,228.69
		2/11/200	23.98	5,228.52
		3/12/2020	23.50	5,229.00
		6/23/2020	23.76	5,228.74
		9/14/2020	24.50	5,228.00
		12/2/2020	25.03	5,227.47
		2/23/2021	25.18	5,227.32
		6/24/2021	25.21	5,227.29
		9/27/2021	25.21	5,227.29
		12/7/2021	DRY	DRY
		3/16/2022	DRY	DRY
		6/27/2022	DRY	DRY
		9/23/2022	DRY	DRY
MW09	5,252.38	10/22/2019	23.94	5,228.44
		10/24/2019	23.93	5,228.45
		2/11/2020	23.70	5,228.68
		3/12/2020	23.53	5,228.85
		6/23/2020	23.86	5,228.52
		9/15/2020	24.62	5,227.76
		12/2/2020	25.21	5,227.17
		2/23/2021	25.39	5,226.99
		6/24/2021	25.60	5,226.78
		9/28/2021	26.22	5,226.16
		12/7/2021	36.58	5,215.80
		3/16/2022	26.66	5,225.72
		6/27/2022	26.77	5,225.61
		9/23/2022	27.28	5,225.10
MW10	5,259.28	10/22/2019	30.59	5,228.69
		10/24/2019	30.60	5,228.68
		2/11/2020	30.35	5,228.93
		3/12/2020	30.25	5,229.03
		6/22/2020	30.52	5,228.76
		9/9/2020	31.26	5,228.02
		11/30/2020	31.93	5,227.35
		2/18/2021	32.16	5,227.12
		6/24/2021	32.32	5,226.96
		9/27/2021	33.00	5,226.28
		12/7/2021	33.34	5,225.94
		3/15/2022	33.43	5,225.85
		6/27/2022	34.53	5,224.75
		9/23/2022	34.06	5,225.22



TABLE 2 GROUNDWATER ELEVATIONS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico				
Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW12	5,259.25	10/22/2019	30.85	5,228.40
		10/24/2019	30.83	5,228.42
		2/11/2020	30.55	5,228.70
		3/12/2020	30.41	5,228.84
		6/23/2020	30.72	5,228.53
		9/11/2020	31.49	5,227.76
		12/1/2020	32.11	5,227.14
		2/22/2021	32.33	5,226.92
		6/24/2021	32.57	5,226.68
		9/28/2021	32.12	5,227.13
		12/7/2021	33.45	5,225.80
		3/15/2022	33.54	5,225.71
		6/27/2022	33.65	5,225.60
		9/23/2022	34.15	5,225.10
MW13	5,260.32	10/22/2019	31.81	5,228.51
		10/24/2019	31.83	5,228.49
		2/11/2020	31.55	5,228.77
		3/12/2020	31.43	5,228.89
		6/22/2020	31.73	5,228.59
		9/10/2020	32.51	5,227.81
		12/1/2020	33.16	5,227.16
		2/19/2021	33.37	5,226.95
		6/24/2021	33.75	5,226.57
		9/28/2021	34.14	5,226.18
		12/7/2021	34.46	5,225.86
		3/15/2022	34.53	5,225.79
		6/27/2022	34.63	5,225.69
		9/23/2022	35.11	5,225.21
MW14	5,259.67	10/22/2019	30.92	5,228.75
		10/24/2019	30.92	5,228.75
		2/11/2020	30.74	5,228.93
		3/12/2020	30.63	5,229.04
		6/23/2020	30.91	5,228.76
		9/9/2020	31.62	5,228.05
		11/30/2020	32.30	5,227.37
		2/18/2021	32.52	5,227.15
		6/24/2021	32.70	5,226.97
		9/27/2021	33.34	5,226.33
		12/7/2021	33.68	5,225.99
		3/15/2022	33.74	5,225.93
		6/27/2022	33.87	5,225.80
		9/23/2022	34.40	5,225.27



TABLE 2 GROUNDWATER ELEVATIONS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico				
Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW15	5,256.00	10/22/2019	27.20	5,228.80
		10/24/2019	27.15	5,228.85
		2/11/2020	26.96	5,229.04
		3/12/2020	26.84	5,229.16
		6/23/2020	27.12	5,228.88
		9/14/2020	27.91	5,228.09
		12/2/2020	28.55	5,227.45
		2/23/2021	28.76	5,227.24
		6/24/2021	28.92	5,227.08
		9/27/2021	29.59	5,226.41
		12/7/2021	29.92	5,226.08
		3/16/2022	29.97	5,226.03
		6/27/2022	30.12	5,225.88
		9/23/2022	30.63	5,225.37
MW17	5,260.27	2/11/2020	31.60	5,228.67
		3/12/2020	31.47	5,228.80
		6/22/2020	31.87	5,228.40
		9/11/2020	32.69	5,227.58
		12/2/2020	33.32	5,226.95
		2/22/2021	33.54	5,226.73
		6/24/2021	--	--
		9/28/2021	34.32	5,225.95
		12/6/2021	34.61	5,225.66
		3/16/2022	34.66	5,225.61
		6/27/2022	35.18	5,225.09
		9/23/2022	35.09	5,225.18
MW18	5,259.64	2/11/2020	31.07	5,228.57
		3/12/2020	30.92	5,228.72
		6/22/2020	31.33	5,228.31
		9/11/2020	32.08	5,227.56
		12/1/2020	32.67	5,226.97
		2/22/2021	32.86	5,226.78
		6/24/2021	38.09	5,221.55
		9/28/2021	38.74	5,220.90
		12/6/2021	34.06	5,225.58
		3/14/2022	34.11	5,225.53
		6/27/2022	34.24	5,225.40
		9/23/2022	34.76	5,224.88



TABLE 2 GROUNDWATER ELEVATIONS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico				
Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW20	5,252.11	2/11/2020	23.41	5,228.70
		3/12/2020	23.24	5,228.87
		6/23/2020	23.58	5,228.53
		9/15/2020	24.36	5,227.75
		12/2/2020	24.94	5,227.17
		2/23/2021	25.11	5,227.00
		6/24/2021	25.32	5,226.79
		9/28/2021	DRY	DRY
		12/7/2021	26.26	5,225.85
		3/16/2022	26.33	5,225.78
		6/27/2022	DRY	DRY
		9/23/2022	DRY	DRY

Notes:
amsl: above mean sea level
BTOC: below top of casing



TABLE 3 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico							
Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Acetone (µg/L)	Total Xylenes (µg/L)	Other VOCs (1)
NMWQCC Standard		5	1,000	700	NE	620	NA
MW03	9/12/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	12/1/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	2/22/2021	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/28/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/16/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	Insufficient Water Volumes to Collect Sample					
	9/23/2022	Insufficient Water Volumes to Collect Sample					
MW05	9/12/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	11/30/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	2/22/2021	Insufficient Water Volumes to Collect Sample					
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/28/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/17/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	Insufficient Water Volumes to Collect Sample					
	9/23/2022	Insufficient Water Volumes to Collect Sample					
MW06	9/12/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	11/30/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	2/22/2021	Insufficient Water Volumes to Collect Sample					
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/28/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/16/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/28/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	Insufficient Water Volumes to Collect Sample					
MW08	10/24/2019	<1.0	<1.0	<1.0	11	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	11	<1.5	ND
	6/23/2020	<1.0	<1.0	<1.0	11	<1.5	ND
	9/9/2020	Insufficient Water Volumes to Collect Sample					
	11/30/2020	Insufficient Water Volumes to Collect Sample					
	2/22/2021	Insufficient Water Volumes to Collect Sample					
	6/24/2021	Insufficient Water Volumes to Collect Sample					
	9/28/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/16/2022	Insufficient Water Volumes to Collect Sample					
	6/28/2022	Insufficient Water Volumes to Collect Sample					
	9/23/2022	Insufficient Water Volumes to Collect Sample					



TABLE 3 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico							
Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Acetone (µg/L)	Total Xylenes (µg/L)	Other VOCs (1)
NMWQCC Standard		5	1,000	700	NE	620	NA
MW09	10/24/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/13/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/23/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	12/2/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	2/22/2021	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/27/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/16/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/28/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
MW10	10/24/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	11/30/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	2/22/2021	Insufficient Water Volumes to Collect Sample					
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/27/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/15/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
MW12	10/24/2019	26	12	2.6	<10	22	ND
	3/12/2020	2.0	<1.0	<1.0	<10	<1.5	ND
	6/23/2020	<1.0	<1.0	<1.0	<10	1.9	ND
	9/9/2020	2.32	<1.0	<1.0	<5.0	4.14	ND
	12/1/2020	1.77	<1.0	<1.0	<5.0	4.52	ND
	2/22/2021	1.20	<1.0	<1.0	<5.0	4.42	ND
	6/28/2021	<2.0	<2.0	<2.0	--	<3.0	ND
	9/28/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/15/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
MW13	10/24/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	12/1/2020	<1.0	<1.0	<1.0	<5.0	<3.0	ND
	2/22/2021	Insufficient Water Volumes to Collect Sample					
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/28/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/15/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	<1.0	<1.0	<1.0	<10	<1.5	ND



TABLE 3 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico							
Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Acetone (µg/L)	Total Xylenes (µg/L)	Other VOCs (1)
NMWQCC Standard		5	1,000	700	NE	620	NA
MW14	10/24/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/23/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	11/30/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	2/22/2021	Insufficient Water Volumes to Collect Sample					
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/28/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/17/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/28/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	Insufficient Water Volumes to Collect Sample					
MW15	10/24/2019	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/23/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	12/2/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	2/22/2021	<1.0	<1.0	<1.0	<50	<3.0	ND
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/27/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/16/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/28/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
MW17	2/11/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	12/1/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	2/22/2021	<1.0	<1.0	<1.0	<50	<3.0	ND
	6/24/2021	Insufficient Water Volumes to Collect Sample					
	9/27/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/14/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/28/2022	Insufficient Water Volumes to Collect Sample					
	9/23/2022	Insufficient Water Volumes to Collect Sample					
MW18	2/11/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/12/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/22/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	12/1/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	2/22/2021	<1.0	<1.0	<1.0	<50	<3.0	ND
	6/28/2021	<2.0	<2.0	<2.0	--	--	ND
	9/27/2021	<1.0	<1.0	<1.0	<4.0	<1.5	ND
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/14/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/23/2022	<1.0	<1.0	<1.0	<10	<1.5	ND



TABLE 3 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico							
Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Acetone (µg/L)	Total Xylenes (µg/L)	Other VOCs (1)
NMWQCC Standard		5	1,000	700	NE	620	NA
MW20	2/11/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	3/13/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/23/2020	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/9/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	12/2/2020	<1.0	<1.0	<1.0	<50	<3.0	ND
	2/22/2021	<1.0	<1.0	<1.0	<50	<3.0	ND
	6/24/2021	<1.0	<1.0	<1.0	<10	<1.5	ND
	9/27/2021	Insufficient Water Volumes to Collect Sample					
	12/7/2021	Insufficient Water Volumes to Collect Sample					
	3/16/2022	<1.0	<1.0	<1.0	<10	<1.5	ND
	6/27/2022	Insufficient Water Volumes to Collect Sample					
	9/23/2022	Insufficient Water Volumes to Collect Sample					
MW21 (2)	2/6/2020	<5.0	<5.0	<5.0	<50	<7.5	ND
MW22 (2)	2/7/2020	<1.0	<1.0	<1.0	11	<1.5	ND
MW23 (2)	2/7/2020	<5.0	<5.0	<5.0	<50	<7.5	ND
MW24 (2)	2/15/2020	<1.0	<1.0	<1.0	<10	<1.5	ND

Notes:

µg/L: micrograms per liter

NMWQCC: New Mexico Water Quality Control Commission

ND: not detected above laboratory reporting limit

<0.037: indicates result less than the stated laboratory reporting limit (RL)

Concentrations in bold and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code

(1): Volatile organic compounds (VOCs) not detected above laboratory reporting limits were not included in this table. See Laboratory Analytical Reports for complete results.

(2): Groundwater samples collected from a temporary well screen placed in the open boring.



TABLE 4 GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico																			
Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate-Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	250	600	1.6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	1,000	6-9
MW03	9/12/2019	13	13,000	1,600	<1.0	19	<10	--	<5.0	2,500	390	27	6,600	137.8	<2,000	137.8	45,000	30,000	7.41
	3/12/2020	19	15,000	1,700	<1.0	<10	<10	--	<5.0	2,500	410	25	6,500	--	--	--	--	26,700	7.38
	6/22/2020	16	12,000	1,800	<1.0	<10	<10	--	<5.0	1,900	350	25	5,500	131.1	<2,000	131.1	46,000	22,000	7.48
	9/9/2020	<500	14,900	2,830	<1.50	--	--	0.152	--	--	--	--	--	--	--	--	--	32,600	7.36
	12/1/2020	15.6	11,300	1,770	<1.50	--	--	0.233	--	--	--	--	--	--	--	--	--	25,700	7.31
	2/22/2021	<100	12,200	1,930	<1.50	--	--	0.359	--	--	--	--	--	--	--	--	--	29,200	7.25
	6/24/2021	15	11,000	1,900	<1.0	--	--	<10	<5.0	2,000	310	28	5,900	--	--	--	--	23,600	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	Insufficient Water Volumes to Collect Sample																	
	6/27/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW05	9/12/2019	15	15,000	2,300	<1.0	20	21	--	<5.0	2,100	750	25	7,800	153.9	<2,000	153.9	54,000	34,000	7.25
	3/12/2020	4.3	3,400	2,600	<1.0	<4.0	<4.0	--	<5.0	760	110	12	2,300	--	--	--	--	8,420	7.57
	6/22/2020	5.8	4,500	2,100	<1.0	<4.0	<4.0	--	<5.0	1,000	150	16	2,500	199.6	<2,000	199.6	19,000	12,000	7.66
	9/9/2020	<100	1,780	3,000	0.761	--	--	1.83	--	--	--	--	--	--	--	--	--	6,720	7.46
	11/30/2020	<100	1,660	2,510	0.751	--	--	0.294	--	--	--	--	--	--	--	--	--	6,600	7.52
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	2.5	1,900	2,300	<1.0	--	--	<1.0	<5.0	540	80	10	1300	--	--	--	--	6,420	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/17/2022	4.9	3,300	4,700	<1.0	--	--	<2.0	<5.0	820	98	13	1,500	271.4	<2,000	271.4	22,000	13,100	7.68
	6/27/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW06	9/12/2019	5.5	5,300	2,300	<1.0	<10	1.0	--	<5.0	1,100	170	16	3,500	200.8	<2,000	200.8	22,000	13,600	7.49
	3/12/2020	12	9,600	3,900	<1.0	<10	18	--	<5.0	1,100	450	18	5,400	--	--	--	--	19,800	7.50
	6/22/2020	9.8	7,200	3,800	<1.0	<10	13	--	<5.0	870	350	17	4,800	226.3	<2,000	226.3	31,000	18,200	7.69
	9/9/2020	<100	8,610	4,330	<1.50	--	--	13.4	--	--	--	--	--	--	--	--	--	18,400	7.35
	11/30/2020	13.5	9,100	3,700	<1.50	--	--	15.3	--	--	--	--	--	--	--	--	--	19,600	7.53
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	7.3	4,900	4,700	1.2	--	--	9.6	<5.0	730	290	15	4,800	--	--	--	--	15,200	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	5	3,400	4,700	<1.0	--	--	5.0	<5.0	610	230	17	3,500	269.8	<2,000	269.8	23,000	13,300	7.73
	6/28/2022	3.9	2,300	4,000	0.86	--	--	2.3	<2.5	560	220	18	3,300	276.0	<2,000	276.0	20,000	11,800	--
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW08	10/24/2019	2.4	1,500	3,100	2.8	<0.50	3.0	--	<1.0	580	200	9.0	1,800	--	--	--	--	7,700	7.76
	3/12/2020	1.4	670	4,400	2.8	<2.0	<2.0	--	<5.0	470	180	6.1	1,700	--	--	--	--	6,950	7.63
	6/23/2020	1.4	550	4,700	2.6	<1.0	<1.0	--	<5.0	450	190	6.2	1,800	232.2	<2,000	232.2	9,100	8,050	7.60
	9/9/2020	Insufficient Water Volumes to Collect Sample																	
	11/30/2020	Insufficient Water Volumes to Collect Sample																	
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	Insufficient Water Volumes to Collect Sample																	
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	Insufficient Water Volumes to Collect Sample																	
	6/28/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW09	10/24/2019	3.9	3,300	1,900	<0.50	<2.0	3.1	--	<2.5	1,100	190	14	1,600	--	--	--	--	8,410	7.35
	3/13/2020	4.5	3,400	2,200	<1.0	<2.0	3.5	--	<5.0	1,000	180	11	1,700	--	--	--	--	8,980	7.24
	6/23/2020	4.3	3,200	2,300	<1.0	<1.0	3.0	--	<5.0	870	170	11	1,900	236.1	<2,000	236.1	15,000	10,400	7.58
	9/9/2020	<100	1,720	2,870	<1.50	--	--	2.34	--	--	--	--	--	--	--	--	--	6,400	7.18
	12/2/2020	<10.0	1,410	2,380	<1.50	--	--	2.38	--	--	--	--	--	--	--	--	--	6,100	7.21
	2/22/2021	<100	1,240	2,580	<1.50	--	--	2.14	--	--	--	--	--	--	--	--	--	4,980	7.27
	6/24/2021	1.5	740	2,500	<1.0	--	--	<1.0	<5.0	530	94	12	860	--	--	--	--	5,100	--
	9/27/2021	2	1,200	2,600	<1.0	<1.0	1.1	--	<5.0	690	120	14	1,000	236.8	<2,000	236.8	7,300	5,560	7.19
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	2.5	1,700	2,300	<1.0	--	--	<1.0	<5.0	710	130	15	1,200	229.8	<2,000	229.8	8,900	6,560	7.31
	6/28/2022	1.8	970	2,200	1.0	--	--	<1.0	<2.5	990	190	52	1,100	242.5	<2,000	242.5	7,200	5,370	--
	9/23/2022	4.5	3,500	2,200	0.6	--	--	<2.0	<2.5	1200	220	21	1,900	263.2	<2,000	263.2	15,000	8,750	7.36



TABLE 4 GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico																			
Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate-Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	250	600	1.6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	1,000	6-9
MW10	10/24/2019	3.4	2,700	2,200	<0.50	<2.0	3.5	--	<10	600	82	9.1	2,300	--	--	--	--	8,040	7.24
	3/12/2020	2.9	2,200	2,200	<1.0	<2.0	2.2	--	<5.0	640	85	8.7	1,600	--	--	--	--	6,660	7.36
	6/22/2020	3.1	2,100	2,000	<1.0	<2.0	<2.0	--	<5.0	710	94	8.8	1,500	218.7	<2,000	218.7	9,900	7,200	7.65
	9/9/2020	<100	1,540	2,640	<1.50	--	--	1.78	--	--	--	--	--	--	--	--	--	5,370	7.45
	11/30/2020	<10.0	1,210	2,160	<1.50	--	--	1.67	--	--	--	--	--	--	--	--	--	5,950	7.42
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	1.8	1,200	2,200	<1.0	--	--	<1.0	<5.0	510	77	9.5	1,200	--	--	--	--	5,690	--
	9/27/2021	5.3	3,600	1,900	<1.0	--	--	<4.0	<5.0	1,300	180	26	1,800	185.4	<2,000	185.4	16,000	9,510	7.34
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/15/2022	3.9	2,900	2,000	<1.0	--	--	<2.0	<5.0	1,100	120	18	1,700	198.5	<2,000	198.5	14,000	7,340	7.70
	6/27/2022	5.2	3,500	1,600	<0.50	--	--	<4.0	<2.5	1,500	200	39	2,000	170.8	<2,000	170.8	18,000	10,100	--
	9/23/2022	4.5	3,300	1,600	0.71	--	--	<4.0	<2.5	920	120	18	1,800	180.7	<2,000	180.7	15,000	9,200	7.51
MW12	10/24/2019	35	27,000	2,400	<0.50	<20	<20	--	<2.5	2,800	400	75	18,000	--	--	--	--	57,000	7.34
	3/12/2020	33	28,000	2,400	<1.0	<20	<20	--	<5.0	2,400	370	67	13,000	--	--	--	--	42,900	7.20
	6/23/2020	32	25,000	2,400	<1.0	<10	2.5	--	<5.0	2,300	370	73	15,000	256.2	<2,000	256.2	91,000	52,000	7.45
	9/9/2020	<500	21,900	3,230	<1.5	--	--	2.24	--	--	--	--	--	--	--	--	--	41,600	7.07
	12/1/2020	22.4	18,600	<2500	<1.50	--	--	3.45	--	--	--	--	--	--	--	--	--	31,100	7.17
	2/22/2021	<100	14,400	2,860	<1.50	--	--	3.90	--	--	--	--	--	--	--	--	--	27,100	7.38
	6/28/2021	5.2	3,400	1,800	<1.0	--	--	<4.0	<5.0	1,100	150	12	1,800	--	--	--	--	10,500	--
	9/28/2021	11	8,300	2,900	<1.0	<1.0	4.9	4.90	<5.0	910	140	36	4,800	256.8	<2,000	256.6	36,000	18,900	7.39
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/15/2022	8.7	6,500	2,700	<1.0	--	--	6.90	<5.0	730	110	34	4,600	248.4	<2,000	248.6	30,000	15,200	7.48
	6/27/2022	7.7	5,900	2,400	<0.50	--	--	7.40	<2.5	670	110	27	4,100	245.6	<2,000	245.6	26,000	13,900	--
	9/23/2022	4.3	3,700	2,600	0.64	--	--	5.20	<2.5	490	73	20	3,200	226.6	<2,000	222.6	16,000	8,900	7.45
MW13	10/24/2019	24	19,000	1,600	4.4	<20	<20	--	<2.5	3,400	440	37	11,000	--	--	--	--	40,400	7.17
	3/12/2020	19	16,000	2,200	<1.0	<10	<10	--	<5.0	2,500	320	26	7,500	--	--	--	--	30,000	7.06
	6/22/2020	17	14,000	1,800	<1.0	<10	<10	--	<5.0	2,400	340	26	6,100	182.5	<2,000	182.5	47,000	29,200	7.36
	9/9/2020	<100	7,380	3,160	<1.50	--	--	4.76	--	--	--	--	--	--	--	--	--	15,900	7.25
	12/1/2020	12.3	8,030	2,420	<1.50	--	--	1.18	--	--	--	--	--	--	--	--	--	21,000	7.32
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	9.8	6,900	1,900	<1.0	--	--	<10	<5.0	1,700	250	20	3,400	--	--	--	--	16,900	--
	9/28/2021	11	8,600	2,000	<1.0	<10	<1.0	--	<5.0	2,000	280	32	4,000	198.9	<2,000	198.9	33,000	17,200	7.29
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/15/2022	5.3	3,800	2,500	<1.0	--	--	<4.0	<5.0	780	100	16	2,800	249.3	<2,000	249.3	20,000	11,300	7.55
	6/27/2022	5.5	3,500	2,000	0.54	--	--	<2.0	<2.5	630	75	<10	2,600	231.1	<2,000	231.1	20,000	11,000	--
	9/23/2022	3.6	2,800	2,500	0.70	--	--	<2.0	<2.5	710	86	12	2,800	271.9	<2,000	271.9	16,000	8,950	7.55
MW14	10/24/2019	3.9	2,900	1,900	<0.50	<2.0	5.8	--	<2.5	960	160	12	1,900	--	--	--	--	8,860	7.29
	3/12/2020	3.9	3,000	2,200	<1.0	<2.0	4.5	--	<5.0	930	140	9.2	1,600	--	--	--	--	7,600	7.29
	6/23/2020	4.5	3,400	2,000	<1.0	<1.0	5.1	--	<5.0	940	150	10	1,800	223.0	<2,000	223.00	15,000	8,450	7.56
	9/9/2020	<100	3,640	2,430	<1.50	--	--	6.66	--	--	--	--	--	--	--	--	--	9,050	7.21
	11/30/2020	<10.0	2,700	2,180	<1.50	--	--	4.25	--	--	--	--	--	--	--	--	--	7,860	7.36
	2/22/2021	Insufficient Water Volumes to Collect Sample																	
	6/24/2021	4.0	2,900	2,400	<1.0	--	--	<1.0	<5.0	910	130	14	2,200	--	--	--	--	7,810	--
	9/28/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/17/2022	2.8	1,900	2,800	<1.0	--	--	<2.0	<5.0	760	95	12	1,900	225.6	<2,000	225.6	13,000	7,580	7.83
	6/28/2022	3.1	2,200	2,300	0.78	--	--	<2.0	<2.5	810	99	12	2,000	216.5	<2,000	216.5	14,000	8,060	--
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW15	10/24/2019	2.7	1,600	1,700	<0.50	<0.50	2.1	--	<2.5	720	130	9.5	1,400	--	--	--	--	6,370	7.45
	3/12/2020	1.3	730	2,200	<1.0	<2.0	<2.0	--	<5.0	590	91	6.7	720	--	--	--	--	4,300	7.27
	6/23/2020	1.3	560	2,000	<1.0	<1.0	1.7	--	<5.0	520	89	6.7	670	232.8	<2,000	232.8	5,400	4,500	7.70
	9/9/2020	<100	650	2,750	0.810	--	--	1.72	--	--	--	--	--	--	--	--	--	3,790	7.14
	12/2/2020	<100	758	2,060	0.822	--	--	2.24	--	--	--	--	--	--	--	--	--	4,670	7.29
	2/22/2021	<100	630	2,390	<1.50	--	--	2.03	--	--	--	--	--	--	--	--	--	4,170	7.21
	6/24/2021	1.2	490	2,200	<1.0	--	--	1.1	<5.0	520	88	10	690	--	--	--	--	3,850	--
	9/27/2021	1.3	430	2,500	<1.0	--	--	1.8	<5.0	530	85	13	560	219.4	<2,000	219.4	4,900	3,990	7.29
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	1.1	360	2,000	<1.0	--	--	1.2	<5.0	550	80	11	550	216.8	<2,000	216.8	5,000	4,180	7.63
	6/28/2022	0.98	430	2,200	1.2	--	--	<1.0	<2.5	570	83	13	580	215.0	<2,000	215.0	4,900	4,030	--
	9/23/2022	1.0	480	2,100	1.2	--	--	<1.0	<2.5	600	82	14	610	221.8	<2,000	221.8	5,000	3,820	7.43



TABLE 4 GROUNDWATER ANALYTICAL RESULTS - INORGANICS AND GENERAL CHEMISTRY Salty Dog Water Gathering System Hilcorp Energy Company San Juan County, New Mexico																			
Well Identification	Sample Date	USEPA Method 300.0: Anions								USEPA Method 200.7: Dissolved Metals				Standard Method 2320B: Alkalinity			General Chemistry		
		Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Nitrogen, Nitrite as N (mg/L)	Nitrogen, Nitrate as N (mg/L)	Nitrate-Nitrite as N (mg/L)	Phosphorus, Orthophosphate (As P, mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Bicarbonate (As CaCO3) (mg/L)	Carbonate (As CaCO3) (mg/L)	Total Alkalinity (mg/L)	Conductivity (µmhos/cm)	Total Dissolved Solids	pH
NMWQCC Standard		NE	250	600	1.6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	1,000	6-9
MW17	2/11/2020	2.5	1,900	2,300	<1.0	<1.0	2.7	--	<5.0	590	87	7.6	1,500	--	--	--	9,000	6,860	7.40
	3/12/2020	2.3	1,700	2,500	<1.0	<2.0	2.6	--	<5.0	590	87	6.7	1,400	--	--	--	--	6,570	7.41
	6/22/2020	2.2	1,500	2,400	<1.0	2.1	2.1	--	<5.0	550	82	7.0	1,300	242.0	<2,000	242.0	8,200	5,900	7.59
	9/9/2020	<100	2,650	3,170	0.862	--	--	1.93	--	--	--	--	--	--	--	--	--	7,650	7.41
	12/1/2020	<100	6,320	2,280	0.603	--	--	0.472	--	--	--	--	--	--	--	--	--	10,100	7.36
	2/22/2021	<100	7,210	2,130	<1.50	--	--	0.221	--	--	--	--	--	--	--	--	--	17,900	7.37
	6/24/2021	Insufficient Water Volumes to Collect Sample																	
	9/27/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/14/2022	Insufficient Water Volumes to Collect Sample																	
	6/28/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW18	2/11/2020	11	8,200	2,300	<1.0	<10	1.6	--	<5.0	1,400	230	25	5,000	--	--	--	32,000	18,600	7.45
	3/12/2020	22	18,000	2,200	<1.0	<20	<20	--	<5.0	2,200	320	33	9,200	--	--	--	--	7,600	7.29
	6/22/2020	16	10,000	2,300	<1.0	<10	<10	--	<5.0	1,600	260	29	6,700	229.6	<2,000	229.6	47,000	21,800	7.33
	9/9/2020	<100	8,400	2,670	<1.50	--	--	2.97	--	--	--	--	--	--	--	--	--	17,600	7.04
	12/1/2020	<10.0	5,730	2,360	<1.50	--	--	3.28	--	--	--	--	--	--	--	--	--	12,700	7.26
	2/22/2021	<100	5,300	2,640	<1.50	--	--	3.32	--	--	--	--	--	--	--	--	--	12,400	7.25
	6/28/2021	3	1,900	2,200	<1.0	--	--	2.50	<5.0	600	87	7	1,400	--	--	--	--	6,750	--
	9/27/2021	4.3	3,300	2,600	<1.0	<1.0	2.6	--	<5.0	920	150	21	2,000	216.6	<2,000	216.6	15,000	7,890	7.25
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/14/2022	6.2	4,700	2,500	<1.0	--	--	5.0	<5.0	870	130	21	3,200	235.7	<2,000	235.7	23,000	10,500	7.64
	6/27/2022	5.8	3,700	2,200	<0.50	--	--	4.9	<2.5	800	120	18	3,100	235.8	<2,000	235.8	20,000	11,000	--
	9/23/2022	4.3	3,100	2,000	0.88	--	--	3.3	<2.5	870	130	20	2,800	222.6	<2,000	222.6	16,000	8,630	7.34
MW20	2/11/2020	12	8,300	2,500	<1.0	<10	1.9	--	<5.0	970	190	23	5,800	--	--	--	32,000	19,300	7.26
	3/13/2020	9.2	7,300	2,500	<1.0	<10	<10	--	<5.0	880	180	17	4,600	--	--	--	--	13,800	7.30
	6/23/2020	4.9	3,400	2,300	<1.0	<10	2.0	--	<5.0	550	120	12	2,600	248.1	<2,000	248.1	16,000	10,200	7.69
	9/9/2020	<100	3,120	2,860	<1.50	--	--	1.61	--	--	--	--	--	--	--	--	--	8,650	7.30
	12/2/2020	<10.0	3,100	2,420	<1.50	--	--	1.76	--	--	--	--	--	--	--	--	--	8,480	7.35
	2/22/2021	<100	2,730	2,530	<1.50	--	--	1.67	--	--	--	--	--	--	--	--	--	8,020	7.24
	6/24/2021	2.8	1,700	2,300	<1.0	--	--	<1.0	<5.0	500	110	13.0	1600	--	--	--	--	7,010	--
	9/27/2021	Insufficient Water Volumes to Collect Sample																	
	12/7/2021	Insufficient Water Volumes to Collect Sample																	
	3/16/2022	1.7	920	2,100	<1.0	--	--	1.3	<5.0	500	93	14.0	980	228.8	<2,000	228.8	7,000	5,030	7.53
	6/27/2022	Insufficient Water Volumes to Collect Sample																	
	9/23/2022	Insufficient Water Volumes to Collect Sample																	
MW21	2/6/2020	1.1	360	2,200	<1.0	<1.0	<1.0	--	<5.0	540	76	<10.0	650	--	--	--	5,100	4,150	7.15
MW22	2/7/2020	<1.0	310	2,100	<1.0	<1.0	<1.0	--	<5.0	650	94	23	540	--	--	--	4,900	4,490	7.62
MW23	2/7/2020	<1.0	410	1,900	<1.0	<1.0	<1.0	--	<5.0	680	110	19	460	--	--	--	5,000	5,200	6.85
MW24	2/15/2020	<1.0	240	2,100	<1.0	<1.0	<1.0	--	<5.0	510	66	<10.0	530	--	--	--	4,400	3,860	7.24

Notes:

mg/L: milligrams per liter

µmhos/cm: micromhos per centimeter

NMWQCC: New Mexico Water Quality Control Commission

--: not analyzed

<0.037: indicates result less than the stated laboratory reporting limit (RL)

Concentrations in bold and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code



APPENDIX A

Boring Logs

			
BORING LOG/MONITORING WELL COMPLETION DIAGRAM			
Boring/Well Number: MW17		Project: Salty Dog	
Date: 2/5/20 - 2/6/20		Project Number: 017819014	
Logged By: JA/EC		Drilled By: Cascade	
Drilling Method: Sonic		Sampling Method: Continuous	
Elevation:	Detector: PID / quantab		
Gravel Pack: 10-20 Silica Sand 35-23'		Seal: Hydrated Bentonite Chips 23-20'	
Casing Type: Schedule 40 PVC		Grout: Bentonite-Cement Slurry 0-20'	
Screen Type: Schedule 40 PVC		Diameter: 2"	Length: 25'
Slot: 0.010"		Hole Diameter: 6"	Depth to Liquid: NA
Diameter: 2"		Length: 10'	Depth to Water: 28'
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?
Sample #	Depth (ft. bgs.)	Sample Run	Recovery
Soil/Rock Type	Lithology/Remarks		Well Completion
			Stick up
	0	1	SM Dry, loose, lt. reddish brown, silty sand with gravel CI < (28x4)
	1		
	2		
	3		
	4	2	SM SAA CI < (28x4)
	5		
	6	3	SM SAA CI < (28x4)
	7		
	8		
	9	4	SM SAA CI < (28x4)
	10		
	11		
	12	5	SM SAA CI < (31x4)
	13		
	14	6	SM SAA CI < (31x4)
	15		

□ = sand

▨ = grout

▩ = bentonite

										Boring/Well #	MW 17	
										Project:	Salty Dog	
										Project #	017819014	
										Date	2/5/20 - 2/6/20	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion		
	Dry	0.9	N		15	7		SM	SAA			
					16							
					17							
				MW17 @ 17.5-20 1030	18							
	Dry	2.4	N		19	8		SC	light brown, clayey sand, some gravel, white mottling			
					20				CI < (31x4)			
					21					XX	XX	
	Dry	1.1	N		22	9		CH	Brown clay, some sand	XX	XX	
					23					XX	XX	
					24							
	Dry	1.1	N		25	10		CH	SAA : CI < (31x4)			
					26							
	moist	0.4	N		27	11		CH	Dark brown, some dark red brown fat clay some sand			
					28							
					29							
	Dry	0.8	N		30	12		CH	SAA			
					31							
	Dry	0.6	N		32	13			Interbedded clay and sand 16 brown to reddish brown			
					33							
	Dry	0.4	N		34	14			lt. brown clay and claystone CI < (31x4)			
					35							
	Dry	0.6	N		36	15			SAA			
					37				well set @ 35'			
										backfill		



Advancing Opportunity

Boring/Well #	MW17
Project:	Salty Dog
Project #	017819014
Date	2-5-20 - 2-6-20

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.9	N	MW17 37.5-40' 1115 16	37			L#	U < 31 grey shale/siltstone	
					38					
					39					
					40					
					41					
					42					
					43					
					44					
					45					
					46					
					47					
					48					
					49					
					50					
					51					
					52					
					53					
					54					
					55					
					56					
					57					
					58					
					59					

TD @ 40' → backfill well to 35'



BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 18		Project: Salty Dog	
Date: 2-5-2020		Project Number: 017819014	
Logged By: JA/EC		Drilled By: Cascade	
Drilling Method: Sonic		Sampling Method: Continuous	
Elevation:	Detector: PID/Quantab		
Gravel Pack: 10-20 Silica Sand 40-27		Seal: Hydrated Bentonite Chips 27-28	
Casing Type: Schedule 40 PVC		Grout: Bentonite-Cement Slurry 0-25	
Screen Type: Schedule 40 PVC		Diameter: 2"	Length: 30'
Slot: 0.010"		Hole Diameter: 6"	Depth to Liquid: 30
		Diameter: 2"	Length: 16'
		Total Depth: 40	Depth to Water: 30

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	dry	0.0	NO		0			SM	brown/reddish silty sand w/gravel med. coh. med plasticity	stickup
					1					
					2					
	dry	0.0	NO		3			SM	SAA	
					4				c(10-5') = ND <112ppm	
					5	0-10				
	dry	0.0	NO		6			SM	SAA	
					7					
	dry	0.0	NO		8			SM	SAA	
					9				c(5-10') = ND <112ppm	
					10					
	NR				11				NR	
					12					
					13	10-20				
	dry	0.5	NO		14			SM	SAA some cobbles	
					15				c(10-15') = ND <112ppm	

☐ = sand

☐ = bentonite

☐ = grout

										Boring/Well # <u>MW 18</u>	
										Project: <u>Salty Dog</u>	
										Project # <u>017819014</u>	
										Date <u>2-5-2020</u>	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion	
					15						
	dry	0.0	NO		16			SM	SAA		
					17						
					18	10-20					
	dry	0.0	NO		19			SM	SAA		
					20				CI (15-20) = 1.4 → 132 ppm		
					21						
	dry	4.1	NO	MWB 0.20-20.5 1550	22			SM	SAA		
					23						
	m	0.6	NO		24			SM	SAA but moist		
					25	20-30			CI (20-25) = 1.2 → 112 ppm		
					26						
	m	0.4	NO		27			SM	SAA gw @ 40'		
					28						
	m	0.9	NO	MWB @ 27.5-30'	29			SM	CI = 0.6 CI 12 ppm		
	SAT			1535	30			SW-SM	brown sandy lean clay brown poorly well graded sand w/ silt		
					31						
	SAT	0.0	NO		32			SW-SM	SAA		
					33						
	SAT	0.0	NO		34			SW-SM	SAA		
					35	30-40			CI (30-35) = 2.2 → 240 ppm		
	SAT	0.0	NO		36			SW-SM	SAA		
					37						



Advancing Opportunity

Boring/Well #

mw 18

Project:

Salty Dog

Project #

017819014

Date

2-5-2020

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
		see	above		37				see above	
	dry	0.0	NO	mwb 2 37.5-40'	38				grey claystone (bedrock)	
				1550 1545	39					
					40				c1 (35-40') → 3.2 → 432 ppm	
					41				TDE @ 40'	
					42					
					43					
					44					
					45					
					46					
					47					
					48					
					49					
					50					
					51					
					52					
					53					
					54					
					55					
					56					
					57					
					58					
					59					



Advancing Opportunity

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 20		Project: Salty Dog	
Date: 2/7/20		Project Number: 017819014	
Logged By: JA/EC		Drilled By: Cascade	
Drilling Method: Sonic		Sampling Method: Continuous	
Elevation:	Detector: PID / Quantab		
Gravel Pack: 10-20 Silica Sand 37-25		Seal: Hydrated Bentonite Chips 22-25	
Casing Type: Schedule 40 PVC		Grout: Bentonite-Cement Slurry 0-22'	
Screen Type: Schedule 40 PVC		Diameter: 2"	Length: 10'
Slot: 0.010"		Hole Diameter: 6"	Depth to Liquid: 29'
		Total Depth: 37'	Depth to Water: 29'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	D	0.0	N		0			SM	Dry it reddish brown silty sand	Stick up
					1					
					2					
					3	8-5				
	D	0.0	N		4			SW-SC	It reddish brown sand and gravel CI < (28x4)	
					5					
					6					
	D	0.6	N		7	5-10		SW-SC	SAA	
					8					
	D	0.9	N		9			SW-SC	SAA CI < (28x4)	
					10					
	D	0.4	N		11			SW-SC	SAA	
					12	10-15				
					13					
	D	0.6	N		14			SW-SC	SAN CI < (28x4)	
					15					

☐ = sand

☒ = bentonite

☒ = grout

										Boring/Well # <u>MW 20</u>	
										Project: <u>Salty Dog</u>	
										Project # <u>017819014</u>	
										Date <u>2/7/20</u>	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion	
	D	0.2	N		15			SW-SL	DRY reddish brown coarse sand		
					16						
					17						
	D	0.1	N		18			SW-SL	SAA CI < (28 X 4)		
					19						
					20						
	M	0.1	N		21			SW-SL	moist reddish brown sand		
					22						
					23					XX XX	
	M	0.1	N		24			SW-SL	SAA CI < (28 X 4)	XX XX	
					25					XX XX	
	M	0.0	N		26			SW-SL	SAA		
					27						
					28	27.5 30'					
	M	0.0	N		29			SW-SL CL	moist Dark brown sand, little clay gravel and GW @ 29' Some organics (black) no Hc stain CI = 964 (5.0)	GW	
					30						
	D	0.0	N		31			CH	Dark gray shale/claystone		
					32						
					33						
	D	0.0	N		34			CH	Dark gray shale/claystone		
					35				SAA		
					36						
					37				TOC 37'		



BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW21		Project: Salty Dog	
Date: 2/6/2020		Project Number: 017819014	
Logged By: JA/EC		Drilled By: Cascade	
Drilling Method: Sonic		Sampling Method: Continuous	
Seal: Hydrated Bentonite Chips		Grout: Bentonite-Cement Slurry	
Diameter: 2" Length: NA		Hole Diameter: 6"	Depth to Liquid: NA
Diameter: 2" Length: NA		Total Depth: 20	Depth to Water: 15'

Elevation: _____ Detector: **PID/quantab**

Gravel Pack: **10-20 Silica Sand**

Casing Type: **Schedule 40 PVC** **No well Set**

Screen Type: **Schedule 40 PVC** Slot: **0.010"**

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	0.0	N		0	1	no recovery		fine, it reddish brown sand trace silt	NO well
					1					
					2					
	moist	0.0	N		3	2			SAA	
					4					
					5		no recovery 10-11'			
	moist	0.3	N		6	3			SAA C1 L(31x4)	
					7					
	M	0.3	N		8					
					9	4			SAA C1 L(31x4)	
					10		no recovery 10-11'			
					11					
	m	0.0	N		12	5			SAA C1 L(31x4)	
					13					
					14					
					15					

										Boring/Well #	MW 21	
										Project:	Salty Dog	
										Project #	017819014	
										Date	2/6/26	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion		
	vm	0.1	N	15.8.17	15	6			Dark gray, slight brown fat clay. GW @ 15' CI (31 X 4)			
				16								
				17								
	vm	1.0	N	mw 21 17.5-20	18	7			SAA CI (31 X 4)			
				19								
				20								
					21				TD = 20' no well set			
					22							
					23							
					24							
					25							
					26							
					27							
					28							
					29							
					30							
					31							
					32							
					33							
					34							
					35							
					36							
					37							

			
BORING LOG/MONITORING WELL COMPLETION DIAGRAM			
Boring/Well Number: <u>MW22</u>		Project: <u>Salty Dog</u>	
Date: <u>2/6/20</u>		Project Number: <u>017819014</u>	
Logged By: <u>JA/EC</u>		Drilled By: <u>Cascade</u>	
Drilling Method: <u>Sonic</u>		Sampling Method: <u>Continuous</u>	
Elevation:	Detector: <u>PID / quantab</u>	Seal: <u>Hydrated Bentonite Chips</u>	
Gravel Pack: <u>10-20 Silica Sand</u>		Grout: <u>Bentonite-Cement Slurry</u>	
Casing Type: <u>Schedule 40 PVC</u>		Diameter: <u>2"</u>	Length: <u>20</u>
Screen Type: <u>Schedule 40 PVC</u>		Diameter: <u>2"</u>	Length: <u>20</u>
Slot: <u>0.010"</u>		Total Depth: <u>20</u>	
		Depth to Liquid: <u>NA</u>	
		Depth to Water: <u>15</u>	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Loose, lt. brown, fine sand trace S. 16	No well
					1			SM		
					2					
					3					
					4					
					5					
	D	1.1	N		6			SM	SAA CI = L(31X4)	
					7					
					8					
	D	0.8	N		9			SM	SAA CI = L(31X4)	
					10					
					11					
					12				NR	
					13					
					14					
					15					

										Boring/Well #	MW22	
										Project:	Salty Dog	
										Project #	017819014	
										Date	2-6-20	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion		
	m	0.1	N	MW22 C 15-17.5 1740	15			SM	SHIT (13/14)			
					16							
					17							
	Sat	0.2	N	MW22 C 17.5-20 1754	18	15-20		CH	Dark gray, fat clay, some sand organic swampy odor			
					19							
					20							
					21							
					22							
					23							
					24							
					25							
					26							
					27							
					28							
					29							
					30							
					31							
					32							
					33							
					34							
					35							
					36							
					37							

TDE 20'
NO well set

			
BORING LOG/MONITORING WELL COMPLETION DIAGRAM			
Boring/Well Number: <u>MW 23</u>		Project: <u>Salty Dog</u>	
Date: <u>2/7/20</u>		Project Number: <u>017819014</u>	
Logged By: <u>JA/EC</u>		Drilled By: <u>Cascade</u>	
Drilling Method: <u>Sonic</u>		Sampling Method: <u>Continuous</u>	
Elevation:	Detector: <u>PID / quantab</u>	Seal: <u>Hydrated Bentonite Chips</u>	
Gravel Pack: <u>10-20 Silica Sand</u>	Casing Type: <u>Schedule 40 PVC</u>	Grout: <u>Bentonite-Cement Slurry</u>	
Screen Type: <u>Schedule 40 PVC</u>		Diameter: <u>2"</u>	Length: <u>6'</u>
Slot: <u>0.010"</u>		Diameter: <u>2"</u>	Length: <u>25'</u>
Total Depth: <u>25'</u>		Depth to Liquid: <u>NA</u>	
Depth to Water: <u>18'</u>			

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
m			N		0				Dark brown, silty sand, little clay (topsoil)	
					1			SM	EC	
					2	0-5		SM	Red brown silty sand	
		0.5			3					
m			N		4			SM	Red brown silty sand	
					5	5-10			CI = 4.8 = 892 ppm	
					6					
m		0.3	N		7			SM	Red brown silty sand, black organic swampy odor CI < 28	
					8					
m		0.8	N		9			SM	lt. brown medium sand, trace silt CI = < 28	
					10					
m		0.5	N		11			CL/SM	Dark brown black, organic clay and sand	
					12	10-15			CI < 28	
					13					
m		1.8	N		14			SW	Brown medium sand	
					15				CI < 28	

										Boring/Well #	mw 23	
										Project:	Salty Dog	
										Project #	017819014	
										Date	2/7/20	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion		
					15							
	M	14	N		16			SWSC	light red brown sand and gravel			
					17	15-20						
					18							
	M	0.8	N		19			SWSC	SAA C/C 28			
					20							
					21			SWSC	SAA C/C 28			
	M	0.1	N		22	20-25						
					23							
					24			SWSC	Black sand and gravel			
	M	0.1	N	MW23 225-25 1040	25			CL	organic swampy odor			
					26							
					27							
					28							
					29							
					30							
					31							
					32							
					33							
					34							
					35							
					36							
					37							

TDE 25'
no wal
set



BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW24		Project: Salty Dog	
Date: 2/7/20		Project Number: 017819014	
Logged By: JA/EC		Drilled By: Cascade	
Drilling Method: Sonic		Sampling Method: Continuous	
Elevation:	Detector: PID/quantab	Seal: Hydrated Bentonite Chips	
Gravel Pack: 10-20 Silica Sand		Grout: Bentonite-Cement Slurry	
Casing Type: Schedule 40 PVC		Diameter: 2"	Length: 25'
Screen Type: Schedule 40 PVC		Diameter: 2"	Length: 25'
Slot: 0.010"		Total Depth: 25'	
		Depth to Liquid: NA	
		Depth to Water: 20'	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	2.2	N		0			SM	light reddish brown silty sand	
					1				CI (28x4)	
					2	0-5				
					3					
					4					
	Dry	1.5	N		5			SM	SAA CI (28x4)	
					6					
					7	5-10				
					8					
					9					
					10					
	D	0.2	N		11				SAA CI (28x4)	
					12	10-15				
					13					
					14					
					15					

										Boring/Well #	MW 24	
										Project:	Salty Dog	
										Project #	017819014	
										Date	2/7/20	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion		
					15							
	D	0.2	N		16			SM	SAA C1 < 28x4			
	-	-	-	-	17	15-20						
					18							
	D	0.2	N	17.5-20	19			SM	SAA C1 < 28x4			
	-	-	-	-	20							
					21			SM	Coarse Sand and cobbles C1 < 28			
					22							
					23	20-25						
					24							
					25			SM	lt brown coarse sand and cobbles C1 < 28			
					26							
					27				TD = 25'			
					28							
					29							
					30							
					31							
					32							
					33							
					34							
					35							
					36							
					37							



APPENDIX B

Laboratory Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 17, 2020

Josh Adams
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX

RE: Salty Dog

OrderNo.: 2002349

Dear Josh Adams:

Hall Environmental Analysis Laboratory received 12 sample(s) on 2/8/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW17 17.5-20

Project: Salty Dog

Collection Date: 2/6/2020 10:30:00 AM

Lab ID: 2002349-001

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	2/14/2020 11:26:39 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/14/2020 11:26:39 AM
Surr: DNOP	93.2	55.1-146		%Rec	1	2/14/2020 11:26:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 12:16:16 PM
Surr: BFB	79.6	66.6-105		%Rec	1	2/13/2020 12:16:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 12:16:16 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 12:16:16 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 12:16:16 PM
Xylenes, Total	ND	0.10		mg/Kg	1	2/13/2020 12:16:16 PM
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	2/13/2020 12:16:16 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	120	60		mg/Kg	20	2/13/2020 8:29:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW17 37.5-40

Project: Salty Dog

Collection Date: 2/6/2020 11:15:00 AM

Lab ID: 2002349-002

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/14/2020 11:54:03 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/14/2020 11:54:03 AM
Surr: DNOP	68.2	55.1-146		%Rec	1	2/14/2020 11:54:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 1:27:06 PM
Surr: BFB	78.3	66.6-105		%Rec	1	2/13/2020 1:27:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 1:27:06 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 1:27:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 1:27:06 PM
Xylenes, Total	ND	0.10		mg/Kg	1	2/13/2020 1:27:06 PM
Surr: 4-Bromofluorobenzene	86.1	80-120		%Rec	1	2/13/2020 1:27:06 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/13/2020 8:42:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20 7.5-10

Project: Salty Dog

Collection Date: 2/7/2020 4:46:00 PM

Lab ID: 2002349-003

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/14/2020 3:26:15 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/14/2020 3:26:15 PM
Surr: DNOP	111	55.1-146		%Rec	1	2/14/2020 3:26:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 2:37:14 PM
Surr: BFB	86.0	66.6-105		%Rec	1	2/13/2020 2:37:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 2:37:14 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 2:37:14 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 2:37:14 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/13/2020 2:37:14 PM
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	2/13/2020 2:37:14 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/13/2020 9:44:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20 27.5-30

Project: Salty Dog

Collection Date: 2/7/2020 5:00:00 PM

Lab ID: 2002349-004

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/14/2020 12:12:14 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/14/2020 12:12:14 PM
Surr: DNOP	89.5	55.1-146		%Rec	1	2/14/2020 12:12:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 3:00:52 PM
Surr: BFB	79.9	66.6-105		%Rec	1	2/13/2020 3:00:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 3:00:52 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 3:00:52 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 3:00:52 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/13/2020 3:00:52 PM
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	2/13/2020 3:00:52 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	2300	60		mg/Kg	20	2/13/2020 9:56:45 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW21 15-17.5

Project: Salty Dog

Collection Date: 2/6/2020 5:04:00 PM

Lab ID: 2002349-005

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/14/2020 12:21:19 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/14/2020 12:21:19 PM
Surr: DNOP	89.3	55.1-146		%Rec	1	2/14/2020 12:21:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 9:16:09 PM
Surr: BFB	79.4	66.6-105		%Rec	1	2/13/2020 9:16:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 9:16:09 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 9:16:09 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 9:16:09 PM
Xylenes, Total	ND	0.10		mg/Kg	1	2/13/2020 9:16:09 PM
Surr: 4-Bromofluorobenzene	87.8	80-120		%Rec	1	2/13/2020 9:16:09 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	160	60		mg/Kg	20	2/13/2020 10:09:09 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW21 17.5-20

Project: Salty Dog

Collection Date: 2/6/2020 4:41:00 PM

Lab ID: 2002349-006

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	2/14/2020 12:30:27 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/14/2020 12:30:27 PM
Surr: DNOP	89.2	55.1-146		%Rec	1	2/14/2020 12:30:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 9:39:30 PM
Surr: BFB	81.8	66.6-105		%Rec	1	2/13/2020 9:39:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 9:39:30 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 9:39:30 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 9:39:30 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/13/2020 9:39:30 PM
Surr: 4-Bromofluorobenzene	90.9	80-120		%Rec	1	2/13/2020 9:39:30 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	99	60		mg/Kg	20	2/13/2020 10:21:33 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW22 15-17.5

Project: Salty Dog

Collection Date: 2/6/2020 5:40:00 PM

Lab ID: 2002349-007

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/14/2020 12:39:35 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/14/2020 12:39:35 PM
Surr: DNOP	96.6	55.1-146		%Rec	1	2/14/2020 12:39:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/13/2020 4:11:40 PM
Surr: BFB	78.1	66.6-105		%Rec	1	2/13/2020 4:11:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 4:11:40 PM
Toluene	ND	0.049		mg/Kg	1	2/13/2020 4:11:40 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/13/2020 4:11:40 PM
Xylenes, Total	ND	0.098		mg/Kg	1	2/13/2020 4:11:40 PM
Surr: 4-Bromofluorobenzene	85.3	80-120		%Rec	1	2/13/2020 4:11:40 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/13/2020 10:33:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW22 17.5-20

Project: Salty Dog

Collection Date: 2/6/2020 5:54:00 PM

Lab ID: 2002349-008

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/14/2020 12:48:42 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/14/2020 12:48:42 PM
Surr: DNOP	89.0	55.1-146		%Rec	1	2/14/2020 12:48:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/13/2020 4:35:11 PM
Surr: BFB	76.8	66.6-105		%Rec	1	2/13/2020 4:35:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	2/13/2020 4:35:11 PM
Toluene	ND	0.049		mg/Kg	1	2/13/2020 4:35:11 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/13/2020 4:35:11 PM
Xylenes, Total	ND	0.098		mg/Kg	1	2/13/2020 4:35:11 PM
Surr: 4-Bromofluorobenzene	85.2	80-120		%Rec	1	2/13/2020 4:35:11 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/13/2020 10:46:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW23 0-5

Project: Salty Dog

Collection Date: 2/7/2020 10:20:00 AM

Lab ID: 2002349-009

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	2/14/2020 12:57:51 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	2/14/2020 12:57:51 PM
Surr: DNOP	90.8	55.1-146		%Rec	1	2/14/2020 12:57:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 4:58:37 PM
Surr: BFB	82.4	66.6-105		%Rec	1	2/13/2020 4:58:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 4:58:37 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 4:58:37 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 4:58:37 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/13/2020 4:58:37 PM
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	2/13/2020 4:58:37 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	720	60		mg/Kg	20	2/13/2020 10:58:48 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 23 22.5-25

Project: Salty Dog

Collection Date: 2/7/2020 10:40:00 AM

Lab ID: 2002349-010

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	2/14/2020 1:06:59 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	2/14/2020 1:06:59 PM
Surr: DNOP	88.7	55.1-146		%Rec	1	2/14/2020 1:06:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/13/2020 5:22:04 PM
Surr: BFB	79.8	66.6-105		%Rec	1	2/13/2020 5:22:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 5:22:04 PM
Toluene	ND	0.050		mg/Kg	1	2/13/2020 5:22:04 PM
Ethylbenzene	ND	0.050		mg/Kg	1	2/13/2020 5:22:04 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/13/2020 5:22:04 PM
Surr: 4-Bromofluorobenzene	88.6	80-120		%Rec	1	2/13/2020 5:22:04 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/13/2020 11:11:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW24 4.5-7

Project: Salty Dog

Collection Date: 2/7/2020 11:30:00 AM

Lab ID: 2002349-011

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/14/2020 1:16:07 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/14/2020 1:16:07 PM
Surr: DNOP	104	55.1-146		%Rec	1	2/14/2020 1:16:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/13/2020 7:19:23 PM
Surr: BFB	84.5	66.6-105		%Rec	1	2/13/2020 7:19:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/13/2020 7:19:23 PM
Toluene	ND	0.049		mg/Kg	1	2/13/2020 7:19:23 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/13/2020 7:19:23 PM
Xylenes, Total	ND	0.099		mg/Kg	1	2/13/2020 7:19:23 PM
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	2/13/2020 7:19:23 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	ND	60		mg/Kg	20	2/13/2020 11:23:37 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002349

Date Reported: 2/17/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW24 17.5-20

Project: Salty Dog

Collection Date: 2/7/2020 11:50:00 AM

Lab ID: 2002349-012

Matrix: SOIL

Received Date: 2/8/2020 8:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/14/2020 1:25:17 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/14/2020 1:25:17 PM
Surr: DNOP	101	55.1-146		%Rec	1	2/14/2020 1:25:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/13/2020 7:42:51 PM
Surr: BFB	80.0	66.6-105		%Rec	1	2/13/2020 7:42:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	2/13/2020 7:42:51 PM
Toluene	ND	0.049		mg/Kg	1	2/13/2020 7:42:51 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/13/2020 7:42:51 PM
Xylenes, Total	ND	0.097		mg/Kg	1	2/13/2020 7:42:51 PM
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	2/13/2020 7:42:51 PM
EPA METHOD 300.0: ANIONS						Analyst: CJS
Chloride	180	60		mg/Kg	20	2/13/2020 11:36:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2002349

17-Feb-20

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: MB-50442		SampType: mblk		TestCode: EPA Method 300.0: Anions						
Client ID: PBS	Batch ID: 50442			RunNo: 66549						
Prep Date: 2/13/2020	Analysis Date: 2/13/2020			SeqNo: 2287113			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-50442		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS	Batch ID: 50442			RunNo: 66549						
Prep Date: 2/13/2020	Analysis Date: 2/13/2020			SeqNo: 2287114			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002349

17-Feb-20

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB-50451	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 50451			RunNo: 66547						
Prep Date: 2/14/2020	Analysis Date: 2/14/2020			SeqNo: 2287108		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.2		10.00		92.2	55.1	146			

Sample ID: LCS-50451	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 50451			RunNo: 66547						
Prep Date: 2/14/2020	Analysis Date: 2/14/2020			SeqNo: 2287109		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.8	55.1	146			

Sample ID: MB-50431	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 50431			RunNo: 66547						
Prep Date: 2/13/2020	Analysis Date: 2/14/2020			SeqNo: 2287532		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	14		10.00		143	55.1	146			

Sample ID: LCS-50431	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 50431			RunNo: 66547						
Prep Date: 2/13/2020	Analysis Date: 2/14/2020			SeqNo: 2287533		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	116	70	130			
Surr: DNOP	5.2		5.000		105	55.1	146			

Sample ID: 2002349-001AMS	SampType: MS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: MW17 17.5-20	Batch ID: 50431			RunNo: 66547						
Prep Date: 2/13/2020	Analysis Date: 2/14/2020			SeqNo: 2287542		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.7	48.45	7.065	88.0	47.4	136			
Surr: DNOP	4.4		4.845		90.6	55.1	146			

Sample ID: 2002349-001AMSD	SampType: MSD			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: MW17 17.5-20	Batch ID: 50431			RunNo: 66547						
Prep Date: 2/13/2020	Analysis Date: 2/14/2020			SeqNo: 2287543		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	8.5	42.37	7.065	79.2	47.4	136	20.0	43.4	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002349

17-Feb-20

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: 2002349-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: MW17 17.5-20	Batch ID: 50431	RunNo: 66547								
Prep Date: 2/13/2020	Analysis Date: 2/14/2020	SeqNo: 2287543	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		4.237		88.4	55.1	146	0	0	

Sample ID: MB-50437	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 50437	RunNo: 66547								
Prep Date: 2/13/2020	Analysis Date: 2/14/2020	SeqNo: 2288190	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	16		10.00		163	55.1	146			S

Sample ID: LCS-50437	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 50437	RunNo: 66547								
Prep Date: 2/13/2020	Analysis Date: 2/14/2020	SeqNo: 2288191	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.2		5.000		124	55.1	146			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002349

17-Feb-20

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: 2002349-002ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: MW17 37.5-40	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287153 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	24.95	0	117	69.1	142			
Surr: BFB	930		998.0		93.2	66.6	105			

Sample ID: 2002349-002amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: MW17 37.5-40	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287154 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.63	0	112	69.1	142	5.67	20	
Surr: BFB	920		985.2		93.0	66.6	105	0	0	

Sample ID: lcs-50406	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287170 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.9	80	120			
Surr: BFB	890		1000		88.8	66.6	105			

Sample ID: mb-50406	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287171 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	800		1000		79.9	66.6	105			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002349

17-Feb-20

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: 2002349-001ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: MW17 17.5-20	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287176 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	0.9901	0.01660	95.8	78.5	119			
Toluene	1.0	0.050	0.9901	0.01390	101	75.7	123			
Ethylbenzene	1.1	0.050	0.9901	0	106	74.3	126			
Xylenes, Total	3.2	0.099	2.970	0	107	72.9	130			
Surr: 4-Bromofluorobenzene	0.88		0.9901		88.8	80	120			

Sample ID: 2002349-001amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: MW17 17.5-20	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287177 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	0.9980	0.01660	96.3	78.5	119	1.34	20	
Toluene	1.0	0.050	0.9980	0.01390	101	75.7	123	1.33	20	
Ethylbenzene	1.1	0.050	0.9980	0	107	74.3	126	1.71	20	
Xylenes, Total	3.3	0.10	2.994	0	109	72.9	130	2.27	20	
Surr: 4-Bromofluorobenzene	0.90		0.9980		90.4	80	120	0	0	

Sample ID: LCS-50406	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287194 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.1	80	120			
Toluene	0.90	0.050	1.000	0	89.6	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.9	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	80	120			

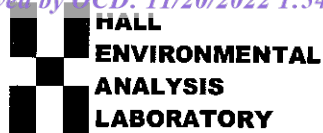
Sample ID: mb-50406	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 50406	RunNo: 66550								
Prep Date: 2/12/2020	Analysis Date: 2/13/2020	SeqNo: 2287195 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		88.2	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY FAR

Work Order Number: 2002349

RcptNo: 1

Received By: Erin Melendrez

2/8/2020 8:35:00 AM

Completed By: Isaiah Ortiz

2/10/2020 7:42:34 AM

Reviewed By:

Y6 2/10/20

UAG
I-OK

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)

Adjusted? _____

Checked by: JR 2/10/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

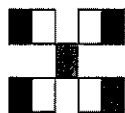
17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Not Present			

Chain-of-Custody Record

Client: <u>Hilcorp</u>			
Mailing Address: <u>Jennifer Deal</u> <u>PO Box 4700</u> <u>Bloomfield, NM 87499</u>			
Phone #:			
email or Fax#: <u>Ideal@hilcorp.com</u>			
QA/QC Package:			
☒ Standard	☐ Level 4 (Full Validation)		
Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other _____			
☐ EDD (Type) _____			
Date	Time	Matrix	Sample Name
2/16	1030	Soil	MW17 17.5-20
2/16	1115		MW17 37.5-40
2/17	1646		MW20 7.5-10
2/17	1700		MW20 27.5-30
2/16	1704		MW21 15-17.5
2/16	1641		MW21 17.5-20
2/16	1740		MW22 15-17.5
2/16	1754		MW22 17.5-20
2/17	1030		MW23 0-5
2/17	1040		MW23 22.5-25
2/17	1130		MW24 4.5-7
2/17	1150		MW24 17.5-20
Date:	Time:	Relinquished by:	
2/17	1030	Steve Carroll	
Date:	Time:	Relinquished by:	
2/17	1850	MWA	

Turn-Around Time:			
☒ Standard		☐ Rush	
Project Name: Safety Dog			
Project #:			
Project Manager: Josh Adams			
Sampler: E. Carroll / C. McGinn			
On Ice:		☒ Yes ☐ No	
# of Coolers: 1			
Cooler Temp (including CF): 2.8+0.1(CF)=2.9(°C)			
Container Type and #	Preservative Type	HEAL No	
1402		2007349	001
			002
			003
			004
			005
			006
			007
			008
			009
			010
			011
			012
Received by:		Via:	Date
Christina		Air	2/7/20
Received by:		Via:	Date
C. Adams		Courier	7/8/20



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Remarks:

Please cc: jadams@itenv.com



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 11, 2020

Jennifer Deal
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Salty Dog

OrderNo.: 2002203

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 4 sample(s) on 2/6/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2002203

Date Reported: 2/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18

Project: Salty Dog

Collection Date: 2/5/2020 4:00:00 PM

Lab ID: 2002203-001

Matrix: GROUNDWA

Received Date: 2/6/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	5.0	P D	µg/L	5	2/6/2020 12:13:06 PM	B66356
Toluene	ND	5.0	P D	µg/L	5	2/6/2020 12:13:06 PM	B66356
Ethylbenzene	ND	5.0	P D	µg/L	5	2/6/2020 12:13:06 PM	B66356
Xylenes, Total	ND	10	P D	µg/L	5	2/6/2020 12:13:06 PM	B66356
Surr: 4-Bromofluorobenzene	90.4	80-120	P D	%Rec	5	2/6/2020 12:13:06 PM	B66356

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 1 of 10

Analytical Report

Lab Order 2002203

Date Reported: 2/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18 @ 20-22.5'

Project: Salty Dog

Collection Date: 2/5/2020 3:20:00 PM

Lab ID: 2002203-002

Matrix: SOIL

Received Date: 2/6/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	86	60		mg/Kg	20	2/7/2020 11:27:42 AM	50328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	2/10/2020 1:49:19 PM	50327
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/10/2020 1:49:19 PM	50327
Surr: DNOP	108	55.1-146		%Rec	1	2/10/2020 1:49:19 PM	50327
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/7/2020 12:59:52 PM	50313
Surr: BFB	84.8	66.6-105		%Rec	1	2/7/2020 12:59:52 PM	50313
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	2/7/2020 12:59:52 PM	50313
Toluene	ND	0.049		mg/Kg	1	2/7/2020 12:59:52 PM	50313
Ethylbenzene	ND	0.049		mg/Kg	1	2/7/2020 12:59:52 PM	50313
Xylenes, Total	ND	0.099		mg/Kg	1	2/7/2020 12:59:52 PM	50313
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	2/7/2020 12:59:52 PM	50313

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002203

Date Reported: 2/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18 @ 27.5-30'

Project: Salty Dog

Collection Date: 2/5/2020 3:35:00 PM

Lab ID: 2002203-003

Matrix: SOIL

Received Date: 2/6/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	91	60		mg/Kg	20	2/7/2020 11:40:03 AM	50328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/10/2020 2:16:44 PM	50327
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/10/2020 2:16:44 PM	50327
Surr: DNOP	96.5	55.1-146		%Rec	1	2/10/2020 2:16:44 PM	50327
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/7/2020 2:10:57 PM	50313
Surr: BFB	81.8	66.6-105		%Rec	1	2/7/2020 2:10:57 PM	50313
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	2/7/2020 2:10:57 PM	50313
Toluene	ND	0.048		mg/Kg	1	2/7/2020 2:10:57 PM	50313
Ethylbenzene	ND	0.048		mg/Kg	1	2/7/2020 2:10:57 PM	50313
Xylenes, Total	ND	0.097		mg/Kg	1	2/7/2020 2:10:57 PM	50313
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	2/7/2020 2:10:57 PM	50313

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2002203

Date Reported: 2/11/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18 @ 37.5-40'

Project: Salty Dog

Collection Date: 2/5/2020 3:45:00 PM

Lab ID: 2002203-004

Matrix: SOIL

Received Date: 2/6/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	750	60		mg/Kg	20	2/7/2020 11:52:23 AM	50328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/10/2020 2:25:55 PM	50327
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/10/2020 2:25:55 PM	50327
Surr: DNOP	98.1	55.1-146		%Rec	1	2/10/2020 2:25:55 PM	50327
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/7/2020 3:21:25 PM	50313
Surr: BFB	85.9	66.6-105		%Rec	1	2/7/2020 3:21:25 PM	50313
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	2/7/2020 3:21:25 PM	50313
Toluene	ND	0.049		mg/Kg	1	2/7/2020 3:21:25 PM	50313
Ethylbenzene	ND	0.049		mg/Kg	1	2/7/2020 3:21:25 PM	50313
Xylenes, Total	ND	0.098		mg/Kg	1	2/7/2020 3:21:25 PM	50313
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	2/7/2020 3:21:25 PM	50313

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2002203
11-Feb-20

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: MB-50328		SampType: mblk			TestCode: EPA Method 300.0: Anions					
Client ID: PBS		Batch ID: 50328			RunNo: 66427					
Prep Date: 2/7/2020		Analysis Date: 2/7/2020			SeqNo: 2282379		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-50328		SampType: lcs			TestCode: EPA Method 300.0: Anions					
Client ID: LCSS		Batch ID: 50328			RunNo: 66427					
Prep Date: 2/7/2020		Analysis Date: 2/7/2020			SeqNo: 2282380		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002203

11-Feb-20

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB-50327	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 50327	RunNo: 66422								
Prep Date: 2/7/2020	Analysis Date: 2/10/2020	SeqNo: 2282773 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.1	55.1	146			

Sample ID: LCS-50327	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 50327	RunNo: 66422								
Prep Date: 2/7/2020	Analysis Date: 2/10/2020	SeqNo: 2282774 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	70	130			
Surr: DNOP	4.6		5.000		91.8	55.1	146			

Sample ID: 2002203-002AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: MW18 @ 20-22.5'	Batch ID: 50327	RunNo: 66422								
Prep Date: 2/7/2020	Analysis Date: 2/10/2020	SeqNo: 2282867 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.6	47.76	3.375	94.5	47.4	136			
Surr: DNOP	4.7		4.776		98.9	55.1	146			

Sample ID: 2002203-002AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: MW18 @ 20-22.5'	Batch ID: 50327	RunNo: 66422								
Prep Date: 2/7/2020	Analysis Date: 2/10/2020	SeqNo: 2282868 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	8.6	42.88	3.375	90.3	47.4	136	14.1	43.4	
Surr: DNOP	4.5		4.288		105	55.1	146	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2002203

11-Feb-20

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb-50277	SampType: MBLK				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: PBS	Batch ID: 50277				RunNo: 66356					
Prep Date: 2/5/2020	Analysis Date: 2/6/2020				SeqNo: 2280539	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	820		1000		82.2	66.6	105			

Sample ID: lcs-50277	SampType: LCS				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: LCSS	Batch ID: 50277				RunNo: 66356					
Prep Date: 2/5/2020	Analysis Date: 2/6/2020				SeqNo: 2280540	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.3	66.6	105			

Sample ID: 2002203-002ams	SampType: MS				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: MW18 @ 20-22.5'	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282517	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.22	0	92.7	69.1	142			
Surr: BFB	890		969.0		92.2	66.6	105			

Sample ID: 2002203-002amsd	SampType: MSD				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: MW18 @ 20-22.5'	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282518	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.56	0	92.2	69.1	142	0.803	20	
Surr: BFB	900		982.3		91.6	66.6	105	0	0	

Sample ID: lcs-50313	SampType: LCS				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: LCSS	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282531	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	86.2	80	120			
Surr: BFB	920		1000		92.1	66.6	105			

Sample ID: mb-50313	SampType: MBLK				TestCode: EPA Method 8015D: Gasoline Range					
Client ID: PBS	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282532	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		84.4	66.6	105			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 7 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2002203

11-Feb-20

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb-50277	SampType: MBLK				TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch ID: 50277				RunNo: 66356					
Prep Date: 2/5/2020	Analysis Date: 2/6/2020				SeqNo: 2280572	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.90		1.000		90.4	80	120			

Sample ID: LCS-50277	SampType: LCS				TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSS	Batch ID: 50277				RunNo: 66356					
Prep Date: 2/5/2020	Analysis Date: 2/6/2020				SeqNo: 2280573	Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		91.7	80	120			

Sample ID: 2002203-003ams	SampType: MS				TestCode: EPA Method 8021B: Volatiles					
Client ID: MW18 @ 27.5-30'	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282548	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.023	0.9363	0.01634	96.0	78.5	119			
Toluene	0.94	0.047	0.9363	0.01422	98.8	75.7	123			
Ethylbenzene	0.95	0.047	0.9363	0	102	74.3	126			
Xylenes, Total	2.9	0.094	2.809	0.02195	103	72.9	130			
Surr: 4-Bromofluorobenzene	0.86		0.9363		91.7	80	120			

Sample ID: 2002203-003amsd	SampType: MSD				TestCode: EPA Method 8021B: Volatiles					
Client ID: MW18 @ 27.5-30'	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282549	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.023	0.9217	0.01634	96.1	78.5	119	1.47	20	
Toluene	0.93	0.046	0.9217	0.01422	99.5	75.7	123	0.924	20	
Ethylbenzene	0.96	0.046	0.9217	0	104	74.3	126	0.269	20	
Xylenes, Total	2.9	0.092	2.765	0.02195	105	72.9	130	0.994	20	
Surr: 4-Bromofluorobenzene	0.87		0.9217		94.0	80	120	0	0	

Sample ID: LCS-50313	SampType: LCS				TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSS	Batch ID: 50313				RunNo: 66388					
Prep Date: 2/6/2020	Analysis Date: 2/7/2020				SeqNo: 2282556	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.0	80	120			
Toluene	0.94	0.050	1.000	0	94.5	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.2	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 8 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2002203

11-Feb-20

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: LCS-50313		SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSS		Batch ID: 50313			RunNo: 66388					
Prep Date: 2/6/2020		Analysis Date: 2/7/2020			SeqNo: 2282556		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.6	80	120			

Sample ID: mb-50313		SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS		Batch ID: 50313			RunNo: 66388					
Prep Date: 2/6/2020		Analysis Date: 2/7/2020			SeqNo: 2282557		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		95.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002203

11-Feb-20

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBW	Batch ID: B66356	RunNo: 66356								
Prep Date:	Analysis Date: 2/6/2020	SeqNo: 2280556 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		95.6	80	120			

Sample ID: 100ng btex lcs	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSW	Batch ID: B66356	RunNo: 66356								
Prep Date:	Analysis Date: 2/6/2020	SeqNo: 2280557 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	80	120			
Toluene	19	1.0	20.00	0	96.9	80	120			
Ethylbenzene	19	1.0	20.00	0	97.1	80	120			
Xylenes, Total	59	2.0	60.00	0	98.3	80	119			
Surr: 4-Bromofluorobenzene	19		20.00		93.9	80	120			

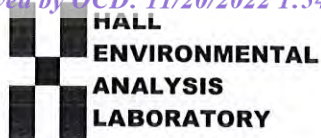
Sample ID: 2002203-001ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: MW18	Batch ID: B66356	RunNo: 66356								
Prep Date:	Analysis Date: 2/6/2020	SeqNo: 2280559 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	96	5.0	100.0	1.600	94.3	80	120			
Toluene	98	5.0	100.0	1.440	96.3	80	120			
Ethylbenzene	100	5.0	100.0	0	99.6	80	120			
Xylenes, Total	300	10	300.0	3.750	99.0	68.3	130			
Surr: 4-Bromofluorobenzene	97		100.0		97.1	80	120			

Sample ID: 2002203-001amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: MW18	Batch ID: B66356	RunNo: 66356								
Prep Date:	Analysis Date: 2/6/2020	SeqNo: 2280560 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	89	5.0	100.0	1.600	87.5	80	120	7.38	20	
Toluene	92	5.0	100.0	1.440	90.1	80	120	6.57	20	
Ethylbenzene	93	5.0	100.0	0	93.0	80	120	6.76	20	
Xylenes, Total	280	10	300.0	3.750	93.0	68.3	130	6.12	20	
Surr: 4-Bromofluorobenzene	95		100.0		94.7	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **HILCORP ENERGY FAR**Work Order Number: **2002203**RcptNo: **1**Received By: **Leah Baca**

2/6/2020 8:00:00 AM

Completed By: **Isaiah Ortiz**

2/6/2020 8:08:29 AM

Reviewed By: **ENM**

2/6/20

Leah Baca
IOX

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *SR 2/6/20*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.0	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 28, 2019

Josh Adams
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX

RE: Salty Dog

OrderNo.: 1909668

Dear Josh Adams:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/13/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 20, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog

Collection Date: 9/12/2019 2:33:00 PM

Lab ID: 1909668-001

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	10		mg/L	100	9/13/2019 3:55:24 PM	R62938
Chloride	13000	500	*	mg/L	1E+	9/13/2019 4:07:45 PM	R62938
Nitrogen, Nitrite (As N)	19	10	*	mg/L	100	9/13/2019 3:55:24 PM	R62938
Bromide	13	10		mg/L	100	9/13/2019 3:55:24 PM	R62938
Nitrogen, Nitrate (As N)	ND	10		mg/L	100	9/13/2019 3:55:24 PM	R62938
Phosphorus, Orthophosphate (As P)	ND	50		mg/L	100	9/13/2019 3:55:24 PM	R62938
Sulfate	1600	50	*	mg/L	100	9/13/2019 3:55:24 PM	R62938
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	45000	50		µmhos/c	10	9/16/2019 2:10:59 PM	R62955
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	137.8	20.00		mg/L Ca	1	9/16/2019 11:22:50 AM	R62955
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	9/16/2019 11:22:50 AM	R62955
Total Alkalinity (as CaCO3)	137.8	20.00		mg/L Ca	1	9/16/2019 11:22:50 AM	R62955
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JMT
Total Dissolved Solids	30000	200	*D	mg/L	1	9/16/2019 2:37:00 PM	47473
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.41		H	pH units	1	9/16/2019 11:22:50 AM	R62955
EPA METHOD 6010B: DISSOLVED METALS							Analyst: ELS
Calcium	2500	100		mg/L	100	9/20/2019 9:10:25 AM	A63074
Magnesium	390	10		mg/L	10	9/18/2019 3:17:55 PM	A63017
Potassium	27	1.0		mg/L	1	9/18/2019 3:15:42 PM	A63017
Sodium	6600	100		mg/L	100	9/20/2019 9:10:25 AM	A63074
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Toluene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Ethylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Naphthalene	ND	2.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1-Methylnaphthalene	ND	4.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
2-Methylnaphthalene	ND	4.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Acetone	ND	10		µg/L	1	9/13/2019 2:08:25 PM	W62926
Bromobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 1 of 19

Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog

Collection Date: 9/12/2019 2:33:00 PM

Lab ID: 1909668-001

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Bromoform	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Bromomethane	ND	3.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
2-Butanone	ND	10		µg/L	1	9/13/2019 2:08:25 PM	W62926
Carbon disulfide	ND	10		µg/L	1	9/13/2019 2:08:25 PM	W62926
Carbon Tetrachloride	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Chlorobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Chloroethane	ND	2.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Chloroform	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Chloromethane	ND	3.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
2-Chlorotoluene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
4-Chlorotoluene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
cis-1,2-DCE	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Dibromochloromethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Dibromomethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,1-Dichloroethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,1-Dichloroethene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2-Dichloropropane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,3-Dichloropropane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
2,2-Dichloropropane	ND	2.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,1-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Hexachlorobutadiene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
2-Hexanone	ND	10		µg/L	1	9/13/2019 2:08:25 PM	W62926
Isopropylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
4-Isopropyltoluene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
4-Methyl-2-pentanone	ND	10		µg/L	1	9/13/2019 2:08:25 PM	W62926
Methylene Chloride	ND	3.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
n-Butylbenzene	ND	3.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
n-Propylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
sec-Butylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Styrene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
tert-Butylbenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog

Collection Date: 9/12/2019 2:33:00 PM

Lab ID: 1909668-001

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
trans-1,2-DCE	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Trichlorofluoromethane	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Vinyl chloride	ND	1.0		µg/L	1	9/13/2019 2:08:25 PM	W62926
Xylenes, Total	ND	1.5		µg/L	1	9/13/2019 2:08:25 PM	W62926
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	9/13/2019 2:08:25 PM	W62926
Surr: 4-Bromofluorobenzene	85.4	70-130		%Rec	1	9/13/2019 2:08:25 PM	W62926
Surr: Dibromofluoromethane	110	70-130		%Rec	1	9/13/2019 2:08:25 PM	W62926
Surr: Toluene-d8	104	70-130		%Rec	1	9/13/2019 2:08:25 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog

Collection Date: 9/12/2019 1:35:00 PM

Lab ID: 1909668-002

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	9/13/2019 4:20:06 PM	R62938
Chloride	15000	1000	*	mg/L	2E+	9/18/2019 11:33:04 AM	R63030
Nitrogen, Nitrite (As N)	20	10	*	mg/L	100	9/13/2019 4:32:27 PM	R62938
Bromide	15	1.0		mg/L	10	9/13/2019 4:20:06 PM	R62938
Nitrogen, Nitrate (As N)	21	1.0	*	mg/L	10	9/13/2019 4:20:06 PM	R62938
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/13/2019 4:20:06 PM	R62938
Sulfate	2300	50	*	mg/L	100	9/13/2019 4:32:27 PM	R62938
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	54000	50		µmhos/c	10	9/16/2019 2:15:10 PM	R62955
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	153.9	20.00		mg/L Ca	1	9/16/2019 11:33:19 AM	R62955
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/16/2019 11:33:19 AM	R62955
Total Alkalinity (as CaCO ₃)	153.9	20.00		mg/L Ca	1	9/16/2019 11:33:19 AM	R62955
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JMT
Total Dissolved Solids	34000	200	*D	mg/L	1	9/16/2019 2:37:00 PM	47473
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.25		H	pH units	1	9/16/2019 11:33:19 AM	R62955
EPA METHOD 6010B: DISSOLVED METALS							Analyst: ELS
Calcium	2100	100		mg/L	100	9/20/2019 9:12:12 AM	A63074
Magnesium	750	10		mg/L	10	9/18/2019 3:21:56 PM	A63017
Potassium	25	1.0		mg/L	1	9/18/2019 3:20:05 PM	A63017
Sodium	7800	100		mg/L	100	9/20/2019 9:12:12 AM	A63074
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Toluene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Ethylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Naphthalene	ND	2.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1-Methylnaphthalene	ND	4.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
2-Methylnaphthalene	ND	4.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Acetone	ND	10		µg/L	1	9/13/2019 3:36:58 PM	W62926
Bromobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog

Collection Date: 9/12/2019 1:35:00 PM

Lab ID: 1909668-002

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Bromoform	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Bromomethane	ND	3.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
2-Butanone	ND	10		µg/L	1	9/13/2019 3:36:58 PM	W62926
Carbon disulfide	ND	10		µg/L	1	9/13/2019 3:36:58 PM	W62926
Carbon Tetrachloride	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Chlorobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Chloroethane	ND	2.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Chloroform	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Chloromethane	ND	3.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
2-Chlorotoluene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
4-Chlorotoluene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
cis-1,2-DCE	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Dibromochloromethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Dibromomethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,1-Dichloroethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,1-Dichloroethene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2-Dichloropropane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,3-Dichloropropane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
2,2-Dichloropropane	ND	2.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,1-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Hexachlorobutadiene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
2-Hexanone	ND	10		µg/L	1	9/13/2019 3:36:58 PM	W62926
Isopropylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
4-Isopropyltoluene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
4-Methyl-2-pentanone	ND	10		µg/L	1	9/13/2019 3:36:58 PM	W62926
Methylene Chloride	ND	3.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
n-Butylbenzene	ND	3.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
n-Propylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
sec-Butylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Styrene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
tert-Butylbenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog

Collection Date: 9/12/2019 1:35:00 PM

Lab ID: 1909668-002

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
trans-1,2-DCE	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Trichlorofluoromethane	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Vinyl chloride	ND	1.0		µg/L	1	9/13/2019 3:36:58 PM	W62926
Xylenes, Total	ND	1.5		µg/L	1	9/13/2019 3:36:58 PM	W62926
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	9/13/2019 3:36:58 PM	W62926
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	1	9/13/2019 3:36:58 PM	W62926
Surr: Dibromofluoromethane	113	70-130		%Rec	1	9/13/2019 3:36:58 PM	W62926
Surr: Toluene-d8	104	70-130		%Rec	1	9/13/2019 3:36:58 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 9/12/2019 2:02:00 PM

Lab ID: 1909668-003

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	9/13/2019 4:44:48 PM	R62938
Chloride	5300	250	*	mg/L	500	9/17/2019 6:55:35 PM	R62985
Nitrogen, Nitrite (As N)	ND	10	*	mg/L	100	9/13/2019 4:57:09 PM	R62938
Bromide	5.5	1.0		mg/L	10	9/13/2019 4:44:48 PM	R62938
Nitrogen, Nitrate (As N)	1.0	1.0		mg/L	10	9/13/2019 4:44:48 PM	R62938
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/13/2019 4:44:48 PM	R62938
Sulfate	2300	50	*	mg/L	100	9/13/2019 4:57:09 PM	R62938
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	22000	25		µmhos/c	5	9/16/2019 2:19:39 PM	R62955
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	200.8	20.00		mg/L Ca	1	9/16/2019 11:44:27 AM	R62955
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	9/16/2019 11:44:27 AM	R62955
Total Alkalinity (as CaCO3)	200.8	20.00		mg/L Ca	1	9/16/2019 11:44:27 AM	R62955
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JMT
Total Dissolved Solids	13600	200	*D	mg/L	1	9/16/2019 2:37:00 PM	47473
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.49		H	pH units	1	9/16/2019 11:44:27 AM	R62955
EPA METHOD 6010B: DISSOLVED METALS							Analyst: ELS
Calcium	1100	50		mg/L	50	9/20/2019 9:19:36 AM	A63074
Magnesium	170	10		mg/L	10	9/18/2019 3:26:18 PM	B63017
Potassium	16	1.0		mg/L	1	9/18/2019 3:24:10 PM	B63017
Sodium	3500	50		mg/L	50	9/20/2019 9:19:36 AM	A63074
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Toluene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Ethylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Naphthalene	ND	2.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1-Methylnaphthalene	ND	4.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
2-Methylnaphthalene	ND	4.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Acetone	ND	10		µg/L	1	9/13/2019 4:06:27 PM	W62926
Bromobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 9/12/2019 2:02:00 PM

Lab ID: 1909668-003

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Bromoform	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Bromomethane	ND	3.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
2-Butanone	ND	10		µg/L	1	9/13/2019 4:06:27 PM	W62926
Carbon disulfide	ND	10		µg/L	1	9/13/2019 4:06:27 PM	W62926
Carbon Tetrachloride	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Chlorobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Chloroethane	ND	2.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Chloroform	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Chloromethane	ND	3.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
2-Chlorotoluene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
4-Chlorotoluene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
cis-1,2-DCE	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Dibromochloromethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Dibromomethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,1-Dichloroethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,1-Dichloroethene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2-Dichloropropane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,3-Dichloropropane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
2,2-Dichloropropane	ND	2.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,1-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Hexachlorobutadiene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
2-Hexanone	ND	10		µg/L	1	9/13/2019 4:06:27 PM	W62926
Isopropylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
4-Isopropyltoluene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
4-Methyl-2-pentanone	ND	10		µg/L	1	9/13/2019 4:06:27 PM	W62926
Methylene Chloride	ND	3.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
n-Butylbenzene	ND	3.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
n-Propylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
sec-Butylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Styrene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
tert-Butylbenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 1909668

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 9/12/2019 2:02:00 PM

Lab ID: 1909668-003

Matrix: AQUEOUS

Received Date: 9/13/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
trans-1,2-DCE	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Trichlorofluoromethane	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Vinyl chloride	ND	1.0		µg/L	1	9/13/2019 4:06:27 PM	W62926
Xylenes, Total	ND	1.5		µg/L	1	9/13/2019 4:06:27 PM	W62926
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	9/13/2019 4:06:27 PM	W62926
Surr: 4-Bromofluorobenzene	82.6	70-130		%Rec	1	9/13/2019 4:06:27 PM	W62926
Surr: Dibromofluoromethane	109	70-130		%Rec	1	9/13/2019 4:06:27 PM	W62926
Surr: Toluene-d8	102	70-130		%Rec	1	9/13/2019 4:06:27 PM	W62926

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R62938	RunNo: 62938								
Prep Date:	Analysis Date: 9/13/2019	SeqNo: 2144630	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R62938	RunNo: 62938								
Prep Date:	Analysis Date: 9/13/2019	SeqNo: 2144631	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.8	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.0	90	110			
Bromide	2.5	0.10	2.500	0	98.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.8	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	91.7	90	110			
Sulfate	9.8	0.50	10.00	0	97.7	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R62985	RunNo: 62985								
Prep Date:	Analysis Date: 9/17/2019	SeqNo: 2147718	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS-B	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R62985	RunNo: 62985								
Prep Date:	Analysis Date: 9/17/2019	SeqNo: 2147726	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.7	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R63030	RunNo: 63030								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2149495	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R63030	RunNo: 63030								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2149495		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R63030	RunNo: 63030								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2149496		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.4	90	110			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: W62926	RunNo: 62926								
Prep Date:	Analysis Date: 9/13/2019	SeqNo: 2144410	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: W62926	RunNo: 62926								
Prep Date:	Analysis Date: 9/13/2019	SeqNo: 2144410 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.4	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: W62926	RunNo: 62926								
Prep Date:	Analysis Date: 9/13/2019	SeqNo: 2144411 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	18	1.0	20.00	0	92.0	70	130			
Chlorobenzene	18	1.0	20.00	0	87.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: 100ng lcs		SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW		Batch ID: W62926		RunNo: 62926						
Prep Date:		Analysis Date: 9/13/2019		SeqNo: 2144411			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16	1.0	20.00	0	80.8	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.6	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		86.3	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.5	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID: 1909668-001a ms		SampType: MS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW03		Batch ID: W62926		RunNo: 62926						
Prep Date:		Analysis Date: 9/13/2019		SeqNo: 2144421			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	19	1.0	20.00	0	95.0	70	130			
Chlorobenzene	19	1.0	20.00	0	92.8	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.2	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.3	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.4	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		99.9	70	130			

Sample ID: 1909668-001a msd		SampType: MSD		TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW03		Batch ID: W62926		RunNo: 62926						
Prep Date:		Analysis Date: 9/13/2019		SeqNo: 2144423		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130	2.83	20	
Toluene	19	1.0	20.00	0	93.2	70	130	1.94	20	
Chlorobenzene	18	1.0	20.00	0	91.5	70	130	1.43	20	
1,1-Dichloroethene	17	1.0	20.00	0	84.3	70	130	5.68	20	
Trichloroethene (TCE)	17	1.0	20.00	0	85.6	70	130	1.90	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.4		10.00		84.4	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		104	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.4	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668
28-Oct-19

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: Ics-1 99.8uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R62955		RunNo: 62955						
Prep Date:		Analysis Date: 9/16/2019		SeqNo: 2146976		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	99	5.0	99.80	0	99.3	85	115			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB-A	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A63017	RunNo: 63017								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2148716 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID: LCS-A	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A63017	RunNo: 63017								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2148717 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	50	1.0	50.00	0	99.7	80	120			
Potassium	49	1.0	50.00	0	98.3	80	120			

Sample ID: MB-B	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: B63017	RunNo: 63017								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2148719 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID: LCS-B	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: B63017	RunNo: 63017								
Prep Date:	Analysis Date: 9/18/2019	SeqNo: 2148720 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	51	1.0	50.00	0	102	80	120			
Potassium	50	1.0	50.00	0	101	80	120			

Sample ID: MB-A	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A63074	RunNo: 63074								
Prep Date:	Analysis Date: 9/20/2019	SeqNo: 2151039 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCS-A	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A63074	RunNo: 63074								
Prep Date:	Analysis Date: 9/20/2019	SeqNo: 2151040 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: LCS-A		SampType: LCS		TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: LCSW		Batch ID: A63074		RunNo: 63074						
Prep Date:		Analysis Date: 9/20/2019		SeqNo: 2151040		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	100	80	120			
Sodium	48	1.0	50.00	0	96.8	80	120			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity
Client ID: PBW	Batch ID: R62955	RunNo: 62955
Prep Date:	Analysis Date: 9/16/2019	SeqNo: 2146955 Units: mg/L CaCO3
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaCO3)	ND	20.00

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity
Client ID: LCSW	Batch ID: R62955	RunNo: 62955
Prep Date:	Analysis Date: 9/16/2019	SeqNo: 2146956 Units: mg/L CaCO3
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaCO3)	78.56	20.00 80.00 0 98.2 90 110

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1909668

28-Oct-19

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: MB-47473	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 47473	RunNo: 62954								
Prep Date: 9/13/2019	Analysis Date: 9/16/2019	SeqNo: 2145864	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-47473	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 47473	RunNo: 62954								
Prep Date: 9/13/2019	Analysis Date: 9/16/2019	SeqNo: 2145865	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

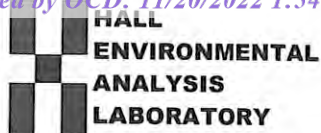
S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY FAR

Work Order Number: 1909668

RcptNo: 1

Received By: Leah Baca

9/13/2019 8:15:00 AM

Leah Baca

Completed By: Yazmine Garduno

9/13/2019 8:44:55 AM

Yazmine Garduno

Reviewed By:

YB 9/13/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 5

(<2 or >12 unless noted)

Adjusted? NO

Checked by: DAD 9/13/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good				

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Chain-of-Custody Record									
Client: <u>Hilcorp</u>		Turn-Around Time: Results by <u>Monday @ 3pm</u>							
Mailing Address: <u>382 Rd 3100</u>		☐ Standard ☒ Rush <u>2 day</u>							
Phone #: <u>505-324-5128</u>		Project Name: <u>Salty Dog</u>							
email or Fax#: <u>jdeal@hilcorp.com</u>		Project #: <u>017819014</u>							
QA/QC Package: <u>Level 4 (Full Validation)</u>		Project Manager: <u>Josh Adams</u>							
☒ Standard ☐ Level 4 (Full Validation)		Sampler: <u>C. McGinn</u>							
Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other		On Ice: ☒ Yes ☐ No							
☒ EDD (Type) <u>PDF</u>		# of Coolers: <u>1</u>							
		Cooler Temp (including CF): <u>4.1 - 0.3 - 4.4 C</u>							
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.			
<u>9/12/19</u>	<u>1433</u>	<u>Aqueous</u>	<u>MW03</u>	<u>various</u>	<u>various</u>	<u>1901705</u>			
<u>↓</u>	<u>1335</u>	<u>↓</u>	<u>MW05</u>	<u>↓</u>	<u>↓</u>	<u>-001</u>			
<u>↓</u>	<u>1402</u>	<u>↓</u>	<u>MW06</u>	<u>↓</u>	<u>↓</u>	<u>-002</u>			
Date: <u>9/12/19</u>	Time: <u>1100</u>	Relinquished by: <u>Carrie Mae</u>		Received by: <u>Shane Webb</u>		Date: <u>9/12/19</u>	Time: <u>1100</u>		
Date: <u>9/12/19</u>	Time: <u>1752</u>	Relinquished by: <u>Shane Webb</u>		Received by: <u>Shane Webb</u>		Date: <u>9/13/19</u>	Time: <u>0815</u>		

samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report, if necessary.

Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 10/24/2019 9:35:00 AM

Lab ID: 1910D50-001

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Toluene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 10:44:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 10:44:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 10:44:00 AM
Acetone	ND	10		µg/L	1	10/25/2019 10:44:00 AM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Bromoform	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 10:44:00 AM
2-Butanone	ND	10		µg/L	1	10/25/2019 10:44:00 AM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 10:44:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 10:44:00 AM
Chloroform	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 10:44:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 10:44:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 10:44:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 0

Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 10/24/2019 9:35:00 AM

Lab ID: 1910D50-001

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
2-Hexanone	ND	10		µg/L	1	10/25/2019 10:44:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 10:44:00 AM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 10:44:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 10:44:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Styrene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 10:44:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 10:44:00 AM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 10:44:00 AM
Xylenes, Total	ND	1.5		µg/L	1	10/25/2019 10:44:00 AM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	10/25/2019 10:44:00 AM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	10/25/2019 10:44:00 AM
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	10/25/2019 10:44:00 AM
Surr: Toluene-d8	97.4	70-130		%Rec	1	10/25/2019 10:44:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 0

Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW08

Project: Salty Dog

Collection Date: 10/24/2019 10:05:00 AM

Lab ID: 1910D50-002

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Toluene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 11:07:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 11:07:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 11:07:00 AM
Acetone	11	10		µg/L	1	10/25/2019 11:07:00 AM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Bromoform	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 11:07:00 AM
2-Butanone	ND	10		µg/L	1	10/25/2019 11:07:00 AM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 11:07:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 11:07:00 AM
Chloroform	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 11:07:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 11:07:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 11:07:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 0

Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW08

Project: Salty Dog

Collection Date: 10/24/2019 10:05:00 AM

Lab ID: 1910D50-002

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
2-Hexanone	ND	10		µg/L	1	10/25/2019 11:07:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 11:07:00 AM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 11:07:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 11:07:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Styrene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 11:07:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 11:07:00 AM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 11:07:00 AM
Xylenes, Total	ND	1.5		µg/L	1	10/25/2019 11:07:00 AM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	10/25/2019 11:07:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/25/2019 11:07:00 AM
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	10/25/2019 11:07:00 AM
Surr: Toluene-d8	95.7	70-130		%Rec	1	10/25/2019 11:07:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 10/24/2019 10:50:00 AM

Lab ID: 1910D50-003

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Toluene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 11:31:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 11:31:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 11:31:00 AM
Acetone	ND	10		µg/L	1	10/25/2019 11:31:00 AM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Bromoform	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 11:31:00 AM
2-Butanone	ND	10		µg/L	1	10/25/2019 11:31:00 AM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 11:31:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 11:31:00 AM
Chloroform	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 11:31:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 11:31:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 11:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 10/24/2019 10:50:00 AM

Lab ID: 1910D50-003

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
2-Hexanone	ND	10		µg/L	1	10/25/2019 11:31:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 11:31:00 AM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 11:31:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 11:31:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Styrene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 11:31:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 11:31:00 AM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 11:31:00 AM
Xylenes, Total	ND	1.5		µg/L	1	10/25/2019 11:31:00 AM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/25/2019 11:31:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/25/2019 11:31:00 AM
Surr: Dibromofluoromethane	99.7	70-130		%Rec	1	10/25/2019 11:31:00 AM
Surr: Toluene-d8	97.7	70-130		%Rec	1	10/25/2019 11:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 10/24/2019 10:40:00 AM

Lab ID: 1910D50-004

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Toluene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 11:55:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 11:55:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 11:55:00 AM
Acetone	ND	10		µg/L	1	10/25/2019 11:55:00 AM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Bromoform	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 11:55:00 AM
2-Butanone	ND	10		µg/L	1	10/25/2019 11:55:00 AM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 11:55:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 11:55:00 AM
Chloroform	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 11:55:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 11:55:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 11:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 10/24/2019 10:40:00 AM

Lab ID: 1910D50-004

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
2-Hexanone	ND	10		µg/L	1	10/25/2019 11:55:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 11:55:00 AM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 11:55:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 11:55:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Styrene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 11:55:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 11:55:00 AM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 11:55:00 AM
Xylenes, Total	ND	1.5		µg/L	1	10/25/2019 11:55:00 AM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/25/2019 11:55:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/25/2019 11:55:00 AM
Surr: Dibromofluoromethane	98.6	70-130		%Rec	1	10/25/2019 11:55:00 AM
Surr: Toluene-d8	96.7	70-130		%Rec	1	10/25/2019 11:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 10/24/2019 9:40:00 AM

Lab ID: 1910D50-005

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Toluene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 12:19:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 12:19:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 12:19:00 PM
Acetone	ND	10		µg/L	1	10/25/2019 12:19:00 PM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Bromoform	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 12:19:00 PM
2-Butanone	ND	10		µg/L	1	10/25/2019 12:19:00 PM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 12:19:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 12:19:00 PM
Chloroform	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 12:19:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 12:19:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 12:19:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 10/24/2019 9:40:00 AM

Lab ID: 1910D50-005

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
2-Hexanone	ND	10		µg/L	1	10/25/2019 12:19:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 12:19:00 PM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 12:19:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 12:19:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Styrene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 12:19:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 12:19:00 PM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 12:19:00 PM
Xylenes, Total	ND	1.5		µg/L	1	10/25/2019 12:19:00 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/25/2019 12:19:00 PM
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	10/25/2019 12:19:00 PM
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	10/25/2019 12:19:00 PM
Surr: Toluene-d8	96.5	70-130		%Rec	1	10/25/2019 12:19:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 10/24/2019 11:40:00 AM

Lab ID: 1910D50-006

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Toluene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Ethylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 12:42:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 12:42:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 12:42:00 PM
Acetone	ND	10		µg/L	1	10/25/2019 12:42:00 PM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Bromoform	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 12:42:00 PM
2-Butanone	ND	10		µg/L	1	10/25/2019 12:42:00 PM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 12:42:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 12:42:00 PM
Chloroform	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 12:42:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 12:42:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 12:42:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 10/24/2019 11:40:00 AM

Lab ID: 1910D50-006

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
2-Hexanone	ND	10		µg/L	1	10/25/2019 12:42:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 12:42:00 PM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 12:42:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 12:42:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Styrene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 12:42:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 12:42:00 PM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 12:42:00 PM
Xylenes, Total	ND	1.5		µg/L	1	10/25/2019 12:42:00 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/25/2019 12:42:00 PM
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	10/25/2019 12:42:00 PM
Surr: Dibromofluoromethane	100	70-130		%Rec	1	10/25/2019 12:42:00 PM
Surr: Toluene-d8	97.2	70-130		%Rec	1	10/25/2019 12:42:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW12

Project: Salty Dog

Collection Date: 10/24/2019 11:50:00 AM

Lab ID: 1910D50-007

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
Benzene	13	1.0		µg/L	1	10/25/2019 1:06:00 PM
Toluene	6.2	1.0		µg/L	1	10/25/2019 1:06:00 PM
Ethylbenzene	1.3	1.0		µg/L	1	10/25/2019 1:06:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Naphthalene	ND	2.0		µg/L	1	10/25/2019 1:06:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 1:06:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/25/2019 1:06:00 PM
Acetone	ND	10		µg/L	1	10/25/2019 1:06:00 PM
Bromobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Bromoform	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Bromomethane	ND	3.0		µg/L	1	10/25/2019 1:06:00 PM
2-Butanone	ND	10		µg/L	1	10/25/2019 1:06:00 PM
Carbon disulfide	ND	10		µg/L	1	10/25/2019 1:06:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Chlorobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Chloroethane	ND	2.0		µg/L	1	10/25/2019 1:06:00 PM
Chloroform	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Chloromethane	ND	3.0		µg/L	1	10/25/2019 1:06:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/25/2019 1:06:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Dibromomethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/25/2019 1:06:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 1910D50

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW12

Project: Salty Dog

Collection Date: 10/24/2019 11:50:00 AM

Lab ID: 1910D50-007

Matrix: GROUNDWA

Received Date: 10/25/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: CCM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
2-Hexanone	ND	10		µg/L	1	10/25/2019 1:06:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/25/2019 1:06:00 PM
Methylene Chloride	ND	3.0		µg/L	1	10/25/2019 1:06:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/25/2019 1:06:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Styrene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/25/2019 1:06:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/25/2019 1:06:00 PM
Vinyl chloride	ND	1.0		µg/L	1	10/25/2019 1:06:00 PM
Xylenes, Total	11	1.5		µg/L	1	10/25/2019 1:06:00 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	10/25/2019 1:06:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/25/2019 1:06:00 PM
Surr: Dibromofluoromethane	98.9	70-130		%Rec	1	10/25/2019 1:06:00 PM
Surr: Toluene-d8	96.2	70-130		%Rec	1	10/25/2019 1:06:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18

Project: Salty Dog SWD

Collection Date: 3/12/2020 9:55:00 AM

Lab ID: 2003675-001

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 6:07:59 PM
Chloride	18000	1000	*	mg/L	2000	3/22/2020 8:52:43 AM
Bromide	22	1.0		mg/L	10	3/20/2020 6:07:59 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 6:07:59 PM
Sulfate	2200	50	*	mg/L	100	3/20/2020 6:20:24 PM
Nitrate+Nitrite as N	ND	20		mg/L	100	3/22/2020 11:21:38 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	2200	50		mg/L	50	3/24/2020 3:13:19 AM
Magnesium	320	20		mg/L	20	3/23/2020 5:46:14 AM
Potassium	33	1.0		mg/L	1	3/23/2020 4:46:34 AM
Sodium	9200	100		mg/L	100	3/24/2020 3:16:04 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 3:36:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 3:36:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 3:36:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 3:36:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 3:36:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 3:36:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 3:36:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 3:36:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 3:36:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18

Project: Salty Dog SWD

Collection Date: 3/12/2020 9:55:00 AM

Lab ID: 2003675-001

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 3:36:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 3:36:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 3:36:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 3:36:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 3:36:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 3:36:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 3:36:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 3:36:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 3:36:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 3:36:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW18

Project: Salty Dog SWD

Collection Date: 3/12/2020 9:55:00 AM

Lab ID: 2003675-001

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	1	3/19/2020 3:36:00 AM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	3/19/2020 3:36:00 AM
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	3/19/2020 3:36:00 AM
Surr: Toluene-d8	95.0	70-130		%Rec	1	3/19/2020 3:36:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.15		H	pH units	1	3/16/2020 12:01:05 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	30000	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW17

Project: Salty Dog SWD

Collection Date: 3/12/2020 11:05:00 AM

Lab ID: 2003675-002

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 6:32:49 PM
Chloride	1700	50	*	mg/L	100	3/20/2020 6:45:13 PM
Bromide	2.3	1.0		mg/L	10	3/20/2020 6:32:49 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 6:32:49 PM
Sulfate	2500	50	*	mg/L	100	3/20/2020 6:45:13 PM
Nitrate+Nitrite as N	2.6	2.0		mg/L	10	3/21/2020 1:34:42 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	590	20		mg/L	20	3/23/2020 6:06:02 AM
Magnesium	87	5.0		mg/L	5	3/23/2020 5:56:48 AM
Potassium	6.7	1.0		mg/L	1	3/23/2020 4:56:58 AM
Sodium	1400	20		mg/L	20	3/23/2020 6:06:02 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 4:00:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 4:00:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 4:00:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 4:00:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 4:00:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 4:00:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 4:00:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 4:00:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 4:00:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW17

Project: Salty Dog SWD

Collection Date: 3/12/2020 11:05:00 AM

Lab ID: 2003675-002

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 4:00:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 4:00:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 4:00:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 4:00:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 4:00:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 4:00:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 4:00:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 4:00:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 4:00:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 4:00:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW17

Project: Salty Dog SWD

Collection Date: 3/12/2020 11:05:00 AM

Lab ID: 2003675-002

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	92.9	70-130		%Rec	1	3/19/2020 4:00:00 AM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	3/19/2020 4:00:00 AM
Surr: Dibromofluoromethane	97.5	70-130		%Rec	1	3/19/2020 4:00:00 AM
Surr: Toluene-d8	95.6	70-130		%Rec	1	3/19/2020 4:00:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.41		H	pH units	1	3/16/2020 12:05:33 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	6570	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog SWD

Collection Date: 3/12/2020 11:48:00 AM

Lab ID: 2003675-003

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 6:57:38 PM
Chloride	15000	1000	*	mg/L	2000	3/22/2020 9:05:07 AM
Bromide	19	1.0		mg/L	10	3/20/2020 6:57:38 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 6:57:38 PM
Sulfate	1700	50	*	mg/L	100	3/20/2020 7:10:02 PM
Nitrate+Nitrite as N	ND	10		mg/L	50	3/22/2020 11:34:03 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	2500	50		mg/L	50	3/24/2020 3:18:53 AM
Magnesium	410	10		mg/L	10	3/23/2020 6:14:41 AM
Potassium	25	1.0		mg/L	1	3/23/2020 6:10:50 AM
Sodium	6500	100		mg/L	100	3/24/2020 3:29:12 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 4:23:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 4:23:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 4:23:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 4:23:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 4:23:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 4:23:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 4:23:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 4:23:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 4:23:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog SWD

Collection Date: 3/12/2020 11:48:00 AM

Lab ID: 2003675-003

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 4:23:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 4:23:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 4:23:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 4:23:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 4:23:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 4:23:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 4:23:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 4:23:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 4:23:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 4:23:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog SWD

Collection Date: 3/12/2020 11:48:00 AM

Lab ID: 2003675-003

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	92.9	70-130		%Rec	1	3/19/2020 4:23:00 AM
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	3/19/2020 4:23:00 AM
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	3/19/2020 4:23:00 AM
Surr: Toluene-d8	95.5	70-130		%Rec	1	3/19/2020 4:23:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.38		H	pH units	1	3/16/2020 12:09:26 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	26700	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog SWD

Collection Date: 3/12/2020 12:40:00 PM

Lab ID: 2003675-004

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 7:22:26 PM
Chloride	16000	1000	*	mg/L	2000	3/22/2020 9:17:32 AM
Bromide	19	1.0		mg/L	10	3/20/2020 7:22:26 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 7:22:26 PM
Sulfate	2200	50	*	mg/L	100	3/20/2020 7:59:41 PM
Nitrate+Nitrite as N	ND	10		mg/L	50	3/22/2020 11:46:28 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	2500	50		mg/L	50	3/24/2020 3:32:03 AM
Magnesium	320	10		mg/L	10	3/23/2020 6:21:04 AM
Potassium	26	1.0		mg/L	1	3/23/2020 6:17:55 AM
Sodium	7500	100		mg/L	100	3/24/2020 3:34:46 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 4:47:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 4:47:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 4:47:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 4:47:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 4:47:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 4:47:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 4:47:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 4:47:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 4:47:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog SWD

Collection Date: 3/12/2020 12:40:00 PM

Lab ID: 2003675-004

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 4:47:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 4:47:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 4:47:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 4:47:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 4:47:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 4:47:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 4:47:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 4:47:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 4:47:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 4:47:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2003675
Date Reported:

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog SWD

Collection Date: 3/12/2020 12:40:00 PM

Lab ID: 2003675-004

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%Rec	1	3/19/2020 4:47:00 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	3/19/2020 4:47:00 AM
Surr: Dibromofluoromethane	94.8	70-130		%Rec	1	3/19/2020 4:47:00 AM
Surr: Toluene-d8	96.2	70-130		%Rec	1	3/19/2020 4:47:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.06		H	pH units	1	3/16/2020 12:17:56 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	30000	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog SWD

Collection Date: 3/12/2020 1:34:00 PM

Lab ID: 2003675-005

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 8:36:54 PM
Chloride	3400	250	*	mg/L	500	3/22/2020 9:29:57 AM
Bromide	4.3	1.0		mg/L	10	3/20/2020 8:36:54 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 8:36:54 PM
Sulfate	2600	50	*	mg/L	100	3/20/2020 8:49:18 PM
Nitrate+Nitrite as N	ND	4.0		mg/L	20	3/22/2020 11:58:52 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	760	10		mg/L	10	3/23/2020 6:35:22 AM
Magnesium	110	10		mg/L	10	3/23/2020 6:35:22 AM
Potassium	12	1.0		mg/L	1	3/23/2020 6:24:19 AM
Sodium	2300	50		mg/L	50	3/24/2020 3:37:32 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 5:11:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 5:11:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 5:11:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 5:11:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 5:11:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 5:11:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 5:11:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 5:11:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 5:11:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog SWD

Collection Date: 3/12/2020 1:34:00 PM

Lab ID: 2003675-005

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 5:11:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 5:11:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 5:11:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 5:11:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 5:11:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 5:11:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 5:11:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 5:11:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 5:11:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 5:11:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog SWD

Collection Date: 3/12/2020 1:34:00 PM

Lab ID: 2003675-005

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%Rec	1	3/19/2020 5:11:00 AM
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	3/19/2020 5:11:00 AM
Surr: Dibromofluoromethane	96.9	70-130		%Rec	1	3/19/2020 5:11:00 AM
Surr: Toluene-d8	95.7	70-130		%Rec	1	3/19/2020 5:11:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.57		H	pH units	1	3/16/2020 12:22:04 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	8420	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog SWD

Collection Date: 3/12/2020 2:24:00 PM

Lab ID: 2003675-006

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 9:01:43 PM
Chloride	2200	100	*	mg/L	200	3/22/2020 9:42:21 AM
Bromide	2.9	1.0		mg/L	10	3/20/2020 9:01:43 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 9:01:43 PM
Sulfate	2200	50	*	mg/L	100	3/20/2020 9:14:08 PM
Nitrate+Nitrite as N	2.2	2.0		mg/L	10	3/21/2020 2:24:19 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	640	10		mg/L	10	3/23/2020 6:41:40 AM
Magnesium	85	1.0		mg/L	1	3/23/2020 6:38:14 AM
Potassium	8.7	1.0		mg/L	1	3/23/2020 6:38:14 AM
Sodium	1600	20		mg/L	20	3/24/2020 3:40:15 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 5:34:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 5:34:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 5:34:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 5:34:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 5:34:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 5:34:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 5:34:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 5:34:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 5:34:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog SWD

Collection Date: 3/12/2020 2:24:00 PM

Lab ID: 2003675-006

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 5:34:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 5:34:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 5:34:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 5:34:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 5:34:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 5:34:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 5:34:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 5:34:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 5:34:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 5:34:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003675

Date Reported:

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog SWD

Collection Date: 3/12/2020 2:24:00 PM

Lab ID: 2003675-006

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	91.1	70-130		%Rec	1	3/19/2020 5:34:00 AM
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	3/19/2020 5:34:00 AM
Surr: Dibromofluoromethane	96.8	70-130		%Rec	1	3/19/2020 5:34:00 AM
Surr: Toluene-d8	94.9	70-130		%Rec	1	3/19/2020 5:34:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.36		H	pH units	1	3/16/2020 12:26:11 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	6660	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog SWD

Collection Date: 3/12/2020 3:28:00 PM

Lab ID: 2003675-007

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 9:26:33 PM
Chloride	9600	500	*	mg/L	1000	3/22/2020 9:54:45 AM
Bromide	12	1.0		mg/L	10	3/20/2020 9:26:33 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 9:26:33 PM
Sulfate	3900	50	*	mg/L	100	3/20/2020 9:38:57 PM
Nitrate+Nitrite as N	18	10	*	mg/L	50	3/22/2020 12:11:17 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	1100	50		mg/L	50	3/24/2020 3:42:52 AM
Magnesium	450	10		mg/L	10	3/23/2020 6:47:43 AM
Potassium	18	1.0		mg/L	1	3/23/2020 6:44:32 AM
Sodium	5400	100		mg/L	100	3/24/2020 3:45:43 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 5:58:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 5:58:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 5:58:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 5:58:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 5:58:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 5:58:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 5:58:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 5:58:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 5:58:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog SWD

Collection Date: 3/12/2020 3:28:00 PM

Lab ID: 2003675-007

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 5:58:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 5:58:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 5:58:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 5:58:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 5:58:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 5:58:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 5:58:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 5:58:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 5:58:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 5:58:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003675

Date Reported:

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog SWD

Collection Date: 3/12/2020 3:28:00 PM

Lab ID: 2003675-007

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%Rec	1	3/19/2020 5:58:00 AM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	3/19/2020 5:58:00 AM
Surr: Dibromofluoromethane	97.5	70-130		%Rec	1	3/19/2020 5:58:00 AM
Surr: Toluene-d8	95.5	70-130		%Rec	1	3/19/2020 5:58:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.50		H	pH units	1	3/16/2020 12:30:18 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	19800	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20

Project: Salty Dog SWD

Collection Date: 3/13/2020 9:49:00 AM

Lab ID: 2003675-008

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 9:51:21 PM
Chloride	7300	500	*	mg/L	1000	3/22/2020 10:07:10 AM
Bromide	9.2	1.0		mg/L	10	3/20/2020 9:51:21 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 9:51:21 PM
Sulfate	2500	50	*	mg/L	100	3/20/2020 10:03:45 PM
Nitrate+Nitrite as N	ND	10		mg/L	50	3/22/2020 12:23:41 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	880	10		mg/L	10	3/23/2020 6:54:12 AM
Magnesium	180	10		mg/L	10	3/23/2020 6:54:12 AM
Potassium	17	1.0		mg/L	1	3/23/2020 6:50:48 AM
Sodium	4600	50		mg/L	50	3/24/2020 3:48:25 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 6:21:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 6:21:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 6:21:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 6:21:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 6:21:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 6:21:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 6:21:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 6:21:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 6:21:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20

Project: Salty Dog SWD

Collection Date: 3/13/2020 9:49:00 AM

Lab ID: 2003675-008

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 6:21:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 6:21:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 6:21:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 6:21:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 6:21:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 6:21:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 6:21:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 6:21:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 6:21:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 6:21:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20

Project: Salty Dog SWD

Collection Date: 3/13/2020 9:49:00 AM

Lab ID: 2003675-008

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%Rec	1	3/19/2020 6:21:00 AM
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	3/19/2020 6:21:00 AM
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	3/19/2020 6:21:00 AM
Surr: Toluene-d8	96.4	70-130		%Rec	1	3/19/2020 6:21:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.30		H	pH units	1	3/16/2020 12:34:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	13800	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog SWD

Collection Date: 3/13/2020 10:25:00 AM

Lab ID: 2003675-009

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 10:16:10 PM
Chloride	3400	250	*	mg/L	500	3/22/2020 10:44:24 AM
Bromide	4.5	1.0		mg/L	10	3/20/2020 10:16:10 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 10:16:10 PM
Sulfate	2200	50	*	mg/L	100	3/20/2020 10:28:34 PM
Nitrate+Nitrite as N	3.5	2.0		mg/L	10	3/21/2020 3:01:32 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	1000	20		mg/L	20	3/24/2020 3:51:10 AM
Magnesium	180	10		mg/L	10	3/23/2020 7:00:40 AM
Potassium	11	1.0		mg/L	1	3/23/2020 6:57:12 AM
Sodium	1700	20		mg/L	20	3/24/2020 3:51:10 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 6:45:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 6:45:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 6:45:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 6:45:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 6:45:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 6:45:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 6:45:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 6:45:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 6:45:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog SWD

Collection Date: 3/13/2020 10:25:00 AM

Lab ID: 2003675-009

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 6:45:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 6:45:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 6:45:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 6:45:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 6:45:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 6:45:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 6:45:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 6:45:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 6:45:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 6:45:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog SWD

Collection Date: 3/13/2020 10:25:00 AM

Lab ID: 2003675-009

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	1	3/19/2020 6:45:00 AM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	3/19/2020 6:45:00 AM
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	3/19/2020 6:45:00 AM
Surr: Toluene-d8	95.7	70-130		%Rec	1	3/19/2020 6:45:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.24		H	pH units	1	3/16/2020 12:38:34 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	8980	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW08

Project: Salty Dog SWD

Collection Date: 3/13/2020 10:48:00 AM

Lab ID: 2003675-010

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	2.8	1.0		mg/L	10	3/20/2020 11:05:47 PM
Chloride	670	50	*	mg/L	100	3/20/2020 11:18:11 PM
Bromide	1.4	1.0		mg/L	10	3/20/2020 11:05:47 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 11:05:47 PM
Sulfate	4400	50	*	mg/L	100	3/20/2020 11:18:11 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	3/21/2020 3:13:58 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	470	10		mg/L	10	3/23/2020 7:14:29 AM
Magnesium	180	10		mg/L	10	3/23/2020 7:14:29 AM
Potassium	6.1	1.0		mg/L	1	3/23/2020 7:03:31 AM
Sodium	1700	20		mg/L	20	3/24/2020 3:53:50 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 7:09:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 7:09:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 7:09:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 7:09:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 7:09:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 7:09:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 7:09:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 7:09:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 7:09:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW08

Project: Salty Dog SWD

Collection Date: 3/13/2020 10:48:00 AM

Lab ID: 2003675-010

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 7:09:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 7:09:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 7:09:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 7:09:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 7:09:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 7:09:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 7:09:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 7:09:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 7:09:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 7:09:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003675

Date Reported:

CLIENT: HILCORP ENERGY

Client Sample ID: MW08

Project: Salty Dog SWD

Collection Date: 3/13/2020 10:48:00 AM

Lab ID: 2003675-010

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	93.2	70-130		%Rec	1	3/19/2020 7:09:00 AM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	3/19/2020 7:09:00 AM
Surr: Dibromofluoromethane	96.3	70-130		%Rec	1	3/19/2020 7:09:00 AM
Surr: Toluene-d8	95.1	70-130		%Rec	1	3/19/2020 7:09:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.63		H	pH units	1	3/16/2020 12:42:43 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	6950	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog SWD

Collection Date: 3/13/2020 11:36:00 AM

Lab ID: 2003675-011

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 11:30:36 PM
Chloride	730	50	*	mg/L	100	3/20/2020 11:43:01 PM
Bromide	1.3	1.0		mg/L	10	3/20/2020 11:30:36 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 11:30:36 PM
Sulfate	2200	50	*	mg/L	100	3/20/2020 11:43:01 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	3/21/2020 4:03:37 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	590	10		mg/L	10	3/23/2020 7:20:37 AM
Magnesium	91	1.0		mg/L	1	3/23/2020 7:17:18 AM
Potassium	6.7	1.0		mg/L	1	3/23/2020 7:17:18 AM
Sodium	720	10		mg/L	10	3/23/2020 7:20:37 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 7:32:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 7:32:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 7:32:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 7:32:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 7:32:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 7:32:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 7:32:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 7:32:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 7:32:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog SWD

Collection Date: 3/13/2020 11:36:00 AM

Lab ID: 2003675-011

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 7:32:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 7:32:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 7:32:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 7:32:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 7:32:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 7:32:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 7:32:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 7:32:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 7:32:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 7:32:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2003675

Date Reported:

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog SWD

Collection Date: 3/13/2020 11:36:00 AM

Lab ID: 2003675-011

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	91.0	70-130		%Rec	1	3/19/2020 7:32:00 AM
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	3/19/2020 7:32:00 AM
Surr: Dibromofluoromethane	97.1	70-130		%Rec	1	3/19/2020 7:32:00 AM
Surr: Toluene-d8	93.7	70-130		%Rec	1	3/19/2020 7:32:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.27		H	pH units	1	3/16/2020 12:46:38 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	4300	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog SWD

Collection Date: 3/13/2020 12:05:00 PM

Lab ID: 2003675-012

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2020 11:55:26 PM
Chloride	3000	100	*	mg/L	200	3/22/2020 10:56:49 AM
Bromide	3.9	1.0		mg/L	10	3/20/2020 11:55:26 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2020 11:55:26 PM
Sulfate	2200	50	*	mg/L	100	3/21/2020 12:07:51 AM
Nitrate+Nitrite as N	4.5	2.0		mg/L	10	3/21/2020 4:16:01 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	930	10		mg/L	10	3/23/2020 7:26:46 AM
Magnesium	140	10		mg/L	10	3/23/2020 7:26:46 AM
Potassium	9.2	1.0		mg/L	1	3/23/2020 7:23:21 AM
Sodium	1600	20		mg/L	20	3/24/2020 4:04:09 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 7:56:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 7:56:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 7:56:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 7:56:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 7:56:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 7:56:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 7:56:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 7:56:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 7:56:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog SWD

Collection Date: 3/13/2020 12:05:00 PM

Lab ID: 2003675-012

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 7:56:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 7:56:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 7:56:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 7:56:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 7:56:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 7:56:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 7:56:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 7:56:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 7:56:00 AM
Xylenes, Total	ND	1.5		µg/L	1	3/19/2020 7:56:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2003675
Date Reported:

CLIENT: HILCORP ENERGY
Project: Salty Dog SWD
Lab ID: 2003675-012

Client Sample ID: MW14
Collection Date: 3/13/2020 12:05:00 PM
Received Date: 3/14/2020 8:15:00 AM

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	93.7	70-130		%Rec	1	3/19/2020 7:56:00 AM
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	3/19/2020 7:56:00 AM
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	3/19/2020 7:56:00 AM
Surr: Toluene-d8	95.7	70-130		%Rec	1	3/19/2020 7:56:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.29		H	pH units	1	3/16/2020 12:50:36 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	7600	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12

Project: Salty Dog SWD

Collection Date: 3/13/2020 12:50:00 PM

Lab ID: 2003675-013

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/21/2020 12:20:16 AM
Chloride	28000	1000	*	mg/L	2000	3/22/2020 11:09:14 AM
Bromide	33	1.0		mg/L	10	3/21/2020 12:20:16 AM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/21/2020 12:20:16 AM
Sulfate	2400	50	*	mg/L	100	3/21/2020 12:32:40 AM
Nitrate+Nitrite as N	ND	20		mg/L	100	3/22/2020 12:36:06 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	2400	50		mg/L	50	3/24/2020 4:06:48 AM
Magnesium	370	10		mg/L	10	3/23/2020 7:33:20 AM
Potassium	67	1.0		mg/L	1	3/23/2020 7:29:36 AM
Sodium	13000	500		mg/L	500	3/24/2020 4:09:39 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	2.0	1.0		µg/L	1	3/19/2020 8:20:00 AM
Toluene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Ethylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Naphthalene	ND	2.0		µg/L	1	3/19/2020 8:20:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 8:20:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	3/19/2020 8:20:00 AM
Acetone	ND	10		µg/L	1	3/19/2020 8:20:00 AM
Bromobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Bromoform	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Bromomethane	ND	3.0		µg/L	1	3/19/2020 8:20:00 AM
2-Butanone	ND	10		µg/L	1	3/19/2020 8:20:00 AM
Carbon disulfide	ND	10		µg/L	1	3/19/2020 8:20:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Chlorobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Chloroethane	ND	2.0		µg/L	1	3/19/2020 8:20:00 AM
Chloroform	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Chloromethane	ND	3.0		µg/L	1	3/19/2020 8:20:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12

Project: Salty Dog SWD

Collection Date: 3/13/2020 12:50:00 PM

Lab ID: 2003675-013

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/19/2020 8:20:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Dibromomethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/19/2020 8:20:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
2-Hexanone	ND	10		µg/L	1	3/19/2020 8:20:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/19/2020 8:20:00 AM
Methylene Chloride	ND	3.0		µg/L	1	3/19/2020 8:20:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	3/19/2020 8:20:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Styrene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/19/2020 8:20:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/19/2020 8:20:00 AM
Vinyl chloride	ND	1.0		µg/L	1	3/19/2020 8:20:00 AM
Xylenes, Total	4.6	1.5		µg/L	1	3/19/2020 8:20:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2003675

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12

Project: Salty Dog SWD

Collection Date: 3/13/2020 12:50:00 PM

Lab ID: 2003675-013

Matrix: AQUEOUS

Received Date: 3/14/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%Rec	1	3/19/2020 8:20:00 AM
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	3/19/2020 8:20:00 AM
Surr: Dibromofluoromethane	96.5	70-130		%Rec	1	3/19/2020 8:20:00 AM
Surr: Toluene-d8	94.3	70-130		%Rec	1	3/19/2020 8:20:00 AM
SM4500-H+B / 9040C: PH						Analyst: vfs
pH	7.20		H	pH units	1	3/16/2020 12:54:36 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	42900	200	*D	mg/L	1	3/24/2020 9:55:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 09, 2020

Jennifer Deal
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Salty Dog SWD

OrderNo.: 2006B99

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 15 sample(s) on 6/24/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 18

Project: Salty Dog SWD

Collection Date: 6/22/2020 9:30:00 AM

Lab ID: 2006B99-001

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 4:18:51 PM	R69869
Chloride	10000	500		mg/L	1E+	6/27/2020 12:49:34 AM	A69965
Bromide	16	1.0		mg/L	10	6/24/2020 4:18:51 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/24/2020 4:18:51 PM	R69869
Sulfate	2300	50		mg/L	100	6/24/2020 4:31:15 PM	R69869
Nitrate+Nitrite as N	ND	10		mg/L	50	6/27/2020 3:24:00 AM	A69965
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	47000	100		µmhos/c	10	6/29/2020 10:10:40 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	229.6	20.00		mg/L Ca	1	6/25/2020 3:52:25 PM	R69922
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/25/2020 3:52:25 PM	R69922
Total Alkalinity (as CaCO3)	229.6	20.00		mg/L Ca	1	6/25/2020 3:52:25 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	21800	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.33		H	pH units	1	6/25/2020 3:52:25 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	1600	100		mg/L	100	6/26/2020 2:45:10 PM	B69930
Magnesium	260	5.0		mg/L	5	6/24/2020 6:12:25 PM	A69879
Potassium	29	1.0		mg/L	1	6/24/2020 6:10:32 PM	A69879
Sodium	6700	100		mg/L	100	6/26/2020 2:45:10 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Toluene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Naphthalene	ND	2.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Acetone	ND	10		µg/L	1	6/27/2020 9:22:46 PM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 18

Project: Salty Dog SWD

Collection Date: 6/22/2020 9:30:00 AM

Lab ID: 2006B99-001

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromoform	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Bromomethane	ND	3.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
2-Butanone	ND	10		µg/L	1	6/27/2020 9:22:46 PM	B69957
Carbon disulfide	ND	10		µg/L	1	6/27/2020 9:22:46 PM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Chloroethane	ND	2.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Chloroform	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Chloromethane	ND	3.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
2-Hexanone	ND	10		µg/L	1	6/27/2020 9:22:46 PM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2020 9:22:46 PM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Styrene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2020 9:22:46 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 18

Project: Salty Dog SWD

Collection Date: 6/22/2020 9:30:00 AM

Lab ID: 2006B99-001

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/27/2020 9:22:46 PM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/27/2020 9:22:46 PM	B69957
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	6/27/2020 9:22:46 PM	B69957
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	6/27/2020 9:22:46 PM	B69957
Surr: Dibromofluoromethane	111	70-130		%Rec	1	6/27/2020 9:22:46 PM	B69957
Surr: Toluene-d8	104	70-130		%Rec	1	6/27/2020 9:22:46 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 17

Project: Salty Dog SWD

Collection Date: 6/22/2020 10:20:00 AM

Lab ID: 2006B99-002

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 5:08:29 PM	R69869
Chloride	1500	50		mg/L	100	6/24/2020 5:20:53 PM	R69869
Bromide	2.2	1.0		mg/L	10	6/24/2020 5:08:29 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/24/2020 5:08:29 PM	R69869
Sulfate	2400	50		mg/L	100	6/24/2020 5:20:53 PM	R69869
Nitrate+Nitrite as N	2.1	1.0		mg/L	5	6/27/2020 3:36:52 AM	A69965
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	8200	10		µmhos/c	1	6/25/2020 4:05:22 PM	R69922
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	242.0	20.00		mg/L Ca	1	6/25/2020 4:05:22 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 4:05:22 PM	R69922
Total Alkalinity (as CaCO ₃)	242.0	20.00		mg/L Ca	1	6/25/2020 4:05:22 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5900	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.59		H	pH units	1	6/25/2020 4:05:22 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	550	20		mg/L	20	6/26/2020 2:47:18 PM	B69930
Magnesium	82	1.0		mg/L	1	6/24/2020 6:22:14 PM	A69879
Potassium	7.0	1.0		mg/L	1	6/24/2020 6:22:14 PM	A69879
Sodium	1300	20		mg/L	20	6/26/2020 2:47:18 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Toluene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Naphthalene	ND	2.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Acetone	ND	10		µg/L	1	6/27/2020 9:51:28 PM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 17

Project: Salty Dog SWD

Collection Date: 6/22/2020 10:20:00 AM

Lab ID: 2006B99-002

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromoform	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Bromomethane	ND	3.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
2-Butanone	ND	10		µg/L	1	6/27/2020 9:51:28 PM	B69957
Carbon disulfide	ND	10		µg/L	1	6/27/2020 9:51:28 PM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Chloroethane	ND	2.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Chloroform	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Chloromethane	ND	3.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
2-Hexanone	ND	10		µg/L	1	6/27/2020 9:51:28 PM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2020 9:51:28 PM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Styrene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2020 9:51:28 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 17

Project: Salty Dog SWD

Collection Date: 6/22/2020 10:20:00 AM

Lab ID: 2006B99-002

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/27/2020 9:51:28 PM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/27/2020 9:51:28 PM	B69957
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	6/27/2020 9:51:28 PM	B69957
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	6/27/2020 9:51:28 PM	B69957
Surr: Dibromofluoromethane	113	70-130		%Rec	1	6/27/2020 9:51:28 PM	B69957
Surr: Toluene-d8	103	70-130		%Rec	1	6/27/2020 9:51:28 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 03

Project: Salty Dog SWD

Collection Date: 6/22/2020 10:49:00 AM

Lab ID: 2006B99-003

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 5:33:17 PM	R69869
Chloride	12000	500		mg/L	1E+	6/27/2020 1:02:26 AM	A69965
Bromide	16	1.0		mg/L	10	6/24/2020 5:33:17 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/24/2020 5:33:17 PM	R69869
Sulfate	1800	50		mg/L	100	6/24/2020 5:45:41 PM	R69869
Nitrate+Nitrite as N	ND	10		mg/L	50	6/27/2020 3:49:44 AM	A69965
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	46000	100		µmhos/c	10	6/29/2020 10:13:38 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	131.1	20.00		mg/L Ca	1	6/25/2020 4:17:56 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 4:17:56 PM	R69922
Total Alkalinity (as CaCO ₃)	131.1	20.00		mg/L Ca	1	6/25/2020 4:17:56 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	22000	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.48		H	pH units	1	6/25/2020 4:17:56 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	1900	100		mg/L	100	6/26/2020 2:49:14 PM	B69930
Magnesium	350	5.0		mg/L	5	6/24/2020 6:28:23 PM	A69879
Potassium	25	1.0		mg/L	1	6/24/2020 6:26:23 PM	A69879
Sodium	5500	100		mg/L	100	6/26/2020 2:49:14 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Toluene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Naphthalene	ND	2.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Acetone	ND	10		µg/L	1	6/27/2020 10:20:10 PM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 03

Project: Salty Dog SWD

Collection Date: 6/22/2020 10:49:00 AM

Lab ID: 2006B99-003

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromoform	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Bromomethane	ND	3.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
2-Butanone	ND	10		µg/L	1	6/27/2020 10:20:10 PM	B69957
Carbon disulfide	ND	10		µg/L	1	6/27/2020 10:20:10 PM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Chloroethane	ND	2.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Chloroform	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Chloromethane	ND	3.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
2-Hexanone	ND	10		µg/L	1	6/27/2020 10:20:10 PM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2020 10:20:10 PM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Styrene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2020 10:20:10 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 03

Project: Salty Dog SWD

Collection Date: 6/22/2020 10:49:00 AM

Lab ID: 2006B99-003

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/27/2020 10:20:10 PM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/27/2020 10:20:10 PM	B69957
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	6/27/2020 10:20:10 PM	B69957
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	6/27/2020 10:20:10 PM	B69957
Surr: Dibromofluoromethane	113	70-130		%Rec	1	6/27/2020 10:20:10 PM	B69957
Surr: Toluene-d8	102	70-130		%Rec	1	6/27/2020 10:20:10 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 13

Project: Salty Dog SWD

Collection Date: 6/22/2020 11:46:00 AM

Lab ID: 2006B99-004

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 5:58:05 PM	R69869
Chloride	14000	500		mg/L	1E+	6/27/2020 1:15:19 AM	A69965
Bromide	17	1.0		mg/L	10	6/24/2020 5:58:05 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/24/2020 5:58:05 PM	R69869
Sulfate	1800	50		mg/L	100	6/24/2020 6:10:29 PM	R69869
Nitrate+Nitrite as N	ND	10		mg/L	50	6/27/2020 4:02:37 AM	A69965
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	47000	100		µmhos/c	10	6/29/2020 10:16:39 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	182.5	20.00		mg/L Ca	1	6/25/2020 4:27:31 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 4:27:31 PM	R69922
Total Alkalinity (as CaCO ₃)	182.5	20.00		mg/L Ca	1	6/25/2020 4:27:31 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	29200	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.36		H	pH units	1	6/25/2020 4:27:31 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	2400	100		mg/L	100	6/26/2020 2:51:23 PM	B69930
Magnesium	340	5.0		mg/L	5	6/24/2020 6:32:35 PM	A69879
Potassium	26	1.0		mg/L	1	6/24/2020 6:30:41 PM	A69879
Sodium	6100	100		mg/L	100	6/26/2020 2:51:23 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Toluene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Naphthalene	ND	2.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Acetone	ND	10		µg/L	1	6/27/2020 10:48:49 PM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 13

Project: Salty Dog SWD

Collection Date: 6/22/2020 11:46:00 AM

Lab ID: 2006B99-004

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromoform	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Bromomethane	ND	3.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
2-Butanone	ND	10		µg/L	1	6/27/2020 10:48:49 PM	B69957
Carbon disulfide	ND	10		µg/L	1	6/27/2020 10:48:49 PM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Chloroethane	ND	2.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Chloroform	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Chloromethane	ND	3.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
2-Hexanone	ND	10		µg/L	1	6/27/2020 10:48:49 PM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2020 10:48:49 PM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Styrene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2020 10:48:49 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 13

Project: Salty Dog SWD

Collection Date: 6/22/2020 11:46:00 AM

Lab ID: 2006B99-004

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/27/2020 10:48:49 PM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/27/2020 10:48:49 PM	B69957
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	6/27/2020 10:48:49 PM	B69957
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	6/27/2020 10:48:49 PM	B69957
Surr: Dibromofluoromethane	111	70-130		%Rec	1	6/27/2020 10:48:49 PM	B69957
Surr: Toluene-d8	99.5	70-130		%Rec	1	6/27/2020 10:48:49 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 05

Project: Salty Dog SWD

Collection Date: 6/22/2020 12:41:00 PM

Lab ID: 2006B99-005

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 6:22:53 PM	R69869
Chloride	4500	250		mg/L	500	6/27/2020 1:28:11 AM	A69965
Bromide	5.8	1.0		mg/L	10	6/24/2020 6:22:53 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/24/2020 6:22:53 PM	R69869
Sulfate	2100	50		mg/L	100	6/24/2020 6:35:18 PM	R69869
Nitrate+Nitrite as N	ND	4.0		mg/L	20	6/27/2020 4:15:29 AM	A69965
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	19000	50		µmhos/c	5	6/29/2020 10:22:40 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	199.6	20.00		mg/L Ca	1	6/25/2020 4:50:30 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 4:50:30 PM	R69922
Total Alkalinity (as CaCO ₃)	199.6	20.00		mg/L Ca	1	6/25/2020 4:50:30 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	12000	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.66		H	pH units	1	6/25/2020 4:50:30 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	1000	50		mg/L	50	6/26/2020 2:53:31 PM	B69930
Magnesium	150	5.0		mg/L	5	6/24/2020 6:36:34 PM	A69879
Potassium	16	1.0		mg/L	1	6/24/2020 6:34:28 PM	A69879
Sodium	2500	50		mg/L	50	6/26/2020 2:53:31 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Toluene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Naphthalene	ND	2.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Acetone	ND	10		µg/L	1	6/27/2020 11:17:24 PM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 05

Project: Salty Dog SWD

Collection Date: 6/22/2020 12:41:00 PM

Lab ID: 2006B99-005

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromoform	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Bromomethane	ND	3.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
2-Butanone	ND	10		µg/L	1	6/27/2020 11:17:24 PM	B69957
Carbon disulfide	ND	10		µg/L	1	6/27/2020 11:17:24 PM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Chloroethane	ND	2.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Chloroform	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Chloromethane	ND	3.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
2-Hexanone	ND	10		µg/L	1	6/27/2020 11:17:24 PM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2020 11:17:24 PM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Styrene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2020 11:17:24 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 05

Project: Salty Dog SWD

Collection Date: 6/22/2020 12:41:00 PM

Lab ID: 2006B99-005

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/27/2020 11:17:24 PM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/27/2020 11:17:24 PM	B69957
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	6/27/2020 11:17:24 PM	B69957
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	6/27/2020 11:17:24 PM	B69957
Surr: Dibromofluoromethane	111	70-130		%Rec	1	6/27/2020 11:17:24 PM	B69957
Surr: Toluene-d8	104	70-130		%Rec	1	6/27/2020 11:17:24 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 10

Project: Salty Dog SWD

Collection Date: 6/22/2020 1:28:00 PM

Lab ID: 2006B99-006

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 6:47:42 PM	R69869
Chloride	2100	100		mg/L	200	6/27/2020 1:41:03 AM	A69965
Bromide	3.1	1.0		mg/L	10	6/24/2020 6:47:42 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/24/2020 6:47:42 PM	R69869
Sulfate	2000	50		mg/L	100	6/24/2020 7:00:06 PM	R69869
Nitrate+Nitrite as N	ND	2.0		mg/L	10	6/27/2020 4:28:21 AM	A69965
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	9900	10		µmhos/c	1	6/25/2020 5:01:57 PM	R69922
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	218.7	20.00		mg/L Ca	1	6/25/2020 5:01:57 PM	R69922
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/25/2020 5:01:57 PM	R69922
Total Alkalinity (as CaCO3)	218.7	20.00		mg/L Ca	1	6/25/2020 5:01:57 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	7200	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.65		H	pH units	1	6/25/2020 5:01:57 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	710	20		mg/L	20	6/26/2020 2:55:40 PM	B69930
Magnesium	94	1.0		mg/L	1	6/24/2020 6:38:39 PM	A69879
Potassium	8.8	1.0		mg/L	1	6/24/2020 6:38:39 PM	A69879
Sodium	1500	20		mg/L	20	6/26/2020 2:55:40 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Toluene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Naphthalene	ND	2.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Acetone	ND	10		µg/L	1	6/27/2020 11:45:56 PM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 10

Project: Salty Dog SWD

Collection Date: 6/22/2020 1:28:00 PM

Lab ID: 2006B99-006

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromoform	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Bromomethane	ND	3.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
2-Butanone	ND	10		µg/L	1	6/27/2020 11:45:56 PM	B69957
Carbon disulfide	ND	10		µg/L	1	6/27/2020 11:45:56 PM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Chloroethane	ND	2.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Chloroform	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Chloromethane	ND	3.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
2-Hexanone	ND	10		µg/L	1	6/27/2020 11:45:56 PM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2020 11:45:56 PM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Styrene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2020 11:45:56 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 10

Project: Salty Dog SWD

Collection Date: 6/22/2020 1:28:00 PM

Lab ID: 2006B99-006

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/27/2020 11:45:56 PM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/27/2020 11:45:56 PM	B69957
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/27/2020 11:45:56 PM	B69957
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	6/27/2020 11:45:56 PM	B69957
Surr: Dibromofluoromethane	107	70-130		%Rec	1	6/27/2020 11:45:56 PM	B69957
Surr: Toluene-d8	105	70-130		%Rec	1	6/27/2020 11:45:56 PM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 06

Project: Salty Dog SWD

Collection Date: 6/22/2020 2:50:00 PM

Lab ID: 2006B99-007

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 1:00:19 PM	R69869
Chloride	7200	250		mg/L	500	6/27/2020 1:53:56 AM	A69965
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	6/24/2020 1:12:43 PM	R69869
Bromide	9.8	1.0		mg/L	10	6/24/2020 1:00:19 PM	R69869
Nitrogen, Nitrate (As N)	13	1.0	*	mg/L	10	6/24/2020 1:00:19 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 1:00:19 PM	R69869
Sulfate	3800	50		mg/L	100	6/24/2020 1:12:43 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	31000	50		µmhos/c	5	6/29/2020 10:25:40 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	226.3	20.00		mg/L Ca	1	6/25/2020 5:13:49 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 5:13:49 PM	R69922
Total Alkalinity (as CaCO ₃)	226.3	20.00		mg/L Ca	1	6/25/2020 5:13:49 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	18200	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.69		H	pH units	1	6/25/2020 5:13:49 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	870	10		mg/L	10	6/26/2020 2:57:49 PM	B69930
Magnesium	350	5.0		mg/L	5	6/24/2020 6:54:15 PM	A69879
Potassium	17	1.0		mg/L	1	6/24/2020 6:52:10 PM	A69879
Sodium	4800	100		mg/L	100	6/26/2020 2:59:46 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 2:09:09 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 06

Project: Salty Dog SWD

Collection Date: 6/22/2020 2:50:00 PM

Lab ID: 2006B99-007

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 2:09:09 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 2:09:09 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 2:09:09 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 2:09:09 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 06

Project: Salty Dog SWD

Collection Date: 6/22/2020 2:50:00 PM

Lab ID: 2006B99-007

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 2:09:09 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 2:09:09 AM	B69957
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	6/28/2020 2:09:09 AM	B69957
Surr: 4-Bromofluorobenzene	92.6	70-130		%Rec	1	6/28/2020 2:09:09 AM	B69957
Surr: Dibromofluoromethane	110	70-130		%Rec	1	6/28/2020 2:09:09 AM	B69957
Surr: Toluene-d8	106	70-130		%Rec	1	6/28/2020 2:09:09 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 14

Project: Salty Dog SWD

Collection Date: 6/23/2020 9:26:00 AM

Lab ID: 2006B99-008

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 1:25:07 PM	R69869
Chloride	3400	100		mg/L	200	6/27/2020 2:32:32 AM	A69965
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	6/24/2020 1:25:07 PM	R69869
Bromide	4.5	1.0		mg/L	10	6/24/2020 1:25:07 PM	R69869
Nitrogen, Nitrate (As N)	5.1	1.0		mg/L	10	6/24/2020 1:25:07 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 1:25:07 PM	R69869
Sulfate	2000	50		mg/L	100	6/24/2020 1:37:32 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	15000	50		µmhos/c	5	6/29/2020 10:28:39 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	223.0	20.00		mg/L Ca	1	6/25/2020 5:26:20 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 5:26:20 PM	R69922
Total Alkalinity (as CaCO ₃)	223.0	20.00		mg/L Ca	1	6/25/2020 5:26:20 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	8450	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.56		H	pH units	1	6/25/2020 5:26:20 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	940	20		mg/L	20	6/26/2020 3:07:50 PM	B69930
Magnesium	150	5.0		mg/L	5	6/24/2020 6:58:33 PM	A69879
Potassium	10	1.0		mg/L	1	6/24/2020 6:56:21 PM	A69879
Sodium	1800	20		mg/L	20	6/26/2020 3:07:50 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 3:34:49 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 14

Project: Salty Dog SWD

Collection Date: 6/23/2020 9:26:00 AM

Lab ID: 2006B99-008

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 3:34:49 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 3:34:49 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 3:34:49 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 3:34:49 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 14

Project: Salty Dog SWD

Collection Date: 6/23/2020 9:26:00 AM

Lab ID: 2006B99-008

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 3:34:49 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 3:34:49 AM	B69957
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	6/28/2020 3:34:49 AM	B69957
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	6/28/2020 3:34:49 AM	B69957
Surr: Dibromofluoromethane	108	70-130		%Rec	1	6/28/2020 3:34:49 AM	B69957
Surr: Toluene-d8	103	70-130		%Rec	1	6/28/2020 3:34:49 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 20

Project: Salty Dog SWD

Collection Date: 6/23/2020 10:20:00 AM

Lab ID: 2006B99-009

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 1:49:57 PM	R69869
Chloride	3400	250		mg/L	500	6/27/2020 2:45:24 AM	A69965
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	6/24/2020 2:02:21 PM	R69869
Bromide	4.9	1.0		mg/L	10	6/24/2020 1:49:57 PM	R69869
Nitrogen, Nitrate (As N)	2.0	1.0		mg/L	10	6/24/2020 1:49:57 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 1:49:57 PM	R69869
Sulfate	2300	50		mg/L	100	6/24/2020 2:02:21 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	16000	50		µmhos/c	5	6/29/2020 10:31:37 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	248.1	20.00		mg/L Ca	1	6/25/2020 5:38:27 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 5:38:27 PM	R69922
Total Alkalinity (as CaCO ₃)	248.1	20.00		mg/L Ca	1	6/25/2020 5:38:27 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	10200	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.69		H	pH units	1	6/25/2020 5:38:27 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	550	50		mg/L	50	6/26/2020 3:09:48 PM	B69930
Magnesium	120	5.0		mg/L	5	6/24/2020 7:02:51 PM	A69879
Potassium	12	1.0		mg/L	1	6/24/2020 7:00:36 PM	A69879
Sodium	2600	50		mg/L	50	6/26/2020 3:09:48 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 4:03:25 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 20

Project: Salty Dog SWD

Collection Date: 6/23/2020 10:20:00 AM

Lab ID: 2006B99-009

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 4:03:25 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 4:03:25 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 4:03:25 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 4:03:25 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 20

Project: Salty Dog SWD

Collection Date: 6/23/2020 10:20:00 AM

Lab ID: 2006B99-009

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 4:03:25 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 4:03:25 AM	B69957
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	6/28/2020 4:03:25 AM	B69957
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	6/28/2020 4:03:25 AM	B69957
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/28/2020 4:03:25 AM	B69957
Surr: Toluene-d8	103	70-130		%Rec	1	6/28/2020 4:03:25 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 09

Project: Salty Dog SWD

Collection Date: 6/23/2020 11:03:00 AM

Lab ID: 2006B99-010

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 2:39:34 PM	R69869
Chloride	3200	100		mg/L	200	6/27/2020 2:58:17 AM	A69965
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	6/24/2020 2:39:34 PM	R69869
Bromide	4.3	1.0		mg/L	10	6/24/2020 2:39:34 PM	R69869
Nitrogen, Nitrate (As N)	3.0	1.0		mg/L	10	6/24/2020 2:39:34 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 2:39:34 PM	R69869
Sulfate	2300	50		mg/L	100	6/24/2020 2:51:59 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	15000	50		µmhos/c	5	6/29/2020 10:34:34 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	236.1	20.00		mg/L Ca	1	6/25/2020 5:51:15 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 5:51:15 PM	R69922
Total Alkalinity (as CaCO ₃)	236.1	20.00		mg/L Ca	1	6/25/2020 5:51:15 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	10400	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.58		H	pH units	1	6/25/2020 5:51:15 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	870	20		mg/L	20	6/26/2020 3:11:49 PM	B69930
Magnesium	170	5.0		mg/L	5	6/24/2020 7:07:07 PM	A69879
Potassium	11	1.0		mg/L	1	6/24/2020 7:04:54 PM	A69879
Sodium	1900	20		mg/L	20	6/26/2020 3:11:49 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 4:31:54 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 09

Project: Salty Dog SWD

Collection Date: 6/23/2020 11:03:00 AM

Lab ID: 2006B99-010

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 4:31:54 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 4:31:54 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 4:31:54 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 4:31:54 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 09

Project: Salty Dog SWD

Collection Date: 6/23/2020 11:03:00 AM

Lab ID: 2006B99-010

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 4:31:54 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 4:31:54 AM	B69957
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	6/28/2020 4:31:54 AM	B69957
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	6/28/2020 4:31:54 AM	B69957
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/28/2020 4:31:54 AM	B69957
Surr: Toluene-d8	102	70-130		%Rec	1	6/28/2020 4:31:54 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 08

Project: Salty Dog SWD

Collection Date: 6/23/2020 11:34:00 AM

Lab ID: 2006B99-011

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	2.6	1.0		mg/L	10	6/24/2020 3:04:24 PM	R69869
Chloride	550	50		mg/L	100	6/24/2020 3:16:49 PM	R69869
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	6/24/2020 3:04:24 PM	R69869
Bromide	1.4	1.0		mg/L	10	6/24/2020 3:04:24 PM	R69869
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	6/24/2020 3:04:24 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 3:04:24 PM	R69869
Sulfate	4700	50		mg/L	100	6/24/2020 3:16:49 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	9100	10		µmhos/c	1	6/25/2020 6:15:38 PM	R69922
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	232.2	20.00		mg/L Ca	1	6/25/2020 6:15:38 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 6:15:38 PM	R69922
Total Alkalinity (as CaCO ₃)	232.2	20.00		mg/L Ca	1	6/25/2020 6:15:38 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	8050	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.60		H	pH units	1	6/25/2020 6:15:38 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ags
Calcium	450	5.0		mg/L	5	6/24/2020 7:11:01 PM	A69879
Magnesium	190	5.0		mg/L	5	6/24/2020 7:11:01 PM	A69879
Potassium	6.2	1.0		mg/L	1	6/24/2020 7:09:10 PM	A69879
Sodium	1800	20		mg/L	20	6/26/2020 3:13:45 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 5:00:31 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 08

Project: Salty Dog SWD

Collection Date: 6/23/2020 11:34:00 AM

Lab ID: 2006B99-011

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 5:00:31 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 5:00:31 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 5:00:31 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 5:00:31 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 08

Project: Salty Dog SWD

Collection Date: 6/23/2020 11:34:00 AM

Lab ID: 2006B99-011

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 5:00:31 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 5:00:31 AM	B69957
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	6/28/2020 5:00:31 AM	B69957
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	6/28/2020 5:00:31 AM	B69957
Surr: Dibromofluoromethane	112	70-130		%Rec	1	6/28/2020 5:00:31 AM	B69957
Surr: Toluene-d8	105	70-130		%Rec	1	6/28/2020 5:00:31 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 15

Project: Salty Dog SWD

Collection Date: 6/23/2020 12:25:00 PM

Lab ID: 2006B99-012

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 3:29:14 PM	R69869
Chloride	560	50		mg/L	100	6/24/2020 3:41:38 PM	R69869
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	6/24/2020 3:29:14 PM	R69869
Bromide	1.3	1.0		mg/L	10	6/24/2020 3:29:14 PM	R69869
Nitrogen, Nitrate (As N)	1.7	1.0		mg/L	10	6/24/2020 3:29:14 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 3:29:14 PM	R69869
Sulfate	2000	50		mg/L	100	6/24/2020 3:41:38 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	5400	10		µmhos/c	1	6/25/2020 6:28:09 PM	R69922
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	232.8	20.00		mg/L Ca	1	6/25/2020 6:28:09 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 6:28:09 PM	R69922
Total Alkalinity (as CaCO ₃)	232.8	20.00		mg/L Ca	1	6/25/2020 6:28:09 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4500	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.70		H	pH units	1	6/25/2020 6:28:09 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	520	10		mg/L	10	6/26/2020 3:15:35 PM	B69930
Magnesium	89	1.0		mg/L	1	6/24/2020 7:20:34 PM	A69879
Potassium	6.7	1.0		mg/L	1	6/24/2020 7:20:34 PM	A69879
Sodium	670	10		mg/L	10	6/26/2020 3:15:35 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 5:29:12 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 15

Project: Salty Dog SWD

Collection Date: 6/23/2020 12:25:00 PM

Lab ID: 2006B99-012

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 5:29:12 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 5:29:12 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 5:29:12 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 5:29:12 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 15

Project: Salty Dog SWD

Collection Date: 6/23/2020 12:25:00 PM

Lab ID: 2006B99-012

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 5:29:12 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 5:29:12 AM	B69957
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	6/28/2020 5:29:12 AM	B69957
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	6/28/2020 5:29:12 AM	B69957
Surr: Dibromofluoromethane	110	70-130		%Rec	1	6/28/2020 5:29:12 AM	B69957
Surr: Toluene-d8	102	70-130		%Rec	1	6/28/2020 5:29:12 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 12

Project: Salty Dog SWD

Collection Date: 6/23/2020 1:28:00 PM

Lab ID: 2006B99-013

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/24/2020 3:54:02 PM	R69869
Chloride	25000	1000		mg/L	2E+	6/27/2020 3:11:08 AM	A69965
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	6/24/2020 4:06:26 PM	R69869
Bromide	32	1.0		mg/L	10	6/24/2020 3:54:02 PM	R69869
Nitrogen, Nitrate (As N)	2.5	1.0		mg/L	10	6/24/2020 3:54:02 PM	R69869
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/24/2020 3:54:02 PM	R69869
Sulfate	2400	50		mg/L	100	6/24/2020 4:06:26 PM	R69869
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JRR
Conductivity	91000	500		µmhos/c	50	6/29/2020 10:37:29 AM	R69980
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO ₃)	256.2	20.00		mg/L Ca	1	6/25/2020 6:40:10 PM	R69922
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/25/2020 6:40:10 PM	R69922
Total Alkalinity (as CaCO ₃)	256.2	20.00		mg/L Ca	1	6/25/2020 6:40:10 PM	R69922
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	52000	1000	*D	mg/L	1	7/1/2020 11:40:00 AM	53386
SM4500-H+B / 9040C: PH							Analyst: JRR
pH	7.45		H	pH units	1	6/25/2020 6:40:10 PM	R69922
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	2300	200		mg/L	200	6/26/2020 3:17:31 PM	B69930
Magnesium	370	5.0		mg/L	5	6/24/2020 7:26:47 PM	A69879
Potassium	73	5.0		mg/L	5	6/24/2020 7:26:47 PM	A69879
Sodium	15000	200		mg/L	200	6/26/2020 3:17:31 PM	B69930
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 5:57:42 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 12

Project: Salty Dog SWD

Collection Date: 6/23/2020 1:28:00 PM

Lab ID: 2006B99-013

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 5:57:42 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 5:57:42 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 5:57:42 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 5:57:42 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW 12

Project: Salty Dog SWD

Collection Date: 6/23/2020 1:28:00 PM

Lab ID: 2006B99-013

Matrix: GROUNDWA

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 5:57:42 AM	B69957
Xylenes, Total	1.9	1.5		µg/L	1	6/28/2020 5:57:42 AM	B69957
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	6/28/2020 5:57:42 AM	B69957
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	6/28/2020 5:57:42 AM	B69957
Surr: Dibromofluoromethane	111	70-130		%Rec	1	6/28/2020 5:57:42 AM	B69957
Surr: Toluene-d8	106	70-130		%Rec	1	6/28/2020 5:57:42 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Trip Blank

Project: Salty Dog SWD

Collection Date:

Lab ID: 2006B99-014

Matrix: TRIP BLANK

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 6:26:13 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 6:26:13 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 6:26:13 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 6:26:13 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Trip Blank

Project: Salty Dog SWD

Collection Date:

Lab ID: 2006B99-014

Matrix: TRIP BLANK

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 6:26:13 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 6:26:13 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 6:26:13 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 6:26:13 AM	B69957
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/28/2020 6:26:13 AM	B69957
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	6/28/2020 6:26:13 AM	B69957
Surr: Dibromofluoromethane	109	70-130		%Rec	1	6/28/2020 6:26:13 AM	B69957
Surr: Toluene-d8	99.6	70-130		%Rec	1	6/28/2020 6:26:13 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Trip Blank

Project: Salty Dog SWD

Collection Date:

Lab ID: 2006B99-015

Matrix: TRIP BLANK

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Toluene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Ethylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Naphthalene	ND	2.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
2-Methylnaphthalene	ND	4.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Acetone	ND	10		µg/L	1	6/28/2020 6:54:53 AM	B69957
Bromobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Bromodichloromethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Bromoform	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Bromomethane	ND	3.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
2-Butanone	ND	10		µg/L	1	6/28/2020 6:54:53 AM	B69957
Carbon disulfide	ND	10		µg/L	1	6/28/2020 6:54:53 AM	B69957
Carbon Tetrachloride	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Chlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Chloroethane	ND	2.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Chloroform	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Chloromethane	ND	3.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
2-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
4-Chlorotoluene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
cis-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Dibromochloromethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Dibromomethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,1-Dichloroethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,1-Dichloroethene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,3-Dichloropropane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
2,2-Dichloropropane	ND	2.0		µg/L	1	6/28/2020 6:54:53 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2006B99

Date Reported: 7/9/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Trip Blank

Project: Salty Dog SWD

Collection Date:

Lab ID: 2006B99-015

Matrix: TRIP BLANK

Received Date: 6/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Hexachlorobutadiene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
2-Hexanone	ND	10		µg/L	1	6/28/2020 6:54:53 AM	B69957
Isopropylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
4-Isopropyltoluene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
4-Methyl-2-pentanone	ND	10		µg/L	1	6/28/2020 6:54:53 AM	B69957
Methylene Chloride	ND	3.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
n-Butylbenzene	ND	3.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
n-Propylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
sec-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Styrene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
tert-Butylbenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
trans-1,2-DCE	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Trichlorofluoromethane	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Vinyl chloride	ND	1.0		µg/L	1	6/28/2020 6:54:53 AM	B69957
Xylenes, Total	ND	1.5		µg/L	1	6/28/2020 6:54:53 AM	B69957
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	6/28/2020 6:54:53 AM	B69957
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	6/28/2020 6:54:53 AM	B69957
Surr: Dibromofluoromethane	105	70-130		%Rec	1	6/28/2020 6:54:53 AM	B69957
Surr: Toluene-d8	106	70-130		%Rec	1	6/28/2020 6:54:53 AM	B69957

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: A69879	RunNo: 69879								
Prep Date:	Analysis Date: 6/24/2020	SeqNo: 2426691 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: LCSW	Batch ID: A69879	RunNo: 69879								
Prep Date:	Analysis Date: 6/24/2020	SeqNo: 2426693 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.6	85	115			
Magnesium	49	1.0	50.00	0	98.1	85	115			
Potassium	49	1.0	50.00	0	97.1	85	115			

Sample ID: LLCSRR	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: A69879	RunNo: 69879								
Prep Date:	Analysis Date: 6/24/2020	SeqNo: 2426696 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	104	50	150			
Magnesium	ND	1.0	0.5000	0	101	50	150			
Potassium	ND	1.0	0.5000	0	103	50	150			

Sample ID: MB-B	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: B69930	RunNo: 69930								
Prep Date:	Analysis Date: 6/26/2020	SeqNo: 2428809 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLCS-B	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: B69930	RunNo: 69930								
Prep Date:	Analysis Date: 6/26/2020	SeqNo: 2428811 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	109	50	150			
Sodium	ND	1.0	0.5000	0	105	50	150			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2006B99
09-Jul-20

Client: HILCORP ENERGY

Project: Salty Dog SWD

Sample ID: LCS-B	SampType: LCS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: LCSW	Batch ID: B69930	RunNo: 69930								
Prep Date:	Analysis Date: 6/26/2020	SeqNo: 2428813	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	96.8	85	115			
Sodium	48	1.0	50.00	0	95.1	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R69869	RunNo: 69869								
Prep Date:	Analysis Date: 6/24/2020	SeqNo: 2427024 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R69869	RunNo: 69869								
Prep Date:	Analysis Date: 6/24/2020	SeqNo: 2427025 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.9	90	110			
Chloride	4.6	0.50	5.000	0	92.7	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.5	90	110			
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.3	90	110			
Phosphorus, Orthophosphate (As P)	4.5	0.50	5.000	0	90.8	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A69965	RunNo: 69965								
Prep Date:	Analysis Date: 6/26/2020	SeqNo: 2430139 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: A69965	RunNo: 69965								
Prep Date:	Analysis Date: 6/26/2020	SeqNo: 2430140 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.6	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.2	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY

Project: Salty Dog SWD

Sample ID: mb2		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW		Batch ID: B69957		RunNo: 69957						
Prep Date:		Analysis Date: 6/28/2020		SeqNo: 2429870		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY

Project: Salty Dog SWD

Sample ID: mb2	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: B69957				RunNo: 69957					
Prep Date:	Analysis Date: 6/28/2020				SeqNo: 2429870	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.0	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: 100ng lcs2	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW	Batch ID: B69957				RunNo: 69957					
Prep Date:	Analysis Date: 6/28/2020				SeqNo: 2429871	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B69957		RunNo: 69957							
Prep Date:	Analysis Date: 6/28/2020		SeqNo: 2429871		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.6	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.5	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: 2006b99-007a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: MW 06	Batch ID: B69957		RunNo: 69957							
Prep Date:	Analysis Date: 6/28/2020		SeqNo: 2429879		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	22	1.0	20.00	0	108	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		115	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: 2006b99-007a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: MW 06	Batch ID: B69957		RunNo: 69957							
Prep Date:	Analysis Date: 6/28/2020		SeqNo: 2429880		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130	9.24	20	
Toluene	19	1.0	20.00	0	96.2	70	130	6.54	20	
Chlorobenzene	20	1.0	20.00	0	101	70	130	6.62	20	
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130	9.10	20	
Trichloroethene (TCE)	18	1.0	20.00	0	87.6	70	130	14.2	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.4		10.00		94.3	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		101	70	130	0	0	
Surr: Toluene-d8	11		10.00		106	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: Ics-1 99.5uS eC	SampType: Ics			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R69922			RunNo: 69922						
Prep Date:	Analysis Date: 6/25/2020			SeqNo: 2428389		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	99	10	99.50	0	99.2	85	115			

Sample ID: Ics-2 99.5uS eC	SampType: Ics			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R69922			RunNo: 69922						
Prep Date:	Analysis Date: 6/25/2020			SeqNo: 2428416		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.50	0	101	85	115			

Sample ID: Ics-1 99.5uS eC	SampType: Ics			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R69980			RunNo: 69980						
Prep Date:	Analysis Date: 6/29/2020			SeqNo: 2431767		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	99	10	99.50	0	99.3	85	115			

Sample ID: 2006b99-004b dup	SampType: dup			TestCode: SM2510B: Specific Conductance						
Client ID: MW 13	Batch ID: R69980			RunNo: 69980						
Prep Date:	Analysis Date: 6/29/2020			SeqNo: 2431771		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	51000	100						8.48	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2006B99
09-Jul-20

Client: HILCORP ENERGY
Project: Salty Dog SWD

Sample ID: 2006b99-004b dup		SampType: dup		TestCode: SM4500-H+B / 9040C: pH						
Client ID: MW 13		Batch ID: R69922		RunNo: 69922						
Prep Date:		Analysis Date: 6/25/2020		SeqNo: 2428482		Units: pH units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.38									H

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2006B99

09-Jul-20

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R69922	RunNo: 69922								
Prep Date:	Analysis Date: 6/25/2020	SeqNo: 2428349	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R69922	RunNo: 69922								
Prep Date:	Analysis Date: 6/25/2020	SeqNo: 2428350	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	76.04	20.00	80.00	0	95.1	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R69922	RunNo: 69922								
Prep Date:	Analysis Date: 6/25/2020	SeqNo: 2428371	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R69922	RunNo: 69922								
Prep Date:	Analysis Date: 6/25/2020	SeqNo: 2428372	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.20	20.00	80.00	0	96.5	90	110			

Sample ID: 2006b99-004b dup	SampType: dup	TestCode: SM2320B: Alkalinity								
Client ID: MW 13	Batch ID: R69922	RunNo: 69922								
Prep Date:	Analysis Date: 6/25/2020	SeqNo: 2428377	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	183.0	20.00						0.306	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2006B99
09-Jul-20

Client: HILCORP ENERGY
Project: Salty Dog SWD

Sample ID: MB-53386	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 53386	RunNo: 70041								
Prep Date: 6/29/2020	Analysis Date: 7/1/2020	SeqNo: 2433469	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-53386	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 53386	RunNo: 70041								
Prep Date: 6/29/2020	Analysis Date: 7/1/2020	SeqNo: 2433470	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

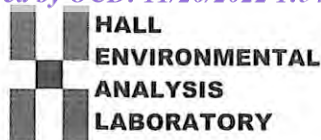
S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Hilcorp Energy

Work Order Number: 2006B99

RcptNo: 1

Received By: Emily Mocho

6/24/2020 8:00:00 AM

Completed By: Emily Mocho

6/24/2020 8:23:23 AM

Reviewed By: IO

6/24/20

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 26
(<2 or >12 unless noted)

Adjusted? noChecked by: SPAG. 27.20Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

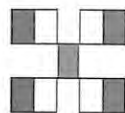
16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Not Present			
2	1.4	Good	Not Present			

Chain-of-Custody Record													
Client: <u>HLICRP</u>		☒ Standard ☐ Rush		Turn-Around Time: _____									
Jennifer Deal		Project Name:		_____									
Mailing Address: <u>382 Rd 3100</u>		Salty Dog SWD		_____									
Phone #: <u>AZtec NM 3100</u>		Project #:		_____									
email or Fax#: <u>505.324.5128</u>		Project Manager:		_____									
QA/QC Package: <u>Standard</u>		On Ice: ☒ Yes ☐ No		_____									
Accreditation: ☐ Az Compliance ☐ NELAC		Sampler: <u>Caitlin McGinn</u>		_____									
☒ EDD (Type) <u>PDF</u>		# of Coolers: <u>2</u>		_____									
		Cooler Temp (including CFI): <u>4-1-0.2 = 3.9</u>		_____									
Date		Time		Matrix		Sample Name		Container Type and #		Preservative Type		HEAL No.	
10/23/20		1328		GLW		mw12		Various		Various		2006B99	
6:24:20						Trip Blank 1						- 013	
						Trip Blank 2						- 014	
						543						- 015	
						6:24:20						543	
												6:24:20	
Date:		Time:		Relinquished by:		Received by:		Via:		Date		Time	
10/23/20		1451		Caitlin McGinn		Christa Warrick		6/23/20		1451			
Date:		Time:		Relinquished by:		Received by:		Via:		Date		Time	
10/23/20		1920		Caitlin McGinn		Carmen Morris		6/24/20		0000			

necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Remarks: cc jadams@itenv.com
cmg@itenv.com

Released to Imaging: 1/3/2024 3:09:18 PM

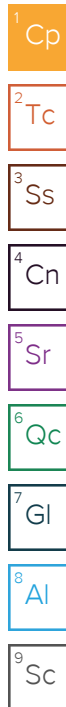


ANALYTICAL REPORT

September 25, 2020

HilCorp-Farmington, NM

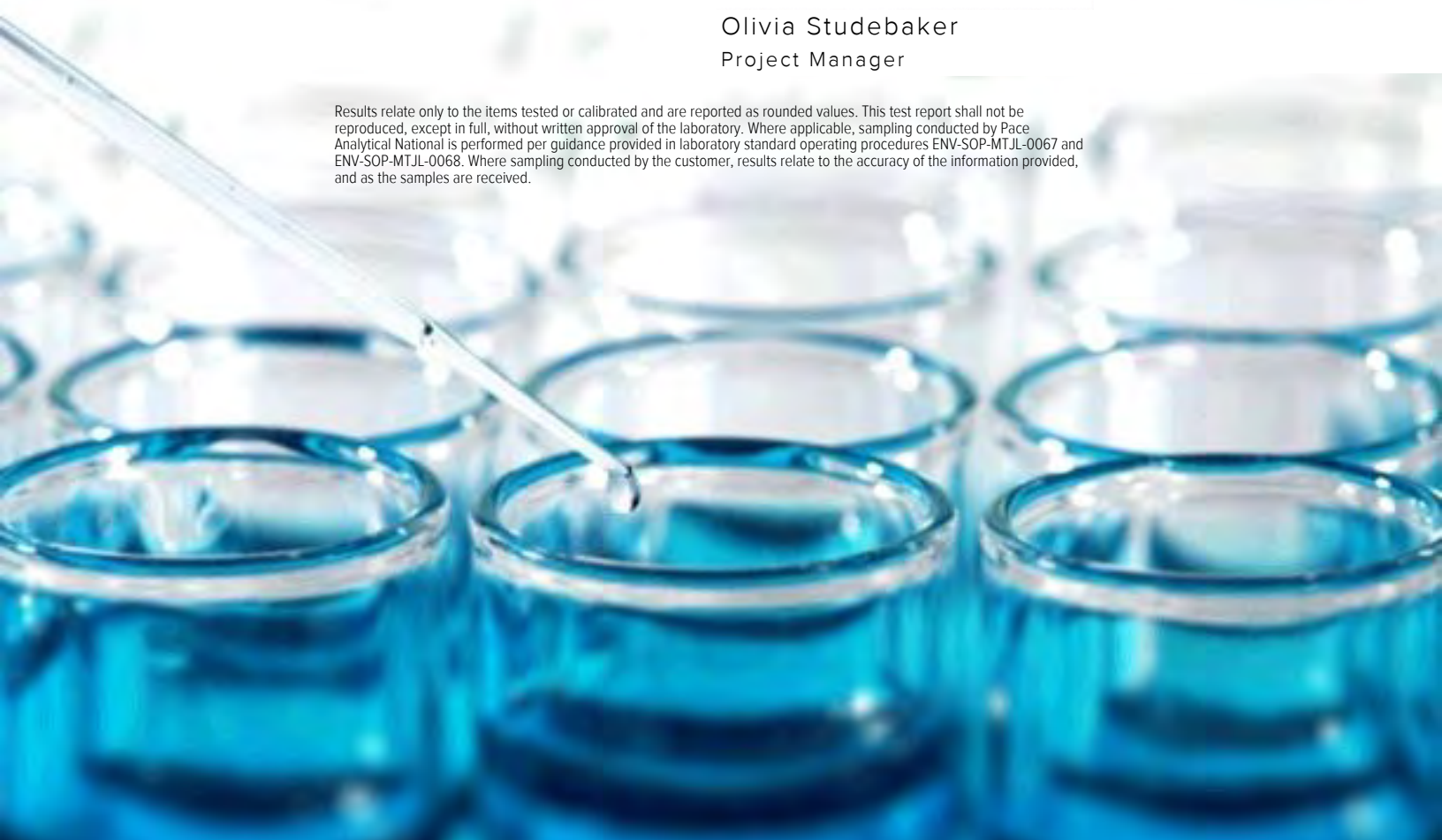
Sample Delivery Group: L1262613
Samples Received: 09/16/2020
Project Number:
Description: Salty Dog Pipeline
Site: SALTY DOG PIPELINE
Report To: Kurt Hoekstra
382 Road 3100
Aztec, NM 87401



Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

MW-14 L1262613-01 GW

				Collected by Kurt	Collected date/time 09/09/20 10:47	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545028	1	09/17/20 19:55	09/17/20 22:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547446	2	09/23/20 15:08	09/23/20 15:08	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 15:29	09/21/20 15:29	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 15:47	09/21/20 15:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 02:31	09/21/20 02:31	JHH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-10 L1262613-02 GW

				Collected by Kurt	Collected date/time 09/09/20 14:05	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545028	1	09/17/20 19:55	09/17/20 22:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 16:57	09/23/20 16:57	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 16:56	09/21/20 16:56	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 17:14	09/21/20 17:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 02:50	09/21/20 02:50	JHH	Mt. Juliet, TN

MW-6 L1262613-03 GW

				Collected by Kurt	Collected date/time 09/09/20 14:38	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545028	1	09/17/20 19:55	09/17/20 22:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	5	09/23/20 17:23	09/23/20 17:23	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 17:31	09/21/20 17:31	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 17:49	09/21/20 17:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 03:10	09/21/20 03:10	JHH	Mt. Juliet, TN

MW-13 L1262613-04 GW

				Collected by Kurt	Collected date/time 09/10/20 12:14	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545028	1	09/17/20 19:55	09/17/20 22:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:24	09/23/20 17:24	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 18:06	09/21/20 18:06	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 18:23	09/21/20 18:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 03:30	09/21/20 03:30	JHH	Mt. Juliet, TN

MW-5 L1262613-05 GW

				Collected by Kurt	Collected date/time 09/10/20 12:57	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545028	1	09/17/20 19:55	09/17/20 22:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:02	09/23/20 17:02	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	1	09/21/20 18:41	09/21/20 18:41	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 18:58	09/21/20 18:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 03:50	09/21/20 03:50	JHH	Mt. Juliet, TN

MW-12 L1262613-06 GW

				Collected by Kurt	Collected date/time 09/11/20 10:58	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545122	1	09/18/20 01:37	09/18/20 06:03	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:04	09/23/20 17:04	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 20:08	09/21/20 20:08	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	500	09/21/20 19:16	09/21/20 19:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 04:10	09/21/20 04:10	JHH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-17 L1262613-07 GW

				Collected by Kurt	Collected date/time 09/11/20 12:39	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545116	1	09/18/20 01:10	09/18/20 04:14	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:05	09/23/20 17:05	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	1	09/21/20 20:25	09/21/20 20:25	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 20:43	09/21/20 20:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 04:30	09/21/20 04:30	JHH	Mt. Juliet, TN

MW-18 L1262613-08 GW

				Collected by Kurt	Collected date/time 09/11/20 13:47	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545116	1	09/18/20 01:10	09/18/20 04:14	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:25	09/23/20 17:25	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 21:00	09/21/20 21:00	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 21:18	09/21/20 21:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 04:50	09/21/20 04:50	JHH	Mt. Juliet, TN

MW-3 L1262613-09 GW

				Collected by Kurt	Collected date/time 09/11/20 14:17	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1545116	1	09/18/20 01:10	09/18/20 04:14	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:27	09/23/20 17:27	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 21:35	09/21/20 21:35	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	500	09/21/20 21:53	09/21/20 21:53	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 05:10	09/21/20 05:10	JHH	Mt. Juliet, TN

MW-15 L1262613-10 GW

				Collected by Kurt	Collected date/time 09/14/20 12:22	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1546195	1	09/20/20 13:10	09/20/20 18:58	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:28	09/23/20 17:28	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	1	09/21/20 22:10	09/21/20 22:10	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 22:27	09/21/20 22:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 05:29	09/21/20 05:29	JHH	Mt. Juliet, TN

MW-9 L1262613-11 GW

				Collected by Kurt	Collected date/time 09/15/20 09:18	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1546336	1	09/21/20 01:13	09/21/20 05:06	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:29	09/23/20 17:29	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 23:37	09/21/20 23:37	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/21/20 22:45	09/21/20 22:45	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 05:49	09/21/20 05:49	JHH	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

MW-20 L1262613-12 GW

				Collected by Kurt	Collected date/time 09/15/20 10:48	Received date/time 09/16/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1546363	1	09/21/20 01:12	09/21/20 04:30	VRP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1547563	1	09/23/20 17:30	09/23/20 17:30	SDL	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1544671	1	09/17/20 17:25	09/17/20 17:25	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	10	09/21/20 23:54	09/21/20 23:54	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1545220	100	09/22/20 00:12	09/22/20 00:12	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1546373	1	09/21/20 06:09	09/21/20 06:09	JHH	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

9Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 09/09/20 10:47

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	9050	T8	50.0	1	09/17/2020 22:09	WG1545028

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	6.66		0.200	2	09/23/2020 15:08	WG1547446

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.21	T8	1	09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-01 WG1544671: 7.21 at 21.1C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 15:47	WG1545220
Chloride	3640		100	100	09/21/2020 15:47	WG1545220
Fluoride	ND		1.50	10	09/21/2020 15:29	WG1545220
Sulfate	2430		500	100	09/21/2020 15:47	WG1545220

Sample Narrative:

L1262613-01 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-01 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 02:31	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 02:31	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 02:31	WG1546373
Benzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 02:31	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 02:31	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 02:31	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 02:31	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 02:31	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 02:31	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 02:31	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 02:31	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373

Collected date/time: 09/09/20 10:47

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 02:31	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 02:31	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 02:31	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 02:31	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 02:31	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 02:31	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 02:31	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 02:31	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 02:31	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 02:31	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 02:31	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 02:31	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 02:31	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 02:31	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Styrene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Toluene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 02:31	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 02:31	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 02:31	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 02:31	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 02:31	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 02:31	WG1546373
(S) Toluene-d8	97.0		80.0-120		09/21/2020 02:31	WG1546373
(S) 4-Bromofluorobenzene	97.2		77.0-126		09/21/2020 02:31	WG1546373
(S) 1,2-Dichloroethane-d4	98.1		70.0-130		09/21/2020 02:31	WG1546373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 09/09/20 14:05

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	5370	T8	20.0	1	09/17/2020 22:09	WG1545028

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.78		0.100	1	09/23/2020 16:57	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.45	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-02 WG1544671: 7.45 at 21.2C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 17:14	WG1545220
Chloride	1540		100	100	09/21/2020 17:14	WG1545220
Fluoride	ND		1.50	10	09/21/2020 16:56	WG1545220
Sulfate	2640		500	100	09/21/2020 17:14	WG1545220

Sample Narrative:

L1262613-02 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-02 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

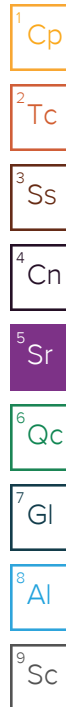
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 02:50	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 02:50	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 02:50	WG1546373
Benzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 02:50	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 02:50	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 02:50	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 02:50	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 02:50	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 02:50	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 02:50	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 02:50	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373

Collected date/time: 09/09/20 14:05

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 02:50	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 02:50	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 02:50	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 02:50	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 02:50	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 02:50	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 02:50	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 02:50	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 02:50	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 02:50	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 02:50	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 02:50	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 02:50	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 02:50	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Styrene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Toluene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 02:50	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 02:50	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 02:50	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 02:50	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 02:50	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 02:50	WG1546373
(S) Toluene-d8	98.2		80.0-120		09/21/2020 02:50	WG1546373
(S) 4-Bromofluorobenzene	99.7		77.0-126		09/21/2020 02:50	WG1546373
(S) 1,2-Dichloroethane-d4	100		70.0-130		09/21/2020 02:50	WG1546373



Collected date/time: 09/09/20 14:38

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	18400	T8	100	1	09/17/2020 22:09	WG1545028

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	13.4		0.500	5	09/23/2020 17:23	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.35	T8	1	09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-03 WG1544671: 7.35 at 22C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 17:49	WG1545220
Chloride	8610		100	100	09/21/2020 17:49	WG1545220
Fluoride	ND		1.50	10	09/21/2020 17:31	WG1545220
Sulfate	4330		500	100	09/21/2020 17:49	WG1545220

Sample Narrative:

L1262613-03 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-03 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

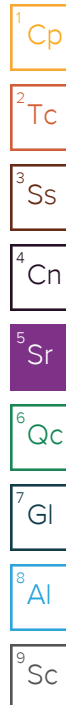
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 03:10	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 03:10	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 03:10	WG1546373
Benzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 03:10	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 03:10	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 03:10	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 03:10	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 03:10	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 03:10	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 03:10	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 03:10	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373

Collected date/time: 09/09/20 14:38

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 03:10	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 03:10	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 03:10	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 03:10	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 03:10	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 03:10	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 03:10	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 03:10	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 03:10	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 03:10	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 03:10	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 03:10	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 03:10	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 03:10	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Styrene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Toluene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 03:10	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 03:10	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 03:10	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:10	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 03:10	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 03:10	WG1546373
(S) Toluene-d8	97.1		80.0-120		09/21/2020 03:10	WG1546373
(S) 4-Bromofluorobenzene	99.6		77.0-126		09/21/2020 03:10	WG1546373
(S) 1,2-Dichloroethane-d4	101		70.0-130		09/21/2020 03:10	WG1546373



Collected date/time: 09/10/20 12:14

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	15900		100	1	09/17/2020 22:09	WG1545028

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4.76		0.100	1	09/23/2020 17:24	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.25	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-04 WG1544671: 7.25 at 21.8C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 18:23	WG1545220
Chloride	7380		100	100	09/21/2020 18:23	WG1545220
Fluoride	ND		1.50	10	09/21/2020 18:06	WG1545220
Sulfate	3160		500	100	09/21/2020 18:23	WG1545220

Sample Narrative:

L1262613-04 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-04 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

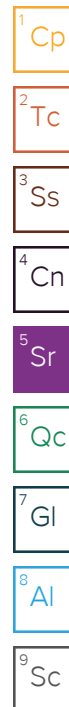
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 03:30	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 03:30	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 03:30	WG1546373
Benzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 03:30	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 03:30	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 03:30	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 03:30	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 03:30	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 03:30	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 03:30	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 03:30	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373

Collected date/time: 09/10/20 12:14

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 03:30	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 03:30	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 03:30	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 03:30	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 03:30	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 03:30	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 03:30	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 03:30	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 03:30	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 03:30	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 03:30	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 03:30	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 03:30	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 03:30	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Styrene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Toluene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 03:30	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 03:30	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 03:30	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:30	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 03:30	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 03:30	WG1546373
(S) Toluene-d8	94.2		80.0-120		09/21/2020 03:30	WG1546373
(S) 4-Bromofluorobenzene	96.5		77.0-126		09/21/2020 03:30	WG1546373
(S) 1,2-Dichloroethane-d4	104		70.0-130		09/21/2020 03:30	WG1546373



Collected date/time: 09/10/20 12:57

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	6720		50.0	1	09/17/2020 22:09	WG1545028

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.83		0.100	1	09/23/2020 17:02	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.46	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-05 WG1544671: 7.46 at 21.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 18:58	WG1545220
Chloride	1780		100	100	09/21/2020 18:58	WG1545220
Fluoride	0.761		0.150	1	09/21/2020 18:41	WG1545220
Sulfate	3000		500	100	09/21/2020 18:58	WG1545220

Sample Narrative:

L1262613-05 WG1545220: Reporting Bromide @ 100x due to high Sulfate

Volatile Organic Compounds (GC/MS) by Method 8260B

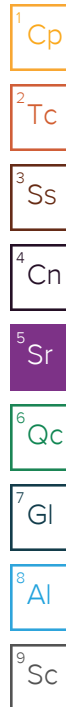
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 03:50	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 03:50	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 03:50	WG1546373
Benzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 03:50	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 03:50	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 03:50	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 03:50	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 03:50	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 03:50	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 03:50	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 03:50	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373

Collected date/time: 09/10/20 12:57

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 03:50	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 03:50	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 03:50	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 03:50	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 03:50	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 03:50	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 03:50	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 03:50	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 03:50	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 03:50	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 03:50	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 03:50	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 03:50	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 03:50	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Styrene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Toluene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 03:50	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 03:50	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 03:50	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 03:50	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 03:50	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 03:50	WG1546373
(S) Toluene-d8	99.2		80.0-120		09/21/2020 03:50	WG1546373
(S) 4-Bromofluorobenzene	99.9		77.0-126		09/21/2020 03:50	WG1546373
(S) 1,2-Dichloroethane-d4	102		70.0-130		09/21/2020 03:50	WG1546373



Collected date/time: 09/11/20 10:58

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	41600		1000	1	09/18/2020 06:03	WG1545122

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.24		0.100	1	09/23/2020 17:04	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.07	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-06 WG1544671: 7.07 at 21.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		500	500	09/21/2020 19:16	WG1545220
Chloride	21900		500	500	09/21/2020 19:16	WG1545220
Fluoride	ND		1.50	10	09/21/2020 20:08	WG1545220
Sulfate	3230		2500	500	09/21/2020 19:16	WG1545220

Sample Narrative:

L1262613-06 WG1545220: Reporting Bromide @ 500x due to high Sulfate

L1262613-06 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

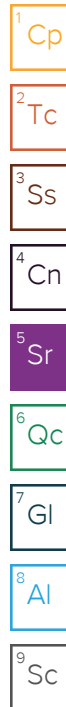
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 04:10	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 04:10	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 04:10	WG1546373
Benzene	0.00232		0.00100	1	09/21/2020 04:10	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 04:10	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 04:10	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 04:10	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 04:10	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 04:10	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 04:10	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 04:10	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 04:10	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373

Collected date/time: 09/11/20 10:58

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 04:10	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 04:10	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 04:10	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 04:10	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 04:10	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 04:10	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 04:10	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 04:10	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 04:10	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 04:10	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 04:10	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 04:10	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 04:10	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 04:10	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Styrene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Toluene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 04:10	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 04:10	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 04:10	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:10	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 04:10	WG1546373
Xylenes, Total	0.00414		0.00300	1	09/21/2020 04:10	WG1546373
(S) Toluene-d8	96.8		80.0-120		09/21/2020 04:10	WG1546373
(S) 4-Bromofluorobenzene	95.3		77.0-126		09/21/2020 04:10	WG1546373
(S) 1,2-Dichloroethane-d4	100		70.0-130		09/21/2020 04:10	WG1546373



Collected date/time: 09/11/20 12:39

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	7650		50.0	1	09/18/2020 04:14	WG1545116

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.93		0.100	1	09/23/2020 17:05	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.41	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-07 WG1544671: 7.41 at 21.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 20:43	WG1545220
Chloride	2650		100	100	09/21/2020 20:43	WG1545220
Fluoride	0.862		0.150	1	09/21/2020 20:25	WG1545220
Sulfate	3170		500	100	09/21/2020 20:43	WG1545220

Sample Narrative:

L1262613-07 WG1545220: Reporting Bromide @ 100x due to high Sulfate

Volatile Organic Compounds (GC/MS) by Method 8260B

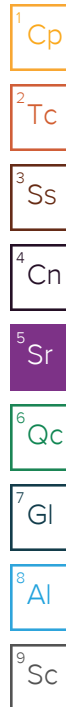
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 04:30	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 04:30	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 04:30	WG1546373
Benzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 04:30	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 04:30	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 04:30	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 04:30	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 04:30	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 04:30	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 04:30	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 04:30	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373

Collected date/time: 09/11/20 12:39

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 04:30	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 04:30	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 04:30	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 04:30	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 04:30	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 04:30	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 04:30	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 04:30	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 04:30	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 04:30	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 04:30	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 04:30	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 04:30	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 04:30	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Styrene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Toluene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 04:30	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 04:30	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 04:30	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:30	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 04:30	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 04:30	WG1546373
(S) Toluene-d8	97.3		80.0-120		09/21/2020 04:30	WG1546373
(S) 4-Bromofluorobenzene	99.9		77.0-126		09/21/2020 04:30	WG1546373
(S) 1,2-Dichloroethane-d4	101		70.0-130		09/21/2020 04:30	WG1546373



Collected date/time: 09/11/20 13:47

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	17600		100	1	09/18/2020 04:14	WG1545116

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.97		0.100	1	09/23/2020 17:25	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.04	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-08 WG1544671: 7.04 at 21.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 21:18	WG1545220
Chloride	8400		100	100	09/21/2020 21:18	WG1545220
Fluoride	ND		1.50	10	09/21/2020 21:00	WG1545220
Sulfate	2670		500	100	09/21/2020 21:18	WG1545220

Sample Narrative:

L1262613-08 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-08 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 04:50	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 04:50	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 04:50	WG1546373
Benzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 04:50	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 04:50	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 04:50	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 04:50	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 04:50	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 04:50	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 04:50	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 04:50	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373

Collected date/time: 09/11/20 13:47

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 04:50	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 04:50	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 04:50	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 04:50	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 04:50	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 04:50	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 04:50	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 04:50	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 04:50	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 04:50	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 04:50	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 04:50	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 04:50	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 04:50	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Styrene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Toluene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 04:50	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 04:50	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 04:50	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 04:50	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 04:50	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 04:50	WG1546373
(S) Toluene-d8	96.6		80.0-120		09/21/2020 04:50	WG1546373
(S) 4-Bromofluorobenzene	98.1		77.0-126		09/21/2020 04:50	WG1546373
(S) 1,2-Dichloroethane-d4	96.2		70.0-130		09/21/2020 04:50	WG1546373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 09/11/20 14:17

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	32600		100	1	09/18/2020 04:14	WG1545116

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.152	J5	0.100	1	09/23/2020 17:27	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.36	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-09 WG1544671: 7.36 at 21.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		500	500	09/21/2020 21:53	WG1545220
Chloride	14900		500	500	09/21/2020 21:53	WG1545220
Fluoride	ND		1.50	10	09/21/2020 21:35	WG1545220
Sulfate	2830		2500	500	09/21/2020 21:53	WG1545220

Sample Narrative:

L1262613-09 WG1545220: Reporting Bromide @ 500x due to high Sulfate

L1262613-09 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

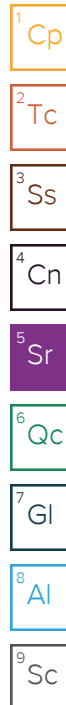
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 05:10	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 05:10	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 05:10	WG1546373
Benzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 05:10	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 05:10	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 05:10	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 05:10	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 05:10	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 05:10	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 05:10	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 05:10	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373

Collected date/time: 09/11/20 14:17

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 05:10	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 05:10	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 05:10	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 05:10	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 05:10	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 05:10	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 05:10	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 05:10	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 05:10	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 05:10	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 05:10	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 05:10	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 05:10	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 05:10	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Styrene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Toluene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 05:10	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 05:10	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 05:10	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:10	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 05:10	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 05:10	WG1546373
(S) Toluene-d8	98.0		80.0-120		09/21/2020 05:10	WG1546373
(S) 4-Bromofluorobenzene	100		77.0-126		09/21/2020 05:10	WG1546373
(S) 1,2-Dichloroethane-d4	100		70.0-130		09/21/2020 05:10	WG1546373



Collected date/time: 09/14/20 12:22

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	3790		50.0	1	09/20/2020 18:58	WG1546195

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.72		0.100	1	09/23/2020 17:28	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.14	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-10 WG1544671: 7.14 at 21.8C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 22:27	WG1545220
Chloride	650		100	100	09/21/2020 22:27	WG1545220
Fluoride	0.810		0.150	1	09/21/2020 22:10	WG1545220
Sulfate	2750		500	100	09/21/2020 22:27	WG1545220

Sample Narrative:

L1262613-10 WG1545220: Reporting Bromide @ 100x due to high Sulfate

Volatile Organic Compounds (GC/MS) by Method 8260B

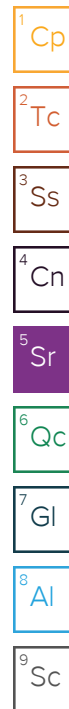
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 05:29	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 05:29	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 05:29	WG1546373
Benzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 05:29	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 05:29	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 05:29	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 05:29	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 05:29	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 05:29	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 05:29	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 05:29	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373

Collected date/time: 09/14/20 12:22

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 05:29	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 05:29	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 05:29	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 05:29	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 05:29	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 05:29	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 05:29	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 05:29	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 05:29	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 05:29	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 05:29	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 05:29	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 05:29	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 05:29	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Styrene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Toluene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 05:29	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 05:29	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 05:29	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:29	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 05:29	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 05:29	WG1546373
(S) Toluene-d8	94.1		80.0-120		09/21/2020 05:29	WG1546373
(S) 4-Bromofluorobenzene	97.6		77.0-126		09/21/2020 05:29	WG1546373
(S) 1,2-Dichloroethane-d4	102		70.0-130		09/21/2020 05:29	WG1546373



Collected date/time: 09/15/20 09:18

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	6400		50.0	1	09/21/2020 05:06	WG1546336

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.34		0.100	1	09/23/2020 17:29	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.18	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-11 WG1544671: 7.18 at 21.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/21/2020 22:45	WG1545220
Chloride	1720		100	100	09/21/2020 22:45	WG1545220
Fluoride	ND		1.50	10	09/21/2020 23:37	WG1545220
Sulfate	2870		500	100	09/21/2020 22:45	WG1545220

Sample Narrative:

L1262613-11 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-11 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 05:49	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 05:49	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 05:49	WG1546373
Benzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 05:49	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 05:49	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 05:49	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 05:49	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 05:49	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 05:49	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 05:49	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 05:49	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373

Collected date/time: 09/15/20 09:18

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 05:49	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 05:49	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 05:49	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 05:49	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 05:49	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 05:49	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 05:49	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 05:49	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 05:49	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 05:49	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 05:49	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 05:49	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 05:49	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 05:49	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Styrene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Toluene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 05:49	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 05:49	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 05:49	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 05:49	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 05:49	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 05:49	WG1546373
(S) Toluene-d8	97.1		80.0-120		09/21/2020 05:49	WG1546373
(S) 4-Bromofluorobenzene	97.7		77.0-126		09/21/2020 05:49	WG1546373
(S) 1,2-Dichloroethane-d4	101		70.0-130		09/21/2020 05:49	WG1546373

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 09/15/20 10:48

L1262613

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	8650		100	1	09/21/2020 04:30	WG1546363

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.61		0.100	1	09/23/2020 17:30	WG1547563

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.30	T8	1		09/17/2020 17:25	WG1544671

Sample Narrative:

L1262613-12 WG1544671: 7.3 at 22C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	09/22/2020 00:12	WG1545220
Chloride	3120		100	100	09/22/2020 00:12	WG1545220
Fluoride	ND		1.50	10	09/21/2020 23:54	WG1545220
Sulfate	2860		500	100	09/22/2020 00:12	WG1545220

Sample Narrative:

L1262613-12 WG1545220: Reporting Bromide @ 100x due to high Sulfate

L1262613-12 WG1545220: Reporting Fluoride @ 10x due to matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

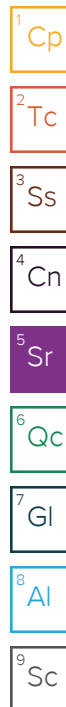
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	09/21/2020 06:09	WG1546373
Acrolein	ND		0.0500	1	09/21/2020 06:09	WG1546373
Acrylonitrile	ND		0.0100	1	09/21/2020 06:09	WG1546373
Benzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Bromobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Bromodichloromethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
Bromoform	ND		0.00100	1	09/21/2020 06:09	WG1546373
Bromomethane	ND		0.00500	1	09/21/2020 06:09	WG1546373
n-Butylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
sec-Butylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
tert-Butylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Carbon tetrachloride	ND		0.00100	1	09/21/2020 06:09	WG1546373
Chlorobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Chlorodibromomethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
Chloroethane	ND		0.00500	1	09/21/2020 06:09	WG1546373
Chloroform	ND		0.00500	1	09/21/2020 06:09	WG1546373
Chloromethane	ND		0.00250	1	09/21/2020 06:09	WG1546373
2-Chlorotoluene	ND		0.00100	1	09/21/2020 06:09	WG1546373
4-Chlorotoluene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	09/21/2020 06:09	WG1546373
1,2-Dibromoethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
Dibromomethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2-Dichlorobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,3-Dichlorobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373

Collected date/time: 09/15/20 10:48

L1262613

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Dichlorodifluoromethane	ND		0.00500	1	09/21/2020 06:09	WG1546373
1,1-Dichloroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2-Dichloroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1-Dichloroethene	ND		0.00100	1	09/21/2020 06:09	WG1546373
cis-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 06:09	WG1546373
trans-1,2-Dichloroethene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2-Dichloropropane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1-Dichloropropene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,3-Dichloropropane	ND		0.00100	1	09/21/2020 06:09	WG1546373
cis-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 06:09	WG1546373
trans-1,3-Dichloropropene	ND		0.00100	1	09/21/2020 06:09	WG1546373
2,2-Dichloropropane	ND		0.00100	1	09/21/2020 06:09	WG1546373
Di-isopropyl ether	ND		0.00100	1	09/21/2020 06:09	WG1546373
Ethylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Hexachloro-1,3-butadiene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Isopropylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
p-Isopropyltoluene	ND		0.00100	1	09/21/2020 06:09	WG1546373
2-Butanone (MEK)	ND		0.0100	1	09/21/2020 06:09	WG1546373
Methylene Chloride	ND		0.00500	1	09/21/2020 06:09	WG1546373
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	09/21/2020 06:09	WG1546373
Methyl tert-butyl ether	ND		0.00100	1	09/21/2020 06:09	WG1546373
Naphthalene	ND		0.00500	1	09/21/2020 06:09	WG1546373
n-Propylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Styrene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1,1,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1,2,2-Tetrachloroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
Tetrachloroethene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Toluene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2,3-Trichlorobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2,4-Trichlorobenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1,1-Trichloroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,1,2-Trichloroethane	ND		0.00100	1	09/21/2020 06:09	WG1546373
Trichloroethene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Trichlorofluoromethane	ND		0.00500	1	09/21/2020 06:09	WG1546373
1,2,3-Trichloropropane	ND		0.00250	1	09/21/2020 06:09	WG1546373
1,2,4-Trimethylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,2,3-Trimethylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
1,3,5-Trimethylbenzene	ND		0.00100	1	09/21/2020 06:09	WG1546373
Vinyl chloride	ND		0.00100	1	09/21/2020 06:09	WG1546373
Xylenes, Total	ND		0.00300	1	09/21/2020 06:09	WG1546373
(S) Toluene-d8	95.9		80.0-120		09/21/2020 06:09	WG1546373
(S) 4-Bromofluorobenzene	99.1		77.0-126		09/21/2020 06:09	WG1546373
(S) 1,2-Dichloroethane-d4	101		70.0-130		09/21/2020 06:09	WG1546373



Gravimetric Analysis by Method 2540 C-2011

L1262613-01,02,03,04,05

Method Blank (MB)

(MB) R3572029-1 09/17/20 22:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1258131-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1258131-04 09/17/20 22:09 • (DUP) R3572029-3 09/17/20 22:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	9500	9670	1	1.75		5

L1261177-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1261177-03 09/17/20 22:09 • (DUP) R3572029-4 09/17/20 22:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	875	886	1	1.25		5

Laboratory Control Sample (LCS)

(LCS) R3572029-2 09/17/20 22:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8710	99.0	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Gravimetric Analysis by Method 2540 C-2011 [L1262613-07,08,09](#)

Method Blank (MB)

(MB) R3572271-1 09/18/20 04:14

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L1261323-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1261323-01 09/18/20 04:14 • (DUP) R3572271-3 09/18/20 04:14

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	952	946	1	0.632		5

L1261341-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1261341-03 09/18/20 04:14 • (DUP) R3572271-4 09/18/20 04:14

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	2750	2710	1	1.61		5

Laboratory Control Sample (LCS)

(LCS) R3572271-2 09/18/20 04:14

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8000	90.9	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Gravimetric Analysis by Method 2540 C-2011

[L1262613-06](#)

Method Blank (MB)

(MB) R3572273-1 09/18/20 06:03

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L1261905-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1261905-01 09/18/20 06:03 • (DUP) R3572273-3 09/18/20 06:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	199	185	1	7.29	J3	5

L1261905-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1261905-10 09/18/20 06:03 • (DUP) R3572273-4 09/18/20 06:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	611	596	1	2.49		5

Laboratory Control Sample (LCS)

(LCS) R3572273-2 09/18/20 06:03

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8800	100	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Gravimetric Analysis by Method 2540 C-2011 [L1262613-10](#)

Method Blank (MB)

(MB) R3572813-1 09/20/20 18:58

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L1261705-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1261705-01 09/20/20 18:58 • (DUP) R3572813-3 09/20/20 18:58

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	870	854	1	1.86		5

Laboratory Control Sample (LCS)

(LCS) R3572813-2 09/20/20 18:58

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	7490	85.1	77.4-123	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

[L1262613-11](#)

Method Blank (MB)

(MB) R3573187-1 09/21/20 05:06

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L1262215-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262215-01 09/21/20 05:06 • (DUP) R3573187-3 09/21/20 05:06

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	931	4610	1	133	<u>J3</u>	5

L1262460-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262460-01 09/21/20 05:06 • (DUP) R3573187-4 09/21/20 05:06

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	6140	6150	1	0.0814		5

Laboratory Control Sample (LCS)

(LCS) R3573187-2 09/21/20 05:06

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8710	99.0	77.4-123	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

[L1262613-12](#)

Method Blank (MB)

(MB) R3573177-1 09/21/20 04:30

Analyte	MB Result mg/l	<u>MB Qualifier</u>	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1262613-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1262613-12 09/21/20 04:30 • (DUP) R3573177-3 09/21/20 04:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Dissolved Solids	8650	8560	1	1.05		5

L1263372-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1263372-01 09/21/20 04:30 • (DUP) R3573177-4 09/21/20 04:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Dissolved Solids	3780	3840	1	1.78		5

Laboratory Control Sample (LCS)

(LCS) R3573177-2 09/21/20 04:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Dissolved Solids	8800	8830	100	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 353.2

L1262613-01

Method Blank (MB)

(MB) R3573639-1 09/23/20 14:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0500	0.100

L1262604-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1262604-06 09/23/20 15:04 • (DUP) R3573639-6 09/23/20 15:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate-Nitrite	2.75	2.73	1	0.730		20

L1262613-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262613-01 09/23/20 15:08 • (DUP) R3573639-7 09/23/20 15:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate-Nitrite	6.66	6.24	2	6.51		20

Laboratory Control Sample (LCS)

(LCS) R3573639-2 09/23/20 14:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Nitrate-Nitrite	4.00	2.36	94.4	90.0-110	

L1262604-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1262604-02 09/23/20 14:23 • (MS) R3573639-3 09/23/20 14:25

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate-Nitrite	2.50	5.04	8.29	130	1	90.0-110	E J5

L1263408-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1263408-01 09/23/20 14:39 • (MS) R3573639-4 09/23/20 14:40 • (MSD) R3573639-5 09/23/20 14:41

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	2.50	1.11	4.41	4.35	132	130	1	90.0-110	J5	J5	1.37	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 353.2

[L1262613-02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3573729-1 09/23/20 16:55

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0500	0.100

L1262613-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1262613-02 09/23/20 16:57 • (DUP) R3573729-3 09/23/20 16:59

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	1.78	1.80	1	1.12		20

L1262793-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262793-01 09/23/20 17:46 • (DUP) R3573729-4 09/23/20 17:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	0.403	0.413	1	2.45		20

Laboratory Control Sample (LCS)

(LCS) R3573729-2 09/23/20 16:56

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Nitrate-Nitrite	4.00	2.38	95.2	90.0-110	

L1262793-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262793-02 09/23/20 17:48 • (MS) R3573729-5 09/23/20 17:49 • (MSD) R3573729-6 09/23/20 17:51

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	2.50	0.919	2.67	4.42	70.0	140	1	90.0-110	J6	J3 J5	49.4	20

L1262613-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1262613-09 09/23/20 17:27 • (MS) R3573729-7 09/23/20 17:56

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Nitrate-Nitrite	2.50	0.152	3.26	124	1	90.0-110	J5

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 9040C

[L1262613-01,02,03,04,05,06,07,08,09,10,11,12](#)

L1262071-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262071-01 09/17/20 17:25 • (DUP) R3571663-2 09/17/20 17:25

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.94	6.94	1	0.000		1

Sample Narrative:
OS: 6.94 at 21.5C
DUP: 6.94 at 21.5C

L1262613-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1262613-12 09/17/20 17:25 • (DUP) R3571663-3 09/17/20 17:25

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.30	7.28	1	0.274		1

Sample Narrative:
OS: 7.3 at 22C
DUP: 7.28 at 21.9C

Laboratory Control Sample (LCS)

(LCS) R3571663-1 09/17/20 17:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:
LCS: 10.05 at 21.3C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 9056A

L1262613-01,02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

(MB) R3572931-1 09/21/20 09:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1262954-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262954-01 09/21/20 13:45 • (DUP) R3572931-3 09/21/20 14:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP RPD Limits
Bromide	ND	ND	1	0.000	15
Chloride	23.1	23.0	1	0.430	15
Fluoride	0.319	0.319	1	0.0945	15
Sulfate	13.4	13.5	1	0.679	15

L1262742-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1262742-01 09/22/20 00:29 • (DUP) R3572931-6 09/22/20 00:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP RPD Limits
Bromide	ND	ND	1	0.000	15
Chloride	10.4	10.4	1	0.426	15
Fluoride	ND	ND	1	0.000	15
Sulfate	23.6	23.4	1	0.675	15

Laboratory Control Sample (LCS)

(LCS) R3572931-2 09/21/20 09:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	41.6	104	80.0-120	
Chloride	40.0	40.7	102	80.0-120	
Fluoride	8.00	8.39	105	80.0-120	
Sulfate	40.0	42.4	106	80.0-120	

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Wet Chemistry by Method 9056A [L1262613-01,02,03,04,05,06,07,08,09,10,11,12](#)

L1262959-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262959-01 09/21/20 14:20 • (MS) R3572931-4 09/21/20 14:37 • (MSD) R3572931-5 09/21/20 14:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	51.5	52.3	103	105	1	80.0-120			1.55	15
Chloride	50.0	8.91	61.3	61.2	105	105	1	80.0-120			0.102	15
Fluoride	5.00	0.165	5.51	5.57	107	108	1	80.0-120			1.06	15
Sulfate	50.0	30.1	82.8	82.5	105	105	1	80.0-120			0.381	15

L1262742-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1262742-04 09/22/20 01:21 • (MS) R3572931-7 09/22/20 01:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	46.8	93.7	1	80.0-120	
Chloride	50.0	5.13	56.5	103	1	80.0-120	
Fluoride	5.00	ND	5.22	104	1	80.0-120	
Sulfate	50.0	33.2	86.2	106	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1262613-01,02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

(MB) R3573090-3 09/21/20 01:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1262613-01,02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

(MB) R3573090-3 09/21/20 01:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	95.9			80.0-120
(S) 4-Bromofluorobenzene	97.0			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3573090-1 09/21/20 00:10 • (LCSD) R3573090-2 09/21/20 00:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.0250	0.0297	0.0302	119	121	19.0-160			1.67	27
Acrolein	0.0250	0.0334	0.0319	134	128	10.0-160			4.59	26
Acrylonitrile	0.0250	0.0262	0.0255	105	102	55.0-149			2.71	20
Benzene	0.00500	0.00500	0.00522	100	104	70.0-123			4.31	20

Volatile Organic Compounds (GC/MS) by Method 8260B

L1262613-01.02.03.04.05.06.07.08.09.10.11.12

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3573090-1 09/21/20 00:10 • (LCSD) R3573090-2 09/21/20 00:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	0.00500	0.00399	0.00415	79.8	83.0	73.0-121			3.93	20
Bromodichloromethane	0.00500	0.00472	0.00502	94.4	100	75.0-120			6.16	20
Bromoform	0.00500	0.00504	0.00512	101	102	68.0-132			1.57	20
Bromomethane	0.00500	0.00486	0.00538	97.2	108	10.0-160			10.2	25
n-Butylbenzene	0.00500	0.00404	0.00409	80.8	81.8	73.0-125			1.23	20
sec-Butylbenzene	0.00500	0.00407	0.00430	81.4	86.0	75.0-125			5.50	20
tert-Butylbenzene	0.00500	0.00439	0.00454	87.8	90.8	76.0-124			3.36	20
Carbon tetrachloride	0.00500	0.00546	0.00583	109	117	68.0-126			6.55	20
Chlorobenzene	0.00500	0.00523	0.00521	105	104	80.0-121			0.383	20
Chlorodibromomethane	0.00500	0.00520	0.00554	104	111	77.0-125			6.33	20
Chloroethane	0.00500	0.00545	0.00528	109	106	47.0-150			3.17	20
Chloroform	0.00500	0.00516	0.00554	103	111	73.0-120			7.10	20
Chloromethane	0.00500	0.00413	0.00434	82.6	86.8	41.0-142			4.96	20
2-Chlorotoluene	0.00500	0.00395	0.00415	79.0	83.0	76.0-123			4.94	20
4-Chlorotoluene	0.00500	0.00410	0.00435	82.0	87.0	75.0-122			5.92	20
1,2-Dibromo-3-Chloropropane	0.00500	0.00406	0.00379	81.2	75.8	58.0-134			6.88	20
1,2-Dibromoethane	0.00500	0.00511	0.00498	102	99.6	80.0-122			2.58	20
Dibromomethane	0.00500	0.00506	0.00565	101	113	80.0-120			11.0	20
1,2-Dichlorobenzene	0.00500	0.00462	0.00483	92.4	96.6	79.0-121			4.44	20
1,3-Dichlorobenzene	0.00500	0.00455	0.00495	91.0	99.0	79.0-120			8.42	20
1,4-Dichlorobenzene	0.00500	0.00469	0.00477	93.8	95.4	79.0-120			1.69	20
Dichlorodifluoromethane	0.00500	0.00638	0.00643	128	129	51.0-149			0.781	20
1,1-Dichloroethane	0.00500	0.00494	0.00523	98.8	105	70.0-126			5.70	20
1,2-Dichloroethane	0.00500	0.00549	0.00558	110	112	70.0-128			1.63	20
1,1-Dichloroethene	0.00500	0.00549	0.00519	110	104	71.0-124			5.62	20
cis-1,2-Dichloroethene	0.00500	0.00506	0.00506	101	101	73.0-120			0.000	20
trans-1,2-Dichloroethene	0.00500	0.00510	0.00531	102	106	73.0-120			4.03	20
1,2-Dichloropropane	0.00500	0.00483	0.00498	96.6	99.6	77.0-125			3.06	20
1,1-Dichloropropene	0.00500	0.00541	0.00526	108	105	74.0-126			2.81	20
1,3-Dichloropropane	0.00500	0.00463	0.00484	92.6	96.8	80.0-120			4.44	20
cis-1,3-Dichloropropene	0.00500	0.00486	0.00521	97.2	104	80.0-123			6.95	20
trans-1,3-Dichloropropene	0.00500	0.00466	0.00466	93.2	93.2	78.0-124			0.000	20
2,2-Dichloropropane	0.00500	0.00493	0.00509	98.6	102	58.0-130			3.19	20
Di-isopropyl ether	0.00500	0.00469	0.00501	93.8	100	58.0-138			6.60	20
Ethylbenzene	0.00500	0.00495	0.00513	99.0	103	79.0-123			3.57	20
Hexachloro-1,3-butadiene	0.00500	0.00455	0.00514	91.0	103	54.0-138			12.2	20
Isopropylbenzene	0.00500	0.00507	0.00511	101	102	76.0-127			0.786	20
p-Isopropyltoluene	0.00500	0.00429	0.00439	85.8	87.8	76.0-125			2.30	20
2-Butanone (MEK)	0.0250	0.0249	0.0261	99.6	104	44.0-160			4.71	20
Methylene Chloride	0.00500	0.00483	0.00473	96.6	94.6	67.0-120			2.09	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1262613-01,02,03,04,05,06,07,08,09,10,11,12

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3573090-1 09/21/20 00:10 • (LCSD) R3573090-2 09/21/20 00:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.0250	0.0229	0.0234	91.6	93.6	68.0-142			2.16	20
Methyl tert-butyl ether	0.00500	0.00515	0.00523	103	105	68.0-125			1.54	20
Naphthalene	0.00500	0.00327	0.00359	65.4	71.8	54.0-135			9.33	20
n-Propylbenzene	0.00500	0.00406	0.00430	81.2	86.0	77.0-124			5.74	20
Styrene	0.00500	0.00499	0.00499	99.8	99.8	73.0-130			0.000	20
1,1,1,2-Tetrachloroethane	0.00500	0.00525	0.00525	105	105	75.0-125			0.000	20
1,1,2,2-Tetrachloroethane	0.00500	0.00378	0.00392	75.6	78.4	65.0-130			3.64	20
Tetrachloroethene	0.00500	0.00594	0.00605	119	121	72.0-132			1.83	20
Toluene	0.00500	0.00500	0.00494	100	98.8	79.0-120			1.21	20
1,1,2-Trichlorotrifluoroethane	0.00500	0.00563	0.00530	113	106	69.0-132			6.04	20
1,2,3-Trichlorobenzene	0.00500	0.00334	0.00388	66.8	77.6	50.0-138			15.0	20
1,2,4-Trichlorobenzene	0.00500	0.00391	0.00399	78.2	79.8	57.0-137			2.03	20
1,1,1-Trichloroethane	0.00500	0.00568	0.00586	114	117	73.0-124			3.12	20
1,1,2-Trichloroethane	0.00500	0.00510	0.00513	102	103	80.0-120			0.587	20
Trichloroethene	0.00500	0.00600	0.00590	120	118	78.0-124			1.68	20
Trichlorofluoromethane	0.00500	0.00623	0.00647	125	129	59.0-147			3.78	20
1,2,3-Trichloropropane	0.00500	0.00439	0.00467	87.8	93.4	73.0-130			6.18	20
1,2,3-Trimethylbenzene	0.00500	0.00420	0.00423	84.0	84.6	77.0-120			0.712	20
1,2,4-Trimethylbenzene	0.00500	0.00398	0.00407	79.6	81.4	76.0-121			2.24	20
1,3,5-Trimethylbenzene	0.00500	0.00395	0.00423	79.0	84.6	76.0-122			6.85	20
Vinyl chloride	0.00500	0.00526	0.00537	105	107	67.0-131			2.07	20
Xylenes, Total	0.0150	0.0147	0.0153	98.0	102	79.0-123			4.00	20
(S) Toluene-d8				95.6	96.8	80.0-120				
(S) 4-Bromofluorobenzene				99.7	102	77.0-126				
(S) 1,2-Dichloroethane-d4				101	102	70.0-130				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1262613-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262613-01 09/21/20 02:31 • (MS) R3573090-4 09/21/20 10:19 • (MSD) R3573090-5 09/21/20 11:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	0.0250	ND	ND	ND	101	97.2	1	10.0-160			4.03	35
Acrolein	0.0250	ND	ND	ND	138	128	1	10.0-160			6.92	39
Acrylonitrile	0.0250	ND	0.0232	0.0226	92.8	90.4	1	21.0-160			2.62	32
Benzene	0.00500	ND	0.00489	0.00448	97.8	89.6	1	17.0-158			8.75	27
Bromobenzene	0.00500	ND	0.00405	0.00400	81.0	80.0	1	30.0-149			1.24	28
Bromodichloromethane	0.00500	ND	0.00471	0.00454	94.2	90.8	1	31.0-150			3.68	27
Bromoform	0.00500	ND	0.00478	0.00473	95.6	94.6	1	29.0-150			1.05	29
Bromomethane	0.00500	ND	ND	ND	94.2	96.6	1	10.0-160			2.52	38

Volatile Organic Compounds (GC/MS) by Method 8260B

L1262613-01.02.03.04.05.06.07.08.09.10.11.12

L1262613-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262613-01 09/21/20 02:31 • (MS) R3573090-4 09/21/20 10:19 • (MSD) R3573090-5 09/21/20 11:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Butylbenzene	0.00500	ND	0.00449	0.00389	89.8	77.8	1	31.0-150			14.3	30
sec-Butylbenzene	0.00500	ND	0.00427	0.00385	85.4	77.0	1	33.0-155			10.3	29
tert-Butylbenzene	0.00500	ND	0.00426	0.00403	85.2	80.6	1	34.0-153			5.55	28
Carbon tetrachloride	0.00500	ND	0.00634	0.00537	127	107	1	23.0-159			16.6	28
Chlorobenzene	0.00500	ND	0.00475	0.00483	95.0	96.6	1	33.0-152			1.67	27
Chlorodibromomethane	0.00500	ND	0.00499	0.00477	99.8	95.4	1	37.0-149			4.51	27
Chloroethane	0.00500	ND	0.00504	ND	101	91.6	1	10.0-160			9.56	30
Chloroform	0.00500	ND	0.00505	ND	101	91.6	1	29.0-154			9.76	28
Chloromethane	0.00500	ND	0.00391	0.00375	78.2	75.0	1	10.0-160			4.18	29
2-Chlorotoluene	0.00500	ND	0.00389	0.00376	77.8	75.2	1	32.0-153			3.40	28
4-Chlorotoluene	0.00500	ND	0.00402	0.00398	80.4	79.6	1	32.0-150			1.00	28
1,2-Dibromo-3-Chloropropane	0.00500	ND	ND	ND	78.8	77.8	1	22.0-151			1.28	34
1,2-Dibromoethane	0.00500	ND	0.00488	0.00486	97.6	97.2	1	34.0-147			0.411	27
Dibromomethane	0.00500	ND	0.00500	0.00481	100	96.2	1	30.0-151			3.87	27
1,2-Dichlorobenzene	0.00500	ND	0.00437	0.00435	87.4	87.0	1	34.0-149			0.459	28
1,3-Dichlorobenzene	0.00500	ND	0.00475	0.00440	95.0	88.0	1	36.0-146			7.65	27
1,4-Dichlorobenzene	0.00500	ND	0.00453	0.00457	90.6	91.4	1	35.0-142			0.879	27
Dichlorodifluoromethane	0.00500	ND	0.00757	0.00652	151	130	1	10.0-160			14.9	29
1,1-Dichloroethane	0.00500	ND	0.00486	0.00439	97.2	87.8	1	25.0-158			10.2	27
1,2-Dichloroethane	0.00500	ND	0.00518	0.00512	104	102	1	29.0-151			1.17	27
1,1-Dichloroethene	0.00500	ND	0.00400	0.00379	80.0	75.8	1	11.0-160			5.39	29
cis-1,2-Dichloroethene	0.00500	ND	0.00498	0.00439	99.6	87.8	1	10.0-160			12.6	27
trans-1,2-Dichloroethene	0.00500	ND	0.00494	0.00447	98.8	89.4	1	17.0-153			9.99	27
1,2-Dichloropropane	0.00500	ND	0.00445	0.00447	89.0	89.4	1	30.0-156			0.448	27
1,1-Dichloropropene	0.00500	ND	0.00543	0.00468	109	93.6	1	25.0-158			14.8	27
1,3-Dichloropropane	0.00500	ND	0.00453	0.00450	90.6	90.0	1	38.0-147			0.664	27
cis-1,3-Dichloropropene	0.00500	ND	0.00494	0.00440	98.8	88.0	1	34.0-149			11.6	28
trans-1,3-Dichloropropene	0.00500	ND	0.00441	0.00438	88.2	87.6	1	32.0-149			0.683	28
2,2-Dichloropropane	0.00500	ND	0.00533	0.00451	107	90.2	1	24.0-152			16.7	29
Di-isopropyl ether	0.00500	ND	0.00465	0.00428	93.0	85.6	1	21.0-160			8.29	28
Ethylbenzene	0.00500	ND	0.00491	0.00468	98.2	93.6	1	30.0-155			4.80	27
Hexachloro-1,3-butadiene	0.00500	ND	0.00618	0.00468	124	93.6	1	20.0-154			27.6	34
Isopropylbenzene	0.00500	ND	0.00465	0.00456	93.0	91.2	1	28.0-157			1.95	27
p-Isopropyltoluene	0.00500	ND	0.00429	0.00399	85.8	79.8	1	30.0-154			7.25	29
2-Butanone (MEK)	0.0250	ND	0.0236	0.0221	94.4	88.4	1	10.0-160			6.56	32
Methylene Chloride	0.00500	ND	ND	ND	84.8	76.0	1	23.0-144			10.9	28
4-Methyl-2-pentanone (MIBK)	0.0250	ND	0.0229	0.0224	91.6	89.6	1	29.0-160			2.21	29
Methyl tert-butyl ether	0.00500	ND	0.00505	0.00463	101	92.6	1	28.0-150			8.68	29
Naphthalene	0.00500	ND	ND	ND	64.6	67.0	1	12.0-156			3.65	35
n-Propylbenzene	0.00500	ND	0.00415	0.00386	83.0	77.2	1	31.0-154			7.24	28

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1262613-01.02.03.04.05.06.07.08.09.10.11.12

L1262613-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1262613-01 09/21/20 02:31 • (MS) R3573090-4 09/21/20 10:19 • (MSD) R3573090-5 09/21/20 11:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Styrene	0.00500	ND	0.00484	0.00476	96.8	95.2	1	33.0-155			1.67	28
1,1,1,2-Tetrachloroethane	0.00500	ND	0.00500	0.00514	100	103	1	36.0-151			2.76	29
1,1,2,2-Tetrachloroethane	0.00500	ND	0.00408	0.00378	81.6	75.6	1	33.0-150			7.63	28
Tetrachloroethene	0.00500	ND	0.00586	0.00515	117	103	1	10.0-160			12.9	27
Toluene	0.00500	ND	0.00454	0.00451	90.8	90.2	1	26.0-154			0.663	28
1,1,2-Trichlorotrifluoroethane	0.00500	ND	0.00468	0.00418	93.6	83.6	1	23.0-160			11.3	30
1,2,3-Trichlorobenzene	0.00500	ND	0.00359	0.00335	71.8	67.0	1	17.0-150			6.92	36
1,2,4-Trichlorobenzene	0.00500	ND	0.00410	0.00404	82.0	80.8	1	24.0-150			1.47	33
1,1,1-Trichloroethane	0.00500	ND	0.00580	0.00519	116	104	1	23.0-160			11.1	28
1,1,2-Trichloroethane	0.00500	ND	0.00472	0.00483	94.4	96.6	1	35.0-147			2.30	27
Trichloroethene	0.00500	ND	0.00607	0.00522	121	104	1	10.0-160			15.1	25
Trichlorofluoromethane	0.00500	ND	0.00710	0.00616	142	123	1	17.0-160			14.2	31
1,2,3-Trichloropropane	0.00500	ND	0.00435	0.00407	87.0	81.4	1	34.0-151			6.65	29
1,2,3-Trimethylbenzene	0.00500	ND	0.00419	0.00385	83.8	77.0	1	32.0-149			8.46	28
1,2,4-Trimethylbenzene	0.00500	ND	0.00397	0.00375	79.4	75.0	1	26.0-154			5.70	27
1,3,5-Trimethylbenzene	0.00500	ND	0.00422	0.00373	84.4	74.6	1	28.0-153			12.3	27
Vinyl chloride	0.00500	ND	0.00570	0.00486	114	97.2	1	10.0-160			15.9	27
Xylenes, Total	0.0150	ND	0.0142	0.0137	94.7	91.3	1	29.0-154			3.58	28
(S) Toluene-d8					92.9	96.6		80.0-120				
(S) 4-Bromofluorobenzene					97.8	99.3		77.0-126				
(S) 1,2-Dichloroethane-d4					107	102		70.0-130				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

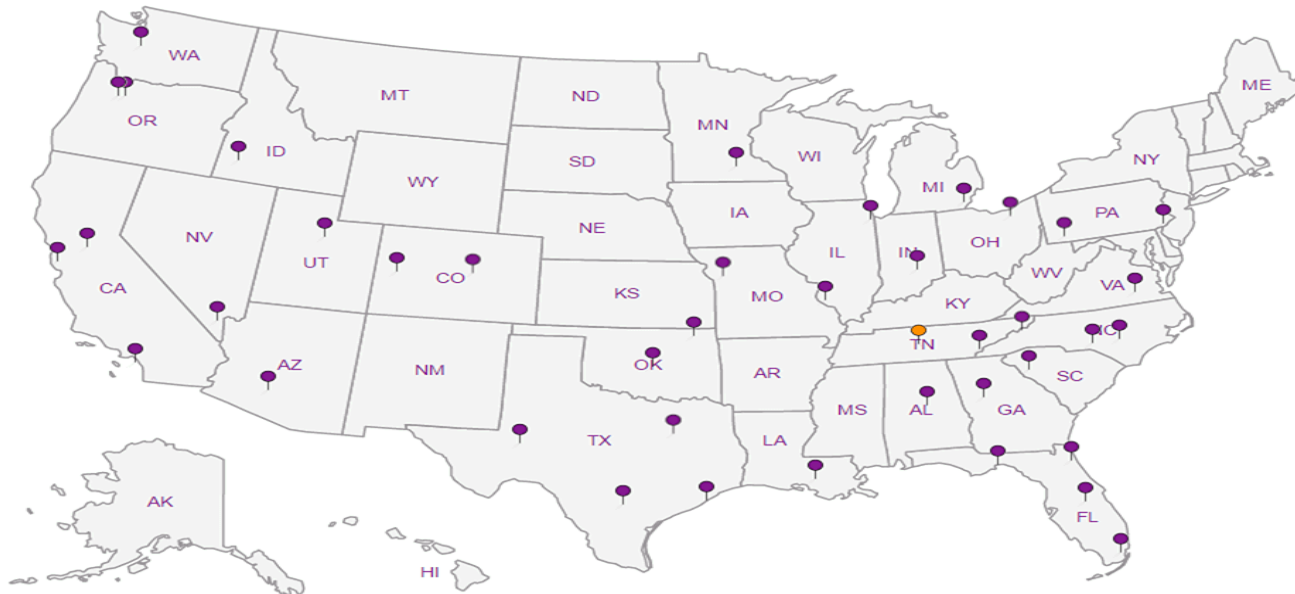
Third Party Federal Accreditations

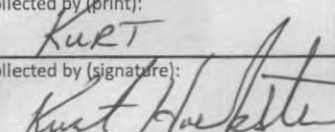
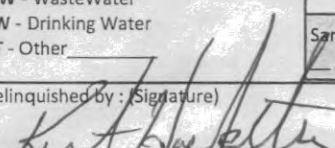
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



HilCorp-Farmington, NM 382 Road 3100 Aztec, NM 87401				Billing Information: Clara Cardoza PO Box 61529 Houston, TX 77208				Pres Chk		Analysis / Container / Preservative										Chain of Custody Page ____ of ____					
Report to: Kurt Hoekstra				Email To: @hilcorp.com;khoekstra@hilcorp.com																 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859					
Project Description: Salty Dog Pipeline				City/State Collected:				Please Circle: PT MT CT ET												SDG # L1262613 J087					
Phone: 505-486-9543				Client Project #				Lab Project # HILCORANM-SALTYDOG																	
Collected by (print): KURT				Site/Facility ID # SALTY DOG PIPELINE				P.O. #																	
Collected by (signature): 				Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day				Quote #																	
Immediately Packed on Ice N ☐ Y ☒								Date Results Needed																	
Sample ID				Comp/Grab		Matrix *		Depth		Date		Time		Cntrs											
MW- 14						GW				9-9		10:47		8		ANIONS 125mIHDPE-NoPres CATIONS 125mIHDPE-NoPres NO2NO3 250mIHDPE-H2SO4 PH 125mIHDPE-NoPres TDS 250mIHDPE-NoPres V8260 40mIAmb-HCI Cooler #1 Cooler #2									
MW- 10						GW				9-9		2:05		8		-01									
MW- 6						GW				9-9		2:38		8		02									
MW- 13						GW				9-10		12:14		8		03									
MW- 5						GW				9-10		12:57		8		04									
MW- 12						GW				9-11		10:58		8		05									
MW- 17						GW				9-11		12:39		8		06									
MW- 18						GW				9-11		1:47		8		07									
MW- 3						GW				9-11		2:17		8		08									
MW- 15						GW				9-14		12:22		8		09									
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other				Remarks: pH _____ Temp _____ 12419 9996 9366 low _____ Other _____														Sample Receipt Checklist COC Seal Present/Intact: ☒ NP ☐ Y ☐ N COC Signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N If Applicable VOA Zero Headspace: ☒ Y ☐ N Preservation Correct/Checked: ☒ Y ☐ N RAD Screen <0.5 mR/hr: ☒ Y ☐ N							
Relinquished by: (Signature) 				Date: 9-15-20		Time: 2:19		Received by: (Signature)				Trip Blank Received: Yes ☒ No ☐ HCL / MeOH TBR				Bottles Received: 46				If preservation required by Login: Date/Time					
Relinquished by: (Signature)				Date:		Time:		Received by: (Signature)				Temp: 12.1-12.0				Date: 9-16-20 Time: 930				Hold:		Condition: NCF / OK			

HilCorp-Farmington, NM 382 Road 3100 Aztec, NM 87401		Billing Information:		Pres Chk	Analysis / Container / Preservative										Chain of Custody Page ____ of ____		
		Clara Cardoza PO Box 61529 Houston, TX 77208													 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859		
Report to:		Email To: @hilcorp.com;khoekstra@hilcorp.com															
Project Description:		City/State		Please Circle:													
Salty Dog Pipeline		Collected:		PT MT CT ET													
Phone: 505-486-9543		Client Project #		Lab Project #													
				HILCORANM-SALTYDOG													
Collected by (print):		Site/Facility ID #		P.O. #													
Kurt		SALTY DOG PIPELINE															
Collected by (signature):		Rush? (Lab MUST Be Notified)		Quote #													
Kurt Hoekstra		☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Date Results Needed													
Immediately																	
Packed on Ice N ☐ Y ☒																	
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	ANIONS 125mlHDPE-NoPres	CATIONS 125mlHDPE-NoPres	NO2NO3 250mlHDPE-H2SO4	PH 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	V8260 40mlAmb-HCl	COOLER #1	COOLER #2		
MW- 9			GW		9-15	9:18	8	X	X	X	X	X	X			-11	
MW- 20			GW		9-15	10:48	8	X	X	X	X	X	X			12	
MW- No Sample			GW				8	X	X	X	X	X	X				
* Matrix:		Remarks:		pH _____ Temp _____													
SS - Soil AIR - Air F - Filter				Flow _____ Other _____													
GW - Groundwater B - Bioassay																	
WW - WasteWater																	
DW - Drinking Water																	
OT - Other																	
Samples returned via:		Tracking #															
UPS FedEx Courier																	
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Trip Blank Received: Yes ☒ No ☐											
Kurt Hoekstra		9-15-20	2:08			HCL / MeOH TBR											
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Temp: 16-15.5 9C		Bottles Received:		If preservation required by Login: Date/Time							
Relinquished by (Signature)		Date:	Time:	Received for lab by (Signature)		Date: 9-16-20 Time: 9:30		Hold:		Condition: NCF / OK							

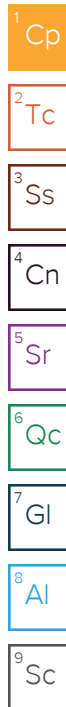


ANALYTICAL REPORT

December 15, 2020

HilCorp-Farmington, NM

Sample Delivery Group: L1292762
Samples Received: 12/04/2020
Project Number:
Description: Salty Dog Pipeline
Site: SALTY DOG PIPELINE
Report To: Kurt Hoekstra
382 Road 3100
Aztec, NM 87401



Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

MW-14 L1292762-01 GW

				Collected by Kurt	Collected date/time 11/30/20 10:15	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587089	1	12/05/20 09:34	12/05/20 16:52	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 17:52	12/11/20 17:52	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	10	12/12/20 22:56	12/12/20 22:56	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	100	12/12/20 23:15	12/12/20 23:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588710	1	12/09/20 17:58	12/09/20 17:58	JHH	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

MW-10 L1292762-02 GW

				Collected by Kurt	Collected date/time 11/30/20 12:18	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587089	1	12/05/20 09:34	12/05/20 16:52	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 17:54	12/11/20 17:54	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	10	12/12/20 23:33	12/12/20 23:33	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	100	12/12/20 23:52	12/12/20 23:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588710	1	12/09/20 18:18	12/09/20 18:18	JHH	Mt. Juliet, TN

MW-6 L1292762-03 GW

				Collected by Kurt	Collected date/time 11/30/20 14:00	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587089	1	12/05/20 09:34	12/05/20 16:52	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	10	12/11/20 18:18	12/11/20 18:18	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	10	12/13/20 00:47	12/13/20 00:47	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	100	12/13/20 01:05	12/13/20 01:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588710	1	12/09/20 18:38	12/09/20 18:38	JHH	Mt. Juliet, TN

MW-5 L1292762-04 GW

				Collected by Kurt	Collected date/time 11/30/20 14:34	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587089	1	12/05/20 09:34	12/05/20 16:52	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:03	12/11/20 18:03	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	1	12/13/20 01:24	12/13/20 01:24	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	100	12/13/20 01:42	12/13/20 01:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588710	1	12/09/20 18:58	12/09/20 18:58	JHH	Mt. Juliet, TN

MW-13 L1292762-05 GW

				Collected by Kurt	Collected date/time 12/01/20 09:17	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587090	1	12/05/20 11:15	12/05/20 13:00	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:04	12/11/20 18:04	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	10	12/13/20 02:01	12/13/20 02:01	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	100	12/13/20 02:19	12/13/20 02:19	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588716	1	12/09/20 05:12	12/09/20 05:12	JHH	Mt. Juliet, TN

MW-12 L1292762-06 GW

				Collected by Kurt	Collected date/time 12/01/20 11:18	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587090	1	12/05/20 11:15	12/05/20 13:00	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:06	12/11/20 18:06	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	10	12/13/20 02:38	12/13/20 02:38	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	500	12/13/20 02:56	12/13/20 02:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588716	1	12/09/20 05:32	12/09/20 05:32	JHH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-17 L1292762-07 GW

				Collected by Kurt	Collected date/time 12/01/20 13:05	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587090	1	12/05/20 11:15	12/05/20 13:00	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:07	12/11/20 18:07	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	1	12/13/20 03:14	12/13/20 03:14	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589872	100	12/13/20 03:33	12/13/20 03:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588716	1	12/09/20 05:52	12/09/20 05:52	JHH	Mt. Juliet, TN

MW-18 L1292762-08 GW

				Collected by Kurt	Collected date/time 12/01/20 14:07	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587090	1	12/05/20 11:15	12/05/20 13:00	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:08	12/11/20 18:08	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	10	12/13/20 20:23	12/13/20 20:23	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	100	12/13/20 20:38	12/13/20 20:38	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588716	1	12/09/20 06:13	12/09/20 06:13	JHH	Mt. Juliet, TN

MW-3 L1292762-09 GW

				Collected by Kurt	Collected date/time 12/01/20 14:48	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1587090	1	12/05/20 11:15	12/05/20 13:00	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:09	12/11/20 18:09	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	10	12/13/20 20:54	12/13/20 20:54	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	100	12/15/20 04:05	12/15/20 04:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	500	12/13/20 21:10	12/13/20 21:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588716	1	12/09/20 06:33	12/09/20 06:33	JHH	Mt. Juliet, TN

MW-15 L1292762-10 GW

				Collected by Kurt	Collected date/time 12/02/20 10:20	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1588510	1	12/09/20 02:29	12/09/20 03:08	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:12	12/11/20 18:12	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	1	12/13/20 21:26	12/13/20 21:26	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	100	12/13/20 21:42	12/13/20 21:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588993	1	12/10/20 03:33	12/10/20 03:33	JHH	Mt. Juliet, TN

MW-9 L1292762-11 GW

				Collected by Kurt	Collected date/time 12/02/20 12:40	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1588510	1	12/09/20 02:29	12/09/20 03:08	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:21	12/11/20 18:21	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	10	12/13/20 21:58	12/13/20 21:58	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	100	12/13/20 22:14	12/13/20 22:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1588993	1	12/10/20 03:53	12/10/20 03:53	JHH	Mt. Juliet, TN

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

MW-20 L1292762-12 GW

				Collected by Kurt	Collected date/time 12/02/20 14:15	Received date/time 12/04/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1588510	1	12/09/20 02:29	12/09/20 03:08	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1589631	1	12/11/20 18:22	12/11/20 18:22	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1589713	1	12/10/20 21:05	12/10/20 21:05	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	10	12/13/20 22:29	12/13/20 22:29	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1589877	100	12/13/20 22:45	12/13/20 22:45	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1589873	1	12/10/20 15:46	12/10/20 15:46	BMB	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 11/30/20 10:15

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	7860		200	1	12/05/2020 16:52	WG1587089

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	4.25		0.100	1	12/11/2020 17:52	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.36	T8	1		12/10/2020 21:05	WG1589713

Sample Narrative:

L1292762-01 WG1589713: 7.36 at 18.3C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		10.0	10	12/12/2020 22:56	WG1589872
Chloride	2700		100	100	12/12/2020 23:15	WG1589872
Fluoride	ND		1.50	10	12/12/2020 22:56	WG1589872
Sulfate	2180		500	100	12/12/2020 23:15	WG1589872

Sample Narrative:

L1292762-01 WG1589872: dilution due to sample matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	12/09/2020 17:58	WG1588710
Acrolein	ND		0.0500	1	12/09/2020 17:58	WG1588710
Acrylonitrile	ND		0.0100	1	12/09/2020 17:58	WG1588710
Benzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Bromobenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Bromodichloromethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
Bromoform	ND		0.00100	1	12/09/2020 17:58	WG1588710
Bromomethane	ND		0.00500	1	12/09/2020 17:58	WG1588710
n-Butylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
sec-Butylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
tert-Butylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Carbon tetrachloride	ND		0.00100	1	12/09/2020 17:58	WG1588710
Chlorobenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Chlorodibromomethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
Chloroethane	ND		0.00500	1	12/09/2020 17:58	WG1588710
Chloroform	ND		0.00500	1	12/09/2020 17:58	WG1588710
Chloromethane	ND		0.00250	1	12/09/2020 17:58	WG1588710
2-Chlorotoluene	ND		0.00100	1	12/09/2020 17:58	WG1588710
4-Chlorotoluene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 17:58	WG1588710
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
Dibromomethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710

Collected date/time: 11/30/20 10:15

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 17:58	WG1588710
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 17:58	WG1588710
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 17:58	WG1588710
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 17:58	WG1588710
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 17:58	WG1588710
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 17:58	WG1588710
2,2-Dichloropropane	ND		0.00100	1	12/09/2020 17:58	WG1588710
Di-isopropyl ether	ND		0.00100	1	12/09/2020 17:58	WG1588710
Ethylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Isopropylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 17:58	WG1588710
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 17:58	WG1588710
Methylene Chloride	ND		0.00500	1	12/09/2020 17:58	WG1588710
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 17:58	WG1588710
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 17:58	WG1588710
Naphthalene	ND	J4	0.00500	1	12/09/2020 17:58	WG1588710
n-Propylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Styrene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
Tetrachloroethene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Toluene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,2,3-Trichlorobenzene	ND	J4	0.00100	1	12/09/2020 17:58	WG1588710
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1,1-Trichloroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 17:58	WG1588710
Trichloroethene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 17:58	WG1588710
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 17:58	WG1588710
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 17:58	WG1588710
Vinyl chloride	ND		0.00100	1	12/09/2020 17:58	WG1588710
Xylenes, Total	ND		0.00300	1	12/09/2020 17:58	WG1588710
(S) Toluene-d8	117		80.0-120		12/09/2020 17:58	WG1588710
(S) 4-Bromofluorobenzene	95.4		77.0-126		12/09/2020 17:58	WG1588710
(S) 1,2-Dichloroethane-d4	113		70.0-130		12/09/2020 17:58	WG1588710

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/30/20 12:18

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	5950		100	1	12/05/2020 16:52	WG1587089

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.67		0.100	1	12/11/2020 17:54	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.42	T8	1	12/10/2020 21:05	WG1589713	

Sample Narrative:

L1292762-02 WG1589713: 7.42 at 18.5C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		10.0	10	12/12/2020 23:33	WG1589872
Chloride	1210		100	100	12/12/2020 23:52	WG1589872
Fluoride	ND		1.50	10	12/12/2020 23:33	WG1589872
Sulfate	2160		500	100	12/12/2020 23:52	WG1589872

Sample Narrative:

L1292762-02 WG1589872: dilution due to sample matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

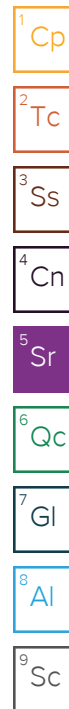
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	12/09/2020 18:18	WG1588710
Acrolein	ND		0.0500	1	12/09/2020 18:18	WG1588710
Acrylonitrile	ND		0.0100	1	12/09/2020 18:18	WG1588710
Benzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Bromobenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Bromodichloromethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
Bromoform	ND		0.00100	1	12/09/2020 18:18	WG1588710
Bromomethane	ND		0.00500	1	12/09/2020 18:18	WG1588710
n-Butylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
sec-Butylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
tert-Butylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Carbon tetrachloride	ND		0.00100	1	12/09/2020 18:18	WG1588710
Chlorobenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Chlorodibromomethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
Chloroethane	ND		0.00500	1	12/09/2020 18:18	WG1588710
Chloroform	ND		0.00500	1	12/09/2020 18:18	WG1588710
Chloromethane	ND		0.00250	1	12/09/2020 18:18	WG1588710
2-Chlorotoluene	ND		0.00100	1	12/09/2020 18:18	WG1588710
4-Chlorotoluene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 18:18	WG1588710
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
Dibromomethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710

Collected date/time: 11/30/20 12:18

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 18:18	WG1588710
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 18:18	WG1588710
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 18:18	WG1588710
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 18:18	WG1588710
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 18:18	WG1588710
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 18:18	WG1588710
2,2-Dichloropropane	ND		0.00100	1	12/09/2020 18:18	WG1588710
Di-isopropyl ether	ND		0.00100	1	12/09/2020 18:18	WG1588710
Ethylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Isopropylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 18:18	WG1588710
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 18:18	WG1588710
Methylene Chloride	ND		0.00500	1	12/09/2020 18:18	WG1588710
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 18:18	WG1588710
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 18:18	WG1588710
Naphthalene	ND	J4	0.00500	1	12/09/2020 18:18	WG1588710
n-Propylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Styrene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
Tetrachloroethene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Toluene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,2,3-Trichlorobenzene	ND	J4	0.00100	1	12/09/2020 18:18	WG1588710
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1,1-Trichloroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 18:18	WG1588710
Trichloroethene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 18:18	WG1588710
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 18:18	WG1588710
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:18	WG1588710
Vinyl chloride	ND		0.00100	1	12/09/2020 18:18	WG1588710
Xylenes, Total	ND		0.00300	1	12/09/2020 18:18	WG1588710
(S) Toluene-d8	117		80.0-120		12/09/2020 18:18	WG1588710
(S) 4-Bromofluorobenzene	97.4		77.0-126		12/09/2020 18:18	WG1588710
(S) 1,2-Dichloroethane-d4	114		70.0-130		12/09/2020 18:18	WG1588710



Collected date/time: 11/30/20 14:00

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	19600		400	1	12/05/2020 16:52	WG1587089

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	15.3		1.00	10	12/11/2020 18:18	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.53	T8	1		12/10/2020 21:05	WG1589713

Sample Narrative:

L1292762-03 WG1589713: 7.53 at 18.4C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	13.5		10.0	10	12/13/2020 00:47	WG1589872
Chloride	9100		100	100	12/13/2020 01:05	WG1589872
Fluoride	ND		1.50	10	12/13/2020 00:47	WG1589872
Sulfate	3700		500	100	12/13/2020 01:05	WG1589872

Sample Narrative:

L1292762-03 WG1589872: dilution due to sample matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

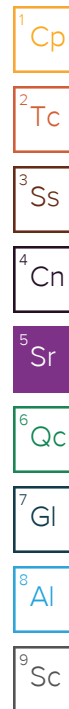
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	12/09/2020 18:38	WG1588710
Acrolein	ND		0.0500	1	12/09/2020 18:38	WG1588710
Acrylonitrile	ND		0.0100	1	12/09/2020 18:38	WG1588710
Benzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Bromobenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Bromodichloromethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
Bromoform	ND		0.00100	1	12/09/2020 18:38	WG1588710
Bromomethane	ND		0.00500	1	12/09/2020 18:38	WG1588710
n-Butylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
sec-Butylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
tert-Butylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Carbon tetrachloride	ND		0.00100	1	12/09/2020 18:38	WG1588710
Chlorobenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Chlorodibromomethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
Chloroethane	ND		0.00500	1	12/09/2020 18:38	WG1588710
Chloroform	ND		0.00500	1	12/09/2020 18:38	WG1588710
Chloromethane	ND		0.00250	1	12/09/2020 18:38	WG1588710
2-Chlorotoluene	ND		0.00100	1	12/09/2020 18:38	WG1588710
4-Chlorotoluene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 18:38	WG1588710
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
Dibromomethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710

Collected date/time: 11/30/20 14:00

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 18:38	WG1588710
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 18:38	WG1588710
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 18:38	WG1588710
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 18:38	WG1588710
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 18:38	WG1588710
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 18:38	WG1588710
2,2-Dichloropropane	ND		0.00100	1	12/09/2020 18:38	WG1588710
Di-isopropyl ether	ND		0.00100	1	12/09/2020 18:38	WG1588710
Ethylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Isopropylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 18:38	WG1588710
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 18:38	WG1588710
Methylene Chloride	ND		0.00500	1	12/09/2020 18:38	WG1588710
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 18:38	WG1588710
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 18:38	WG1588710
Naphthalene	ND	J4	0.00500	1	12/09/2020 18:38	WG1588710
n-Propylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Styrene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
Tetrachloroethene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Toluene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,2,3-Trichlorobenzene	ND	J4	0.00100	1	12/09/2020 18:38	WG1588710
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1,1-Trichloroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 18:38	WG1588710
Trichloroethene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 18:38	WG1588710
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 18:38	WG1588710
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:38	WG1588710
Vinyl chloride	ND		0.00100	1	12/09/2020 18:38	WG1588710
Xylenes, Total	ND		0.00300	1	12/09/2020 18:38	WG1588710
(S) Toluene-d8	115		80.0-120		12/09/2020 18:38	WG1588710
(S) 4-Bromofluorobenzene	94.7		77.0-126		12/09/2020 18:38	WG1588710
(S) 1,2-Dichloroethane-d4	113		70.0-130		12/09/2020 18:38	WG1588710



Collected date/time: 11/30/20 14:34

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	6600		100	1	12/05/2020 16:52	WG1587089

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.294		0.100	1	12/11/2020 18:03	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.52	T8	1	12/10/2020 21:05	WG1589713	

Sample Narrative:

L1292762-04 WG1589713: 7.52 at 18.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	12/13/2020 01:42	WG1589872
Chloride	1660		100	100	12/13/2020 01:42	WG1589872
Fluoride	0.751		0.150	1	12/13/2020 01:24	WG1589872
Sulfate	2510		500	100	12/13/2020 01:42	WG1589872

Sample Narrative:

L1292762-04 WG1589872: dilution due to sample matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

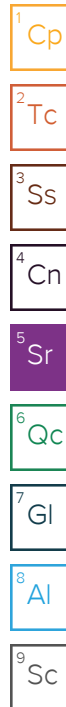
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	12/09/2020 18:58	WG1588710
Acrolein	ND		0.0500	1	12/09/2020 18:58	WG1588710
Acrylonitrile	ND		0.0100	1	12/09/2020 18:58	WG1588710
Benzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Bromobenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Bromodichloromethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
Bromoform	ND		0.00100	1	12/09/2020 18:58	WG1588710
Bromomethane	ND		0.00500	1	12/09/2020 18:58	WG1588710
n-Butylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
sec-Butylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
tert-Butylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Carbon tetrachloride	ND		0.00100	1	12/09/2020 18:58	WG1588710
Chlorobenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Chlorodibromomethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
Chloroethane	ND		0.00500	1	12/09/2020 18:58	WG1588710
Chloroform	ND		0.00500	1	12/09/2020 18:58	WG1588710
Chloromethane	ND		0.00250	1	12/09/2020 18:58	WG1588710
2-Chlorotoluene	ND		0.00100	1	12/09/2020 18:58	WG1588710
4-Chlorotoluene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 18:58	WG1588710
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
Dibromomethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710

Collected date/time: 11/30/20 14:34

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 18:58	WG1588710
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 18:58	WG1588710
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 18:58	WG1588710
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 18:58	WG1588710
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 18:58	WG1588710
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 18:58	WG1588710
2,2-Dichloropropane	ND		0.00100	1	12/09/2020 18:58	WG1588710
Di-isopropyl ether	ND		0.00100	1	12/09/2020 18:58	WG1588710
Ethylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Isopropylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 18:58	WG1588710
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 18:58	WG1588710
Methylene Chloride	ND		0.00500	1	12/09/2020 18:58	WG1588710
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 18:58	WG1588710
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 18:58	WG1588710
Naphthalene	ND	J4	0.00500	1	12/09/2020 18:58	WG1588710
n-Propylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Styrene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
Tetrachloroethene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Toluene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,2,3-Trichlorobenzene	ND	J4	0.00100	1	12/09/2020 18:58	WG1588710
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1,1-Trichloroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 18:58	WG1588710
Trichloroethene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 18:58	WG1588710
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 18:58	WG1588710
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 18:58	WG1588710
Vinyl chloride	ND		0.00100	1	12/09/2020 18:58	WG1588710
Xylenes, Total	ND		0.00300	1	12/09/2020 18:58	WG1588710
(S) Toluene-d8	115		80.0-120		12/09/2020 18:58	WG1588710
(S) 4-Bromofluorobenzene	96.3		77.0-126		12/09/2020 18:58	WG1588710
(S) 1,2-Dichloroethane-d4	112		70.0-130		12/09/2020 18:58	WG1588710



Collected date/time: 12/01/20 09:17

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	21000		400	1	12/05/2020 13:00	WG1587090

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.18		0.100	1	12/11/2020 18:04	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.32	T8	1		12/10/2020 21:05	WG1589713

Sample Narrative:

L1292762-05 WG1589713: 7.32 at 18.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	12.3		10.0	10	12/13/2020 02:01	WG1589872
Chloride	8030		100	100	12/13/2020 02:19	WG1589872
Fluoride	ND		1.50	10	12/13/2020 02:01	WG1589872
Sulfate	2420		500	100	12/13/2020 02:19	WG1589872

Sample Narrative:

L1292762-05 WG1589872: dilution due to sample matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

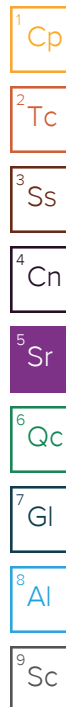
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	12/09/2020 05:12	WG1588716
Acrolein	ND		0.0500	1	12/09/2020 05:12	WG1588716
Acrylonitrile	ND		0.0100	1	12/09/2020 05:12	WG1588716
Benzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Bromobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Bromodichloromethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
Bromoform	ND		0.00100	1	12/09/2020 05:12	WG1588716
Bromomethane	ND		0.00500	1	12/09/2020 05:12	WG1588716
n-Butylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
sec-Butylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
tert-Butylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Carbon tetrachloride	ND		0.00100	1	12/09/2020 05:12	WG1588716
Chlorobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Chlorodibromomethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
Chloroethane	ND		0.00500	1	12/09/2020 05:12	WG1588716
Chloroform	ND		0.00500	1	12/09/2020 05:12	WG1588716
Chloromethane	ND		0.00250	1	12/09/2020 05:12	WG1588716
2-Chlorotoluene	ND		0.00100	1	12/09/2020 05:12	WG1588716
4-Chlorotoluene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 05:12	WG1588716
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
Dibromomethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716

Collected date/time: 12/01/20 09:17

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 05:12	WG1588716
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 05:12	WG1588716
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 05:12	WG1588716
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 05:12	WG1588716
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 05:12	WG1588716
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 05:12	WG1588716
2,2-Dichloropropane	ND	J4	0.00100	1	12/09/2020 05:12	WG1588716
Di-isopropyl ether	ND		0.00100	1	12/09/2020 05:12	WG1588716
Ethylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Isopropylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 05:12	WG1588716
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 05:12	WG1588716
Methylene Chloride	ND		0.00500	1	12/09/2020 05:12	WG1588716
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 05:12	WG1588716
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 05:12	WG1588716
Naphthalene	ND		0.00500	1	12/09/2020 05:12	WG1588716
n-Propylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Styrene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
Tetrachloroethene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Toluene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2,3-Trichlorobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,1,1-Trichloroethane	ND	J4	0.00100	1	12/09/2020 05:12	WG1588716
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 05:12	WG1588716
Trichloroethene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 05:12	WG1588716
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 05:12	WG1588716
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:12	WG1588716
Vinyl chloride	ND		0.00100	1	12/09/2020 05:12	WG1588716
Xylenes, Total	ND		0.00300	1	12/09/2020 05:12	WG1588716
(S) Toluene-d8	106		80.0-120		12/09/2020 05:12	WG1588716
(S) 4-Bromofluorobenzene	85.0		77.0-126		12/09/2020 05:12	WG1588716
(S) 1,2-Dichloroethane-d4	110		70.0-130		12/09/2020 05:12	WG1588716



Collected date/time: 12/01/20 11:18

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	31100		500	1	12/05/2020 13:00	WG1587090

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3.45		0.100	1	12/11/2020 18:06	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.17	T8	1	12/10/2020 21:05	WG1589713	

Sample Narrative:

L1292762-06 WG1589713: 7.17 at 18.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	22.4		10.0	10	12/13/2020 02:38	WG1589872
Chloride	18600		500	500	12/13/2020 02:56	WG1589872
Fluoride	ND		1.50	10	12/13/2020 02:38	WG1589872
Sulfate	ND		2500	500	12/13/2020 02:56	WG1589872

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	12/09/2020 05:32	WG1588716
Acrolein	ND		0.0500	1	12/09/2020 05:32	WG1588716
Acrylonitrile	ND		0.0100	1	12/09/2020 05:32	WG1588716
Benzene	0.00177		0.00100	1	12/09/2020 05:32	WG1588716
Bromobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Bromodichloromethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
Bromoform	ND		0.00100	1	12/09/2020 05:32	WG1588716
Bromomethane	ND		0.00500	1	12/09/2020 05:32	WG1588716
n-Butylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
sec-Butylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
tert-Butylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Carbon tetrachloride	ND		0.00100	1	12/09/2020 05:32	WG1588716
Chlorobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Chlorodibromomethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
Chloroethane	ND		0.00500	1	12/09/2020 05:32	WG1588716
Chloroform	ND		0.00500	1	12/09/2020 05:32	WG1588716
Chloromethane	ND		0.00250	1	12/09/2020 05:32	WG1588716
2-Chlorotoluene	ND		0.00100	1	12/09/2020 05:32	WG1588716
4-Chlorotoluene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 05:32	WG1588716
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
Dibromomethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 05:32	WG1588716
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 05:32	WG1588716

Collected date/time: 12/01/20 11:18

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 05:32	WG1588716
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 05:32	WG1588716
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 05:32	WG1588716
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 05:32	WG1588716
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 05:32	WG1588716
2,2-Dichloropropane	ND	J4	0.00100	1	12/09/2020 05:32	WG1588716
Di-isopropyl ether	ND		0.00100	1	12/09/2020 05:32	WG1588716
Ethylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Isopropylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 05:32	WG1588716
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 05:32	WG1588716
Methylene Chloride	ND		0.00500	1	12/09/2020 05:32	WG1588716
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 05:32	WG1588716
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 05:32	WG1588716
Naphthalene	ND		0.00500	1	12/09/2020 05:32	WG1588716
n-Propylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Styrene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
Tetrachloroethene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Toluene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2,3-Trichlorobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,1,1-Trichloroethane	ND	J4	0.00100	1	12/09/2020 05:32	WG1588716
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 05:32	WG1588716
Trichloroethene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 05:32	WG1588716
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 05:32	WG1588716
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:32	WG1588716
Vinyl chloride	ND		0.00100	1	12/09/2020 05:32	WG1588716
Xylenes, Total	0.00452		0.00300	1	12/09/2020 05:32	WG1588716
(S) Toluene-d8	108		80.0-120		12/09/2020 05:32	WG1588716
(S) 4-Bromofluorobenzene	90.8		77.0-126		12/09/2020 05:32	WG1588716
(S) 1,2-Dichloroethane-d4	107		70.0-130		12/09/2020 05:32	WG1588716

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 12/01/20 13:05

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	10100		200	1	12/05/2020 13:00	WG1587090

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.472		0.100	1	12/11/2020 18:07	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.36	T8	1		12/10/2020 21:05	WG1589713

Sample Narrative:

L1292762-07 WG1589713: 7.36 at 18.3C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	12/13/2020 03:33	WG1589872
Chloride	6320		100	100	12/13/2020 03:33	WG1589872
Fluoride	0.603		0.150	1	12/13/2020 03:14	WG1589872
Sulfate	2280		500	100	12/13/2020 03:33	WG1589872

Sample Narrative:

L1292762-07 WG1589872: dilution due to sample matrix

Volatile Organic Compounds (GC/MS) by Method 8260B

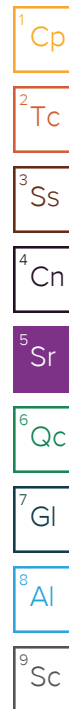
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	12/09/2020 05:52	WG1588716
Acrolein	ND		0.0500	1	12/09/2020 05:52	WG1588716
Acrylonitrile	ND		0.0100	1	12/09/2020 05:52	WG1588716
Benzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Bromobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Bromodichloromethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
Bromoform	ND		0.00100	1	12/09/2020 05:52	WG1588716
Bromomethane	ND		0.00500	1	12/09/2020 05:52	WG1588716
n-Butylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
sec-Butylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
tert-Butylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Carbon tetrachloride	ND		0.00100	1	12/09/2020 05:52	WG1588716
Chlorobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Chlorodibromomethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
Chloroethane	ND		0.00500	1	12/09/2020 05:52	WG1588716
Chloroform	ND		0.00500	1	12/09/2020 05:52	WG1588716
Chloromethane	ND		0.00250	1	12/09/2020 05:52	WG1588716
2-Chlorotoluene	ND		0.00100	1	12/09/2020 05:52	WG1588716
4-Chlorotoluene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 05:52	WG1588716
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
Dibromomethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716

Collected date/time: 12/01/20 13:05

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 05:52	WG1588716
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 05:52	WG1588716
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 05:52	WG1588716
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 05:52	WG1588716
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 05:52	WG1588716
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 05:52	WG1588716
2,2-Dichloropropane	ND	J4	0.00100	1	12/09/2020 05:52	WG1588716
Di-isopropyl ether	ND		0.00100	1	12/09/2020 05:52	WG1588716
Ethylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Isopropylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 05:52	WG1588716
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 05:52	WG1588716
Methylene Chloride	ND		0.00500	1	12/09/2020 05:52	WG1588716
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 05:52	WG1588716
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 05:52	WG1588716
Naphthalene	ND		0.00500	1	12/09/2020 05:52	WG1588716
n-Propylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Styrene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
Tetrachloroethene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Toluene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2,3-Trichlorobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,1,1-Trichloroethane	ND	J4	0.00100	1	12/09/2020 05:52	WG1588716
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 05:52	WG1588716
Trichloroethene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 05:52	WG1588716
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 05:52	WG1588716
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 05:52	WG1588716
Vinyl chloride	ND		0.00100	1	12/09/2020 05:52	WG1588716
Xylenes, Total	ND		0.00300	1	12/09/2020 05:52	WG1588716
(S) Toluene-d8	105		80.0-120		12/09/2020 05:52	WG1588716
(S) 4-Bromofluorobenzene	89.5		77.0-126		12/09/2020 05:52	WG1588716
(S) 1,2-Dichloroethane-d4	109		70.0-130		12/09/2020 05:52	WG1588716



Collected date/time: 12/01/20 14:07

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	12700		200	1	12/05/2020 13:00	WG1587090

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3.28		0.100	1	12/11/2020 18:08	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.26	T8	1	12/10/2020 21:05	WG1589713	

Sample Narrative:

L1292762-08 WG1589713: 7.26 at 18.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		10.0	10	12/13/2020 20:23	WG1589877
Chloride	5730		100	100	12/13/2020 20:38	WG1589877
Fluoride	ND		1.50	10	12/13/2020 20:23	WG1589877
Sulfate	2360		500	100	12/13/2020 20:38	WG1589877

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	12/09/2020 06:13	WG1588716
Acrolein	ND		0.0500	1	12/09/2020 06:13	WG1588716
Acrylonitrile	ND		0.0100	1	12/09/2020 06:13	WG1588716
Benzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Bromobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Bromodichloromethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
Bromoform	ND		0.00100	1	12/09/2020 06:13	WG1588716
Bromomethane	ND		0.00500	1	12/09/2020 06:13	WG1588716
n-Butylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
sec-Butylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
tert-Butylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Carbon tetrachloride	ND		0.00100	1	12/09/2020 06:13	WG1588716
Chlorobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Chlorodibromomethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
Chloroethane	ND		0.00500	1	12/09/2020 06:13	WG1588716
Chloroform	ND		0.00500	1	12/09/2020 06:13	WG1588716
Chloromethane	ND		0.00250	1	12/09/2020 06:13	WG1588716
2-Chlorotoluene	ND		0.00100	1	12/09/2020 06:13	WG1588716
4-Chlorotoluene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 06:13	WG1588716
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
Dibromomethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 06:13	WG1588716
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 06:13	WG1588716

Collected date/time: 12/01/20 14:07

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 06:13	WG1588716
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 06:13	WG1588716
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 06:13	WG1588716
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 06:13	WG1588716
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 06:13	WG1588716
2,2-Dichloropropane	ND	J4	0.00100	1	12/09/2020 06:13	WG1588716
Di-isopropyl ether	ND		0.00100	1	12/09/2020 06:13	WG1588716
Ethylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Isopropylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 06:13	WG1588716
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 06:13	WG1588716
Methylene Chloride	ND		0.00500	1	12/09/2020 06:13	WG1588716
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 06:13	WG1588716
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 06:13	WG1588716
Naphthalene	ND		0.00500	1	12/09/2020 06:13	WG1588716
n-Propylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Styrene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
Tetrachloroethene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Toluene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2,3-Trichlorobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,1,1-Trichloroethane	ND	J4	0.00100	1	12/09/2020 06:13	WG1588716
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 06:13	WG1588716
Trichloroethene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 06:13	WG1588716
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 06:13	WG1588716
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 06:13	WG1588716
Vinyl chloride	ND		0.00100	1	12/09/2020 06:13	WG1588716
Xylenes, Total	ND		0.00300	1	12/09/2020 06:13	WG1588716
(S) Toluene-d8	106		80.0-120		12/09/2020 06:13	WG1588716
(S) 4-Bromofluorobenzene	85.2		77.0-126		12/09/2020 06:13	WG1588716
(S) 1,2-Dichloroethane-d4	106		70.0-130		12/09/2020 06:13	WG1588716

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 12/01/20 14:48

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	25700		400	1	12/05/2020 13:00	WG1587090

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.233		0.100	1	12/11/2020 18:09	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.31	T8	1	12/10/2020 21:05	WG1589713	

Sample Narrative:

L1292762-09 WG1589713: 7.31 at 18.3C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	15.6		10.0	10	12/13/2020 20:54	WG1589877
Chloride	11300		500	500	12/13/2020 21:10	WG1589877
Fluoride	ND		1.50	10	12/13/2020 20:54	WG1589877
Sulfate	1770		500	100	12/15/2020 04:05	WG1589877

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND	J4	0.0500	1	12/09/2020 06:33	WG1588716
Acrolein	ND		0.0500	1	12/09/2020 06:33	WG1588716
Acrylonitrile	ND		0.0100	1	12/09/2020 06:33	WG1588716
Benzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Bromobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Bromodichloromethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
Bromoform	ND		0.00100	1	12/09/2020 06:33	WG1588716
Bromomethane	ND		0.00500	1	12/09/2020 06:33	WG1588716
n-Butylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
sec-Butylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
tert-Butylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Carbon tetrachloride	ND		0.00100	1	12/09/2020 06:33	WG1588716
Chlorobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Chlorodibromomethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
Chloroethane	ND		0.00500	1	12/09/2020 06:33	WG1588716
Chloroform	ND		0.00500	1	12/09/2020 06:33	WG1588716
Chloromethane	ND		0.00250	1	12/09/2020 06:33	WG1588716
2-Chlorotoluene	ND		0.00100	1	12/09/2020 06:33	WG1588716
4-Chlorotoluene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/09/2020 06:33	WG1588716
1,2-Dibromoethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
Dibromomethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2-Dichlorobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,3-Dichlorobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,4-Dichlorobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Dichlorodifluoromethane	ND		0.00500	1	12/09/2020 06:33	WG1588716
1,1-Dichloroethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2-Dichloroethane	ND		0.00100	1	12/09/2020 06:33	WG1588716

Collected date/time: 12/01/20 14:48

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	12/09/2020 06:33	WG1588716
cis-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 06:33	WG1588716
trans-1,2-Dichloroethene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2-Dichloropropane	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,1-Dichloropropene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,3-Dichloropropane	ND		0.00100	1	12/09/2020 06:33	WG1588716
cis-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 06:33	WG1588716
trans-1,3-Dichloropropene	ND		0.00100	1	12/09/2020 06:33	WG1588716
2,2-Dichloropropane	ND	J4	0.00100	1	12/09/2020 06:33	WG1588716
Di-isopropyl ether	ND		0.00100	1	12/09/2020 06:33	WG1588716
Ethylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Hexachloro-1,3-butadiene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Isopropylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
p-Isopropyltoluene	ND		0.00100	1	12/09/2020 06:33	WG1588716
2-Butanone (MEK)	ND		0.0100	1	12/09/2020 06:33	WG1588716
Methylene Chloride	ND		0.00500	1	12/09/2020 06:33	WG1588716
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/09/2020 06:33	WG1588716
Methyl tert-butyl ether	ND		0.00100	1	12/09/2020 06:33	WG1588716
Naphthalene	ND		0.00500	1	12/09/2020 06:33	WG1588716
n-Propylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Styrene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
Tetrachloroethene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Toluene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2,3-Trichlorobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2,4-Trichlorobenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,1,1-Trichloroethane	ND	J4	0.00100	1	12/09/2020 06:33	WG1588716
1,1,2-Trichloroethane	ND		0.00100	1	12/09/2020 06:33	WG1588716
Trichloroethene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Trichlorofluoromethane	ND		0.00500	1	12/09/2020 06:33	WG1588716
1,2,3-Trichloropropane	ND		0.00250	1	12/09/2020 06:33	WG1588716
1,2,4-Trimethylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,2,3-Trimethylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
1,3,5-Trimethylbenzene	ND		0.00100	1	12/09/2020 06:33	WG1588716
Vinyl chloride	ND		0.00100	1	12/09/2020 06:33	WG1588716
Xylenes, Total	ND		0.00300	1	12/09/2020 06:33	WG1588716
(S) Toluene-d8	108		80.0-120		12/09/2020 06:33	WG1588716
(S) 4-Bromofluorobenzene	87.4		77.0-126		12/09/2020 06:33	WG1588716
(S) 1,2-Dichloroethane-d4	108		70.0-130		12/09/2020 06:33	WG1588716

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 12/02/20 10:20

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	4670		20.0	1	12/09/2020 03:08	WG1588510

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.24		0.100	1	12/11/2020 18:12	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.29	<u>T8</u>	1	12/10/2020 21:05	WG1589713	

Sample Narrative:

L1292762-10 WG1589713: 7.29 at 20.5C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	12/13/2020 21:42	WG1589877
Chloride	758		100	100	12/13/2020 21:42	WG1589877
Fluoride	0.822		0.150	1	12/13/2020 21:26	WG1589877
Sulfate	2060		500	100	12/13/2020 21:42	WG1589877

Volatile Organic Compounds (GC/MS) by Method 8260B

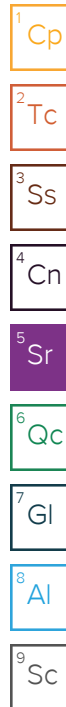
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	12/10/2020 03:33	WG1588993
Acrolein	ND		0.0500	1	12/10/2020 03:33	WG1588993
Acrylonitrile	ND		0.0100	1	12/10/2020 03:33	WG1588993
Benzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Bromobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Bromodichloromethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
Bromoform	ND		0.00100	1	12/10/2020 03:33	WG1588993
Bromomethane	ND		0.00500	1	12/10/2020 03:33	WG1588993
n-Butylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
sec-Butylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
tert-Butylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Carbon tetrachloride	ND		0.00100	1	12/10/2020 03:33	WG1588993
Chlorobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Chlorodibromomethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
Chloroethane	ND		0.00500	1	12/10/2020 03:33	WG1588993
Chloroform	ND		0.00500	1	12/10/2020 03:33	WG1588993
Chloromethane	ND		0.00250	1	12/10/2020 03:33	WG1588993
2-Chlorotoluene	ND		0.00100	1	12/10/2020 03:33	WG1588993
4-Chlorotoluene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/10/2020 03:33	WG1588993
1,2-Dibromoethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
Dibromomethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2-Dichlorobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,3-Dichlorobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,4-Dichlorobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Dichlorodifluoromethane	ND		0.00500	1	12/10/2020 03:33	WG1588993
1,1-Dichloroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2-Dichloroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993

Collected date/time: 12/02/20 10:20

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	12/10/2020 03:33	WG1588993
cis-1,2-Dichloroethene	ND		0.00100	1	12/10/2020 03:33	WG1588993
trans-1,2-Dichloroethene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2-Dichloropropane	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,1-Dichloropropene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,3-Dichloropropane	ND		0.00100	1	12/10/2020 03:33	WG1588993
cis-1,3-Dichloropropene	ND		0.00100	1	12/10/2020 03:33	WG1588993
trans-1,3-Dichloropropene	ND		0.00100	1	12/10/2020 03:33	WG1588993
2,2-Dichloropropane	ND		0.00100	1	12/10/2020 03:33	WG1588993
Di-isopropyl ether	ND		0.00100	1	12/10/2020 03:33	WG1588993
Ethylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Hexachloro-1,3-butadiene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Isopropylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
p-Isopropyltoluene	ND		0.00100	1	12/10/2020 03:33	WG1588993
2-Butanone (MEK)	ND		0.0100	1	12/10/2020 03:33	WG1588993
Methylene Chloride	ND		0.00500	1	12/10/2020 03:33	WG1588993
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/10/2020 03:33	WG1588993
Methyl tert-butyl ether	ND		0.00100	1	12/10/2020 03:33	WG1588993
Naphthalene	ND		0.00500	1	12/10/2020 03:33	WG1588993
n-Propylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Styrene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
Tetrachloroethene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Toluene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2,3-Trichlorobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2,4-Trichlorobenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,1,1-Trichloroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,1,2-Trichloroethane	ND		0.00100	1	12/10/2020 03:33	WG1588993
Trichloroethene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Trichlorofluoromethane	ND		0.00500	1	12/10/2020 03:33	WG1588993
1,2,3-Trichloropropane	ND		0.00250	1	12/10/2020 03:33	WG1588993
1,2,4-Trimethylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,2,3-Trimethylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
1,3,5-Trimethylbenzene	ND		0.00100	1	12/10/2020 03:33	WG1588993
Vinyl chloride	ND		0.00100	1	12/10/2020 03:33	WG1588993
Xylenes, Total	ND		0.00300	1	12/10/2020 03:33	WG1588993
(S) Toluene-d8	111		80.0-120		12/10/2020 03:33	WG1588993
(S) 4-Bromofluorobenzene	85.5		77.0-126		12/10/2020 03:33	WG1588993
(S) 1,2-Dichloroethane-d4	105		70.0-130		12/10/2020 03:33	WG1588993



Collected date/time: 12/02/20 12:40

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	6100		40.0	1	12/09/2020 03:08	WG1588510

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Nitrate-Nitrite	2.38		0.100	1	12/11/2020 18:21	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	su				date / time	
pH	7.21	T8	1		12/10/2020 21:05	WG1589713

Sample Narrative:

L1292762-11 WG1589713: 7.21 at 18.5C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	ND		10.0	10	12/13/2020 21:58	WG1589877
Chloride	1410		100	100	12/13/2020 22:14	WG1589877
Fluoride	ND		1.50	10	12/13/2020 21:58	WG1589877
Sulfate	2380		500	100	12/13/2020 22:14	WG1589877

Volatile Organic Compounds (GC/MS) by Method 8260B

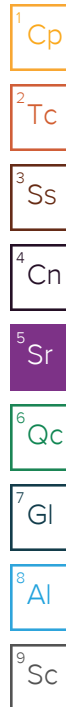
Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acetone	ND		0.0500	1	12/10/2020 03:53	WG1588993
Acrolein	ND		0.0500	1	12/10/2020 03:53	WG1588993
Acrylonitrile	ND		0.0100	1	12/10/2020 03:53	WG1588993
Benzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Bromobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Bromodichloromethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
Bromoform	ND		0.00100	1	12/10/2020 03:53	WG1588993
Bromomethane	ND		0.00500	1	12/10/2020 03:53	WG1588993
n-Butylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
sec-Butylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
tert-Butylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Carbon tetrachloride	ND		0.00100	1	12/10/2020 03:53	WG1588993
Chlorobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Chlorodibromomethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
Chloroethane	ND		0.00500	1	12/10/2020 03:53	WG1588993
Chloroform	ND		0.00500	1	12/10/2020 03:53	WG1588993
Chloromethane	ND		0.00250	1	12/10/2020 03:53	WG1588993
2-Chlorotoluene	ND		0.00100	1	12/10/2020 03:53	WG1588993
4-Chlorotoluene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/10/2020 03:53	WG1588993
1,2-Dibromoethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
Dibromomethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2-Dichlorobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,3-Dichlorobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,4-Dichlorobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Dichlorodifluoromethane	ND		0.00500	1	12/10/2020 03:53	WG1588993
1,1-Dichloroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2-Dichloroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993

Collected date/time: 12/02/20 12:40

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	12/10/2020 03:53	WG1588993
cis-1,2-Dichloroethene	ND		0.00100	1	12/10/2020 03:53	WG1588993
trans-1,2-Dichloroethene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2-Dichloropropane	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,1-Dichloropropene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,3-Dichloropropane	ND		0.00100	1	12/10/2020 03:53	WG1588993
cis-1,3-Dichloropropene	ND		0.00100	1	12/10/2020 03:53	WG1588993
trans-1,3-Dichloropropene	ND		0.00100	1	12/10/2020 03:53	WG1588993
2,2-Dichloropropane	ND		0.00100	1	12/10/2020 03:53	WG1588993
Di-isopropyl ether	ND		0.00100	1	12/10/2020 03:53	WG1588993
Ethylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Hexachloro-1,3-butadiene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Isopropylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
p-Isopropyltoluene	ND		0.00100	1	12/10/2020 03:53	WG1588993
2-Butanone (MEK)	ND		0.0100	1	12/10/2020 03:53	WG1588993
Methylene Chloride	ND		0.00500	1	12/10/2020 03:53	WG1588993
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/10/2020 03:53	WG1588993
Methyl tert-butyl ether	ND		0.00100	1	12/10/2020 03:53	WG1588993
Naphthalene	ND		0.00500	1	12/10/2020 03:53	WG1588993
n-Propylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Styrene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
Tetrachloroethene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Toluene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2,3-Trichlorobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2,4-Trichlorobenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,1,1-Trichloroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,1,2-Trichloroethane	ND		0.00100	1	12/10/2020 03:53	WG1588993
Trichloroethene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Trichlorofluoromethane	ND		0.00500	1	12/10/2020 03:53	WG1588993
1,2,3-Trichloropropane	ND		0.00250	1	12/10/2020 03:53	WG1588993
1,2,4-Trimethylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,2,3-Trimethylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
1,3,5-Trimethylbenzene	ND		0.00100	1	12/10/2020 03:53	WG1588993
Vinyl chloride	ND		0.00100	1	12/10/2020 03:53	WG1588993
Xylenes, Total	ND		0.00300	1	12/10/2020 03:53	WG1588993
(S) Toluene-d8	110		80.0-120		12/10/2020 03:53	WG1588993
(S) 4-Bromofluorobenzene	86.3		77.0-126		12/10/2020 03:53	WG1588993
(S) 1,2-Dichloroethane-d4	107		70.0-130		12/10/2020 03:53	WG1588993



Collected date/time: 12/02/20 14:15

L1292762

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	8480		100	1	12/09/2020 03:08	WG1588510

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.76		0.100	1	12/11/2020 18:22	WG1589631

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.35	T8	1		12/10/2020 21:05	WG1589713

Sample Narrative:

L1292762-12 WG1589713: 7.35 at 18.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		10.0	10	12/13/2020 22:29	WG1589877
Chloride	3100		100	100	12/13/2020 22:45	WG1589877
Fluoride	ND		1.50	10	12/13/2020 22:29	WG1589877
Sulfate	2420		500	100	12/13/2020 22:45	WG1589877

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	12/10/2020 15:46	WG1589873
Acrolein	ND		0.0500	1	12/10/2020 15:46	WG1589873
Acrylonitrile	ND		0.0100	1	12/10/2020 15:46	WG1589873
Benzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Bromobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Bromodichloromethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
Bromoform	ND	J4	0.00100	1	12/10/2020 15:46	WG1589873
Bromomethane	ND		0.00500	1	12/10/2020 15:46	WG1589873
n-Butylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
sec-Butylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
tert-Butylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Carbon tetrachloride	ND		0.00100	1	12/10/2020 15:46	WG1589873
Chlorobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Chlorodibromomethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
Chloroethane	ND		0.00500	1	12/10/2020 15:46	WG1589873
Chloroform	ND		0.00500	1	12/10/2020 15:46	WG1589873
Chloromethane	ND		0.00250	1	12/10/2020 15:46	WG1589873
2-Chlorotoluene	ND		0.00100	1	12/10/2020 15:46	WG1589873
4-Chlorotoluene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	12/10/2020 15:46	WG1589873
1,2-Dibromoethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
Dibromomethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2-Dichlorobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,3-Dichlorobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,4-Dichlorobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Dichlorodifluoromethane	ND		0.00500	1	12/10/2020 15:46	WG1589873
1,1-Dichloroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2-Dichloroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873

Collected date/time: 12/02/20 14:15

L1292762

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	12/10/2020 15:46	WG1589873
cis-1,2-Dichloroethene	ND		0.00100	1	12/10/2020 15:46	WG1589873
trans-1,2-Dichloroethene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2-Dichloropropane	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,1-Dichloropropene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,3-Dichloropropane	ND		0.00100	1	12/10/2020 15:46	WG1589873
cis-1,3-Dichloropropene	ND	J4	0.00100	1	12/10/2020 15:46	WG1589873
trans-1,3-Dichloropropene	ND		0.00100	1	12/10/2020 15:46	WG1589873
2,2-Dichloropropane	ND		0.00100	1	12/10/2020 15:46	WG1589873
Di-isopropyl ether	ND		0.00100	1	12/10/2020 15:46	WG1589873
Ethylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Hexachloro-1,3-butadiene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Isopropylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
p-Isopropyltoluene	ND		0.00100	1	12/10/2020 15:46	WG1589873
2-Butanone (MEK)	ND		0.0100	1	12/10/2020 15:46	WG1589873
Methylene Chloride	ND		0.00500	1	12/10/2020 15:46	WG1589873
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	12/10/2020 15:46	WG1589873
Methyl tert-butyl ether	ND		0.00100	1	12/10/2020 15:46	WG1589873
Naphthalene	ND		0.00500	1	12/10/2020 15:46	WG1589873
n-Propylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Styrene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,1,1,2-Tetrachloroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
Tetrachloroethene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Toluene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2,3-Trichlorobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2,4-Trichlorobenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,1,1-Trichloroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,1,2-Trichloroethane	ND		0.00100	1	12/10/2020 15:46	WG1589873
Trichloroethene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Trichlorofluoromethane	ND		0.00500	1	12/10/2020 15:46	WG1589873
1,2,3-Trichloropropane	ND		0.00250	1	12/10/2020 15:46	WG1589873
1,2,4-Trimethylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,2,3-Trimethylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
1,3,5-Trimethylbenzene	ND		0.00100	1	12/10/2020 15:46	WG1589873
Vinyl chloride	ND		0.00100	1	12/10/2020 15:46	WG1589873
Xylenes, Total	ND		0.00300	1	12/10/2020 15:46	WG1589873
(S) Toluene-d8	105		80.0-120		12/10/2020 15:46	WG1589873
(S) 4-Bromofluorobenzene	103		77.0-126		12/10/2020 15:46	WG1589873
(S) 1,2-Dichloroethane-d4	98.0		70.0-130		12/10/2020 15:46	WG1589873

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Gravimetric Analysis by Method 2540 C-2011 [L1292762-01,02,03,04](#)

Method Blank (MB)

(MB) R3601211-1 12/05/20 16:52

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L1292271-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292271-01 12/05/20 16:52 • (DUP) R3601211-3 12/05/20 16:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	228	233	1	2.17		5

L1292271-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1292271-02 12/05/20 16:52 • (DUP) R3601211-4 12/05/20 16:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	211	212	1	0.473		5

Laboratory Control Sample (LCS)

(LCS) R3601211-2 12/05/20 16:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8690	98.8	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Gravimetric Analysis by Method 2540 C-2011 [L1292762-05,06,07,08,09](#)

Method Blank (MB)

(MB) R3601203-1 12/05/20 13:00

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L1292762-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1292762-07 12/05/20 13:00 • (DUP) R3601203-3 12/05/20 13:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	10100	9980	1	0.798		5

L1292762-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1292762-08 12/05/20 13:00 • (DUP) R3601203-4 12/05/20 13:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	12700	12100	1	4.67		5

Laboratory Control Sample (LCS)

(LCS) R3601203-2 12/05/20 13:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8630	98.1	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Gravimetric Analysis by Method 2540 C-2011

[L1292762-10,11,12](#)

Method Blank (MB)

(MB) R3601985-1 12/09/20 03:08

Analyte	MB Result mg/l	<u>MB Qualifier</u>	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1292762-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1292762-11 12/09/20 03:08 • (DUP) R3601985-3 12/09/20 03:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Dissolved Solids	6100	6100	1	0.131		5

L1292903-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292903-01 12/09/20 03:08 • (DUP) R3601985-4 12/09/20 03:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Dissolved Solids	1730	1720	1	0.463		5

Laboratory Control Sample (LCS)

(LCS) R3601985-2 12/09/20 03:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Dissolved Solids	8800	8640	98.2	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 353.2

[L1292762-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3602717-1 12/11/20 17:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0500	0.100

L1292762-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292762-01 12/11/20 17:52 • (DUP) R3602717-3 12/11/20 17:53

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	4.25	4.25	1	0.000		20

L1292762-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1292762-09 12/11/20 18:09 • (DUP) R3602717-6 12/11/20 18:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	0.233	0.234	1	0.428		20

Laboratory Control Sample (LCS)

(LCS) R3602717-2 12/11/20 17:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.69	108	90.0-110	

L1292762-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292762-02 12/11/20 17:54 • (MS) R3602717-4 12/11/20 17:55 • (MSD) R3602717-5 12/11/20 17:57

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	1.67	4.16	4.12	99.6	98.0	1	90.0-110			0.966	20

L1292762-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1292762-10 12/11/20 18:12 • (MS) R3602717-7 12/11/20 18:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2.50	2.24	4.68	97.6	1	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9040C

[L1292762-01,02,03,04,05,06,07,08,09,10,11,12](#)

L1292762-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292762-01 12/10/20 21:05 • (DUP) R3602376-2 12/10/20 21:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	su	su		%		%
pH	7.36	7.37	1	0.136		1

Sample Narrative:
OS: 7.36 at 18.3C
DUP: 7.37 at 18.4C

Laboratory Control Sample (LCS)

(LCS) R3602376-1 12/10/20 21:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:
LCS: 9.99 at 19.7C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9056A

[L1292762-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3602933-1 12/12/20 09:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1292729-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292729-01 12/12/20 13:36 • (DUP) R3602933-3 12/12/20 13:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP RPD Limits %
Bromide	ND	ND	1	0.782	15
Chloride	4.82	4.85	1	0.526	15
Fluoride	ND	ND	1	0.716	15
Sulfate	68.3	69.0	1	1.02	15

L1292755-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1292755-05 12/12/20 21:43 • (DUP) R3602933-6 12/12/20 22:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP RPD Limits %
Bromide	ND	ND	1	0.000	15
Chloride	1.10	1.08	1	2.47	15
Fluoride	1.82	1.83	1	0.454	15
Sulfate	10.8	10.9	1	1.60	15

Laboratory Control Sample (LCS)

(LCS) R3602933-2 12/12/20 10:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	38.8	96.9	80.0-120	
Chloride	40.0	39.1	97.7	80.0-120	
Fluoride	8.00	8.09	101	80.0-120	
Sulfate	40.0	39.5	98.7	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 9056A L1292762-01,02,03,04,05,06,07

L1292729-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292729-02 12/12/20 14:12 • (MS) R3602933-4 12/12/20 14:31 • (MSD) R3602933-5 12/12/20 14:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	50.2	49.7	100	99.5	1	80.0-120			0.936	15
Chloride	50.0	3.86	55.0	55.7	102	104	1	80.0-120			1.40	15
Fluoride	5.00	ND	5.25	5.32	105	106	1	80.0-120			1.35	15
Sulfate	50.0	76.2	126	126	99.0	99.5	1	80.0-120	E	E	0.221	15

L1292755-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1292755-06 12/12/20 22:20 • (MS) R3602933-7 12/12/20 22:38

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	50.4	101	1	80.0-120	
Chloride	50.0	ND	50.4	101	1	80.0-120	
Fluoride	5.00	ND	5.07	101	1	80.0-120	
Sulfate	50.0	ND	50.5	101	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9056A

[L1292762-08,09,10,11,12](#)

Method Blank (MB)

(MB) R3603635-1 12/13/20 11:05

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1292787-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1292787-02 12/14/20 00:05 • (DUP) R3603635-3 12/14/20 00:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	ND	1	0.000		15
Chloride	ND	ND	1	0.000		15
Fluoride	ND	ND	1	0.000		15
Sulfate	ND	ND	1	0.000		15

L1292885-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1292885-04 12/14/20 03:00 • (DUP) R3603635-6 12/14/20 03:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	1.13	1.16	1	2.04		15
Chloride	239	239	1	0.00774	E	15
Fluoride	ND	ND	1	1.46		15
Sulfate	28.8	28.8	1	0.291		15

Laboratory Control Sample (LCS)

(LCS) R3603635-2 12/13/20 11:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	38.3	95.8	80.0-120	
Chloride	40.0	39.1	97.7	80.0-120	
Fluoride	8.00	8.05	101	80.0-120	
Sulfate	40.0	39.4	98.4	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 9056A [L1292762-08,09,10,11,12](#)

L1292787-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292787-02 12/14/20 00:05 • (MS) R3603635-4 12/14/20 00:37 • (MSD) R3603635-5 12/14/20 00:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	43.7	44.0	87.4	87.9	1	80.0-120			0.569	15
Chloride	50.0	ND	44.7	44.9	89.4	89.8	1	80.0-120			0.453	15
Fluoride	5.00	ND	4.47	4.48	89.3	89.7	1	80.0-120			0.373	15
Sulfate	50.0	ND	44.4	44.6	88.9	89.2	1	80.0-120			0.368	15

L1292885-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1292885-04 12/14/20 03:00 • (MS) R3603635-7 12/14/20 03:32

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	1.13	48.4	94.6	1	80.0-120	
Chloride	50.0	239	277	75.2	1	80.0-120	E V
Fluoride	5.00	ND	4.92	96.7	1	80.0-120	
Sulfate	50.0	28.8	77.5	97.4	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-01,02,03,04

Method Blank (MB)

(MB) R3601772-3 12/09/20 09:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-01,02,03,04

Method Blank (MB)

(MB) R3601772-3 12/09/20 09:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	115			80.0-120
(S) 4-Bromofluorobenzene	95.4			77.0-126
(S) 1,2-Dichloroethane-d4	111			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3601772-1 12/09/20 08:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0263	105	19.0-160	
Acrolein	0.0250	0.00896	35.8	10.0-160	
Acrylonitrile	0.0250	0.0355	142	55.0-149	
Benzene	0.00500	0.00470	94.0	70.0-123	

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-01,02,03,04

Laboratory Control Sample (LCS)

(LCS) R3601772-1 12/09/20 08:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromobenzene	0.00500	0.00510	102	73.0-121	
Bromodichloromethane	0.00500	0.00470	94.0	75.0-120	
Bromoform	0.00500	0.00446	89.2	68.0-132	
Bromomethane	0.00500	0.00229	45.8	10.0-160	
n-Butylbenzene	0.00500	0.00532	106	73.0-125	
sec-Butylbenzene	0.00500	0.00485	97.0	75.0-125	
tert-Butylbenzene	0.00500	0.00482	96.4	76.0-124	
Carbon tetrachloride	0.00500	0.00410	82.0	68.0-126	
Chlorobenzene	0.00500	0.00516	103	80.0-121	
Chlorodibromomethane	0.00500	0.00474	94.8	77.0-125	
Chloroethane	0.00500	0.00406	81.2	47.0-150	
Chloroform	0.00500	0.00475	95.0	73.0-120	
Chloromethane	0.00500	0.00533	107	41.0-142	
2-Chlorotoluene	0.00500	0.00492	98.4	76.0-123	
4-Chlorotoluene	0.00500	0.00500	100	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00515	103	58.0-134	
1,2-Dibromoethane	0.00500	0.00497	99.4	80.0-122	
Dibromomethane	0.00500	0.00440	88.0	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00504	101	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00481	96.2	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00505	101	79.0-120	
Dichlorodifluoromethane	0.00500	0.00515	103	51.0-149	
1,1-Dichloroethane	0.00500	0.00544	109	70.0-126	
1,2-Dichloroethane	0.00500	0.00508	102	70.0-128	
1,1-Dichloroethene	0.00500	0.00423	84.6	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00465	93.0	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00414	82.8	73.0-120	
1,2-Dichloropropane	0.00500	0.00575	115	77.0-125	
1,1-Dichloropropene	0.00500	0.00421	84.2	74.0-126	
1,3-Dichloropropane	0.00500	0.00532	106	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00437	87.4	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00477	95.4	78.0-124	
2,2-Dichloropropane	0.00500	0.00461	92.2	58.0-130	
Di-isopropyl ether	0.00500	0.00622	124	58.0-138	
Ethylbenzene	0.00500	0.00493	98.6	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00488	97.6	54.0-138	
Isopropylbenzene	0.00500	0.00481	96.2	76.0-127	
p-Isopropyltoluene	0.00500	0.00483	96.6	76.0-125	
2-Butanone (MEK)	0.0250	0.0295	118	44.0-160	
Methylene Chloride	0.00500	0.00473	94.6	67.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3601772-1 12/09/20 08:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.0250	0.0342	137	68.0-142	
Methyl tert-butyl ether	0.00500	0.00501	100	68.0-125	
Naphthalene	0.00500	0.00702	140	54.0-135	J4
n-Propylbenzene	0.00500	0.00495	99.0	77.0-124	
Styrene	0.00500	0.00486	97.2	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00505	101	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00554	111	65.0-130	
Tetrachloroethene	0.00500	0.00464	92.8	72.0-132	
Toluene	0.00500	0.00517	103	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00479	95.8	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00796	159	50.0-138	J4
1,2,4-Trichlorobenzene	0.00500	0.00590	118	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00445	89.0	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00540	108	80.0-120	
Trichloroethene	0.00500	0.00435	87.0	78.0-124	
Trichlorofluoromethane	0.00500	0.00500	100	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00524	105	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00495	99.0	77.0-120	
1,2,4-Trimethylbenzene	0.00500	0.00484	96.8	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00485	97.0	76.0-122	
Vinyl chloride	0.00500	0.00429	85.8	67.0-131	
Xylenes, Total	0.0150	0.0142	94.7	79.0-123	
(S) Toluene-d8			117	80.0-120	
(S) 4-Bromofluorobenzene			98.6	77.0-126	
(S) 1,2-Dichloroethane-d4			111	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260B L1292762-05.06.07.08.09

Method Blank (MB)

(MB) R3601830-2 12/09/20 01:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-05.06.07.08.09

Method Blank (MB)

(MB) R3601830-2 12/09/20 01:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	87.2			77.0-126
(S) 1,2-Dichloroethane-d4	106			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3601830-1 12/09/20 01:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0433	173	19.0-160	J4
Acrolein	0.0250	0.0132	52.8	10.0-160	
Acrylonitrile	0.0250	0.0352	141	55.0-149	
Benzene	0.00500	0.00481	96.2	70.0-123	

Volatile Organic Compounds (GC/MS) by Method 8260B L1292762-05.06.07.08.09

Laboratory Control Sample (LCS)

(LCS) R3601830-1 12/09/20 01:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	0.00500	0.00567	113	73.0-121	
Bromodichloromethane	0.00500	0.00450	90.0	75.0-120	
Bromoform	0.00500	0.00491	98.2	68.0-132	
Bromomethane	0.00500	0.00166	33.2	10.0-160	
n-Butylbenzene	0.00500	0.00440	88.0	73.0-125	
sec-Butylbenzene	0.00500	0.00519	104	75.0-125	
tert-Butylbenzene	0.00500	0.00501	100	76.0-124	
Carbon tetrachloride	0.00500	0.00342	68.4	68.0-126	
Chlorobenzene	0.00500	0.00495	99.0	80.0-121	
Chlorodibromomethane	0.00500	0.00471	94.2	77.0-125	
Chloroethane	0.00500	0.00356	71.2	47.0-150	
Chloroform	0.00500	0.00447	89.4	73.0-120	
Chloromethane	0.00500	0.00528	106	41.0-142	
2-Chlorotoluene	0.00500	0.00549	110	76.0-123	
4-Chlorotoluene	0.00500	0.00512	102	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00491	98.2	58.0-134	
1,2-Dibromoethane	0.00500	0.00542	108	80.0-122	
Dibromomethane	0.00500	0.00547	109	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00468	93.6	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00509	102	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00498	99.6	79.0-120	
Dichlorodifluoromethane	0.00500	0.00386	77.2	51.0-149	
1,1-Dichloroethane	0.00500	0.00513	103	70.0-126	
1,2-Dichloroethane	0.00500	0.00503	101	70.0-128	
1,1-Dichloroethene	0.00500	0.00421	84.2	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00466	93.2	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00426	85.2	73.0-120	
1,2-Dichloropropane	0.00500	0.00553	111	77.0-125	
1,1-Dichloropropene	0.00500	0.00444	88.8	74.0-126	
1,3-Dichloropropane	0.00500	0.00548	110	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00455	91.0	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00464	92.8	78.0-124	
2,2-Dichloropropane	0.00500	0.00235	47.0	58.0-130	J4
Di-isopropyl ether	0.00500	0.00515	103	58.0-138	
Ethylbenzene	0.00500	0.00517	103	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00442	88.4	54.0-138	
Isopropylbenzene	0.00500	0.00439	87.8	76.0-127	
p-Isopropyltoluene	0.00500	0.00473	94.6	76.0-125	
2-Butanone (MEK)	0.0250	0.0388	155	44.0-160	
Methylene Chloride	0.00500	0.00404	80.8	67.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3601830-1 12/09/20 01:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.0250	0.0355	142	68.0-142	
Methyl tert-butyl ether	0.00500	0.00384	76.8	68.0-125	
Naphthalene	0.00500	0.00388	77.6	54.0-135	
n-Propylbenzene	0.00500	0.00543	109	77.0-124	
Styrene	0.00500	0.00451	90.2	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00490	98.0	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00567	113	65.0-130	
Tetrachloroethene	0.00500	0.00521	104	72.0-132	
Toluene	0.00500	0.00504	101	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00366	73.2	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00416	83.2	50.0-138	
1,2,4-Trichlorobenzene	0.00500	0.00389	77.8	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00335	67.0	73.0-124	J4
1,1,2-Trichloroethane	0.00500	0.00544	109	80.0-120	
Trichloroethene	0.00500	0.00506	101	78.0-124	
Trichlorofluoromethane	0.00500	0.00317	63.4	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00615	123	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00492	98.4	77.0-120	
1,2,4-Trimethylbenzene	0.00500	0.00491	98.2	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00513	103	76.0-122	
Vinyl chloride	0.00500	0.00566	113	67.0-131	
Xylenes, Total	0.0150	0.0142	94.7	79.0-123	
(S) Toluene-d8			106	80.0-120	
(S) 4-Bromofluorobenzene			94.2	77.0-126	
(S) 1,2-Dichloroethane-d4			103	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-10,11

Method Blank (MB)

(MB) R3602245-2 12/09/20 21:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-10,11

Method Blank (MB)

(MB) R3602245-2 12/09/20 21:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	110			80.0-120
(S) 4-Bromofluorobenzene	91.3			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3602245-1 12/09/20 20:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0294	118	19.0-160	
Acrolein	0.0250	0.0154	61.6	10.0-160	
Acrylonitrile	0.0250	0.0346	138	55.0-149	
Benzene	0.00500	0.00484	96.8	70.0-123	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-10,11

Laboratory Control Sample (LCS)

(LCS) R3602245-1 12/09/20 20:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromobenzene	0.00500	0.00581	116	73.0-121	
Bromodichloromethane	0.00500	0.00427	85.4	75.0-120	
Bromoform	0.00500	0.00483	96.6	68.0-132	
Bromomethane	0.00500	0.00567	113	10.0-160	
n-Butylbenzene	0.00500	0.00452	90.4	73.0-125	
sec-Butylbenzene	0.00500	0.00510	102	75.0-125	
tert-Butylbenzene	0.00500	0.00499	99.8	76.0-124	
Carbon tetrachloride	0.00500	0.00364	72.8	68.0-126	
Chlorobenzene	0.00500	0.00504	101	80.0-121	
Chlorodibromomethane	0.00500	0.00473	94.6	77.0-125	
Chloroethane	0.00500	0.00565	113	47.0-150	
Chloroform	0.00500	0.00449	89.8	73.0-120	
Chloromethane	0.00500	0.00575	115	41.0-142	
2-Chlorotoluene	0.00500	0.00552	110	76.0-123	
4-Chlorotoluene	0.00500	0.00538	108	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00420	84.0	58.0-134	
1,2-Dibromoethane	0.00500	0.00532	106	80.0-122	
Dibromomethane	0.00500	0.00538	108	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00472	94.4	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00508	102	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00498	99.6	79.0-120	
Dichlorodifluoromethane	0.00500	0.00402	80.4	51.0-149	
1,1-Dichloroethane	0.00500	0.00512	102	70.0-126	
1,2-Dichloroethane	0.00500	0.00491	98.2	70.0-128	
1,1-Dichloroethene	0.00500	0.00423	84.6	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00468	93.6	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00453	90.6	73.0-120	
1,2-Dichloropropane	0.00500	0.00577	115	77.0-125	
1,1-Dichloropropene	0.00500	0.00436	87.2	74.0-126	
1,3-Dichloropropane	0.00500	0.00544	109	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00473	94.6	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00469	93.8	78.0-124	
2,2-Dichloropropane	0.00500	0.00328	65.6	58.0-130	
Di-isopropyl ether	0.00500	0.00505	101	58.0-138	
Ethylbenzene	0.00500	0.00508	102	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00446	89.2	54.0-138	
Isopropylbenzene	0.00500	0.00443	88.6	76.0-127	
p-Isopropyltoluene	0.00500	0.00483	96.6	76.0-125	
2-Butanone (MEK)	0.0250	0.0327	131	44.0-160	
Methylene Chloride	0.00500	0.00517	103	67.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-10,11

Laboratory Control Sample (LCS)

(LCS) R3602245-1 12/09/20 20:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.0250	0.0336	134	68.0-142	
Methyl tert-butyl ether	0.00500	0.00379	75.8	68.0-125	
Naphthalene	0.00500	0.00389	77.8	54.0-135	
n-Propylbenzene	0.00500	0.00556	111	77.0-124	
Styrene	0.00500	0.00460	92.0	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00470	94.0	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00631	126	65.0-130	
Tetrachloroethene	0.00500	0.00524	105	72.0-132	
Toluene	0.00500	0.00510	102	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00408	81.6	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00411	82.2	50.0-138	
1,2,4-Trichlorobenzene	0.00500	0.00404	80.8	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00381	76.2	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00539	108	80.0-120	
Trichloroethene	0.00500	0.00482	96.4	78.0-124	
Trichlorofluoromethane	0.00500	0.00435	87.0	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00582	116	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00497	99.4	77.0-120	
1,2,4-Trimethylbenzene	0.00500	0.00499	99.8	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00509	102	76.0-122	
Vinyl chloride	0.00500	0.00586	117	67.0-131	
Xylenes, Total	0.0150	0.0141	94.0	79.0-123	
(S) Toluene-d8			108	80.0-120	
(S) 4-Bromofluorobenzene			93.5	77.0-126	
(S) 1,2-Dichloroethane-d4			103	70.0-130	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-12

Method Blank (MB)

(MB) R3603296-1 12/10/20 12:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-12

Method Blank (MB)

(MB) R3603296-1 12/10/20 12:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	106			80.0-120
(S) 4-Bromofluorobenzene	103			77.0-126
(S) 1,2-Dichloroethane-d4	99.1			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3603296-2 12/10/20 12:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0213	85.2	19.0-160	
Acrolein	0.0250	0.0216	86.4	10.0-160	
Acrylonitrile	0.0250	0.0196	78.4	55.0-149	
Benzene	0.00500	0.00465	93.0	70.0-123	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-12

Laboratory Control Sample (LCS)

(LCS) R3603296-2 12/10/20 12:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromobenzene	0.00500	0.00422	84.4	73.0-121	
Bromodichloromethane	0.00500	0.00412	82.4	75.0-120	
Bromoform	0.00500	0.00338	67.6	68.0-132	J4
Bromomethane	0.00500	0.00528	106	10.0-160	
n-Butylbenzene	0.00500	0.00407	81.4	73.0-125	
sec-Butylbenzene	0.00500	0.00435	87.0	75.0-125	
tert-Butylbenzene	0.00500	0.00435	87.0	76.0-124	
Carbon tetrachloride	0.00500	0.00501	100	68.0-126	
Chlorobenzene	0.00500	0.00450	90.0	80.0-121	
Chlorodibromomethane	0.00500	0.00386	77.2	77.0-125	
Chloroethane	0.00500	0.00549	110	47.0-150	
Chloroform	0.00500	0.00447	89.4	73.0-120	
Chloromethane	0.00500	0.00557	111	41.0-142	
2-Chlorotoluene	0.00500	0.00436	87.2	76.0-123	
4-Chlorotoluene	0.00500	0.00441	88.2	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00332	66.4	58.0-134	
1,2-Dibromoethane	0.00500	0.00449	89.8	80.0-122	
Dibromomethane	0.00500	0.00442	88.4	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00406	81.2	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00430	86.0	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00431	86.2	79.0-120	
Dichlorodifluoromethane	0.00500	0.00481	96.2	51.0-149	
1,1-Dichloroethane	0.00500	0.00456	91.2	70.0-126	
1,2-Dichloroethane	0.00500	0.00431	86.2	70.0-128	
1,1-Dichloroethene	0.00500	0.00482	96.4	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00459	91.8	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00467	93.4	73.0-120	
1,2-Dichloropropane	0.00500	0.00424	84.8	77.0-125	
1,1-Dichloropropene	0.00500	0.00460	92.0	74.0-126	
1,3-Dichloropropane	0.00500	0.00471	94.2	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00398	79.6	80.0-123	J4
trans-1,3-Dichloropropene	0.00500	0.00403	80.6	78.0-124	
2,2-Dichloropropane	0.00500	0.00461	92.2	58.0-130	
Di-isopropyl ether	0.00500	0.00420	84.0	58.0-138	
Ethylbenzene	0.00500	0.00440	88.0	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00402	80.4	54.0-138	
Isopropylbenzene	0.00500	0.00437	87.4	76.0-127	
p-Isopropyltoluene	0.00500	0.00417	83.4	76.0-125	
2-Butanone (MEK)	0.0250	0.0199	79.6	44.0-160	
Methylene Chloride	0.00500	0.00502	100	67.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1292762-12

Laboratory Control Sample (LCS)

(LCS) R3603296-2 12/10/20 12:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Methyl-2-pentanone (MIBK)	0.0250	0.0203	81.2	68.0-142	
Methyl tert-butyl ether	0.00500	0.00471	94.2	68.0-125	
Naphthalene	0.00500	0.00330	66.0	54.0-135	
n-Propylbenzene	0.00500	0.00439	87.8	77.0-124	
Styrene	0.00500	0.00426	85.2	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00430	86.0	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00452	90.4	65.0-130	
Tetrachloroethene	0.00500	0.00453	90.6	72.0-132	
Toluene	0.00500	0.00477	95.4	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00481	96.2	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00330	66.0	50.0-138	
1,2,4-Trichlorobenzene	0.00500	0.00345	69.0	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00477	95.4	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00456	91.2	80.0-120	
Trichloroethene	0.00500	0.00452	90.4	78.0-124	
Trichlorofluoromethane	0.00500	0.00556	111	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00441	88.2	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00411	82.2	77.0-120	
1,2,4-Trimethylbenzene	0.00500	0.00428	85.6	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00424	84.8	76.0-122	
Vinyl chloride	0.00500	0.00530	106	67.0-131	
Xylenes, Total	0.0150	0.0134	89.3	79.0-123	
(S) Toluene-d8			106	80.0-120	
(S) 4-Bromofluorobenzene			102	77.0-126	
(S) 1,2-Dichloroethane-d4			99.3	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1292857-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292857-13 12/10/20 16:06 • (MS) R3603296-3 12/10/20 20:56 • (MSD) R3603296-4 12/10/20 21:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	0.0250	ND	ND	ND	77.6	80.8	1	10.0-160			4.04	35
Acrolein	0.0250	ND	ND	ND	71.2	74.4	1	10.0-160			4.40	39
Acrylonitrile	0.0250	ND	0.0214	0.0231	85.6	92.4	1	21.0-160			7.64	32
Benzene	0.00500	ND	0.00527	0.00589	103	116	1	17.0-158			11.1	27
Bromobenzene	0.00500	ND	0.00486	0.00552	97.2	110	1	30.0-149			12.7	28
Bromodichloromethane	0.00500	ND	0.00471	0.00523	94.2	105	1	31.0-150			10.5	27
Bromoform	0.00500	ND	0.00384	0.00427	76.8	85.4	1	29.0-150			10.6	29
Bromomethane	0.00500	ND	ND	0.00593	96.6	119	1	10.0-160			20.4	38

Volatile Organic Compounds (GC/MS) by Method 8260B L1292762-12

L1292857-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292857-13 12/10/20 16:06 • (MS) R3603296-3 12/10/20 20:56 • (MSD) R3603296-4 12/10/20 21:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Butylbenzene	0.00500	ND	0.00499	0.00534	99.8	107	1	31.0-150			6.78	30
sec-Butylbenzene	0.00500	ND	0.00528	0.00573	106	115	1	33.0-155			8.17	29
tert-Butylbenzene	0.00500	ND	0.00513	0.00573	103	115	1	34.0-153			11.0	28
Carbon tetrachloride	0.00500	ND	0.00576	0.00625	115	125	1	23.0-159			8.16	28
Chlorobenzene	0.00500	ND	0.00511	0.00571	102	114	1	33.0-152			11.1	27
Chlorodibromomethane	0.00500	ND	0.00442	0.00499	88.4	99.8	1	37.0-149			12.1	27
Chloroethane	0.00500	ND	0.00579	0.00645	116	129	1	10.0-160			10.8	30
Chloroform	0.00500	ND	0.00645	0.00696	104	114	1	29.0-154			7.61	28
Chloromethane	0.00500	ND	0.00686	0.00731	137	146	1	10.0-160			6.35	29
2-Chlorotoluene	0.00500	ND	0.00510	0.00574	102	115	1	32.0-153			11.8	28
4-Chlorotoluene	0.00500	ND	0.00517	0.00588	103	118	1	32.0-150			12.9	28
1,2-Dibromo-3-Chloropropane	0.00500	ND	ND	ND	77.6	86.2	1	22.0-151			10.5	34
1,2-Dibromoethane	0.00500	ND	0.00504	0.00555	101	111	1	34.0-147			9.63	27
Dibromomethane	0.00500	ND	0.00486	0.00526	97.2	105	1	30.0-151			7.91	27
1,2-Dichlorobenzene	0.00500	ND	0.00475	0.00532	95.0	106	1	34.0-149			11.3	28
1,3-Dichlorobenzene	0.00500	ND	0.00515	0.00577	103	115	1	36.0-146			11.4	27
1,4-Dichlorobenzene	0.00500	ND	0.00516	0.00584	103	117	1	35.0-142			12.4	27
Dichlorodifluoromethane	0.00500	ND	0.00563	0.00617	113	123	1	10.0-160			9.15	29
1,1-Dichloroethane	0.00500	ND	0.00617	0.00666	107	116	1	25.0-158			7.64	27
1,2-Dichloroethane	0.00500	ND	0.00494	0.00555	98.8	111	1	29.0-151			11.6	27
1,1-Dichloroethene	0.00500	0.00264	0.00824	0.00902	112	128	1	11.0-160			9.04	29
cis-1,2-Dichloroethene	0.00500	0.270	0.284	0.293	280	460	1	10.0-160	EV	EV	3.12	27
trans-1,2-Dichloroethene	0.00500	ND	0.00623	0.00675	106	116	1	17.0-153			8.01	27
1,2-Dichloropropane	0.00500	ND	0.00496	0.00553	99.2	111	1	30.0-156			10.9	27
1,1-Dichloropropene	0.00500	ND	0.00537	0.00584	107	117	1	25.0-158			8.39	27
1,3-Dichloropropane	0.00500	ND	0.00534	0.00598	107	120	1	38.0-147			11.3	27
cis-1,3-Dichloropropene	0.00500	ND	0.00440	0.00515	88.0	103	1	34.0-149			15.7	28
trans-1,3-Dichloropropene	0.00500	ND	0.00432	0.00493	86.4	98.6	1	32.0-149			13.2	28
2,2-Dichloropropane	0.00500	ND	0.00476	0.00533	95.2	107	1	24.0-152			11.3	29
Di-isopropyl ether	0.00500	ND	0.00489	0.00545	97.8	109	1	21.0-160			10.8	28
Ethylbenzene	0.00500	ND	0.00508	0.00566	102	113	1	30.0-155			10.8	27
Hexachloro-1,3-butadiene	0.00500	ND	0.00436	0.00488	87.2	97.6	1	20.0-154			11.3	34
Isopropylbenzene	0.00500	ND	0.00523	0.00568	105	114	1	28.0-157			8.25	27
p-Isopropyltoluene	0.00500	ND	0.00488	0.00533	97.6	107	1	30.0-154			8.81	29
2-Butanone (MEK)	0.0250	ND	0.0211	0.0222	84.4	88.8	1	10.0-160			5.08	32
Methylene Chloride	0.00500	ND	0.00524	0.00568	105	114	1	23.0-144			8.06	28
4-Methyl-2-pentanone (MIBK)	0.0250	ND	0.0229	0.0250	91.6	100	1	29.0-160			8.77	29
Methyl tert-butyl ether	0.00500	ND	0.00541	0.00590	108	118	1	28.0-150			8.66	29
Naphthalene	0.00500	ND	ND	ND	75.4	84.6	1	12.0-156			11.5	35
n-Propylbenzene	0.00500	ND	0.00516	0.00568	103	114	1	31.0-154			9.59	28

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

QUALITY CONTROL SUMMARY

Volatile Organic Compounds (GC/MS) by Method 8260B L1292762-12

L1292857-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292857-13 12/10/20 16:06 • (MS) R3603296-3 12/10/20 20:56 • (MSD) R3603296-4 12/10/20 21:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Styrene	0.00500	ND	ND	ND	2.58	2.94	1	33.0-155	J6	J6	13.0	28
1,1,1,2-Tetrachloroethane	0.00500	ND	0.00503	0.00558	101	112	1	36.0-151			10.4	29
1,1,2,2-Tetrachloroethane	0.00500	ND	0.00517	0.00568	103	114	1	33.0-150			9.40	28
Tetrachloroethene	0.00500	0.00111	0.00681	0.00748	114	127	1	10.0-160			9.38	27
Toluene	0.00500	ND	0.00543	0.00599	109	120	1	26.0-154			9.81	28
1,1,2-Trichlorotrifluoroethane	0.00500	ND	0.00576	0.00615	115	123	1	23.0-160			6.55	30
1,2,3-Trichlorobenzene	0.00500	ND	0.00351	0.00410	70.2	82.0	1	17.0-150			15.5	36
1,2,4-Trichlorobenzene	0.00500	ND	0.00396	0.00450	79.2	90.0	1	24.0-150			12.8	33
1,1,1-Trichloroethane	0.00500	ND	0.00559	0.00609	112	122	1	23.0-160			8.56	28
1,1,2-Trichloroethane	0.00500	0.00196	0.00734	0.00800	108	121	1	35.0-147			8.60	27
Trichloroethene	0.00500	2.15	2.21	2.16	1200	200	1	10.0-160	EV	EV	2.29	25
Trichlorofluoromethane	0.00500	ND	0.00585	0.00649	117	130	1	17.0-160			10.4	31
1,2,3-Trichloropropane	0.00500	ND	0.00514	0.00558	103	112	1	34.0-151			8.21	29
1,2,3-Trimethylbenzene	0.00500	ND	0.00475	0.00537	95.0	107	1	32.0-149			12.3	28
1,2,4-Trimethylbenzene	0.00500	ND	0.00496	0.00561	99.2	112	1	26.0-154			12.3	27
1,3,5-Trimethylbenzene	0.00500	ND	0.00485	0.00556	97.0	111	1	28.0-153			13.6	27
Vinyl chloride	0.00500	ND	0.00589	0.00633	118	127	1	10.0-160			7.20	27
Xylenes, Total	0.0150	ND	0.0156	0.0172	104	115	1	29.0-154			9.76	28
(S) Toluene-d8					104	104		80.0-120				
(S) 4-Bromofluorobenzene					103	101		77.0-126				
(S) 1,2-Dichloroethane-d4					99.2	99.7		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

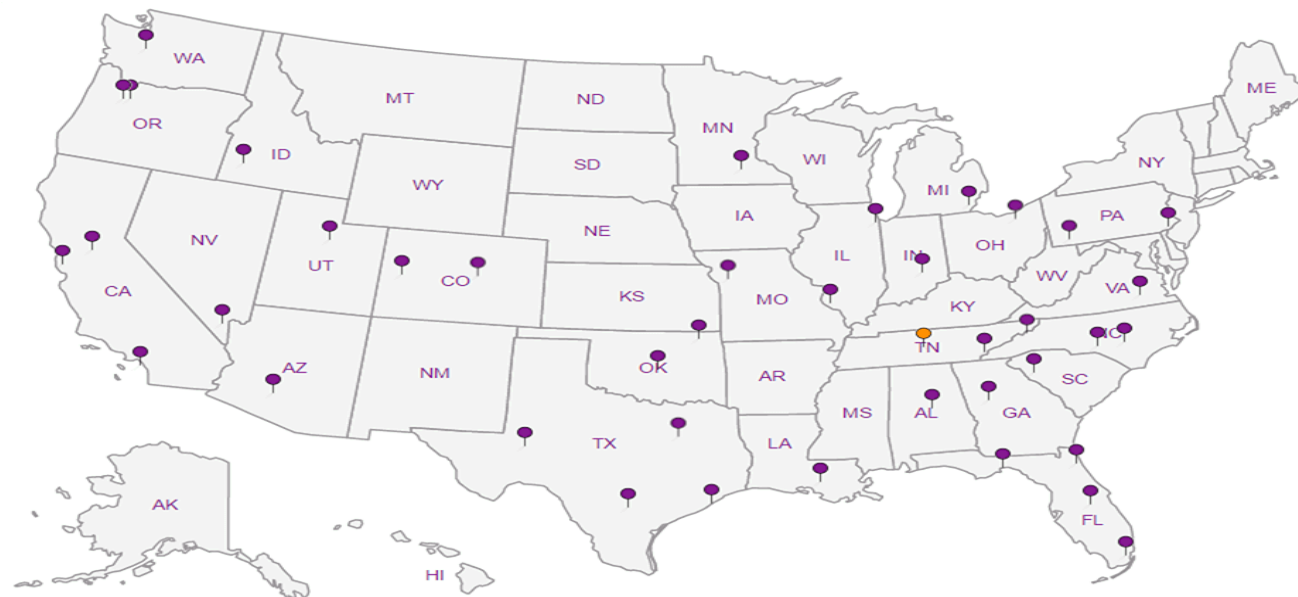
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Billing Information:

Clara Cardoza
PO Box 61529
Houston, TX 77208

Pres
Chk

Analysis / Container / Preservative

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Report to:
Kurt Hoekstra

Email To:
jdeal@hilcorp.com;khoekstra@hilcorp.com

Project Description:
Salty Dog Pipeline

City/State
Collected:

Please Circle:
PT MT CT ET

Phone: 505-486-9543

Client Project #

Lab Project #
HILCORANM-SALTYDOG

Collected by (print):

Site/Facility ID #
SALTY DOG PIPELINE

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N Y X

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	ANIONS 125mLHDPE-NoPres	CATIONS 125mLHDPE-NoPres	NO2NO3 250mLHDPE-H2SO4	PH 125mLHDPE-NoPres	TDS 250mLHDPE-NoPres	V8260 40mLAMB-HCI						
MW- 14		GW		10-30	10:15	8	X	X	X	X	X	X						01
MW- 10		GW		11-30	12:18	8	X	X	X	X	X	X						02
MW- 6		GW		11-30	2:00	8	X	X	X	X	X	X						03
MW- 5		GW		11-30	2:34	8	X	X	X	X	X	X						04
MW- 13		GW		12-1	9:17	8	X	X	X	X	X	X						05
MW- 12		GW		12-1	11:18	8	X	X	X	X	X	X						06
MW- 17		GW		12-1	1:05	8	X	X	X	X	X	X						07
MW- 18		GW		12-1	2:07	8	X	X	X	X	X	X						08
MW- 3		GW		12-1	2:48	8	X	X	X	X	X	X						09
MW- 15		GW		12-2	10:20	8	X	X	X	X	X	X						10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:

UPS FedEx Courier

Tracking #

9186

2503

1587

Relinquished by: (Signature)

Date:

12-3-20

Time:

8:00

Received by: (Signature)

Trip Blank Received: Yes/No

HCL/MoOH

TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp 17.1=17.6

Bottles Received:

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 12-4-20

Time: 2:30

Hold:

Condition:
NCF / OK

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



SDG #

B227

Table #

Acctnum: HILCORANM

Template: T170513

Prelogin: P800131

PM: 823 - Olivia Studebaker

PB: 9-27-20 AP

Shipped Via: FedEx Ground

Remarks

Sample # (lab only)

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Released to Imaging: 1/3/2024 3:09:18 PM



ANALYTICAL REPORT

March 04, 2021

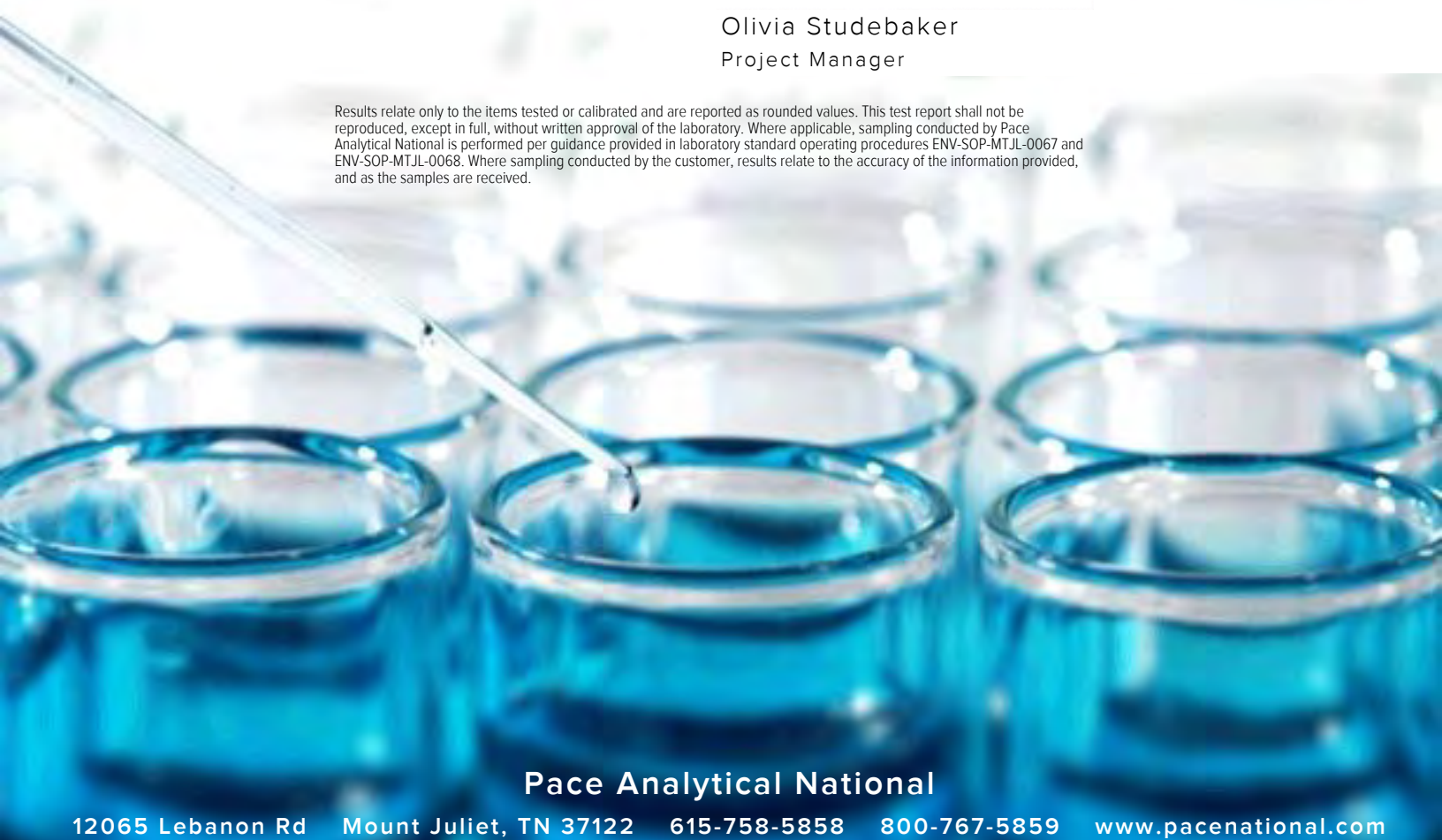
**HilCorp-Farmington, NM**

Sample Delivery Group: L1319812
Samples Received: 02/25/2021
Project Number:
Description: Salty Dog Pipeline
Site: SALTY DOG PIPELINE
Report To: Kurt Hoekstra
382 Road 3100
Aztec, NM 87401

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW-3 L1319812-01 GW

				Collected by Kurt	Collected date/time 02/22/21 10:12	Received date/time 02/25/21 09:50
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1625972	1	02/25/21 19:42	02/25/21 20:46	KLS	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:01	03/03/21 12:01	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 05:13	03/02/21 05:13	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 05:26	03/02/21 05:26	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	500	03/02/21 05:39	03/02/21 05:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 02:31	02/26/21 02:31	DWR	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-12 L1319812-02 GW

				Collected by Kurt	Collected date/time 02/22/21 10:52	Received date/time 02/25/21 09:50
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1625972	1	02/25/21 19:42	02/25/21 20:46	KLS	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:04	03/03/21 12:04	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 05:52	03/02/21 05:52	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 06:05	03/02/21 06:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	500	03/02/21 06:18	03/02/21 06:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 02:52	02/26/21 02:52	DWR	Mt. Juliet, TN

MW-17 L1319812-03 GW

				Collected by Kurt	Collected date/time 02/22/21 12:21	Received date/time 02/25/21 09:50
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1625972	1	02/25/21 19:42	02/25/21 20:46	KLS	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:10	03/03/21 12:10	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 06:31	03/02/21 06:31	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 06:44	03/02/21 06:44	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 03:13	02/26/21 03:13	DWR	Mt. Juliet, TN

MW-18 L1319812-04 GW

				Collected by Kurt	Collected date/time 02/22/21 13:45	Received date/time 02/25/21 09:50
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1625972	1	02/25/21 19:42	02/25/21 20:46	KLS	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:11	03/03/21 12:11	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 06:57	03/02/21 06:57	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 07:10	03/02/21 07:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 03:33	02/26/21 03:33	DWR	Mt. Juliet, TN

MW-15 L1319812-05 GW

				Collected by Kurt	Collected date/time 02/22/21 11:03	Received date/time 02/25/21 09:50
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1626373	1	02/27/21 09:20	02/27/21 11:25	MLL	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:13	03/03/21 12:13	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 07:50	03/02/21 07:50	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 08:03	03/02/21 08:03	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 03:54	02/26/21 03:54	DWR	Mt. Juliet, TN

MW-9 L1319812-06 GW

Collected by Kurt
Collected date/time 02/22/21 13:03
Received date/time 02/25/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1626373	1	02/27/21 09:20	02/27/21 11:25	MML	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:14	03/03/21 12:14	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 08:16	03/02/21 08:16	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 08:29	03/02/21 08:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 04:14	02/26/21 04:14	DWR	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

MW-20 L1319812-07 GW

Collected by Kurt
Collected date/time 02/22/21 14:19
Received date/time 02/25/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1626373	1	02/27/21 09:20	02/27/21 11:25	MML	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1626062	1	03/03/21 12:15	03/03/21 12:15	LRP	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1625672	1	02/25/21 16:40	02/25/21 16:40	SAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	10	03/02/21 08:42	03/02/21 08:42	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1627788	100	03/02/21 08:55	03/02/21 08:55	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1626053	1	02/26/21 04:35	02/26/21 04:35	DWR	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Olivia Studebaker
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 02/22/21 10:12

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	29200		400	1	02/25/2021 20:46	WG1625972

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.359		0.100	1	03/03/2021 12:01	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.25	T8	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-01 WG1625672: 7.25 at 18.3C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 05:26	WG1627788
Chloride	12200		500	500	03/02/2021 05:39	WG1627788
Fluoride	ND		1.50	10	03/02/2021 05:13	WG1627788
Sulfate	1930		500	100	03/02/2021 05:26	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 02:31	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 02:31	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 02:31	WG1626053
Benzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 02:31	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 02:31	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 02:31	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 02:31	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 02:31	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 02:31	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 02:31	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 02:31	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 02:31	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053

Collected date/time: 02/22/21 10:12

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 02:31	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 02:31	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 02:31	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 02:31	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 02:31	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 02:31	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 02:31	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 02:31	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 02:31	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 02:31	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 02:31	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 02:31	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 02:31	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Styrene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Toluene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 02:31	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 02:31	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 02:31	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 02:31	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 02:31	WG1626053
Xylenes, Total	ND		0.00300	1	02/26/2021 02:31	WG1626053
(S) Toluene-d8	97.8		80.0-120		02/26/2021 02:31	WG1626053
(S) 4-Bromofluorobenzene	107		77.0-126		02/26/2021 02:31	WG1626053
(S) 1,2-Dichloroethane-d4	103		70.0-130		02/26/2021 02:31	WG1626053

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 02/22/21 10:52

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	27100		400	1	02/25/2021 20:46	WG1625972

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3.90		0.100	1	03/03/2021 12:04	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.38	T8	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-02 WG1625672: 7.38 at 19.2C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 06:05	WG1627788
Chloride	14400		500	500	03/02/2021 06:18	WG1627788
Fluoride	ND		1.50	10	03/02/2021 05:52	WG1627788
Sulfate	2860		500	100	03/02/2021 06:05	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 02:52	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 02:52	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 02:52	WG1626053
Benzene	0.00120		0.00100	1	02/26/2021 02:52	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 02:52	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 02:52	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 02:52	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 02:52	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 02:52	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 02:52	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 02:52	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 02:52	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 02:52	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053

Collected date/time: 02/22/21 10:52

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 02:52	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 02:52	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 02:52	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 02:52	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 02:52	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 02:52	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 02:52	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 02:52	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 02:52	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 02:52	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 02:52	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 02:52	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 02:52	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Styrene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Toluene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 02:52	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 02:52	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 02:52	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 02:52	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 02:52	WG1626053
Xylenes, Total	0.00442		0.00300	1	02/26/2021 02:52	WG1626053
(S) Toluene-d8	97.2		80.0-120		02/26/2021 02:52	WG1626053
(S) 4-Bromofluorobenzene	104		77.0-126		02/26/2021 02:52	WG1626053
(S) 1,2-Dichloroethane-d4	104		70.0-130		02/26/2021 02:52	WG1626053

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 02/22/21 12:21

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	17900		400	1	02/25/2021 20:46	WG1625972

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.221		0.100	1	03/03/2021 12:10	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.37	<u>T8</u>	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-03 WG1625672: 7.37 at 18.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 06:44	WG1627788
Chloride	7210		100	100	03/02/2021 06:44	WG1627788
Fluoride	ND		1.50	10	03/02/2021 06:31	WG1627788
Sulfate	2130		500	100	03/02/2021 06:44	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 03:13	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 03:13	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 03:13	WG1626053
Benzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 03:13	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 03:13	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 03:13	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 03:13	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 03:13	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 03:13	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 03:13	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 03:13	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 03:13	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053

Collected date/time: 02/22/21 12:21

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 03:13	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 03:13	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 03:13	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 03:13	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 03:13	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 03:13	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 03:13	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 03:13	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 03:13	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 03:13	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 03:13	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 03:13	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 03:13	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Styrene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Toluene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 03:13	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 03:13	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 03:13	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:13	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 03:13	WG1626053
Xylenes, Total	ND		0.00300	1	02/26/2021 03:13	WG1626053
(S) Toluene-d8	97.2		80.0-120		02/26/2021 03:13	WG1626053
(S) 4-Bromofluorobenzene	103		77.0-126		02/26/2021 03:13	WG1626053
(S) 1,2-Dichloroethane-d4	105		70.0-130		02/26/2021 03:13	WG1626053

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 02/22/21 13:45

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	12400		200	1	02/25/2021 20:46	WG1625972

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	3.32		0.100	1	03/03/2021 12:11	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.25	T8	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-04 WG1625672: 7.25 at 18.9C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 07:10	WG1627788
Chloride	5300		100	100	03/02/2021 07:10	WG1627788
Fluoride	ND		1.50	10	03/02/2021 06:57	WG1627788
Sulfate	2640		500	100	03/02/2021 07:10	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 03:33	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 03:33	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 03:33	WG1626053
Benzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 03:33	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 03:33	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 03:33	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 03:33	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 03:33	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 03:33	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 03:33	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 03:33	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 03:33	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053

Collected date/time: 02/22/21 13:45

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 03:33	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 03:33	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 03:33	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 03:33	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 03:33	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 03:33	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 03:33	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 03:33	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 03:33	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 03:33	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 03:33	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 03:33	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 03:33	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Styrene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Toluene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 03:33	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 03:33	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 03:33	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:33	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 03:33	WG1626053
Xylenes, Total	ND		0.00300	1	02/26/2021 03:33	WG1626053
(S) Toluene-d8	99.4		80.0-120		02/26/2021 03:33	WG1626053
(S) 4-Bromofluorobenzene	108		77.0-126		02/26/2021 03:33	WG1626053
(S) 1,2-Dichloroethane-d4	106		70.0-130		02/26/2021 03:33	WG1626053

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 02/22/21 11:03

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	4170		100	1	02/27/2021 11:25	WG1626373

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.03		0.100	1	03/03/2021 12:13	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.21	T8	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-05 WG1625672: 7.21 at 19.1C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 08:03	WG1627788
Chloride	630		10.0	10	03/02/2021 07:50	WG1627788
Fluoride	ND		1.50	10	03/02/2021 07:50	WG1627788
Sulfate	2390		500	100	03/02/2021 08:03	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 03:54	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 03:54	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 03:54	WG1626053
Benzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 03:54	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 03:54	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 03:54	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 03:54	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 03:54	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 03:54	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 03:54	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 03:54	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 03:54	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053

Collected date/time: 02/22/21 11:03

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 03:54	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 03:54	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 03:54	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 03:54	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 03:54	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 03:54	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 03:54	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 03:54	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 03:54	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 03:54	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 03:54	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 03:54	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 03:54	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Styrene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Toluene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 03:54	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 03:54	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 03:54	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 03:54	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 03:54	WG1626053
Xylenes, Total	ND		0.00300	1	02/26/2021 03:54	WG1626053
(S) Toluene-d8	98.5		80.0-120		02/26/2021 03:54	WG1626053
(S) 4-Bromofluorobenzene	106		77.0-126		02/26/2021 03:54	WG1626053
(S) 1,2-Dichloroethane-d4	106		70.0-130		02/26/2021 03:54	WG1626053

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 02/22/21 13:03

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	4980		100	1	02/27/2021 11:25	WG1626373

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.14		0.100	1	03/03/2021 12:14	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.27	<u>T8</u>	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-06 WG1625672: 7.27 at 18.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 08:29	WG1627788
Chloride	1240		100	100	03/02/2021 08:29	WG1627788
Fluoride	ND		1.50	10	03/02/2021 08:16	WG1627788
Sulfate	2580		500	100	03/02/2021 08:29	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

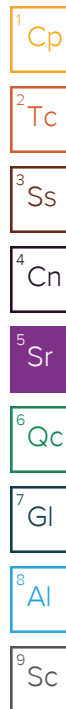
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 04:14	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 04:14	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 04:14	WG1626053
Benzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 04:14	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 04:14	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 04:14	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 04:14	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 04:14	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 04:14	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 04:14	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 04:14	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 04:14	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053

Collected date/time: 02/22/21 13:03

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 04:14	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 04:14	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 04:14	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 04:14	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 04:14	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 04:14	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 04:14	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 04:14	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 04:14	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 04:14	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 04:14	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 04:14	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 04:14	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Styrene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Toluene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 04:14	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 04:14	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 04:14	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 04:14	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 04:14	WG1626053
Xylenes, Total	ND		0.00300	1	02/26/2021 04:14	WG1626053
(S) Toluene-d8	98.0		80.0-120		02/26/2021 04:14	WG1626053
(S) 4-Bromofluorobenzene	105		77.0-126		02/26/2021 04:14	WG1626053
(S) 1,2-Dichloroethane-d4	108		70.0-130		02/26/2021 04:14	WG1626053



Collected date/time: 02/22/21 14:19

L1319812

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	8020		200	1	02/27/2021 11:25	WG1626373

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.67		0.100	1	03/03/2021 12:15	WG1626062

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.24	T8	1		02/25/2021 16:40	WG1625672

Sample Narrative:

L1319812-07 WG1625672: 7.24 at 18.6C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Bromide	ND		100	100	03/02/2021 08:55	WG1627788
Chloride	2730		100	100	03/02/2021 08:55	WG1627788
Fluoride	ND		1.50	10	03/02/2021 08:42	WG1627788
Sulfate	2530		500	100	03/02/2021 08:55	WG1627788

Volatile Organic Compounds (GC/MS) by Method 8260B

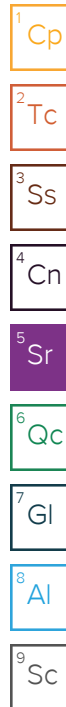
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/26/2021 04:35	WG1626053
Acrolein	ND		0.0500	1	02/26/2021 04:35	WG1626053
Acrylonitrile	ND		0.0100	1	02/26/2021 04:35	WG1626053
Benzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Bromobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Bromodichloromethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
Bromoform	ND		0.00100	1	02/26/2021 04:35	WG1626053
Bromomethane	ND		0.00500	1	02/26/2021 04:35	WG1626053
n-Butylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
sec-Butylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
tert-Butylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Carbon tetrachloride	ND		0.00100	1	02/26/2021 04:35	WG1626053
Chlorobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Chlorodibromomethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
Chloroethane	ND		0.00500	1	02/26/2021 04:35	WG1626053
Chloroform	ND		0.00500	1	02/26/2021 04:35	WG1626053
Chloromethane	ND		0.00250	1	02/26/2021 04:35	WG1626053
2-Chlorotoluene	ND		0.00100	1	02/26/2021 04:35	WG1626053
4-Chlorotoluene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/26/2021 04:35	WG1626053
1,2-Dibromoethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
Dibromomethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2-Dichlorobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,3-Dichlorobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,4-Dichlorobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Dichlorodifluoromethane	ND		0.00500	1	02/26/2021 04:35	WG1626053
1,1-Dichloroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2-Dichloroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053

Collected date/time: 02/22/21 14:19

L1319812

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00100	1	02/26/2021 04:35	WG1626053
cis-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 04:35	WG1626053
trans-1,2-Dichloroethene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2-Dichloropropane	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,1-Dichloropropene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,3-Dichloropropane	ND		0.00100	1	02/26/2021 04:35	WG1626053
cis-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 04:35	WG1626053
trans-1,3-Dichloropropene	ND		0.00100	1	02/26/2021 04:35	WG1626053
2,2-Dichloropropane	ND		0.00100	1	02/26/2021 04:35	WG1626053
Di-isopropyl ether	ND		0.00100	1	02/26/2021 04:35	WG1626053
Ethylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Hexachloro-1,3-butadiene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Isopropylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
p-Isopropyltoluene	ND		0.00100	1	02/26/2021 04:35	WG1626053
2-Butanone (MEK)	ND		0.0100	1	02/26/2021 04:35	WG1626053
Methylene Chloride	ND		0.00500	1	02/26/2021 04:35	WG1626053
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/26/2021 04:35	WG1626053
Methyl tert-butyl ether	ND		0.00100	1	02/26/2021 04:35	WG1626053
Naphthalene	ND		0.00500	1	02/26/2021 04:35	WG1626053
n-Propylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Styrene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
Tetrachloroethene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Toluene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2,3-Trichlorobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2,4-Trichlorobenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,1,1-Trichloroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,1,2-Trichloroethane	ND		0.00100	1	02/26/2021 04:35	WG1626053
Trichloroethene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Trichlorofluoromethane	ND	J4	0.00500	1	02/26/2021 04:35	WG1626053
1,2,3-Trichloropropane	ND		0.00250	1	02/26/2021 04:35	WG1626053
1,2,4-Trimethylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,2,3-Trimethylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
1,3,5-Trimethylbenzene	ND		0.00100	1	02/26/2021 04:35	WG1626053
Vinyl chloride	ND		0.00100	1	02/26/2021 04:35	WG1626053
Xylenes, Total	ND		0.00300	1	02/26/2021 04:35	WG1626053
(S) Toluene-d8	97.7		80.0-120		02/26/2021 04:35	WG1626053
(S) 4-Bromofluorobenzene	107		77.0-126		02/26/2021 04:35	WG1626053
(S) 1,2-Dichloroethane-d4	105		70.0-130		02/26/2021 04:35	WG1626053



Gravimetric Analysis by Method 2540 C-2011 [L1319812-01,02,03,04](#)

Method Blank (MB)

(MB) R3625695-1 02/25/21 20:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1318583-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1318583-01 02/25/21 20:46 • (DUP) R3625695-3 02/25/21 20:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	681	692	1	1.55		5

L1318583-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1318583-06 02/25/21 20:46 • (DUP) R3625695-4 02/25/21 20:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	460	459	1	0.218		5

Laboratory Control Sample (LCS)

(LCS) R3625695-2 02/25/21 20:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8900	101	77.4-123	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3626165-1 02/27/21 11:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

Laboratory Control Sample (LCS)

(LCS) R3626165-2 02/27/21 11:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8550	97.2	77.4-123	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 353.2

L1319812-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3626928-1 03/03/21 11:38

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0500	0.100

L1319707-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1319707-01 03/03/21 11:45 • (DUP) R3626928-3 03/03/21 11:46

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	0.736	0.743	1	0.947		20

L1319812-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1319812-02 03/03/21 12:04 • (DUP) R3626928-7 03/03/21 12:05

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	3.90	3.90	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3626928-2 03/03/21 11:39

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Nitrate-Nitrite	2.50	2.67	107	90.0-110	

L1319707-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1319707-02 03/03/21 11:47 • (MS) R3626928-4 03/03/21 11:48 • (MSD) R3626928-5 03/03/21 11:53

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	2.50	3.39	5.79	5.84	96.0	98.0	1	90.0-110	E	E	0.860	20

L1319812-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1319812-01 03/03/21 12:01 • (MS) R3626928-6 03/03/21 12:02

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Nitrate-Nitrite	2.50	0.359	2.82	98.4	1	90.0-110	

1

Cp

2

Tc

3

Ss

4

Cn

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Sr

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Qc

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Gl

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Al

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Sc

Laboratory Control Sample (LCS)

(LCS) R3625208-1 02/25/21 16:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.05 at 19.9C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 9056A

[L1319812-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3626433-1 03/01/21 14:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Bromide	0.589	⌵	0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1319223-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1319223-03 03/02/21 00:01 • (DUP) R3626433-3 03/02/21 00:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	ND	ND	1	0.211		15
Chloride	22.4	22.4	1	0.164		15
Fluoride	0.465	0.447	1	3.97		15
Sulfate	8.83	8.96	1	1.41		15

L1319223-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1319223-11 03/02/21 03:55 • (DUP) R3626433-6 03/02/21 04:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	ND	ND	1	0.000		15
Chloride	33.4	33.3	1	0.386		15
Fluoride	0.689	0.620	1	10.5		15
Sulfate	ND	ND	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3626433-2 03/01/21 14:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Bromide	40.0	39.9	99.7	80.0-120	
Chloride	40.0	40.0	100	80.0-120	
Fluoride	8.00	8.06	101	80.0-120	
Sulfate	40.0	40.4	101	80.0-120	

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Cp

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Tc

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Ss

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Cn

5

Sr

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Qc

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Gl

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Al

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Sc

Wet Chemistry by Method 9056A [L1319812-01,02,03,04,05,06,07](#)

L1319223-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1319223-03 03/02/21 00:01 • (MS) R3626433-4 03/02/21 00:26 • (MSD) R3626433-5 03/02/21 00:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	50.0	ND	51.0	50.3	100	98.8	1	80.0-120			1.21	15
Chloride	50.0	22.4	74.4	73.8	104	103	1	80.0-120			0.776	15
Fluoride	5.00	0.465	5.56	5.52	102	101	1	80.0-120			0.673	15
Sulfate	50.0	8.83	62.2	61.6	107	106	1	80.0-120			0.932	15

L1319223-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1319223-11 03/02/21 03:55 • (MS) R3626433-7 03/02/21 04:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	50.7	101	1	80.0-120	
Chloride	50.0	33.4	84.8	103	1	80.0-120	
Fluoride	5.00	0.689	5.83	103	1	80.0-120	
Sulfate	50.0	ND	52.4	105	1	80.0-120	

1

Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1319812-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3625829-2 02/25/21 22:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

[L1319812-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3625829-2 02/25/21 22:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	99.0			80.0-120
(S) 4-Bromofluorobenzene	107			77.0-126
(S) 1,2-Dichloroethane-d4	104			70.0-130

1

Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Laboratory Control Sample (LCS)

(LCS) R3625829-1 02/25/21 21:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0276	110	19.0-160	
Acrolein	0.0250	0.0270	108	10.0-160	
Acrylonitrile	0.0250	0.0289	116	55.0-149	
Benzene	0.00500	0.00531	106	70.0-123	

Laboratory Control Sample (LCS)

(LCS) R3625829-1 02/25/21 21:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromobenzene	0.00500	0.00472	94.4	73.0-121	
Bromodichloromethane	0.00500	0.00558	112	75.0-120	
Bromoform	0.00500	0.00519	104	68.0-132	
Bromomethane	0.00500	0.00464	92.8	10.0-160	
n-Butylbenzene	0.00500	0.00439	87.8	73.0-125	
sec-Butylbenzene	0.00500	0.00484	96.8	75.0-125	
tert-Butylbenzene	0.00500	0.00481	96.2	76.0-124	
Carbon tetrachloride	0.00500	0.00544	109	68.0-126	
Chlorobenzene	0.00500	0.00494	98.8	80.0-121	
Chlorodibromomethane	0.00500	0.00501	100	77.0-125	
Chloroethane	0.00500	0.00544	109	47.0-150	
Chloroform	0.00500	0.00550	110	73.0-120	
Chloromethane	0.00500	0.00582	116	41.0-142	
2-Chlorotoluene	0.00500	0.00477	95.4	76.0-123	
4-Chlorotoluene	0.00500	0.00473	94.6	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00440	88.0	58.0-134	
1,2-Dibromoethane	0.00500	0.00525	105	80.0-122	
Dibromomethane	0.00500	0.00570	114	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00479	95.8	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00480	96.0	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00473	94.6	79.0-120	
Dichlorodifluoromethane	0.00500	0.00611	122	51.0-149	
1,1-Dichloroethane	0.00500	0.00545	109	70.0-126	
1,2-Dichloroethane	0.00500	0.00566	113	70.0-128	
1,1-Dichloroethene	0.00500	0.00510	102	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00558	112	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00574	115	73.0-120	
1,2-Dichloropropane	0.00500	0.00552	110	77.0-125	
1,1-Dichloropropene	0.00500	0.00523	105	74.0-126	
1,3-Dichloropropane	0.00500	0.00516	103	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00504	101	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00483	96.6	78.0-124	
2,2-Dichloropropane	0.00500	0.00589	118	58.0-130	
Di-isopropyl ether	0.00500	0.00544	109	58.0-138	
Ethylbenzene	0.00500	0.00490	98.0	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00450	90.0	54.0-138	
Isopropylbenzene	0.00500	0.00508	102	76.0-127	
p-Isopropyltoluene	0.00500	0.00477	95.4	76.0-125	
2-Butanone (MEK)	0.0250	0.0282	113	44.0-160	
Methylene Chloride	0.00500	0.00504	101	67.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC/MS) by Method 8260B L1319812-01,02,03,04,05,06,07

Laboratory Control Sample (LCS)

(LCS) R3625829-1 02/25/21 21:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Methyl-2-pentanone (MIBK)	0.0250	0.0264	106	68.0-142	
Methyl tert-butyl ether	0.00500	0.00588	118	68.0-125	
Naphthalene	0.00500	0.00408	81.6	54.0-135	
n-Propylbenzene	0.00500	0.00480	96.0	77.0-124	
Styrene	0.00500	0.00504	101	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00488	97.6	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00478	95.6	65.0-130	
Tetrachloroethene	0.00500	0.00503	101	72.0-132	
Toluene	0.00500	0.00494	98.8	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00543	109	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00409	81.8	50.0-138	
1,2,4-Trichlorobenzene	0.00500	0.00407	81.4	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00556	111	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00526	105	80.0-120	
Trichloroethene	0.00500	0.00557	111	78.0-124	
Trichlorofluoromethane	0.00500	0.00261	52.2	59.0-147	J4
1,2,3-Trichloropropane	0.00500	0.00466	93.2	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00474	94.8	77.0-120	
1,2,4-Trimethylbenzene	0.00500	0.00468	93.6	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00484	96.8	76.0-122	
Vinyl chloride	0.00500	0.00479	95.8	67.0-131	
Xylenes, Total	0.0150	0.0151	101	79.0-123	
(S) Toluene-d8			99.4	80.0-120	
(S) 4-Bromofluorobenzene			109	77.0-126	
(S) 1,2-Dichloroethane-d4			108	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

HilCorp-Farmington, NM

382 Road 3100
Aztec, NM 87401

Billing Information:

Clave 087302a
PO Box 61529
Houston, TX 77268
JENNIFER DEAL

Pres
ChkReport to:
Kurt HoekstraEmail To:
jdeal@hilcorp.com;khoekstra@hilcorp.comProject Description:
Salty Dog PipelineCity/State
Collected:Please Circle:
PT MT CT ET

Phone: 505-486-9543

Client Project #

Lab Project #
HILCORANM-SALTYDOGCollected by (print):
KurtSite/Facility ID #
SALTY DOG PIPELINE

P.O. #

Collected by (signature):
Kurt Hoekstra

Rush? (Lab MUST Be Notified)

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N ___ Y XNo.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time		ANIONS 125mlHDPE-NoPres	CATIONS 125mlHDPE-NoPres	NO2NO3 250mlHDPE-H2SO4	PH 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	V8260 40mlAmb-HCl	NO SAMPLES FIELD FILTERED					
MW- 3		GW		2-22	10:12	8	X	X	X	X	X	X	X					01
MW- 12		GW		2-22	10:52	8	X	X	X	X	X	X	X					02
MW- 17		GW		2-22	12:21	8	X	X	X	X	X	X	X					03
MW 18		GW		2-22	1:45	8	X	X	X	X	X	X	X					04
MW 15		GW		2-23	11:03	8	X	X	X	X	X	X	X					05
MW 9		GW		2-23	1:03	8	X	X	X	X	X	X	X					06
MW 20		GW		2-23	2:19	8	X	X	X	X	X	X	X					07

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking #

9348 1611 2857

Relinquished by: (Signature)
Kurt Hoekstra

Date:

2-24-21

Time:

6:55

Received by: (Signature)

Trip Blank Received: Yes (No)

HCL/MeOH

TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Bottles Received: 340 = 5 54

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)
Caleb Condon

Date:

2/26/21

Time:

9:50

Hold:

Condition:

NCF / OK

If preservation required by Login: Date/Time

Sample Receipt Checklist
COC Seal Present/Intact: ___ NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N
RAD Screen <0.5 mR/hr: ___ Y ___ N

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



SDG # 1398n

Tab G181

Acctnum: HILCORANM

Template: T170513

Pregoin: P816026

PM: 823 - Olivia Studebaker

PB: BF 6/9/20

Shipped Via: FedEx Ground

Remarks Sample # (Lab only)



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 15, 2021

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX

RE: Salty Dog

OrderNo.: 2106E52

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/26/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog

Collection Date: 6/24/2021 2:15:00 PM

Lab ID: 2106E52-001

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 1:29:21 PM
Chloride	11000	500	*	mg/L	1000	7/1/2021 6:14:43 PM
Bromide	15	1.0		mg/L	10	6/29/2021 1:29:21 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 1:29:21 PM
Sulfate	1900	50	*	mg/L	100	6/29/2021 1:42:14 PM
Nitrate+Nitrite as N	ND	10		mg/L	50	7/1/2021 8:49:25 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	2000	100		mg/L	100	6/30/2021 10:42:03 AM
Magnesium	310	10		mg/L	10	6/30/2021 9:14:53 AM
Potassium	28	10		mg/L	10	6/30/2021 9:14:53 AM
Sodium	5900	100		mg/L	100	6/30/2021 10:42:03 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 3:33:07 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 3:33:07 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 3:33:07 PM
Acetone	ND	10		µg/L	1	6/30/2021 3:33:07 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 3:33:07 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 3:33:07 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 3:33:07 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 3:33:07 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 3:33:07 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 34

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog

Collection Date: 6/24/2021 2:15:00 PM

Lab ID: 2106E52-001

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 3:33:07 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 3:33:07 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 3:33:07 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 3:33:07 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 3:33:07 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 3:33:07 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 3:33:07 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 3:33:07 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 3:33:07 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 3:33:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 34

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03

Project: Salty Dog

Collection Date: 6/24/2021 2:15:00 PM

Lab ID: 2106E52-001

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	6/30/2021 3:33:07 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/30/2021 3:33:07 PM
Surr: Dibromofluoromethane	100	70-130		%Rec	1	6/30/2021 3:33:07 PM
Surr: Toluene-d8	99.0	70-130		%Rec	1	6/30/2021 3:33:07 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	23600	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 3 of 34

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog

Collection Date: 6/24/2021 2:05:00 PM

Lab ID: 2106E52-002

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 2:20:53 PM
Chloride	1900	50	*	mg/L	100	6/29/2021 2:33:46 PM
Chloride	3600	5.0	E*	mg/L	10	7/2/2021 2:35:37 AM
Bromide	2.5	1.0		mg/L	10	6/29/2021 2:20:53 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 2:20:53 PM
Sulfate	2300	50	*	mg/L	100	6/29/2021 2:33:46 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/6/2021 2:57:36 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	540	10		mg/L	10	6/30/2021 9:16:12 AM
Magnesium	80	5.0		mg/L	5	6/30/2021 10:43:23 AM
Potassium	10	5.0		mg/L	5	6/30/2021 10:43:23 AM
Sodium	1300	20		mg/L	20	6/30/2021 10:44:45 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 4:54:49 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 4:54:49 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 4:54:49 PM
Acetone	ND	10		µg/L	1	6/30/2021 4:54:49 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 4:54:49 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 4:54:49 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 4:54:49 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 4:54:49 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 4:54:49 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog

Collection Date: 6/24/2021 2:05:00 PM

Lab ID: 2106E52-002

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 4:54:49 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 4:54:49 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 4:54:49 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 4:54:49 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 4:54:49 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 4:54:49 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 4:54:49 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 4:54:49 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 4:54:49 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05

Project: Salty Dog

Collection Date: 6/24/2021 2:05:00 PM

Lab ID: 2106E52-002

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 4:54:49 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/30/2021 4:54:49 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	6/30/2021 4:54:49 PM
Surr: Dibromofluoromethane	100	70-130		%Rec	1	6/30/2021 4:54:49 PM
Surr: Toluene-d8	101	70-130		%Rec	1	6/30/2021 4:54:49 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	6420	100	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 6/24/2021 1:25:00 PM

Lab ID: 2106E52-003

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	1.2	1.0		mg/L	10	6/29/2021 2:46:38 PM
Chloride	4900	250	*	mg/L	500	7/1/2021 6:27:36 PM
Bromide	7.3	1.0		mg/L	10	6/29/2021 2:46:38 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 2:46:38 PM
Sulfate	4700	50	*	mg/L	100	6/29/2021 2:59:31 PM
Nitrate+Nitrite as N	9.6	1.0		mg/L	5	6/29/2021 11:48:49 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	730	10		mg/L	10	6/30/2021 9:17:35 AM
Magnesium	290	10		mg/L	10	6/30/2021 9:17:35 AM
Potassium	15	10		mg/L	10	6/30/2021 9:17:35 AM
Sodium	4800	50		mg/L	50	6/30/2021 10:46:21 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 5:22:04 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 5:22:04 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 5:22:04 PM
Acetone	ND	10		µg/L	1	6/30/2021 5:22:04 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 5:22:04 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 5:22:04 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 5:22:04 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 5:22:04 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 5:22:04 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 6/24/2021 1:25:00 PM

Lab ID: 2106E52-003

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 5:22:04 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 5:22:04 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 5:22:04 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 5:22:04 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 5:22:04 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 5:22:04 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 5:22:04 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 5:22:04 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 5:22:04 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 5:22:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 6/24/2021 1:25:00 PM

Lab ID: 2106E52-003

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	6/30/2021 5:22:04 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	6/30/2021 5:22:04 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/30/2021 5:22:04 PM
Surr: Toluene-d8	97.2	70-130		%Rec	1	6/30/2021 5:22:04 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	15200	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 6/24/2021 12:25:00 PM

Lab ID: 2106E52-004

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 3:12:24 PM
Chloride	740	50	*	mg/L	100	6/29/2021 3:26:12 PM
Bromide	1.5	1.0		mg/L	10	6/29/2021 3:12:24 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 3:12:24 PM
Sulfate	2500	50	*	mg/L	100	6/29/2021 3:26:12 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/30/2021 12:01:42 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	530	10		mg/L	10	6/30/2021 9:18:56 AM
Magnesium	94	10		mg/L	10	6/30/2021 9:18:56 AM
Potassium	12	10		mg/L	10	6/30/2021 9:18:56 AM
Sodium	860	10		mg/L	10	6/30/2021 9:18:56 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 5:49:24 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 5:49:24 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 5:49:24 PM
Acetone	ND	10		µg/L	1	6/30/2021 5:49:24 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 5:49:24 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 5:49:24 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 5:49:24 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 5:49:24 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 5:49:24 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 6/24/2021 12:25:00 PM

Lab ID: 2106E52-004

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 5:49:24 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 5:49:24 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 5:49:24 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 5:49:24 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 5:49:24 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 5:49:24 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 5:49:24 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 5:49:24 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 5:49:24 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 5:49:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2106E52
Date Reported: 7/15/2021

CLIENT: HILCORP ENERGY Client Sample ID: MW09
Project: Salty Dog Collection Date: 6/24/2021 12:25:00 PM
Lab ID: 2106E52-004 Matrix: GROUNDWA Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	6/30/2021 5:49:24 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	6/30/2021 5:49:24 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/30/2021 5:49:24 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	6/30/2021 5:49:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	5100	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 6/24/2021 1:50:00 PM

Lab ID: 2106E52-005

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 3:39:07 PM
Chloride	1200	50	*	mg/L	100	6/29/2021 3:52:00 PM
Bromide	1.8	1.0		mg/L	10	6/29/2021 3:39:07 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 3:39:07 PM
Sulfate	2200	50	*	mg/L	100	6/29/2021 3:52:00 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/30/2021 12:53:13 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	510	10		mg/L	10	6/30/2021 9:20:15 AM
Magnesium	77	5.0		mg/L	5	6/30/2021 10:52:36 AM
Potassium	9.5	5.0		mg/L	5	6/30/2021 10:52:36 AM
Sodium	1200	20		mg/L	20	6/30/2021 10:53:49 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 6:16:35 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 6:16:35 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 6:16:35 PM
Acetone	ND	10		µg/L	1	6/30/2021 6:16:35 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 6:16:35 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 6:16:35 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 6:16:35 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 6:16:35 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 6:16:35 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 6/24/2021 1:50:00 PM

Lab ID: 2106E52-005

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 6:16:35 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 6:16:35 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 6:16:35 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 6:16:35 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 6:16:35 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 6:16:35 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 6:16:35 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 6:16:35 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 6:16:35 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 6:16:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 6/24/2021 1:50:00 PM

Lab ID: 2106E52-005

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	6/30/2021 6:16:35 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/30/2021 6:16:35 PM
Surr: Dibromofluoromethane	105	70-130		%Rec	1	6/30/2021 6:16:35 PM
Surr: Toluene-d8	99.8	70-130		%Rec	1	6/30/2021 6:16:35 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	5690	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 15 of 34
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Limit	
	S	% Recovery outside of range due to dilution or matrix			

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 6/25/2021 1:00:00 PM

Lab ID: 2106E52-006

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 4:04:52 PM
Chloride	6900	500	*	mg/L	1000	7/1/2021 6:40:29 PM
Bromide	9.8	1.0		mg/L	10	6/29/2021 4:04:52 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 4:04:52 PM
Sulfate	1900	50	*	mg/L	100	6/29/2021 4:17:50 PM
Nitrate+Nitrite as N	ND	10		mg/L	50	7/1/2021 9:02:18 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	1700	50		mg/L	50	6/30/2021 10:55:01 AM
Magnesium	250	10		mg/L	10	6/30/2021 9:21:35 AM
Potassium	20	10		mg/L	10	6/30/2021 9:21:35 AM
Sodium	3400	50		mg/L	50	6/30/2021 10:55:01 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 6:43:45 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 6:43:45 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 6:43:45 PM
Acetone	ND	10		µg/L	1	6/30/2021 6:43:45 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 6:43:45 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 6:43:45 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 6:43:45 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 6:43:45 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 6:43:45 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 6/25/2021 1:00:00 PM

Lab ID: 2106E52-006

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 6:43:45 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 6:43:45 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 6:43:45 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 6:43:45 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 6:43:45 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 6:43:45 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 6:43:45 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 6:43:45 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 6:43:45 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 6:43:45 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 6/25/2021 1:00:00 PM

Lab ID: 2106E52-006

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	6/30/2021 6:43:45 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/30/2021 6:43:45 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/30/2021 6:43:45 PM
Surr: Toluene-d8	96.7	70-130		%Rec	1	6/30/2021 6:43:45 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	16900	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 6/24/2021 1:00:00 PM

Lab ID: 2106E52-007

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 4:56:28 PM
Chloride	2900	100	*	mg/L	200	7/1/2021 6:53:22 PM
Bromide	4.0	1.0		mg/L	10	6/29/2021 4:56:28 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 4:56:28 PM
Sulfate	2400	50	*	mg/L	100	6/29/2021 5:09:22 PM
Nitrate+Nitrite as N	2.3	1.0		mg/L	5	6/30/2021 1:18:57 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	910	10		mg/L	10	6/30/2021 9:22:56 AM
Magnesium	130	10		mg/L	10	6/30/2021 9:22:56 AM
Potassium	14	10		mg/L	10	6/30/2021 9:22:56 AM
Sodium	2200	50		mg/L	50	6/30/2021 10:56:22 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 7:11:04 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 7:11:04 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 7:11:04 PM
Acetone	ND	10		µg/L	1	6/30/2021 7:11:04 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 7:11:04 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 7:11:04 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 7:11:04 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 7:11:04 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 7:11:04 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 6/24/2021 1:00:00 PM

Lab ID: 2106E52-007

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 7:11:04 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 7:11:04 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 7:11:04 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 7:11:04 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 7:11:04 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 7:11:04 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 7:11:04 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 7:11:04 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 7:11:04 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 7:11:04 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 6/24/2021 1:00:00 PM

Lab ID: 2106E52-007

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	6/30/2021 7:11:04 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/30/2021 7:11:04 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/30/2021 7:11:04 PM
Surr: Toluene-d8	101	70-130		%Rec	1	6/30/2021 7:11:04 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	7810	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 6/24/2021 12:45:00 PM

Lab ID: 2106E52-008

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 5:22:15 PM
Chloride	490	50	*	mg/L	100	6/29/2021 5:35:08 PM
Bromide	1.2	1.0		mg/L	10	6/29/2021 5:22:15 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 5:22:15 PM
Sulfate	2200	50	*	mg/L	100	6/29/2021 5:35:08 PM
Nitrate+Nitrite as N	1.1	1.0		mg/L	5	6/30/2021 1:31:55 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	520	10		mg/L	10	6/30/2021 9:24:14 AM
Magnesium	88	5.0		mg/L	5	6/30/2021 10:57:44 AM
Potassium	10	5.0		mg/L	5	6/30/2021 10:57:44 AM
Sodium	690	10		mg/L	10	6/30/2021 9:24:14 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 7:38:22 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 7:38:22 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 7:38:22 PM
Acetone	ND	10		µg/L	1	6/30/2021 7:38:22 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 7:38:22 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 7:38:22 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 7:38:22 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 7:38:22 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 7:38:22 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 6/24/2021 12:45:00 PM

Lab ID: 2106E52-008

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 7:38:22 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 7:38:22 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 7:38:22 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 7:38:22 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 7:38:22 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 7:38:22 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 7:38:22 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 7:38:22 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 7:38:22 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 7:38:22 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 6/24/2021 12:45:00 PM

Lab ID: 2106E52-008

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	6/30/2021 7:38:22 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/30/2021 7:38:22 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	1	6/30/2021 7:38:22 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	6/30/2021 7:38:22 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	3850	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 24 of 34
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Limit	
	S	% Recovery outside of range due to dilution or matrix			

Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20

Project: Salty Dog

Collection Date: 6/24/2021 12:05:00 PM

Lab ID: 2106E52-009

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JMT
Fluoride	ND	1.0		mg/L	10	6/29/2021 5:48:01 PM
Chloride	1700	100	*	mg/L	200	7/1/2021 7:06:15 PM
Bromide	2.8	1.0		mg/L	10	6/29/2021 5:48:01 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/29/2021 5:48:01 PM
Sulfate	2300	50	*	mg/L	100	6/29/2021 6:00:54 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/30/2021 1:44:48 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	500	10		mg/L	10	6/30/2021 9:25:34 AM
Magnesium	110	10		mg/L	10	6/30/2021 9:25:34 AM
Potassium	13	10		mg/L	10	6/30/2021 9:25:34 AM
Sodium	1600	20		mg/L	20	6/30/2021 10:59:04 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Toluene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Ethylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Naphthalene	ND	2.0		µg/L	1	6/30/2021 8:05:35 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 8:05:35 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	6/30/2021 8:05:35 PM
Acetone	ND	10		µg/L	1	6/30/2021 8:05:35 PM
Bromobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Bromodichloromethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Bromoform	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Bromomethane	ND	3.0		µg/L	1	6/30/2021 8:05:35 PM
2-Butanone	ND	10		µg/L	1	6/30/2021 8:05:35 PM
Carbon disulfide	ND	10		µg/L	1	6/30/2021 8:05:35 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Chlorobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Chloroethane	ND	2.0		µg/L	1	6/30/2021 8:05:35 PM
Chloroform	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Chloromethane	ND	3.0		µg/L	1	6/30/2021 8:05:35 PM
2-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
4-Chlorotoluene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
cis-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2106E52

Date Reported: 7/15/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW20

Project: Salty Dog

Collection Date: 6/24/2021 12:05:00 PM

Lab ID: 2106E52-009

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/30/2021 8:05:35 PM
Dibromochloromethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Dibromomethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	6/30/2021 8:05:35 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
2-Hexanone	ND	10		µg/L	1	6/30/2021 8:05:35 PM
Isopropylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	6/30/2021 8:05:35 PM
Methylene Chloride	ND	3.0		µg/L	1	6/30/2021 8:05:35 PM
n-Butylbenzene	ND	3.0		µg/L	1	6/30/2021 8:05:35 PM
n-Propylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
sec-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Styrene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
tert-Butylbenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/30/2021 8:05:35 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
trans-1,2-DCE	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/30/2021 8:05:35 PM
Vinyl chloride	ND	1.0		µg/L	1	6/30/2021 8:05:35 PM
Xylenes, Total	ND	1.5		µg/L	1	6/30/2021 8:05:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2106E52**

Date Reported: 7/15/2021

CLIENT: HILCORP ENERGY

Client Sample ID: MW20

Project: Salty Dog

Collection Date: 6/24/2021 12:05:00 PM

Lab ID: 2106E52-009

Matrix: GROUNDWA

Received Date: 6/26/2021 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	6/30/2021 8:05:35 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	6/30/2021 8:05:35 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/30/2021 8:05:35 PM
Surr: Toluene-d8	98.9	70-130		%Rec	1	6/30/2021 8:05:35 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	7010	200	*D	mg/L	1	7/2/2021 3:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106E52

15-Jul-21

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB-61017	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 61017	RunNo: 79474								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2793961	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLCS-61017	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 61017	RunNo: 79474								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2793963	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	94.9	50	150			
Magnesium	ND	1.0	0.5000	0	97.2	50	150			
Potassium	ND	1.0	0.5000	0	80.9	50	150			
Sodium	ND	1.0	0.5000	0	109	50	150			

Sample ID: LCS-61017	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 61017	RunNo: 79474								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2793965	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	95.6	85	115			
Magnesium	48	1.0	50.00	0	97.0	85	115			
Potassium	49	1.0	50.00	0	97.2	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106E52

15-Jul-21

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79463	RunNo: 79463								
Prep Date:	Analysis Date: 6/29/2021	SeqNo: 2793356	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R79463	RunNo: 79463								
Prep Date:	Analysis Date: 6/29/2021	SeqNo: 2793357	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Bromide	2.4	0.10	2.500	0	97.7	90	110			
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	90.0	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79542	RunNo: 79542								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2796659	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R79542	RunNo: 79542								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2796667	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.3	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A79541	RunNo: 79541								
Prep Date:	Analysis Date: 7/2/2021	SeqNo: 2796767	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106E52

15-Jul-21

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A79541	RunNo: 79541								
Prep Date:	Analysis Date: 7/2/2021	SeqNo: 2796767 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: A79541	RunNo: 79541								
Prep Date:	Analysis Date: 7/2/2021	SeqNo: 2796768 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.2	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79607	RunNo: 79607								
Prep Date:	Analysis Date: 7/6/2021	SeqNo: 2799951 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R79607	RunNo: 79607								
Prep Date:	Analysis Date: 7/6/2021	SeqNo: 2799952 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106E52

15-Jul-21

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R79505			RunNo: 79505						
Prep Date:	Analysis Date: 6/30/2021			SeqNo: 2795257			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	19	1.0	20.00	0	96.8	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	97.8	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID: 2106e52-001a ms	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW03	Batch ID: R79505			RunNo: 79505						
Prep Date:	Analysis Date: 6/30/2021			SeqNo: 2795263			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0.2988	109	70	130			
Toluene	22	1.0	20.00	0.5684	105	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		98.5	70	130			

Sample ID: 2106e52-001a msd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW03	Batch ID: R79505			RunNo: 79505						
Prep Date:	Analysis Date: 6/30/2021			SeqNo: 2795264			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0.2988	113	70	130	3.57	20	
Toluene	20	1.0	20.00	0.5684	97.3	70	130	7.37	20	
Chlorobenzene	20	1.0	20.00	0	100	70	130	5.85	20	
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130	2.06	20	
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130	0.110	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		115	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		103	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		95.7	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E52

15-Jul-21

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R79505	RunNo: 79505								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795278	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E52

15-Jul-21

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R79505			RunNo: 79505						
Prep Date:	Analysis Date: 6/30/2021			SeqNo: 2795278		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.8		10.00		98.5	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E52
15-Jul-21

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: MB-61071	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 61071	RunNo: 79554								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797645		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-61071	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 61071	RunNo: 79554								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797646		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	20.0	1000	0	100	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY

Work Order Number: 2106E52

RcptNo: 1

Received By: Juan Rojas

6/26/2021 8:30:00 AM

Juan Rojas

Completed By: Cheyenne Cason

6/28/2021 9:36:31 AM

Cason

Reviewed By: DAD 6-28-21

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

18
(<2 or >12 unless noted)

Adjusted? **NO**

Checked by: T.C. 6-28-21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good				



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 13, 2021

Josh Adams

Hilcorp Energy

PO Box 61529

Houston, TX 77208-1529

TEL: (337) 276-7676

FAX:

RE: Salty Dog

OrderNo.: 2106F59

Dear Josh Adams:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/30/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2106F59

Date Reported: 7/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW12

Project: Salty Dog

Collection Date: 6/28/2021 1:05:00 PM

Lab ID: 2106F59-001

Matrix: AQUEOUS

Received Date: 6/30/2021 8:44:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/30/2021 3:21:50 PM	R79495
Chloride	3400	250	*	mg/L	500	7/6/2021 4:53:28 PM	R79607
Bromide	5.2	1.0		mg/L	10	6/30/2021 3:21:50 PM	R79495
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/30/2021 3:21:50 PM	R79495
Sulfate	1800	50	*	mg/L	100	6/30/2021 3:34:11 PM	R79495
Nitrate+Nitrite as N	ND	4.0		mg/L	20	7/6/2021 4:02:00 PM	R79607
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	10500	200	*D	mg/L	1	7/7/2021 11:55:00 AM	61103
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	1100	20		mg/L	20	7/2/2021 10:08:47 AM	61083
Magnesium	150	5.0		mg/L	5	7/2/2021 10:54:57 AM	61083
Potassium	12	5.0		mg/L	5	7/2/2021 10:54:57 AM	61083
Sodium	1800	20		mg/L	20	7/2/2021 10:08:47 AM	61083
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	2.0	D	µg/L	2	7/1/2021 9:10:00 PM	SL79511
Toluene	ND	2.0	D	µg/L	2	7/1/2021 9:10:00 PM	SL79511
Ethylbenzene	ND	2.0	D	µg/L	2	7/1/2021 9:10:00 PM	SL79511
Xylenes, Total	ND	3.0	D	µg/L	2	7/1/2021 9:10:00 PM	SL79511
Surr: 1,2-Dichloroethane-d4	97.0	70-130	D	%Rec	2	7/1/2021 9:10:00 PM	SL79511
Surr: Dibromofluoromethane	92.0	70-130	D	%Rec	2	7/1/2021 9:10:00 PM	SL79511
Surr: Toluene-d8	94.6	70-130	D	%Rec	2	7/1/2021 9:10:00 PM	SL79511

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 1 of 6

Analytical Report

Lab Order 2106F59

Date Reported: 7/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW18

Project: Salty Dog

Collection Date: 6/28/2021 1:30:00 PM

Lab ID: 2106F59-002

Matrix: AQUEOUS

Received Date: 6/30/2021 8:44:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/30/2021 3:46:32 PM	R79495
Chloride	1900	100	*	mg/L	200	7/6/2021 5:06:19 PM	R79607
Bromide	3.0	1.0		mg/L	10	6/30/2021 3:46:32 PM	R79495
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	6/30/2021 3:46:32 PM	R79495
Sulfate	2200	50	*	mg/L	100	6/30/2021 3:58:52 PM	R79495
Nitrate+Nitrite as N	2.5	2.0		mg/L	10	7/6/2021 4:14:53 PM	R79607
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	6750	200	*D	mg/L	1	7/7/2021 11:55:00 AM	61103
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	600	10		mg/L	10	7/2/2021 10:10:19 AM	61083
Magnesium	87	5.0		mg/L	5	7/2/2021 12:07:09 PM	61083
Potassium	7.2	5.0		mg/L	5	7/2/2021 12:07:09 PM	61083
Sodium	1400	20		mg/L	20	7/2/2021 12:08:47 PM	61083
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	2.0	D	µg/L	2	7/1/2021 9:33:00 PM	SL79511
Toluene	ND	2.0	D	µg/L	2	7/1/2021 9:33:00 PM	SL79511
Ethylbenzene	ND	2.0	D	µg/L	2	7/1/2021 9:33:00 PM	SL79511
Xylenes, Total	ND	3.0	D	µg/L	2	7/1/2021 9:33:00 PM	SL79511
Surr: 1,2-Dichloroethane-d4	98.1	70-130	D	%Rec	2	7/1/2021 9:33:00 PM	SL79511
Surr: Dibromofluoromethane	92.6	70-130	D	%Rec	2	7/1/2021 9:33:00 PM	SL79511
Surr: Toluene-d8	94.1	70-130	D	%Rec	2	7/1/2021 9:33:00 PM	SL79511

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 2 of 6

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106F59

13-Jul-21

Client: Hilcorp Energy**Project:** Salty Dog

Sample ID: MB-61083	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 61083	RunNo: 79546								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797213 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLCS-61083	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 61083	RunNo: 79546								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797215 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	98.4	50	150			
Magnesium	ND	1.0	0.5000	0	98.3	50	150			
Potassium	ND	1.0	0.5000	0	83.9	50	150			
Sodium	ND	1.0	0.5000	0	95.9	50	150			

Sample ID: LCS-61083	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 61083	RunNo: 79546								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797217 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	95.2	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.8	85	115			
Sodium	49	1.0	50.00	0	97.6	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106F59

13-Jul-21

Client: Hilcorp Energy**Project:** Salty Dog

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79495	RunNo: 79495								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2794696 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R79495	RunNo: 79495								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2794697 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Bromide	2.4	0.10	2.500	0	97.5	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	93.0	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79607	RunNo: 79607								
Prep Date:	Analysis Date: 7/6/2021	SeqNo: 2799951 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R79607	RunNo: 79607								
Prep Date:	Analysis Date: 7/6/2021	SeqNo: 2799952 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.2	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2106F59

13-Jul-21

Client: Hilcorp Energy**Project:** Salty Dog

Sample ID: 100ng 8260 lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: SL79511			RunNo: 79511						
Prep Date:	Analysis Date: 7/1/2021			SeqNo: 2797143		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.0	70	130			
Toluene	20	1.0	20.00	0	99.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.8	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID: MB	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: SL79511			RunNo: 79511						
Prep Date:	Analysis Date: 7/1/2021			SeqNo: 2797144		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106F59

13-Jul-21

Client: Hilcorp Energy
Project: Salty Dog

Sample ID: MB-61103	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 61103	RunNo: 79612								
Prep Date: 7/2/2021	Analysis Date: 7/7/2021	SeqNo: 2800049	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-61103	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 61103	RunNo: 79612								
Prep Date: 7/2/2021	Analysis Date: 7/7/2021	SeqNo: 2800050	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Hilcorp Energy

Work Order Number: 2106F59

RcptNo: 1

Received By: Tracy Casarrubias 6/30/2021 8:44:00 AM

Completed By: Sean Livingston 6/30/2021 9:19:33 AM

Reviewed By: JR 6/30/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: 4
(~~6~~ or >12 unless noted)
Adjusted? NO
Checked by: DAD 6.30.21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good				



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

October 13, 2021

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX

RE: Salty Dog SWD

OrderNo.: 2109G89

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/29/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-15

Project: Salty Dog SWD

Collection Date: 9/27/2021 1:40:00 PM

Lab ID: 2109G89-001

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	10/6/2021 10:00:39 AM
Chloride	430	50	*	mg/L	100	10/4/2021 10:09:38 AM
Bromide	1.3	1.0		mg/L	10	9/29/2021 7:39:44 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	9/29/2021 7:39:44 PM
Sulfate	2500	50	*	mg/L	100	9/29/2021 7:52:37 PM
Nitrate+Nitrite as N	1.8	1.0		mg/L	5	10/4/2021 8:03:33 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	530	10		mg/L	10	10/6/2021 12:47:12 PM
Magnesium	85	1.0		mg/L	1	10/6/2021 9:36:10 AM
Potassium	13	1.0		mg/L	1	10/6/2021 9:36:10 AM
Sodium	560	10		mg/L	10	10/6/2021 12:47:12 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Toluene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Naphthalene	ND	2.0		µg/L	1	10/1/2021 6:10:21 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 6:10:21 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 6:10:21 PM
Acetone	ND	10		µg/L	1	10/1/2021 6:10:21 PM
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Bromoform	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Bromomethane	ND	3.0		µg/L	1	10/1/2021 6:10:21 PM
2-Butanone	ND	10		µg/L	1	10/1/2021 6:10:21 PM
Carbon disulfide	ND	10		µg/L	1	10/1/2021 6:10:21 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Chloroethane	ND	2.0		µg/L	1	10/1/2021 6:10:21 PM
Chloroform	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Chloromethane	ND	3.0		µg/L	1	10/1/2021 6:10:21 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
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- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-15

Project: Salty Dog SWD

Collection Date: 9/27/2021 1:40:00 PM

Lab ID: 2109G89-001

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 6:10:21 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 6:10:21 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
2-Hexanone	ND	10		µg/L	1	10/1/2021 6:10:21 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 6:10:21 PM
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 6:10:21 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 6:10:21 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Styrene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 6:10:21 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 6:10:21 PM
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 6:10:21 PM
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 6:10:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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Analytical Report

Lab Order 2109G89

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-15

Project: Salty Dog SWD

Collection Date: 9/27/2021 1:40:00 PM

Lab ID: 2109G89-001

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	10/1/2021 6:10:21 PM
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	10/1/2021 6:10:21 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/1/2021 6:10:21 PM
Surr: Toluene-d8	99.2	70-130		%Rec	1	10/1/2021 6:10:21 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	4900	10		µmhos/c	1	10/4/2021 1:35:29 PM
SM4500-H+B / 9040C: PH						Analyst: CAS
pH	7.29		H	pH units	1	10/4/2021 1:35:29 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	219.4	20.00		mg/L Ca	1	10/4/2021 1:35:29 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	10/4/2021 1:35:29 PM
Total Alkalinity (as CaCO3)	219.4	20.00		mg/L Ca	1	10/4/2021 1:35:29 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JMT
Total Dissolved Solids	3990	200	*D	mg/L	1	10/4/2021 10:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
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- PQL Practical Quantitative Limit
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- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-10

Project: Salty Dog SWD

Collection Date: 9/27/2021 3:45:00 PM

Lab ID: 2109G89-002

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	10/6/2021 10:13:32 AM
Chloride	3600	250	*	mg/L	500	10/4/2021 10:22:31 AM
Bromide	5.3	1.0		mg/L	10	9/29/2021 8:05:28 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	9/29/2021 8:05:28 PM
Sulfate	1900	50	*	mg/L	100	9/29/2021 8:18:20 PM
Nitrate+Nitrite as N	ND	4.0		mg/L	20	10/4/2021 8:16:26 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	1300	20		mg/L	20	10/6/2021 12:48:37 PM
Magnesium	180	5.0		mg/L	5	10/6/2021 9:49:40 AM
Potassium	26	1.0		mg/L	1	10/6/2021 9:48:20 AM
Sodium	1800	20		mg/L	20	10/6/2021 12:48:37 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Toluene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Naphthalene	ND	2.0		µg/L	1	10/1/2021 6:37:24 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 6:37:24 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 6:37:24 PM
Acetone	ND	10		µg/L	1	10/1/2021 6:37:24 PM
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Bromoform	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Bromomethane	ND	3.0		µg/L	1	10/1/2021 6:37:24 PM
2-Butanone	ND	10		µg/L	1	10/1/2021 6:37:24 PM
Carbon disulfide	ND	10		µg/L	1	10/1/2021 6:37:24 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Chloroethane	ND	2.0		µg/L	1	10/1/2021 6:37:24 PM
Chloroform	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Chloromethane	ND	3.0		µg/L	1	10/1/2021 6:37:24 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
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- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-10

Project: Salty Dog SWD

Collection Date: 9/27/2021 3:45:00 PM

Lab ID: 2109G89-002

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 6:37:24 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 6:37:24 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
2-Hexanone	ND	10		µg/L	1	10/1/2021 6:37:24 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 6:37:24 PM
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 6:37:24 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 6:37:24 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Styrene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 6:37:24 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 6:37:24 PM
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 6:37:24 PM
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 6:37:24 PM

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Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/1/2021 6:37:24 PM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	10/1/2021 6:37:24 PM
Surr: Toluene-d8	99.0	70-130		%Rec	1	10/1/2021 6:37:24 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	16000	100		µmhos/c	10	10/6/2021 12:05:45 PM
SM4500-H+B / 9040C: PH						Analyst: CAS
pH	7.34		H	pH units	1	10/4/2021 1:48:03 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	185.4	20.00		mg/L Ca	1	10/4/2021 1:48:03 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	10/4/2021 1:48:03 PM
Total Alkalinity (as CaCO3)	185.4	20.00		mg/L Ca	1	10/4/2021 1:48:03 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JMT
Total Dissolved Solids	9510	200	*D	mg/L	1	10/4/2021 10:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-13

Project: Salty Dog SWD

Collection Date: 9/28/2021 11:10:00 AM

Lab ID: 2109G89-003

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	10/6/2021 10:26:25 AM
Chloride	8600	500	*	mg/L	1000	10/4/2021 10:35:24 AM
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	9/29/2021 8:44:04 PM
Bromide	11	1.0		mg/L	10	9/29/2021 8:31:12 PM
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	9/29/2021 8:31:12 PM
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/29/2021 8:31:12 PM
Sulfate	2000	50	*	mg/L	100	9/29/2021 8:44:04 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	2000	50		mg/L	50	10/6/2021 12:54:57 PM
Magnesium	280	5.0		mg/L	5	10/6/2021 9:57:59 AM
Potassium	32	1.0		mg/L	1	10/6/2021 9:56:39 AM
Sodium	4000	50		mg/L	50	10/6/2021 12:54:57 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Toluene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Naphthalene	ND	2.0		µg/L	1	10/1/2021 7:04:27 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 7:04:27 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 7:04:27 PM
Acetone	ND	10		µg/L	1	10/1/2021 7:04:27 PM
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Bromoform	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Bromomethane	ND	3.0		µg/L	1	10/1/2021 7:04:27 PM
2-Butanone	ND	10		µg/L	1	10/1/2021 7:04:27 PM
Carbon disulfide	ND	10		µg/L	1	10/1/2021 7:04:27 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Chloroethane	ND	2.0		µg/L	1	10/1/2021 7:04:27 PM
Chloroform	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Chloromethane	ND	3.0		µg/L	1	10/1/2021 7:04:27 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-13

Project: Salty Dog SWD

Collection Date: 9/28/2021 11:10:00 AM

Lab ID: 2109G89-003

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 7:04:27 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 7:04:27 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
2-Hexanone	ND	10		µg/L	1	10/1/2021 7:04:27 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 7:04:27 PM
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 7:04:27 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 7:04:27 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Styrene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 7:04:27 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 7:04:27 PM
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 7:04:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-13

Project: Salty Dog SWD

Collection Date: 9/28/2021 11:10:00 AM

Lab ID: 2109G89-003

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 7:04:27 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	10/1/2021 7:04:27 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/1/2021 7:04:27 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/1/2021 7:04:27 PM
Surr: Toluene-d8	98.3	70-130		%Rec	1	10/1/2021 7:04:27 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	33000	500		µmhos/c	50	10/6/2021 12:10:08 PM
SM4500-H+B / 9040C: PH						Analyst: CAS
pH	7.29		H	pH units	1	10/4/2021 1:59:51 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	198.9	20.00		mg/L Ca	1	10/4/2021 1:59:51 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	10/4/2021 1:59:51 PM
Total Alkalinity (as CaCO3)	198.9	20.00		mg/L Ca	1	10/4/2021 1:59:51 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JMT
Total Dissolved Solids	17200	200	*D	mg/L	1	10/4/2021 10:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-09

Project: Salty Dog SWD

Collection Date: 9/28/2021 11:40:00 AM

Lab ID: 2109G89-004

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	10/6/2021 10:39:18 AM
Chloride	1200	50	*	mg/L	100	10/4/2021 10:48:16 AM
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	9/29/2021 8:56:56 PM
Bromide	2.0	1.0		mg/L	10	9/29/2021 8:56:56 PM
Nitrogen, Nitrate (As N)	1.1	1.0		mg/L	10	9/29/2021 8:56:56 PM
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/29/2021 8:56:56 PM
Sulfate	2600	50	*	mg/L	100	9/29/2021 9:09:48 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	690	20		mg/L	20	10/6/2021 12:56:22 PM
Magnesium	120	5.0		mg/L	5	10/6/2021 10:00:41 AM
Potassium	14	1.0		mg/L	1	10/6/2021 9:59:20 AM
Sodium	1000	20		mg/L	20	10/6/2021 12:56:22 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Toluene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Naphthalene	ND	2.0		µg/L	1	10/1/2021 7:31:28 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 7:31:28 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 7:31:28 PM
Acetone	ND	10		µg/L	1	10/1/2021 7:31:28 PM
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Bromoform	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Bromomethane	ND	3.0		µg/L	1	10/1/2021 7:31:28 PM
2-Butanone	ND	10		µg/L	1	10/1/2021 7:31:28 PM
Carbon disulfide	ND	10		µg/L	1	10/1/2021 7:31:28 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Chloroethane	ND	2.0		µg/L	1	10/1/2021 7:31:28 PM
Chloroform	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Chloromethane	ND	3.0		µg/L	1	10/1/2021 7:31:28 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-09

Project: Salty Dog SWD

Collection Date: 9/28/2021 11:40:00 AM

Lab ID: 2109G89-004

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 7:31:28 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 7:31:28 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
2-Hexanone	ND	10		µg/L	1	10/1/2021 7:31:28 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 7:31:28 PM
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 7:31:28 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 7:31:28 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Styrene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 7:31:28 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 7:31:28 PM
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 7:31:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-09

Project: Salty Dog SWD

Collection Date: 9/28/2021 11:40:00 AM

Lab ID: 2109G89-004

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 7:31:28 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	10/1/2021 7:31:28 PM
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	10/1/2021 7:31:28 PM
Surr: Dibromofluoromethane	107	70-130		%Rec	1	10/1/2021 7:31:28 PM
Surr: Toluene-d8	96.0	70-130		%Rec	1	10/1/2021 7:31:28 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	7300	10		µmhos/c	1	10/4/2021 2:11:59 PM
SM4500-H+B / 9040C: PH						Analyst: CAS
pH	7.19		H	pH units	1	10/4/2021 2:11:59 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	236.8	20.00		mg/L Ca	1	10/4/2021 2:11:59 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	10/4/2021 2:11:59 PM
Total Alkalinity (as CaCO3)	236.8	20.00		mg/L Ca	1	10/4/2021 2:11:59 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JMT
Total Dissolved Solids	5560	200	*D	mg/L	1	10/4/2021 10:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-18

Project: Salty Dog SWD

Collection Date: 9/28/2021 12:55:00 PM

Lab ID: 2109G89-005

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	10/6/2021 10:52:12 AM
Chloride	3300	100	*	mg/L	200	10/4/2021 11:01:09 AM
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	9/29/2021 9:22:40 PM
Bromide	4.3	1.0		mg/L	10	9/29/2021 9:22:40 PM
Nitrogen, Nitrate (As N)	2.6	1.0		mg/L	10	9/29/2021 9:22:40 PM
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/29/2021 9:22:40 PM
Sulfate	2600	50	*	mg/L	100	9/29/2021 9:35:32 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	920	50		mg/L	50	10/6/2021 12:57:46 PM
Magnesium	150	5.0		mg/L	5	10/6/2021 10:38:22 AM
Potassium	21	1.0		mg/L	1	10/6/2021 10:37:02 AM
Sodium	2000	50		mg/L	50	10/6/2021 12:57:46 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Toluene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Naphthalene	ND	2.0		µg/L	1	10/1/2021 7:58:26 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 7:58:26 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 7:58:26 PM
Acetone	ND	10		µg/L	1	10/1/2021 7:58:26 PM
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Bromoform	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Bromomethane	ND	3.0		µg/L	1	10/1/2021 7:58:26 PM
2-Butanone	ND	10		µg/L	1	10/1/2021 7:58:26 PM
Carbon disulfide	ND	10		µg/L	1	10/1/2021 7:58:26 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Chloroethane	ND	2.0		µg/L	1	10/1/2021 7:58:26 PM
Chloroform	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Chloromethane	ND	3.0		µg/L	1	10/1/2021 7:58:26 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-18

Project: Salty Dog SWD

Collection Date: 9/28/2021 12:55:00 PM

Lab ID: 2109G89-005

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 7:58:26 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 7:58:26 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
2-Hexanone	ND	10		µg/L	1	10/1/2021 7:58:26 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 7:58:26 PM
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 7:58:26 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 7:58:26 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Styrene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 7:58:26 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 7:58:26 PM
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 7:58:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-18

Project: Salty Dog SWD

Collection Date: 9/28/2021 12:55:00 PM

Lab ID: 2109G89-005

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 7:58:26 PM
Surr: 1,2-Dichloroethane-d4	91.8	70-130		%Rec	1	10/1/2021 7:58:26 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/1/2021 7:58:26 PM
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/1/2021 7:58:26 PM
Surr: Toluene-d8	94.5	70-130		%Rec	1	10/1/2021 7:58:26 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	15000	100		µmhos/c	10	10/6/2021 12:14:16 PM
SM4500-H+B / 9040C: PH						Analyst: CAS
pH	7.25		H	pH units	1	10/4/2021 2:24:43 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	216.6	20.00		mg/L Ca	1	10/4/2021 2:24:43 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	10/4/2021 2:24:43 PM
Total Alkalinity (as CaCO3)	216.6	20.00		mg/L Ca	1	10/4/2021 2:24:43 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JMT
Total Dissolved Solids	7890	200	*D	mg/L	1	10/4/2021 10:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-12

Project: Salty Dog SWD

Collection Date: 9/28/2021 1:25:00 PM

Lab ID: 2109G89-006

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	9/29/2021 10:14:10 PM
Chloride	8300	500	*	mg/L	1000	10/4/2021 11:14:03 AM
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	9/29/2021 10:14:10 PM
Bromide	11	1.0		mg/L	10	9/29/2021 10:14:10 PM
Nitrogen, Nitrate (As N)	4.9	1.0		mg/L	10	9/29/2021 10:14:10 PM
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/29/2021 10:14:10 PM
Sulfate	2900	50	*	mg/L	100	9/29/2021 10:27:03 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	910	20		mg/L	20	10/6/2021 12:59:10 PM
Magnesium	140	5.0		mg/L	5	10/6/2021 10:50:28 AM
Potassium	36	5.0		mg/L	5	10/6/2021 10:50:28 AM
Sodium	4800	100		mg/L	100	10/6/2021 1:00:34 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Toluene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Naphthalene	ND	2.0		µg/L	1	10/1/2021 8:25:19 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 8:25:19 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 8:25:19 PM
Acetone	ND	10		µg/L	1	10/1/2021 8:25:19 PM
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Bromoform	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Bromomethane	ND	3.0		µg/L	1	10/1/2021 8:25:19 PM
2-Butanone	ND	10		µg/L	1	10/1/2021 8:25:19 PM
Carbon disulfide	ND	10		µg/L	1	10/1/2021 8:25:19 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Chloroethane	ND	2.0		µg/L	1	10/1/2021 8:25:19 PM
Chloroform	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Chloromethane	ND	3.0		µg/L	1	10/1/2021 8:25:19 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-12

Project: Salty Dog SWD

Collection Date: 9/28/2021 1:25:00 PM

Lab ID: 2109G89-006

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 8:25:19 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 8:25:19 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
2-Hexanone	ND	10		µg/L	1	10/1/2021 8:25:19 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 8:25:19 PM
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 8:25:19 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 8:25:19 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Styrene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 8:25:19 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 8:25:19 PM
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 8:25:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2109G89

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-12

Project: Salty Dog SWD

Collection Date: 9/28/2021 1:25:00 PM

Lab ID: 2109G89-006

Matrix: GROUNDWA

Received Date: 9/29/2021 7:21:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Xylenes, Total	2.7	1.5		µg/L	1	10/1/2021 8:25:19 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	10/1/2021 8:25:19 PM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	10/1/2021 8:25:19 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/1/2021 8:25:19 PM
Surr: Toluene-d8	93.5	70-130		%Rec	1	10/1/2021 8:25:19 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	36000	500		µmhos/c	50	10/6/2021 12:18:31 PM
SM4500-H+B / 9040C: PH						Analyst: CAS
pH	7.39		H	pH units	1	10/4/2021 2:37:30 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	256.8	20.00		mg/L Ca	1	10/4/2021 2:37:30 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	10/4/2021 2:37:30 PM
Total Alkalinity (as CaCO3)	256.8	20.00		mg/L Ca	1	10/4/2021 2:37:30 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JMT
Total Dissolved Solids	18900	200	*D	mg/L	1	10/4/2021 10:31:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109G89
13-Oct-21

Client: HILCORP ENERGY
Project: Salty Dog SWD

Sample ID: MB-63026		SampType: MBLK		TestCode: EPA Method 200.7: Metals						
Client ID: PBW		Batch ID: 63026		RunNo: 81836						
Prep Date: 10/4/2021		Analysis Date: 10/6/2021		SeqNo: 2894957		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLLCS-63026		SampType: LCSLL		TestCode: EPA Method 200.7: Metals						
Client ID: BatchQC		Batch ID: 63026		RunNo: 81836						
Prep Date: 10/4/2021		Analysis Date: 10/6/2021		SeqNo: 2894959		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	103	50	150			
Magnesium	ND	1.0	0.5000	0	99.5	50	150			
Potassium	ND	1.0	0.5000	0	89.8	50	150			
Sodium	ND	1.0	0.5000	0	96.2	50	150			

Sample ID: LSC-63026		SampType: LCS		TestCode: EPA Method 200.7: Metals						
Client ID: LCSW		Batch ID: 63026		RunNo: 81836						
Prep Date: 10/4/2021		Analysis Date: 10/6/2021		SeqNo: 2894961		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.4	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Potassium	49	1.0	50.00	0	97.8	85	115			
Sodium	50	1.0	50.00	0	99.0	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 19 of 27

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2109G89

13-Oct-21

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R81682	RunNo: 81682								
Prep Date:	Analysis Date: 9/29/2021	SeqNo: 2887097 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R81682	RunNo: 81682								
Prep Date:	Analysis Date: 9/29/2021	SeqNo: 2887098 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	99.5	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.7	90	110			
Sulfate	9.9	0.50	10.00	0	99.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R81779	RunNo: 81779								
Prep Date:	Analysis Date: 10/4/2021	SeqNo: 2892275 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R81779	RunNo: 81779								
Prep Date:	Analysis Date: 10/4/2021	SeqNo: 2892276 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R81855	RunNo: 81855								
Prep Date:	Analysis Date: 10/6/2021	SeqNo: 2896013 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109G89
13-Oct-21

Client: HILCORP ENERGY
Project: Salty Dog SWD

Sample ID: MB		SampType: mblk		TestCode: EPA Method 300.0: Anions						
Client ID: PBW		Batch ID: R81855		RunNo: 81855						
Prep Date:		Analysis Date: 10/6/2021		SeqNo: 2896013		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID: LCS		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCSW		Batch ID: R81855		RunNo: 81855						
Prep Date:		Analysis Date: 10/6/2021		SeqNo: 2896014		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 21 of 27

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109G89
13-Oct-21

Client: HILCORP ENERGY
Project: Salty Dog SWD

Sample ID: 100ng lcs		SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW		Batch ID: R81760			RunNo: 81760					
Prep Date:		Analysis Date: 10/1/2021			SeqNo: 2891005		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.4	70	130			
Toluene	17	1.0	20.00	0	84.9	70	130			
Chlorobenzene	17	1.0	20.00	0	85.4	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	79.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.5	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.1	70	130			
Surr: Toluene-d8	9.4		10.00		93.5	70	130			

Sample ID: mb		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW		Batch ID: R81760		RunNo: 81760						
Prep Date:		Analysis Date: 10/1/2021		SeqNo: 2891026			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 22 of 27

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109G89

13-Oct-21

Client: HILCORP ENERGY

Project: Salty Dog SWD

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R81760			RunNo: 81760						
Prep Date:	Analysis Date: 10/1/2021			SeqNo: 2891026	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 23 of 27

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109G89
13-Oct-21

Client: HILCORP ENERGY

Project: Salty Dog SWD

Sample ID: mb		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW		Batch ID: R81760		RunNo: 81760						
Prep Date:		Analysis Date: 10/1/2021		SeqNo: 2891026		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.4	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

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E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 24 of 27

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2109G89

13-Oct-21

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: lcs-1 98.7uS eC	SampType: lcs			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R81775			RunNo: 81775						
Prep Date:	Analysis Date: 10/4/2021			SeqNo: 2891954		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	98.70	0	102	85	115			

Sample ID: lcs-1 98.7uS eC	SampType: lcs			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R81861			RunNo: 81861						
Prep Date:	Analysis Date: 10/6/2021			SeqNo: 2896206		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	98.70	0	101	85	115			

Sample ID: lcs-2 98.7uS eC	SampType: lcs			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R81861			RunNo: 81861						
Prep Date:	Analysis Date: 10/6/2021			SeqNo: 2896234		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	98.70	0	102	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2109G89

13-Oct-21

Client: HILCORP ENERGY**Project:** Salty Dog SWD

Sample ID: mb-1 alk	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R81775			RunNo: 81775						
Prep Date:	Analysis Date: 10/4/2021			SeqNo: 2891906		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R81775			RunNo: 81775						
Prep Date:	Analysis Date: 10/4/2021			SeqNo: 2891907		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.28	20.00	80.00	0	92.8	90	110			

Sample ID: mb-2 alk	SampType: mblk			TestCode: SM2320B: Alkalinity						
Client ID: PBW	Batch ID: R81775			RunNo: 81775						
Prep Date:	Analysis Date: 10/4/2021			SeqNo: 2891929		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs			TestCode: SM2320B: Alkalinity						
Client ID: LCSW	Batch ID: R81775			RunNo: 81775						
Prep Date:	Analysis Date: 10/4/2021			SeqNo: 2891930		Units: mg/L CaCO3				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.60	20.00	80.00	0	93.2	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109G89
13-Oct-21

Client: HILCORP ENERGY
Project: Salty Dog SWD

Sample ID: MB-62974		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids						
Client ID: PBW		Batch ID: 62974		RunNo: 81746						
Prep Date: 10/1/2021		Analysis Date: 10/4/2021		SeqNo: 2890467		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-62974		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids						
Client ID: LCSW		Batch ID: 62974		RunNo: 81746						
Prep Date: 10/1/2021		Analysis Date: 10/4/2021		SeqNo: 2890468		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

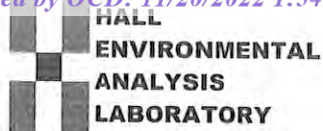
Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY

Work Order Number: 2109G89

RcptNo: 1

Received By: Cheyenne Cason 9/29/2021 7:21:00 AM

Completed By: Cheyenne Cason 9/29/2021 2:15:07 PM

Reviewed By: TAC 9/29/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

12
(≤ 2 or >12 unless noted)

Adjusted? NO

Checked by: JAC 9/29/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			
2	2.1	Good	Yes			
3	3.1	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

January 12, 2022

Mitch Killough
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX

RE: Salty Dog Pipeline

OrderNo.: 2112460

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 12 sample(s) on 12/8/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #6

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 10:05:00 AM

Lab ID: 2112460-001

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/8/2021 10:23:12 PM
Chloride	4700	250	*	mg/L	500	12/15/2021 2:31:00 PM
Bromide	5.9	1.0		mg/L	10	12/8/2021 10:23:12 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2021 10:23:12 PM
Sulfate	4600	50	*	mg/L	100	12/8/2021 10:35:33 PM
Nitrate+Nitrite as N	7.2	4.0		mg/L	20	12/15/2021 7:14:26 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	690	10		mg/L	10	12/10/2021 9:23:00 AM
Magnesium	300	5.0		mg/L	5	12/10/2021 9:21:37 AM
Potassium	24	5.0		mg/L	5	12/10/2021 9:21:37 AM
Sodium	3900	50		mg/L	50	12/10/2021 11:20:01 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 1:14:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 1:14:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 1:14:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 1:14:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 1:14:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 1:14:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 1:14:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 1:14:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 1:14:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #6

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 10:05:00 AM

Lab ID: 2112460-001

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 1:14:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 1:14:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 1:14:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 1:14:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 1:14:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 1:14:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 1:14:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 1:14:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 1:14:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 1:14:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #6

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 10:05:00 AM

Lab ID: 2112460-001

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	1	12/12/2021 1:14:00 AM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	12/12/2021 1:14:00 AM
Surr: Dibromofluoromethane	97.2	70-130		%Rec	1	12/12/2021 1:14:00 AM
Surr: Toluene-d8	99.9	70-130		%Rec	1	12/12/2021 1:14:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	24000	100		µmhos/c	10	12/13/2021 11:27:16 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.68		H	pH units	1	12/10/2021 4:16:51 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	271.6	20.00		mg/L Ca	1	12/10/2021 4:16:51 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 4:16:51 PM
Total Alkalinity (as CaCO3)	271.6	20.00		mg/L Ca	1	12/10/2021 4:16:51 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	14700	200	*D	mg/L	1	12/10/2021 1:56:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #10

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 11:45:00 AM

Lab ID: 2112460-002

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/8/2021 10:47:54 PM
Chloride	3300	100	*	mg/L	200	12/15/2021 2:43:53 PM
Bromide	4.0	1.0		mg/L	10	12/8/2021 10:47:54 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2021 10:47:54 PM
Sulfate	2000	50	*	mg/L	100	12/8/2021 11:00:15 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	12/15/2021 7:27:19 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	1100	20		mg/L	20	12/10/2021 11:21:25 AM
Magnesium	160	5.0		mg/L	5	12/10/2021 9:29:21 AM
Potassium	23	5.0		mg/L	5	12/10/2021 9:29:21 AM
Sodium	1800	20		mg/L	20	12/10/2021 11:21:25 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Toluene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Ethylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2-Dichloroethane (EDC)	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2-Dibromoethane (EDB)	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Naphthalene	ND	2.0	P	µg/L	1	12/12/2021 1:37:00 AM
1-Methylnaphthalene	ND	4.0	P	µg/L	1	12/12/2021 1:37:00 AM
2-Methylnaphthalene	ND	4.0	P	µg/L	1	12/12/2021 1:37:00 AM
Acetone	ND	10	P	µg/L	1	12/12/2021 1:37:00 AM
Bromobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Bromodichloromethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Bromoform	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Bromomethane	ND	3.0	P	µg/L	1	12/12/2021 1:37:00 AM
2-Butanone	ND	10	P	µg/L	1	12/12/2021 1:37:00 AM
Carbon disulfide	ND	10	P	µg/L	1	12/12/2021 1:37:00 AM
Carbon Tetrachloride	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Chlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Chloroethane	ND	2.0	P	µg/L	1	12/12/2021 1:37:00 AM
Chloroform	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Chloromethane	ND	3.0	P	µg/L	1	12/12/2021 1:37:00 AM
2-Chlorotoluene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
4-Chlorotoluene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
cis-1,2-DCE	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #10

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 11:45:00 AM

Lab ID: 2112460-002

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0	P	µg/L	1	12/12/2021 1:37:00 AM
Dibromochloromethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Dibromomethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2-Dichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,3-Dichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,4-Dichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Dichlorodifluoromethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1-Dichloroethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1-Dichloroethene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2-Dichloropropane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,3-Dichloropropane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
2,2-Dichloropropane	ND	2.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1-Dichloropropene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Hexachlorobutadiene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
2-Hexanone	ND	10	P	µg/L	1	12/12/2021 1:37:00 AM
Isopropylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
4-Isopropyltoluene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
4-Methyl-2-pentanone	ND	10	P	µg/L	1	12/12/2021 1:37:00 AM
Methylene Chloride	ND	3.0	P	µg/L	1	12/12/2021 1:37:00 AM
n-Butylbenzene	ND	3.0	P	µg/L	1	12/12/2021 1:37:00 AM
n-Propylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
sec-Butylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Styrene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
tert-Butylbenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0	P	µg/L	1	12/12/2021 1:37:00 AM
Tetrachloroethene (PCE)	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
trans-1,2-DCE	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
trans-1,3-Dichloropropene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2,3-Trichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2,4-Trichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1,1-Trichloroethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,1,2-Trichloroethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Trichloroethene (TCE)	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Trichlorofluoromethane	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
1,2,3-Trichloropropane	ND	2.0	P	µg/L	1	12/12/2021 1:37:00 AM
Vinyl chloride	ND	1.0	P	µg/L	1	12/12/2021 1:37:00 AM
Xylenes, Total	ND	1.5	P	µg/L	1	12/12/2021 1:37:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #10

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 11:45:00 AM

Lab ID: 2112460-002

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	87.6	70-130	P	%Rec	1	12/12/2021 1:37:00 AM
Surr: 4-Bromofluorobenzene	95.9	70-130	P	%Rec	1	12/12/2021 1:37:00 AM
Surr: Dibromofluoromethane	97.4	70-130	P	%Rec	1	12/12/2021 1:37:00 AM
Surr: Toluene-d8	99.6	70-130	P	%Rec	1	12/12/2021 1:37:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	15000	100		µmhos/c	10	12/13/2021 11:30:16 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.61		H	pH units	1	12/10/2021 4:30:47 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	201.1	20.00		mg/L Ca	1	12/10/2021 4:30:47 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 4:30:47 PM
Total Alkalinity (as CaCO3)	201.1	20.00		mg/L Ca	1	12/10/2021 4:30:47 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	8750	200	*D	mg/L	1	12/10/2021 1:56:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #14

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 2:25:00 PM

Lab ID: 2112460-003

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/8/2021 11:12:36 PM
Chloride	2400	100	*	mg/L	200	12/15/2021 2:56:47 PM
Bromide	3.1	1.0		mg/L	10	12/8/2021 11:12:36 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2021 11:12:36 PM
Sulfate	2700	50	*	mg/L	100	12/8/2021 11:24:58 PM
Nitrate+Nitrite as N	2.0	2.0		mg/L	10	12/15/2021 7:40:12 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	730	10		mg/L	10	12/10/2021 9:33:32 AM
Magnesium	100	5.0		mg/L	5	12/10/2021 9:32:10 AM
Potassium	14	5.0		mg/L	5	12/10/2021 9:32:10 AM
Sodium	1900	50		mg/L	50	12/10/2021 11:22:48 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 2:00:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 2:00:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 2:00:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 2:00:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 2:00:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 2:00:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 2:00:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 2:00:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 2:00:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #14

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 2:25:00 PM

Lab ID: 2112460-003

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 2:00:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 2:00:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 2:00:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 2:00:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 2:00:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 2:00:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 2:00:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 2:00:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 2:00:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 2:00:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #14

Project: Salty Dog Pipeline

Collection Date: 12/3/2021 2:25:00 PM

Lab ID: 2112460-003

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	1	12/12/2021 2:00:00 AM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	12/12/2021 2:00:00 AM
Surr: Dibromofluoromethane	98.9	70-130		%Rec	1	12/12/2021 2:00:00 AM
Surr: Toluene-d8	99.9	70-130		%Rec	1	12/12/2021 2:00:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	14000	100		µmhos/c	10	12/13/2021 11:33:17 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.49		H	pH units	1	12/10/2021 4:46:09 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	232.2	20.00		mg/L Ca	1	12/10/2021 4:46:09 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 4:46:09 PM
Total Alkalinity (as CaCO3)	232.2	20.00		mg/L Ca	1	12/10/2021 4:46:09 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	8520	200	*D	mg/L	1	12/10/2021 1:56:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #5

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 10:40:00 AM

Lab ID: 2112460-004

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/8/2021 11:37:18 PM
Chloride	2200	100	*	mg/L	200	12/15/2021 3:09:40 PM
Bromide	3.3	1.0		mg/L	10	12/8/2021 11:37:18 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/8/2021 11:37:18 PM
Sulfate	2100	50	*	mg/L	100	12/8/2021 11:49:38 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	12/15/2021 7:53:05 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	850	10		mg/L	10	12/10/2021 9:36:21 AM
Magnesium	110	5.0		mg/L	5	12/10/2021 9:34:56 AM
Potassium	14	5.0		mg/L	5	12/10/2021 9:34:56 AM
Sodium	1600	20		mg/L	20	12/10/2021 11:29:14 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 2:24:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 2:24:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 2:24:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 2:24:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 2:24:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 2:24:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 2:24:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 2:24:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 2:24:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #5

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 10:40:00 AM

Lab ID: 2112460-004

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 2:24:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 2:24:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 2:24:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 2:24:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 2:24:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 2:24:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 2:24:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 2:24:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 2:24:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 2:24:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #5

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 10:40:00 AM

Lab ID: 2112460-004

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	89.3	70-130		%Rec	1	12/12/2021 2:24:00 AM
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	12/12/2021 2:24:00 AM
Surr: Dibromofluoromethane	97.5	70-130		%Rec	1	12/12/2021 2:24:00 AM
Surr: Toluene-d8	101	70-130		%Rec	1	12/12/2021 2:24:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	13000	100		µmhos/c	10	12/13/2021 11:36:17 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.74		H	pH units	1	12/10/2021 4:59:24 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	205.4	20.00		mg/L Ca	1	12/10/2021 4:59:24 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 4:59:24 PM
Total Alkalinity (as CaCO3)	205.4	20.00		mg/L Ca	1	12/10/2021 4:59:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	7420	40.0	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #13

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 11:20:00 AM

Lab ID: 2112460-005

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/9/2021 12:26:41 AM
Chloride	6800	250	*	mg/L	500	12/15/2021 3:22:32 PM
Bromide	7.8	1.0		mg/L	10	12/9/2021 12:26:41 AM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/9/2021 12:26:41 AM
Sulfate	2100	50	*	mg/L	100	12/9/2021 12:39:02 AM
Nitrate+Nitrite as N	ND	4.0		mg/L	20	12/15/2021 8:05:58 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	1400	50		mg/L	50	12/10/2021 11:30:40 AM
Magnesium	230	5.0		mg/L	5	12/10/2021 9:37:44 AM
Potassium	24	5.0		mg/L	5	12/10/2021 9:37:44 AM
Sodium	3400	50		mg/L	50	12/10/2021 11:30:40 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Toluene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Ethylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2-Dichloroethane (EDC)	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2-Dibromoethane (EDB)	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Naphthalene	ND	2.0	P	µg/L	1	12/12/2021 2:47:00 AM
1-Methylnaphthalene	ND	4.0	P	µg/L	1	12/12/2021 2:47:00 AM
2-Methylnaphthalene	ND	4.0	P	µg/L	1	12/12/2021 2:47:00 AM
Acetone	ND	10	P	µg/L	1	12/12/2021 2:47:00 AM
Bromobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Bromodichloromethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Bromoform	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Bromomethane	ND	3.0	P	µg/L	1	12/12/2021 2:47:00 AM
2-Butanone	ND	10	P	µg/L	1	12/12/2021 2:47:00 AM
Carbon disulfide	ND	10	P	µg/L	1	12/12/2021 2:47:00 AM
Carbon Tetrachloride	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Chlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Chloroethane	ND	2.0	P	µg/L	1	12/12/2021 2:47:00 AM
Chloroform	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Chloromethane	ND	3.0	P	µg/L	1	12/12/2021 2:47:00 AM
2-Chlorotoluene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
4-Chlorotoluene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
cis-1,2-DCE	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference

- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #13

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 11:20:00 AM

Lab ID: 2112460-005

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0	P	µg/L	1	12/12/2021 2:47:00 AM
Dibromochloromethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Dibromomethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2-Dichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,3-Dichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,4-Dichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Dichlorodifluoromethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1-Dichloroethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1-Dichloroethene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2-Dichloropropane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,3-Dichloropropane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
2,2-Dichloropropane	ND	2.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1-Dichloropropene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Hexachlorobutadiene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
2-Hexanone	ND	10	P	µg/L	1	12/12/2021 2:47:00 AM
Isopropylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
4-Isopropyltoluene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
4-Methyl-2-pentanone	ND	10	P	µg/L	1	12/12/2021 2:47:00 AM
Methylene Chloride	ND	3.0	P	µg/L	1	12/12/2021 2:47:00 AM
n-Butylbenzene	ND	3.0	P	µg/L	1	12/12/2021 2:47:00 AM
n-Propylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
sec-Butylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Styrene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
tert-Butylbenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0	P	µg/L	1	12/12/2021 2:47:00 AM
Tetrachloroethene (PCE)	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
trans-1,2-DCE	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
trans-1,3-Dichloropropene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2,3-Trichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2,4-Trichlorobenzene	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1,1-Trichloroethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,1,2-Trichloroethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Trichloroethene (TCE)	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Trichlorofluoromethane	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
1,2,3-Trichloropropane	ND	2.0	P	µg/L	1	12/12/2021 2:47:00 AM
Vinyl chloride	ND	1.0	P	µg/L	1	12/12/2021 2:47:00 AM
Xylenes, Total	ND	1.5	P	µg/L	1	12/12/2021 2:47:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #13

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 11:20:00 AM

Lab ID: 2112460-005

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	89.1	70-130	P	%Rec	1	12/12/2021 2:47:00 AM
Surr: 4-Bromofluorobenzene	95.7	70-130	P	%Rec	1	12/12/2021 2:47:00 AM
Surr: Dibromofluoromethane	97.4	70-130	P	%Rec	1	12/12/2021 2:47:00 AM
Surr: Toluene-d8	100	70-130	P	%Rec	1	12/12/2021 2:47:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	25000	100		µmhos/c	10	12/13/2021 11:39:17 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.56		H	pH units	1	12/10/2021 5:10:55 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	216.2	20.00		mg/L Ca	1	12/10/2021 5:10:55 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 5:10:55 PM
Total Alkalinity (as CaCO3)	216.2	20.00		mg/L Ca	1	12/10/2021 5:10:55 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	15000	100	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #3

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 12:15:00 PM

Lab ID: 2112460-006

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 3:10:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 3:10:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 3:10:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 3:10:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 3:10:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 3:10:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 3:10:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 3:10:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 3:10:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 3:10:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 3:10:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #3

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 12:15:00 PM

Lab ID: 2112460-006

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 3:10:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 3:10:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 3:10:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 3:10:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 3:10:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 3:10:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 3:10:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 3:10:00 AM
Surr: 1,2-Dichloroethane-d4	89.8	70-130		%Rec	1	12/12/2021 3:10:00 AM
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	1	12/12/2021 3:10:00 AM
Surr: Dibromofluoromethane	98.6	70-130		%Rec	1	12/12/2021 3:10:00 AM
Surr: Toluene-d8	101	70-130		%Rec	1	12/12/2021 3:10:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #12

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 1:15:00 PM

Lab ID: 2112460-007

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/9/2021 12:51:23 AM
Chloride	6700	250	*	mg/L	500	12/15/2021 3:35:26 PM
Bromide	7.7	1.0		mg/L	10	12/9/2021 12:51:23 AM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/9/2021 12:51:23 AM
Sulfate	2600	50	*	mg/L	100	12/9/2021 1:03:44 AM
Nitrate+Nitrite as N	6.2	4.0		mg/L	20	12/15/2021 8:18:51 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	780	10		mg/L	10	12/10/2021 9:41:57 AM
Magnesium	130	5.0		mg/L	5	12/10/2021 9:40:31 AM
Potassium	38	5.0		mg/L	5	12/10/2021 9:40:31 AM
Sodium	4800	100		mg/L	100	12/10/2021 11:32:05 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 4:18:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 4:18:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 4:18:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 4:18:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 4:18:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 4:18:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 4:18:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 4:18:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 4:18:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #12

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 1:15:00 PM

Lab ID: 2112460-007

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 4:18:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 4:18:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 4:18:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 4:18:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 4:18:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 4:18:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 4:18:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 4:18:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 4:18:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 4:18:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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CLIENT: HILCORP ENERGY

Client Sample ID: MW #12

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 1:15:00 PM

Lab ID: 2112460-007

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	86.8	70-130		%Rec	1	12/12/2021 4:18:00 AM
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	12/12/2021 4:18:00 AM
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	12/12/2021 4:18:00 AM
Surr: Toluene-d8	99.5	70-130		%Rec	1	12/12/2021 4:18:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	26000	100		µmhos/c	10	12/13/2021 11:42:16 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.58		H	pH units	1	12/10/2021 5:23:11 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	241.8	20.00		mg/L Ca	1	12/10/2021 5:23:11 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 5:23:11 PM
Total Alkalinity (as CaCO3)	241.8	20.00		mg/L Ca	1	12/10/2021 5:23:11 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	14000	100	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #17

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 2:00:00 PM

Lab ID: 2112460-008

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 4:41:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 4:41:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 4:41:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 4:41:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 4:41:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 4:41:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 4:41:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 4:41:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 4:41:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 4:41:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 4:41:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #17

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 2:00:00 PM

Lab ID: 2112460-008

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 4:41:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 4:41:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 4:41:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 4:41:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 4:41:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 4:41:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 4:41:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 4:41:00 AM
Surr: 1,2-Dichloroethane-d4	88.8	70-130		%Rec	1	12/12/2021 4:41:00 AM
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	12/12/2021 4:41:00 AM
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	12/12/2021 4:41:00 AM
Surr: Toluene-d8	100	70-130		%Rec	1	12/12/2021 4:41:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #18

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 3:00:00 PM

Lab ID: 2112460-009

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/9/2021 1:16:05 AM
Chloride	4800	250	*	mg/L	500	12/15/2021 3:48:19 PM
Bromide	6.2	1.0		mg/L	10	12/9/2021 1:16:05 AM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/9/2021 1:16:05 AM
Sulfate	2500	50	*	mg/L	100	12/9/2021 1:28:26 AM
Nitrate+Nitrite as N	4.5	4.0		mg/L	20	12/15/2021 8:31:43 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	1100	50		mg/L	50	12/10/2021 11:33:28 AM
Magnesium	180	5.0		mg/L	5	12/10/2021 9:48:20 AM
Potassium	33	5.0		mg/L	5	12/10/2021 9:48:20 AM
Sodium	3000	50		mg/L	50	12/10/2021 11:33:28 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 5:04:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 5:04:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 5:04:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 5:04:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 5:04:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 5:04:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 5:04:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 5:04:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 5:04:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference

- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #18

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 3:00:00 PM

Lab ID: 2112460-009

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 5:04:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 5:04:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 5:04:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 5:04:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 5:04:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 5:04:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 5:04:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 5:04:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 5:04:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 5:04:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #18

Project: Salty Dog Pipeline

Collection Date: 12/6/2021 3:00:00 PM

Lab ID: 2112460-009

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%Rec	1	12/12/2021 5:04:00 AM
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	1	12/12/2021 5:04:00 AM
Surr: Dibromofluoromethane	97.2	70-130		%Rec	1	12/12/2021 5:04:00 AM
Surr: Toluene-d8	101	70-130		%Rec	1	12/12/2021 5:04:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	21000	100		µmhos/c	10	12/13/2021 11:45:14 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.49		H	pH units	1	12/10/2021 5:36:08 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	225.1	20.00		mg/L Ca	1	12/10/2021 5:36:08 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 5:36:08 PM
Total Alkalinity (as CaCO3)	225.1	20.00		mg/L Ca	1	12/10/2021 5:36:08 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	11400	100	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #15

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 10:30:00 AM

Lab ID: 2112460-010

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/9/2021 1:40:47 AM
Chloride	410	50	*	mg/L	100	12/9/2021 1:53:09 AM
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	12/9/2021 1:40:47 AM
Bromide	1.1	1.0		mg/L	10	12/9/2021 1:40:47 AM
Nitrogen, Nitrate (As N)	1.3	1.0		mg/L	10	12/9/2021 1:40:47 AM
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	12/9/2021 1:40:47 AM
Sulfate	2100	50	*	mg/L	100	12/9/2021 1:53:09 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	570	10		mg/L	10	12/10/2021 9:52:32 AM
Magnesium	85	5.0		mg/L	5	12/10/2021 9:51:08 AM
Potassium	14	5.0		mg/L	5	12/10/2021 9:51:08 AM
Sodium	570	10		mg/L	10	12/10/2021 9:52:32 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 5:27:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 5:27:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 5:27:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 5:27:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 5:27:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 5:27:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 5:27:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 5:27:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 5:27:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #15

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 10:30:00 AM

Lab ID: 2112460-010

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 5:27:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 5:27:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 5:27:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 5:27:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 5:27:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 5:27:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 5:27:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 5:27:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 5:27:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #15

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 10:30:00 AM

Lab ID: 2112460-010

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 5:27:00 AM
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%Rec	1	12/12/2021 5:27:00 AM
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	12/12/2021 5:27:00 AM
Surr: Dibromofluoromethane	99.3	70-130		%Rec	1	12/12/2021 5:27:00 AM
Surr: Toluene-d8	100	70-130		%Rec	1	12/12/2021 5:27:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	4900	10		µmhos/c	1	12/13/2021 11:48:11 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.29		H	pH units	1	12/10/2021 5:48:34 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO ₃)	220.8	20.00		mg/L Ca	1	12/10/2021 5:48:34 PM
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	12/10/2021 5:48:34 PM
Total Alkalinity (as CaCO ₃)	220.8	20.00		mg/L Ca	1	12/10/2021 5:48:34 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	4000	100	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #9

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 12:00:00 PM

Lab ID: 2112460-011

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	ND	1.0		mg/L	10	12/9/2021 2:05:29 AM
Chloride	2000	50	*	mg/L	100	12/9/2021 2:17:50 AM
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	12/9/2021 2:05:29 AM
Bromide	2.6	1.0		mg/L	10	12/9/2021 2:05:29 AM
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	12/9/2021 2:05:29 AM
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	12/9/2021 2:05:29 AM
Sulfate	2400	50	*	mg/L	100	12/9/2021 2:17:50 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	790	10		mg/L	10	12/10/2021 9:55:19 AM
Magnesium	160	5.0		mg/L	5	12/10/2021 9:53:54 AM
Potassium	26	5.0		mg/L	5	12/10/2021 9:53:54 AM
Sodium	1300	20		mg/L	20	12/10/2021 11:36:09 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 5:50:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 5:50:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 5:50:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 5:50:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 5:50:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 5:50:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 5:50:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 5:50:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 5:50:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #9

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 12:00:00 PM

Lab ID: 2112460-011

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 5:50:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 5:50:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 5:50:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 5:50:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 5:50:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 5:50:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 5:50:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 5:50:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 5:50:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #9

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 12:00:00 PM

Lab ID: 2112460-011

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 5:50:00 AM
Surr: 1,2-Dichloroethane-d4	87.1	70-130		%Rec	1	12/12/2021 5:50:00 AM
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	12/12/2021 5:50:00 AM
Surr: Dibromofluoromethane	97.5	70-130		%Rec	1	12/12/2021 5:50:00 AM
Surr: Toluene-d8	101	70-130		%Rec	1	12/12/2021 5:50:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	8900	10		µmhos/c	1	12/13/2021 11:56:54 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.34		H	pH units	1	12/10/2021 6:01:14 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	230.8	20.00		mg/L Ca	1	12/10/2021 6:01:14 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 6:01:14 PM
Total Alkalinity (as CaCO3)	230.8	20.00		mg/L Ca	1	12/10/2021 6:01:14 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	6500	100	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #20

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 1:30:00 PM

Lab ID: 2112460-012

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	ND	1.0		mg/L	10	12/15/2021 4:26:58 PM
Chloride	1400	50	*	mg/L	100	12/15/2021 4:39:50 PM
Bromide	2.2	1.0		mg/L	10	12/15/2021 4:26:58 PM
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	12/15/2021 4:26:58 PM
Sulfate	2200	50	*	mg/L	100	12/15/2021 4:39:50 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	12/15/2021 8:44:36 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	650	10		mg/L	10	12/10/2021 9:58:06 AM
Magnesium	160	5.0		mg/L	5	12/10/2021 9:56:43 AM
Potassium	32	5.0		mg/L	5	12/10/2021 9:56:43 AM
Sodium	1300	20		mg/L	20	12/10/2021 11:37:31 AM
EPA METHOD 8260B: VOLATILES						Analyst: mb
Benzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Toluene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Ethylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Naphthalene	ND	2.0		µg/L	1	12/12/2021 6:13:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 6:13:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/12/2021 6:13:00 AM
Acetone	ND	10		µg/L	1	12/12/2021 6:13:00 AM
Bromobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Bromoform	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Bromomethane	ND	3.0		µg/L	1	12/12/2021 6:13:00 AM
2-Butanone	ND	10		µg/L	1	12/12/2021 6:13:00 AM
Carbon disulfide	ND	10		µg/L	1	12/12/2021 6:13:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Chlorobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Chloroethane	ND	2.0		µg/L	1	12/12/2021 6:13:00 AM
Chloroform	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Chloromethane	ND	3.0		µg/L	1	12/12/2021 6:13:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #20

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 1:30:00 PM

Lab ID: 2112460-012

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2021 6:13:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Dibromomethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/12/2021 6:13:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
2-Hexanone	ND	10		µg/L	1	12/12/2021 6:13:00 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2021 6:13:00 AM
Methylene Chloride	ND	3.0		µg/L	1	12/12/2021 6:13:00 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/12/2021 6:13:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Styrene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/12/2021 6:13:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/12/2021 6:13:00 AM
Vinyl chloride	ND	1.0		µg/L	1	12/12/2021 6:13:00 AM
Xylenes, Total	ND	1.5		µg/L	1	12/12/2021 6:13:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2112460

Date Reported: 1/12/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #20

Project: Salty Dog Pipeline

Collection Date: 12/7/2021 1:30:00 PM

Lab ID: 2112460-012

Matrix: AQUEOUS

Received Date: 12/8/2021 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: mb
Surr: 1,2-Dichloroethane-d4	88.1	70-130		%Rec	1	12/12/2021 6:13:00 AM
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	12/12/2021 6:13:00 AM
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	12/12/2021 6:13:00 AM
Surr: Toluene-d8	101	70-130		%Rec	1	12/12/2021 6:13:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN
Conductivity	7900	10		µmhos/c	1	12/13/2021 11:59:45 AM
SM4500-H+B / 9040C: PH						Analyst: JRR
pH	7.44		H	pH units	1	12/10/2021 6:41:39 PM
SM2320B: ALKALINITY						Analyst: JRR
Bicarbonate (As CaCO3)	232.0	20.00		mg/L Ca	1	12/10/2021 6:41:39 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/10/2021 6:41:39 PM
Total Alkalinity (as CaCO3)	232.0	20.00		mg/L Ca	1	12/10/2021 6:41:39 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: CJS
Total Dissolved Solids	5940	100	*D	mg/L	1	12/10/2021 3:37:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: MB-64403	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 64403	RunNo: 84436								
Prep Date: 12/9/2021	Analysis Date: 12/10/2021	SeqNo: 2966344	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLCS-64403	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 64403	RunNo: 84436								
Prep Date: 12/9/2021	Analysis Date: 12/10/2021	SeqNo: 2966346	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	95.4	50	150			
Magnesium	ND	1.0	0.5000	0	97.4	50	150			
Potassium	ND	1.0	0.5000	0	105	50	150			
Sodium	ND	1.0	0.5000	0	108	50	150			

Sample ID: LCS-64403	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 64403	RunNo: 84436								
Prep Date: 12/9/2021	Analysis Date: 12/10/2021	SeqNo: 2966348	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	47	1.0	50.00	0	94.5	85	115			
Magnesium	49	1.0	50.00	0	97.1	85	115			
Potassium	49	1.0	50.00	0	98.1	85	115			
Sodium	49	1.0	50.00	0	97.5	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R84373	RunNo: 84373								
Prep Date:	Analysis Date: 12/8/2021	SeqNo: 2964370			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R84373	RunNo: 84373								
Prep Date:	Analysis Date: 12/8/2021	SeqNo: 2964371			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			
Chloride	4.6	0.50	5.000	0	92.3	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.6	90	110			
Bromide	2.4	0.10	2.500	0	98.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P)	4.5	0.50	5.000	0	90.4	90	110			
Sulfate	9.3	0.50	10.00	0	92.9	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R84598	RunNo: 84598								
Prep Date:	Analysis Date: 12/15/2021	SeqNo: 2973759			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R84598	RunNo: 84598								
Prep Date:	Analysis Date: 12/15/2021	SeqNo: 2973760			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Estimated value
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Limit
S % Recovery outside of range due to dilution or matrix interference	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: LCS		SampType: lcs			TestCode: EPA Method 300.0: Anions					
Client ID: LCSW		Batch ID: R84598			RunNo: 84598					
Prep Date:		Analysis Date: 12/15/2021			SeqNo: 2973760		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.1	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: mb 2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: B84472	RunNo: 84472								
Prep Date:	Analysis Date: 12/12/2021	SeqNo: 2968072	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 38 of 44

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: mb 2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: B84472	RunNo: 84472								
Prep Date:	Analysis Date: 12/12/2021	SeqNo: 2968072	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.1	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.4	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.9	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID: 100ng lcs 2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: B84472	RunNo: 84472								
Prep Date:	Analysis Date: 12/12/2021	SeqNo: 2968074	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.7	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: 100ng lcs 2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: B84472	RunNo: 84472								
Prep Date:	Analysis Date: 12/12/2021	SeqNo: 2968074	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17	1.0	20.00	0	84.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.9	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.4	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: 2112460-006ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: MW #3	Batch ID: B84472	RunNo: 84472								
Prep Date:	Analysis Date: 12/12/2021	SeqNo: 2968076	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.1	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	87.7	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.1	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: 2112460-006amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES								
Client ID: MW #3	Batch ID: B84472	RunNo: 84472								
Prep Date:	Analysis Date: 12/12/2021	SeqNo: 2968078	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.8	70	130	6.74	20	
Toluene	20	1.0	20.00	0	99.9	70	130	6.93	20	
Chlorobenzene	21	1.0	20.00	0	103	70	130	7.38	20	
1,1-Dichloroethene	17	1.0	20.00	0	83.2	70	130	5.29	20	
Trichloroethene (TCE)	18	1.0	20.00	0	88.2	70	130	6.68	20	
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		96.9	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: Ics-1 99.3uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R84513		RunNo: 84513						
Prep Date:		Analysis Date: 12/13/2021		SeqNo: 2969951		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	99	10	99.30	0	99.9	85	115			

Sample ID: Ics-2 99.3uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R84513		RunNo: 84513						
Prep Date:		Analysis Date: 12/13/2021		SeqNo: 2970003		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.30	0	104	85	115			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: 2112460-012b dup		SampType: dup		TestCode: SM4500-H+B / 9040C: pH						
Client ID: MW #20		Batch ID: R84449		RunNo: 84449						
Prep Date:		Analysis Date: 12/10/2021		SeqNo: 2967557		Units: pH units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.45									H

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R84449	RunNo: 84449								
Prep Date:	Analysis Date: 12/10/2021	SeqNo: 2967459 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R84449	RunNo: 84449								
Prep Date:	Analysis Date: 12/10/2021	SeqNo: 2967460 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.76	20.00	80.00	0	93.5	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R84449	RunNo: 84449								
Prep Date:	Analysis Date: 12/10/2021	SeqNo: 2967482 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R84449	RunNo: 84449								
Prep Date:	Analysis Date: 12/10/2021	SeqNo: 2967483 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.92	20.00	80.00	0	93.6	90	110			

Sample ID: 2112460-012b dup	SampType: dup	TestCode: SM2320B: Alkalinity								
Client ID: MW #20	Batch ID: R84449	RunNo: 84449								
Prep Date:	Analysis Date: 12/10/2021	SeqNo: 2967485 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	233.9	20.00						0.824	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2112460

12-Jan-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: MB-64383	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 64383	RunNo: 84444								
Prep Date: 12/8/2021	Analysis Date: 12/10/2021	SeqNo: 2966632 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-64383	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 64383	RunNo: 84444								
Prep Date: 12/8/2021	Analysis Date: 12/10/2021	SeqNo: 2966633 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Sample ID: MB-64398	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 64398	RunNo: 84456								
Prep Date: 12/9/2021	Analysis Date: 12/10/2021	SeqNo: 2966906 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-64398	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 64398	RunNo: 84456								
Prep Date: 12/9/2021	Analysis Date: 12/10/2021	SeqNo: 2966907 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	20.0	1000	0	100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY

Work Order Number: 2112460

RcptNo: 1

Received By: Tracy Casarrubias 12/8/2021 7:30:00 AM

Completed By: Sean Livingston 12/8/2021 8:09:39 AM

Reviewed By: TMC

12/8/21

Chain of Custody1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? CourierLog In3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
*Cmc 12/8/21*9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐10. Were any sample containers received broken? Yes ☒ No ☒
*Cmc 12/8/21*11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐13. Is it clear what analyses were requested? Yes ☒ No ☐14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved bottles checked for pH: 20 Ph < 2 cnc 12/8/21
24 cnc 12/8/21
 < 2 or > 12 unless noted)

Adjusted? yesChecked by: CmcSpecial Handling (if applicable)15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: added 0.5ml HNO₃ to bot 009C & 012C For Ph < 2 cnc 12/8/2117. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-0.4	Good				
2	-0.1	Good				

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: Salty Dog Pipeline

Project #: _____

Project Manager: Mitch K. Hought

Sampler: Kurt Hoekstra

On Ice: ☒ Yes ☐ No

of Coolers: 2

Cooler Temp (including CF): See Remarks

Container Type and #

Preservative Type

HEAL No.

Volatiles 8260 40ml VOA HCl

Cations/Anions/TDS/pH 500ml, 500ml HNO₃, 125ml H₂SO₄

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
12-3	10:05	Water	MW # 6	Various	Various	2112460
12-3	11:45	Water	MW # 10	Various	Various	001
12-3	2:25	Water	MW # 14	Various	Various	002
12-4	10:40	Water	MW # 5	Various	Various	003
12-4	11:20	Water	MW # 13	Various	Various	004
12-4	12:15	Water	MW # 3	Various	Various	005
12-6	1:15	Water	MW # 12	Various	Various	006
12-6	2:00	Water	MW # 17	Various	Various	007
12-6	3:00	Water	MW # 18	Various	Various	008
		Water		Various	Various	009
		Water		Various	Various	
		Water		Various	Various	

Date: 12-7 Time: 1500

Date: 12-7 Time: 1812

Relinquished by: Kurt Hoekstra

Relinquished by: Mitch Hought

Received by: See Remarks Date: 12/7/21 Time: 1500

Received by: See Remarks Date: 12/8/21 Time: 7:30

Remarks: *Dissolved Fe is to be filtered and preserved in the lab.

1.) -0.4 - 0.5 = -0.4 Samples not frozen - the 12/8/21

2.) 1.0 - 0.8 - 1.0

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 06, 2022

Mitch Killough

HILCORP ENERGY

PO Box 4700

Farmington, NM 87499

TEL: (505) 564-0733

FAX:

RE: Salty Dog Pipeline

OrderNo.: 2203994

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/18/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #3

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 8:39:00 AM

Lab ID: 2203994-001

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
Benzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 2:39:06 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Bromoform	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 2:39:06 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 2:39:06 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 2:39:06 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #3

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 8:39:00 AM

Lab ID: 2203994-001

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 2:39:06 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 2:39:06 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 2:39:06 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 2:39:06 PM	R86688
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	3/23/2022 2:39:06 PM	R86688
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	3/23/2022 2:39:06 PM	R86688
Surr: Dibromofluoromethane	111	70-130		%Rec	1	3/23/2022 2:39:06 PM	R86688
Surr: Toluene-d8	95.6	70-130		%Rec	1	3/23/2022 2:39:06 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #5

Project: Salty Dog Pipeline

Collection Date: 3/17/2022 8:43:00 AM

Lab ID: 2203994-002

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 10:53:14 AM	R86614
Chloride	3300	250	*	mg/L	500	3/22/2022 1:09:44 PM	R86683
Bromide	4.9	1.0		mg/L	10	3/20/2022 10:53:14 AM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 10:53:14 AM	R86614
Sulfate	4700	50	*	mg/L	100	3/20/2022 11:06:05 AM	R86614
Nitrate+Nitrite as N	ND	2.0		mg/L	10	3/22/2022 3:18:25 PM	R86683
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	22000	50		µmhos/c	5	3/24/2022 12:20:12 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	271.4	20.00		mg/L Ca	1	3/22/2022 4:43:30 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 4:43:30 PM	R86681
Total Alkalinity (as CaCO ₃)	271.4	20.00		mg/L Ca	1	3/22/2022 4:43:30 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	13100	100	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.68		H	pH units	1	3/22/2022 4:43:30 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	820	10		mg/L	10	3/22/2022 10:33:48 AM	66312
Magnesium	98	10		mg/L	10	3/22/2022 10:33:48 AM	66312
Potassium	13	1.0		mg/L	1	3/22/2022 10:32:23 AM	66312
Sodium	1500	20		mg/L	20	3/22/2022 11:56:51 AM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 3:06:10 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #5

Project: Salty Dog Pipeline

Collection Date: 3/17/2022 8:43:00 AM

Lab ID: 2203994-002

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 3:06:10 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 3:06:10 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 3:06:10 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 3:06:10 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 3:06:10 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #5

Project: Salty Dog Pipeline

Collection Date: 3/17/2022 8:43:00 AM

Lab ID: 2203994-002

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 3:06:10 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 3:06:10 PM	R86688
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	3/23/2022 3:06:10 PM	R86688
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	3/23/2022 3:06:10 PM	R86688
Surr: Dibromofluoromethane	102	70-130		%Rec	1	3/23/2022 3:06:10 PM	R86688
Surr: Toluene-d8	92.6	70-130		%Rec	1	3/23/2022 3:06:10 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #6

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 9:26:00 AM

Lab ID: 2203994-003

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 11:18:58 AM	R86614
Chloride	3400	250	*	mg/L	500	3/22/2022 1:22:36 PM	R86683
Bromide	5.0	1.0		mg/L	10	3/20/2022 11:18:58 AM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 11:18:58 AM	R86614
Sulfate	4700	50	*	mg/L	100	3/20/2022 11:31:50 AM	R86614
Nitrate+Nitrite as N	5.0	4.0		mg/L	20	3/24/2022 5:08:29 PM	R86750
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	23000	50		µmhos/c	5	3/24/2022 12:23:12 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	269.8	20.00		mg/L Ca	1	3/22/2022 4:57:38 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 4:57:38 PM	R86681
Total Alkalinity (as CaCO ₃)	269.8	20.00		mg/L Ca	1	3/22/2022 4:57:38 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	13300	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.73		H	pH units	1	3/22/2022 4:57:38 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	610	10		mg/L	10	3/22/2022 10:36:35 AM	66312
Magnesium	230	10		mg/L	10	3/22/2022 10:36:35 AM	66312
Potassium	17	1.0		mg/L	1	3/22/2022 10:35:12 AM	66312
Sodium	3500	50		mg/L	50	3/22/2022 11:58:19 AM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 3:33:11 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #6

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 9:26:00 AM

Lab ID: 2203994-003

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 3:33:11 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 3:33:11 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 3:33:11 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 3:33:11 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 3:33:11 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #6

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 9:26:00 AM

Lab ID: 2203994-003

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 3:33:11 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 3:33:11 PM	R86688
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	3/23/2022 3:33:11 PM	R86688
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/23/2022 3:33:11 PM	R86688
Surr: Dibromofluoromethane	109	70-130		%Rec	1	3/23/2022 3:33:11 PM	R86688
Surr: Toluene-d8	93.5	70-130		%Rec	1	3/23/2022 3:33:11 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #9

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 11:58:00 AM

Lab ID: 2203994-004

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 11:44:43 AM	R86614
Chloride	1700	50	*	mg/L	100	3/20/2022 11:57:35 AM	R86614
Bromide	2.5	1.0		mg/L	10	3/20/2022 11:44:43 AM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 11:44:43 AM	R86614
Sulfate	2300	50	*	mg/L	100	3/20/2022 11:57:35 AM	R86614
Nitrate+Nitrite as N	ND	1.0		mg/L	5	3/20/2022 6:10:47 PM	R86614
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	8900	10		µmhos/c	1	3/22/2022 5:11:35 PM	R86681
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	229.8	20.00		mg/L Ca	1	3/22/2022 5:11:35 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 5:11:35 PM	R86681
Total Alkalinity (as CaCO ₃)	229.8	20.00		mg/L Ca	1	3/22/2022 5:11:35 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	6560	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.31		H	pH units	1	3/22/2022 5:11:35 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	710	10		mg/L	10	3/22/2022 10:39:24 AM	66312
Magnesium	130	10		mg/L	10	3/22/2022 10:39:24 AM	66312
Potassium	15	1.0		mg/L	1	3/22/2022 10:37:58 AM	66312
Sodium	1200	20		mg/L	20	3/22/2022 11:59:44 AM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 4:00:13 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #9

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 11:58:00 AM

Lab ID: 2203994-004

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 4:00:13 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 4:00:13 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 4:00:13 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 4:00:13 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 4:00:13 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #9

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 11:58:00 AM

Lab ID: 2203994-004

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 4:00:13 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 4:00:13 PM	R86688
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	3/23/2022 4:00:13 PM	R86688
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	3/23/2022 4:00:13 PM	R86688
Surr: Dibromofluoromethane	110	70-130		%Rec	1	3/23/2022 4:00:13 PM	R86688
Surr: Toluene-d8	93.2	70-130		%Rec	1	3/23/2022 4:00:13 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #10

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 11:52:00 AM

Lab ID: 2203994-005

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 12:36:11 PM	R86614
Chloride	2900	100	*	mg/L	200	3/22/2022 1:35:28 PM	R86683
Bromide	3.9	1.0		mg/L	10	3/20/2022 12:36:11 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 12:36:11 PM	R86614
Sulfate	2000	50	*	mg/L	100	3/20/2022 12:49:03 PM	R86614
Nitrate+Nitrite as N	ND	2.0		mg/L	10	3/22/2022 3:44:08 PM	R86683
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	14000	50		µmhos/c	5	3/24/2022 12:26:12 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	198.5	20.00		mg/L Ca	1	3/22/2022 5:24:31 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 5:24:31 PM	R86681
Total Alkalinity (as CaCO ₃)	198.5	20.00		mg/L Ca	1	3/22/2022 5:24:31 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	7340	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.70		H	pH units	1	3/22/2022 5:24:31 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	1100	20		mg/L	20	3/22/2022 12:01:10 PM	66312
Magnesium	120	10		mg/L	10	3/22/2022 10:42:12 AM	66312
Potassium	18	1.0		mg/L	1	3/22/2022 10:40:46 AM	66312
Sodium	1700	20		mg/L	20	3/22/2022 12:01:10 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 4:27:07 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #10

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 11:52:00 AM

Lab ID: 2203994-005

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 4:27:07 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 4:27:07 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 4:27:07 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 4:27:07 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 4:27:07 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #10

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 11:52:00 AM

Lab ID: 2203994-005

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 4:27:07 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 4:27:07 PM	R86688
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	3/23/2022 4:27:07 PM	R86688
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/23/2022 4:27:07 PM	R86688
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/23/2022 4:27:07 PM	R86688
Surr: Toluene-d8	94.1	70-130		%Rec	1	3/23/2022 4:27:07 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #12

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 9:02:00 AM

Lab ID: 2203994-006

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 1:01:55 PM	R86614
Chloride	6500	250	*	mg/L	500	3/22/2022 1:48:21 PM	R86683
Bromide	8.7	1.0		mg/L	10	3/20/2022 1:01:55 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 1:01:55 PM	R86614
Sulfate	2700	50	*	mg/L	100	3/20/2022 1:14:48 PM	R86614
Nitrate+Nitrite as N	6.9	4.0		mg/L	20	3/22/2022 3:57:01 PM	R86683
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	30000	50		µmhos/c	5	3/24/2022 12:29:13 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	248.4	20.00		mg/L Ca	1	3/22/2022 5:36:05 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 5:36:05 PM	R86681
Total Alkalinity (as CaCO ₃)	248.4	20.00		mg/L Ca	1	3/22/2022 5:36:05 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	15200	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.48		H	pH units	1	3/22/2022 5:36:05 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	730	10		mg/L	10	3/22/2022 10:50:03 AM	66312
Magnesium	110	10		mg/L	10	3/22/2022 10:50:03 AM	66312
Potassium	34	1.0		mg/L	1	3/22/2022 10:48:38 AM	66312
Sodium	4600	50		mg/L	50	3/22/2022 12:02:34 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 4:53:54 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix	
	H	Holding times for preparation or analysis exceeded	
	ND	Not Detected at the Reporting Limit	
	PQL	Practical Quantitative Limit	
	S	% Recovery outside of range due to dilution or matrix interference	

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #12

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 9:02:00 AM

Lab ID: 2203994-006

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 4:53:54 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 4:53:54 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 4:53:54 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 4:53:54 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 4:53:54 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #12

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 9:02:00 AM

Lab ID: 2203994-006

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 4:53:54 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 4:53:54 PM	R86688
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	3/23/2022 4:53:54 PM	R86688
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	3/23/2022 4:53:54 PM	R86688
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/23/2022 4:53:54 PM	R86688
Surr: Toluene-d8	96.5	70-130		%Rec	1	3/23/2022 4:53:54 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #13

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203994-007

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 1:27:40 PM	R86614
Chloride	3800	250	*	mg/L	500	3/22/2022 2:01:13 PM	R86683
Bromide	5.3	1.0		mg/L	10	3/20/2022 1:27:40 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 1:27:40 PM	R86614
Sulfate	2500	50	*	mg/L	100	3/20/2022 1:40:34 PM	R86614
Nitrate+Nitrite as N	ND	4.0		mg/L	20	3/22/2022 4:09:53 PM	R86683
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	20000	50		µmhos/c	5	3/24/2022 12:32:13 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	249.3	20.00		mg/L Ca	1	3/22/2022 5:49:53 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 5:49:53 PM	R86681
Total Alkalinity (as CaCO ₃)	249.3	20.00		mg/L Ca	1	3/22/2022 5:49:53 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	11300	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.55		H	pH units	1	3/22/2022 5:49:53 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	780	10		mg/L	10	3/22/2022 10:52:51 AM	66312
Magnesium	100	10		mg/L	10	3/22/2022 10:52:51 AM	66312
Potassium	16	1.0		mg/L	1	3/22/2022 10:51:27 AM	66312
Sodium	2800	50		mg/L	50	3/22/2022 12:03:58 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 5:20:55 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #13

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203994-007

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 5:20:55 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 5:20:55 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 5:20:55 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 5:20:55 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 5:20:55 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #13

Project: Salty Dog Pipeline

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203994-007

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 5:20:55 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 5:20:55 PM	R86688
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	3/23/2022 5:20:55 PM	R86688
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	3/23/2022 5:20:55 PM	R86688
Surr: Dibromofluoromethane	108	70-130		%Rec	1	3/23/2022 5:20:55 PM	R86688
Surr: Toluene-d8	94.4	70-130		%Rec	1	3/23/2022 5:20:55 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #14

Project: Salty Dog Pipeline

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203994-008

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 1:53:26 PM	R86614
Chloride	1900	100	*	mg/L	200	3/22/2022 2:52:40 PM	R86683
Bromide	2.8	1.0		mg/L	10	3/20/2022 1:53:26 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 1:53:26 PM	R86614
Sulfate	2800	50	*	mg/L	100	3/20/2022 2:06:18 PM	R86614
Nitrate+Nitrite as N	ND	2.0		mg/L	10	3/22/2022 4:22:45 PM	R86683
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	13000	50		µmhos/c	5	3/24/2022 12:35:14 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	225.6	20.00		mg/L Ca	1	3/22/2022 6:03:34 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 6:03:34 PM	R86681
Total Alkalinity (as CaCO ₃)	225.6	20.00		mg/L Ca	1	3/22/2022 6:03:34 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	7580	100	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.83		H	pH units	1	3/22/2022 6:03:34 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	760	10		mg/L	10	3/22/2022 10:55:39 AM	66312
Magnesium	95	10		mg/L	10	3/22/2022 10:55:39 AM	66312
Potassium	12	1.0		mg/L	1	3/22/2022 10:54:14 AM	66312
Sodium	1900	50		mg/L	50	3/22/2022 12:10:21 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 5:47:58 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #14

Project: Salty Dog Pipeline

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203994-008

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 5:47:58 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 5:47:58 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 5:47:58 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 5:47:58 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 5:47:58 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #14

Project: Salty Dog Pipeline

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203994-008

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 5:47:58 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 5:47:58 PM	R86688
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	3/23/2022 5:47:58 PM	R86688
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	3/23/2022 5:47:58 PM	R86688
Surr: Dibromofluoromethane	108	70-130		%Rec	1	3/23/2022 5:47:58 PM	R86688
Surr: Toluene-d8	94.7	70-130		%Rec	1	3/23/2022 5:47:58 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #15

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 11:14:00 AM

Lab ID: 2203994-009

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 2:19:10 PM	R86614
Chloride	360	50	*	mg/L	100	3/20/2022 2:32:02 PM	R86614
Bromide	1.1	1.0		mg/L	10	3/20/2022 2:19:10 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 2:19:10 PM	R86614
Sulfate	2000	50	*	mg/L	100	3/20/2022 2:32:02 PM	R86614
Nitrate+Nitrite as N	1.2	1.0		mg/L	5	3/20/2022 7:15:08 PM	R86614
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	5000	10		µmhos/c	1	3/22/2022 6:15:48 PM	R86681
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	216.8	20.00		mg/L Ca	1	3/22/2022 6:15:48 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 6:15:48 PM	R86681
Total Alkalinity (as CaCO ₃)	216.8	20.00		mg/L Ca	1	3/22/2022 6:15:48 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	4180	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.63		H	pH units	1	3/22/2022 6:15:48 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	550	10		mg/L	10	3/22/2022 10:58:45 AM	66312
Magnesium	80	1.0		mg/L	1	3/22/2022 10:57:20 AM	66312
Potassium	11	1.0		mg/L	1	3/22/2022 10:57:20 AM	66312
Sodium	550	10		mg/L	10	3/22/2022 12:13:27 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 6:15:02 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #15

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 11:14:00 AM

Lab ID: 2203994-009

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 6:15:02 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 6:15:02 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 6:15:02 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 6:15:02 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 6:15:02 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #15

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 11:14:00 AM

Lab ID: 2203994-009

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 6:15:02 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 6:15:02 PM	R86688
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	3/23/2022 6:15:02 PM	R86688
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	3/23/2022 6:15:02 PM	R86688
Surr: Dibromofluoromethane	109	70-130		%Rec	1	3/23/2022 6:15:02 PM	R86688
Surr: Toluene-d8	94.0	70-130		%Rec	1	3/23/2022 6:15:02 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **2203994**Date Reported: **4/6/2022****CLIENT:** HILCORP ENERGY**Client Sample ID:** MW #17**Project:** Salty Dog Pipeline**Collection Date:** 3/14/2022 3:48:00 PM**Lab ID:** 2203994-010**Matrix:** AQUEOUS**Received Date:** 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
Benzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 6:41:52 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Bromoform	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 6:41:52 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 6:41:52 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 6:41:52 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #17

Project: Salty Dog Pipeline

Collection Date: 3/14/2022 3:48:00 PM

Lab ID: 2203994-010

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 6:41:52 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 6:41:52 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 6:41:52 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 6:41:52 PM	R86688
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	3/23/2022 6:41:52 PM	R86688
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/23/2022 6:41:52 PM	R86688
Surr: Dibromofluoromethane	112	70-130		%Rec	1	3/23/2022 6:41:52 PM	R86688
Surr: Toluene-d8	97.9	70-130		%Rec	1	3/23/2022 6:41:52 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #18

Project: Salty Dog Pipeline

Collection Date: 3/14/2022 3:48:00 PM

Lab ID: 2203994-011

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 3:10:39 PM	R86614
Chloride	4700	250	*	mg/L	500	3/22/2022 3:05:32 PM	R86683
Bromide	6.2	1.0		mg/L	10	3/20/2022 3:10:39 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 3:10:39 PM	R86614
Sulfate	2500	50	*	mg/L	100	3/20/2022 3:23:31 PM	R86614
Nitrate+Nitrite as N	5.0	4.0		mg/L	20	3/22/2022 4:35:37 PM	R86683
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	23000	50		µmhos/c	5	3/24/2022 12:38:13 PM	R86771
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	235.7	20.00		mg/L Ca	1	3/22/2022 6:28:09 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 6:28:09 PM	R86681
Total Alkalinity (as CaCO ₃)	235.7	20.00		mg/L Ca	1	3/22/2022 6:28:09 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	10500	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.64		H	pH units	1	3/22/2022 6:28:09 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	870	10		mg/L	10	3/22/2022 11:01:30 AM	66312
Magnesium	130	10		mg/L	10	3/22/2022 11:01:30 AM	66312
Potassium	21	1.0		mg/L	1	3/22/2022 11:00:08 AM	66312
Sodium	3200	50		mg/L	50	3/22/2022 12:12:02 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Toluene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Naphthalene	ND	2.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Acetone	ND	10		µg/L	1	3/23/2022 7:08:37 PM	R86688
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #18

Project: Salty Dog Pipeline

Collection Date: 3/14/2022 3:48:00 PM

Lab ID: 2203994-011

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Bromomethane	ND	3.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
2-Butanone	ND	10		µg/L	1	3/23/2022 7:08:37 PM	R86688
Carbon disulfide	ND	10		µg/L	1	3/23/2022 7:08:37 PM	R86688
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Chloroethane	ND	2.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Chloroform	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Chloromethane	ND	3.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
2-Hexanone	ND	10		µg/L	1	3/23/2022 7:08:37 PM	R86688
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 7:08:37 PM	R86688
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Styrene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 7:08:37 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #18

Project: Salty Dog Pipeline

Collection Date: 3/14/2022 3:48:00 PM

Lab ID: 2203994-011

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 7:08:37 PM	R86688
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 7:08:37 PM	R86688
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	3/23/2022 7:08:37 PM	R86688
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	3/23/2022 7:08:37 PM	R86688
Surr: Dibromofluoromethane	109	70-130		%Rec	1	3/23/2022 7:08:37 PM	R86688
Surr: Toluene-d8	97.8	70-130		%Rec	1	3/23/2022 7:08:37 PM	R86688

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

CLIENT: HILCORP ENERGY

Client Sample ID: MW #20

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 12:46:00 PM

Lab ID: 2203994-012

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	1.0		mg/L	10	3/20/2022 3:36:23 PM	R86614
Chloride	920	50	*	mg/L	100	3/20/2022 4:14:59 PM	R86614
Bromide	1.7	1.0		mg/L	10	3/20/2022 3:36:23 PM	R86614
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/20/2022 3:36:23 PM	R86614
Sulfate	2100	50	*	mg/L	100	3/20/2022 4:14:59 PM	R86614
Nitrate+Nitrite as N	1.3	1.0		mg/L	5	3/20/2022 7:40:53 PM	R86614
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	7000	10		µmhos/c	1	3/22/2022 6:41:24 PM	R86681
SM2320B: ALKALINITY							Analyst: MRA
Bicarbonate (As CaCO ₃)	228.8	20.00		mg/L Ca	1	3/22/2022 6:41:24 PM	R86681
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	3/22/2022 6:41:24 PM	R86681
Total Alkalinity (as CaCO ₃)	228.8	20.00		mg/L Ca	1	3/22/2022 6:41:24 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5030	200	*D	mg/L	1	3/23/2022 11:39:00 AM	66294
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.53		H	pH units	1	3/22/2022 6:41:24 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Calcium	500	10		mg/L	10	3/22/2022 12:14:51 PM	66312
Magnesium	93	1.0		mg/L	1	3/22/2022 11:08:53 AM	66312
Potassium	14	1.0		mg/L	1	3/22/2022 11:08:53 AM	66312
Sodium	980	10		mg/L	10	3/22/2022 12:14:51 PM	66312
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Toluene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Ethylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Naphthalene	ND	2.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Acetone	ND	10		µg/L	1	3/24/2022 4:23:55 PM	R86740
Bromobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #20

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 12:46:00 PM

Lab ID: 2203994-012

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Bromomethane	ND	3.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
2-Butanone	ND	10		µg/L	1	3/24/2022 4:23:55 PM	R86740
Carbon disulfide	ND	10		µg/L	1	3/24/2022 4:23:55 PM	R86740
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Chlorobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Chloroethane	ND	2.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Chloroform	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Chloromethane	ND	3.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Dibromomethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
2-Hexanone	ND	10		µg/L	1	3/24/2022 4:23:55 PM	R86740
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2022 4:23:55 PM	R86740
Methylene Chloride	ND	3.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Styrene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2022 4:23:55 PM	R86740

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2203994

Date Reported: 4/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW #20

Project: Salty Dog Pipeline

Collection Date: 3/16/2022 12:46:00 PM

Lab ID: 2203994-012

Matrix: AQUEOUS

Received Date: 3/18/2022 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Vinyl chloride	ND	1.0		µg/L	1	3/24/2022 4:23:55 PM	R86740
Xylenes, Total	ND	1.5		µg/L	1	3/24/2022 4:23:55 PM	R86740
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	3/24/2022 4:23:55 PM	R86740
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/24/2022 4:23:55 PM	R86740
Surr: Dibromofluoromethane	112	70-130		%Rec	1	3/24/2022 4:23:55 PM	R86740
Surr: Toluene-d8	106	70-130		%Rec	1	3/24/2022 4:23:55 PM	R86740

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: MB-66312	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 66312	RunNo: 86637								
Prep Date: 3/21/2022	Analysis Date: 3/22/2022	SeqNo: 3058528 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLCS-66312	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 66312	RunNo: 86637								
Prep Date: 3/21/2022	Analysis Date: 3/22/2022	SeqNo: 3058530 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	104	50	150			
Magnesium	ND	1.0	0.5000	0	99.6	50	150			
Potassium	ND	1.0	0.5000	0	91.1	50	150			
Sodium	ND	1.0	0.5000	0	99.0	50	150			

Sample ID: LCS-66312	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 66312	RunNo: 86637								
Prep Date: 3/21/2022	Analysis Date: 3/22/2022	SeqNo: 3058532 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	96.0	85	115			
Magnesium	48	1.0	50.00	0	95.8	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			
Sodium	48	1.0	50.00	0	95.0	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Estimated value
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Limit
S % Recovery outside of range due to dilution or matrix interference	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R86614	RunNo: 86614								
Prep Date:	Analysis Date: 3/20/2022	SeqNo: 3057611 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R86614	RunNo: 86614								
Prep Date:	Analysis Date: 3/20/2022	SeqNo: 3057612 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.8	0.50	5.000	0	96.4	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P)	4.5	0.50	5.000	0	90.4	90	110			
Sulfate	10	0.50	10.00	0	103	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Sample ID: 2203994-012BMS	SampType: ms	TestCode: EPA Method 300.0: Anions								
Client ID: MW #20	Batch ID: R86614	RunNo: 86614								
Prep Date:	Analysis Date: 3/20/2022	SeqNo: 3057636 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	5.5	1.0	5.000	0.7030	95.2	79.7	110			
Bromide	25	1.0	25.00	1.734	92.7	91.2	106			

Sample ID: 2203994-012BMSD	SampType: msd	TestCode: EPA Method 300.0: Anions								
Client ID: MW #20	Batch ID: R86614	RunNo: 86614								
Prep Date:	Analysis Date: 3/20/2022	SeqNo: 3057637 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	5.5	1.0	5.000	0.7030	96.6	79.7	110	1.25	20	
Bromide	25	1.0	25.00	1.734	93.5	91.2	106	0.835	20	

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R86683	RunNo: 86683								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060705 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R86683	RunNo: 86683								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060705 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R86683	RunNo: 86683								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060713 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R86750	RunNo: 86750								
Prep Date:	Analysis Date: 3/24/2022	SeqNo: 3063328 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R86750	RunNo: 86750								
Prep Date:	Analysis Date: 3/24/2022	SeqNo: 3063329 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R86688			RunNo: 86688						
Prep Date:	Analysis Date: 3/23/2022			SeqNo: 3061024		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	70	130			
Toluene	19	1.0	20.00	0	94.1	70	130			
Chlorobenzene	19	1.0	20.00	0	93.2	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R86688			RunNo: 86688						
Prep Date:	Analysis Date: 3/23/2022			SeqNo: 3061048		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R86688	RunNo: 86688								
Prep Date:	Analysis Date: 3/23/2022	SeqNo: 3061048	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Estimated value
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL	Practical Quantitative Limit	RL Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R86688		RunNo: 86688							
Prep Date:	Analysis Date: 3/23/2022		SeqNo: 3061048		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R86740		RunNo: 86740							
Prep Date:	Analysis Date: 3/24/2022		SeqNo: 3062550		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	120	70	130			
Toluene	22	1.0	20.00	0	109	70	130			
Chlorobenzene	22	1.0	20.00	0	110	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.5	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: 2203994-012a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: MW #20	Batch ID: R86740		RunNo: 86740							
Prep Date:	Analysis Date: 3/24/2022		SeqNo: 3062557		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	28	1.0	20.00	0	139	70	130			S
Toluene	25	1.0	20.00	0	124	70	130			
Chlorobenzene	23	1.0	20.00	0	117	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	124	70	130			
Trichloroethene (TCE)	23	1.0	20.00	0	114	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		117	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY**Project:** Salty Dog Pipeline

Sample ID: 2203994-012a msd		SampType: MSD		TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW #20		Batch ID: R86740		RunNo: 86740						
Prep Date:		Analysis Date: 3/24/2022		SeqNo: 3062558		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	27	1.0	20.00	0	133	70	130	4.88	20	S
Toluene	22	1.0	20.00	0	110	70	130	11.9	20	
Chlorobenzene	22	1.0	20.00	0	111	70	130	5.41	20	
1,1-Dichloroethene	24	1.0	20.00	0	119	70	130	3.51	20	
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130	6.51	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		114	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	
Surr: Toluene-d8	10		10.00		104	70	130	0	0	

Sample ID: mb		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW		Batch ID: R86740		RunNo: 86740						
Prep Date:		Analysis Date: 3/24/2022		SeqNo: 3062559		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R86740			RunNo: 86740						
Prep Date:	Analysis Date: 3/24/2022			SeqNo: 3062559	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R86740	RunNo: 86740								
Prep Date:	Analysis Date: 3/24/2022	SeqNo: 3062559	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY

Project: Salty Dog Pipeline

Sample ID: Ics-1 100.2uS eC	SampType: Ics		TestCode: SM2510B: Specific Conductance							
Client ID: LCSW	Batch ID: R86681		RunNo: 86681							
Prep Date:	Analysis Date: 3/22/2022		SeqNo: 3060544		Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	110	10	100.0	0	108	85	115			

Sample ID: Ics-2 100.2uS eC	SampType: Ics		TestCode: SM2510B: Specific Conductance							
Client ID: LCSW	Batch ID: R86681		RunNo: 86681							
Prep Date:	Analysis Date: 3/22/2022		SeqNo: 3060570		Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.2	0	104	85	115			

Sample ID: Ics-1 100.2uS eC	SampType: Ics		TestCode: SM2510B: Specific Conductance							
Client ID: LCSW	Batch ID: R86771		RunNo: 86771							
Prep Date:	Analysis Date: 3/24/2022		SeqNo: 3064121		Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.2	0	103	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203994

06-Apr-22

Client: HILCORP ENERGY
Project: Salty Dog Pipeline

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R86681	RunNo: 86681								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060403 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R86681	RunNo: 86681								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060404 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	73.08	20.00	80.00	0	91.4	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R86681	RunNo: 86681								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060426 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R86681	RunNo: 86681								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060427 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.16	20.00	80.00	0	92.7	90	110			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 220399406-Apr-22

Client: HILCORP ENERGY
Project: Salty Dog Pipeline

Sample ID: MB-66294	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 66294	RunNo: 86672								
Prep Date: 3/21/2022	Analysis Date: 3/23/2022	SeqNo: 3060074 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-66294	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 66294	RunNo: 86672								
Prep Date: 3/21/2022	Analysis Date: 3/23/2022	SeqNo: 3060075 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1070	20.0	1000	0	107	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

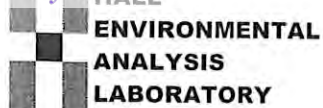
E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Sample Log-In Check List

Client Name: HILCORP ENERGY

Work Order Number: 2203994

RcptNo: 1

Received By: Cheyenne Cason 3/18/2022 8:05:00 AM

Completed By: Cheyenne Cason 3/18/2022 8:37:17 AM

Reviewed By: JR 3/18/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 10
(<2 or >12 unless noted)

Adjusted? noChecked by: Che 3/18/22Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Yes			
2	1.9	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 25, 2022

Stuart Hyde
HILCORP ENERGY
PO Box 4700
Farmington, NM 87499
TEL: (505) 564-0733
FAX:

RE: Salty Dog

OrderNo.: 2206F50

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/29/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-18

Project: Salty Dog

Collection Date: 6/27/2022 12:20:00 PM

Lab ID: 2206F50-001

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	ND	0.50		mg/L	5	6/30/2022 10:50:55 AM
Chloride	3700	250	*	mg/L	500	7/5/2022 11:52:42 AM
Bromide	5.8	0.50		mg/L	5	6/30/2022 10:50:55 AM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 10:50:55 AM
Sulfate	2200	250	*	mg/L	500	7/5/2022 11:52:42 AM
Nitrate+Nitrite as N	4.9	4.0		mg/L	20	7/11/2022 4:11:06 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	800	10		mg/L	10	7/11/2022 10:25:51 AM
Magnesium	120	10		mg/L	10	7/11/2022 10:25:51 AM
Potassium	18	1.0		mg/L	1	7/7/2022 2:07:04 PM
Sodium	3100	50		mg/L	50	7/11/2022 10:27:13 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Toluene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Ethylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Naphthalene	ND	2.0		µg/L	1	7/7/2022 5:29:01 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 5:29:01 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 5:29:01 PM
Acetone	ND	10		µg/L	1	7/7/2022 5:29:01 PM
Bromobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Bromodichloromethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Bromoform	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Bromomethane	ND	3.0		µg/L	1	7/7/2022 5:29:01 PM
2-Butanone	ND	10		µg/L	1	7/7/2022 5:29:01 PM
Carbon disulfide	ND	10		µg/L	1	7/7/2022 5:29:01 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Chlorobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Chloroethane	ND	2.0		µg/L	1	7/7/2022 5:29:01 PM
Chloroform	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Chloromethane	ND	3.0		µg/L	1	7/7/2022 5:29:01 PM
2-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
4-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
cis-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-18

Project: Salty Dog

Collection Date: 6/27/2022 12:20:00 PM

Lab ID: 2206F50-001

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/7/2022 5:29:01 PM
Dibromochloromethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Dibromomethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/7/2022 5:29:01 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
2-Hexanone	ND	10		µg/L	1	7/7/2022 5:29:01 PM
Isopropylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/7/2022 5:29:01 PM
Methylene Chloride	ND	3.0		µg/L	1	7/7/2022 5:29:01 PM
n-Butylbenzene	ND	3.0		µg/L	1	7/7/2022 5:29:01 PM
n-Propylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
sec-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Styrene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
tert-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/7/2022 5:29:01 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
trans-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/7/2022 5:29:01 PM
Vinyl chloride	ND	1.0		µg/L	1	7/7/2022 5:29:01 PM
Xylenes, Total	ND	1.5		µg/L	1	7/7/2022 5:29:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW-18

Project: Salty Dog

Collection Date: 6/27/2022 12:20:00 PM

Lab ID: 2206F50-001

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	7/7/2022 5:29:01 PM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	7/7/2022 5:29:01 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	7/7/2022 5:29:01 PM
Surr: Toluene-d8	96.5	70-130		%Rec	1	7/7/2022 5:29:01 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	20000	100		µmhos/c	10	7/6/2022 2:39:01 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO3)	235.8	20.00		mg/L Ca	1	6/30/2022 2:47:39 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/30/2022 2:47:39 PM
Total Alkalinity (as CaCO3)	235.8	20.00		mg/L Ca	1	6/30/2022 2:47:39 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	11000	200	*D	mg/L	1	7/2/2022 12:06:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12

Project: Salty Dog

Collection Date: 6/27/2022 12:45:00 PM

Lab ID: 2206F50-002

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	ND	0.50		mg/L	5	6/30/2022 12:08:06 PM
Chloride	5900	250	*	mg/L	500	7/5/2022 12:31:16 PM
Bromide	7.7	0.50		mg/L	5	6/30/2022 12:08:06 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 12:08:06 PM
Sulfate	2400	250	*	mg/L	500	7/5/2022 12:31:16 PM
Nitrate+Nitrite as N	7.4	4.0		mg/L	20	7/11/2022 4:23:57 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	670	10		mg/L	10	7/11/2022 10:28:38 AM
Magnesium	110	10		mg/L	10	7/11/2022 10:28:38 AM
Potassium	27	1.0		mg/L	1	7/7/2022 2:09:33 PM
Sodium	4100	50		mg/L	50	7/11/2022 10:30:00 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Toluene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Ethylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Naphthalene	ND	2.0		µg/L	1	7/6/2022 11:47:19 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/6/2022 11:47:19 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/6/2022 11:47:19 PM
Acetone	ND	10		µg/L	1	7/6/2022 11:47:19 PM
Bromobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Bromodichloromethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Bromoform	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Bromomethane	ND	3.0		µg/L	1	7/6/2022 11:47:19 PM
2-Butanone	ND	10		µg/L	1	7/6/2022 11:47:19 PM
Carbon disulfide	ND	10		µg/L	1	7/6/2022 11:47:19 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Chlorobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Chloroethane	ND	2.0		µg/L	1	7/6/2022 11:47:19 PM
Chloroform	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Chloromethane	ND	3.0		µg/L	1	7/6/2022 11:47:19 PM
2-Chlorotoluene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
4-Chlorotoluene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
cis-1,2-DCE	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12

Project: Salty Dog

Collection Date: 6/27/2022 12:45:00 PM

Lab ID: 2206F50-002

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/6/2022 11:47:19 PM
Dibromochloromethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Dibromomethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/6/2022 11:47:19 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
2-Hexanone	ND	10		µg/L	1	7/6/2022 11:47:19 PM
Isopropylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/6/2022 11:47:19 PM
Methylene Chloride	ND	3.0		µg/L	1	7/6/2022 11:47:19 PM
n-Butylbenzene	ND	3.0		µg/L	1	7/6/2022 11:47:19 PM
n-Propylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
sec-Butylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Styrene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
tert-Butylbenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/6/2022 11:47:19 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
trans-1,2-DCE	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/6/2022 11:47:19 PM
Vinyl chloride	ND	1.0		µg/L	1	7/6/2022 11:47:19 PM
Xylenes, Total	ND	1.5		µg/L	1	7/6/2022 11:47:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12

Project: Salty Dog

Collection Date: 6/27/2022 12:45:00 PM

Lab ID: 2206F50-002

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	7/6/2022 11:47:19 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	7/6/2022 11:47:19 PM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	7/6/2022 11:47:19 PM
Surr: Toluene-d8	100	70-130		%Rec	1	7/6/2022 11:47:19 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	26000	100		µmhos/c	10	7/6/2022 2:44:58 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO3)	245.6	20.00		mg/L Ca	1	6/30/2022 3:01:12 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/30/2022 3:01:12 PM
Total Alkalinity (as CaCO3)	245.6	20.00		mg/L Ca	1	6/30/2022 3:01:12 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	13900	200	*D	mg/L	1	7/2/2022 12:06:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 6/27/2022 1:30:00 PM

Lab ID: 2206F50-003

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	0.54	0.50		mg/L	5	6/30/2022 12:33:49 PM
Chloride	3500	250	*	mg/L	500	7/5/2022 12:44:07 PM
Bromide	5.5	0.50		mg/L	5	6/30/2022 12:33:49 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 12:33:49 PM
Sulfate	2000	250	*	mg/L	500	7/5/2022 12:44:07 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	7/11/2022 5:15:25 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	630	10		mg/L	10	7/11/2022 10:31:25 AM
Magnesium	75	10		mg/L	10	7/11/2022 10:31:25 AM
Potassium	ND	10		mg/L	10	7/11/2022 10:31:25 AM
Sodium	2600	50		mg/L	50	7/11/2022 10:37:48 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Toluene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Ethylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2-Dichloroethane (EDC)	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2-Dibromoethane (EDB)	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Naphthalene	ND	2.0	P	µg/L	1	7/7/2022 12:15:46 AM
1-Methylnaphthalene	ND	4.0	P	µg/L	1	7/7/2022 12:15:46 AM
2-Methylnaphthalene	ND	4.0	P	µg/L	1	7/7/2022 12:15:46 AM
Acetone	ND	10	P	µg/L	1	7/7/2022 12:15:46 AM
Bromobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Bromodichloromethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Bromoform	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Bromomethane	ND	3.0	P	µg/L	1	7/7/2022 12:15:46 AM
2-Butanone	ND	10	P	µg/L	1	7/7/2022 12:15:46 AM
Carbon disulfide	ND	10	P	µg/L	1	7/7/2022 12:15:46 AM
Carbon Tetrachloride	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Chlorobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Chloroethane	ND	2.0	P	µg/L	1	7/7/2022 12:15:46 AM
Chloroform	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Chloromethane	ND	3.0	P	µg/L	1	7/7/2022 12:15:46 AM
2-Chlorotoluene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
4-Chlorotoluene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
cis-1,2-DCE	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 6/27/2022 1:30:00 PM

Lab ID: 2206F50-003

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2-Dibromo-3-chloropropane	ND	2.0	P	µg/L	1	7/7/2022 12:15:46 AM
Dibromochloromethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Dibromomethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2-Dichlorobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,3-Dichlorobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,4-Dichlorobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Dichlorodifluoromethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1-Dichloroethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1-Dichloroethene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2-Dichloropropane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,3-Dichloropropane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
2,2-Dichloropropane	ND	2.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1-Dichloropropene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Hexachlorobutadiene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
2-Hexanone	ND	10	P	µg/L	1	7/7/2022 12:15:46 AM
Isopropylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
4-Isopropyltoluene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
4-Methyl-2-pentanone	ND	10	P	µg/L	1	7/7/2022 12:15:46 AM
Methylene Chloride	ND	3.0	P	µg/L	1	7/7/2022 12:15:46 AM
n-Butylbenzene	ND	3.0	P	µg/L	1	7/7/2022 12:15:46 AM
n-Propylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
sec-Butylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Styrene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
tert-Butylbenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1,1,2-Tetrachloroethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1,2,2-Tetrachloroethane	ND	2.0	P	µg/L	1	7/7/2022 12:15:46 AM
Tetrachloroethene (PCE)	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
trans-1,2-DCE	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
trans-1,3-Dichloropropene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2,3-Trichlorobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2,4-Trichlorobenzene	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1,1-Trichloroethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,1,2-Trichloroethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Trichloroethene (TCE)	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Trichlorofluoromethane	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
1,2,3-Trichloropropane	ND	2.0	P	µg/L	1	7/7/2022 12:15:46 AM
Vinyl chloride	ND	1.0	P	µg/L	1	7/7/2022 12:15:46 AM
Xylenes, Total	ND	1.5	P	µg/L	1	7/7/2022 12:15:46 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13

Project: Salty Dog

Collection Date: 6/27/2022 1:30:00 PM

Lab ID: 2206F50-003

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	112	70-130	P	%Rec	1	7/7/2022 12:15:46 AM
Surr: 4-Bromofluorobenzene	104	70-130	P	%Rec	1	7/7/2022 12:15:46 AM
Surr: Dibromofluoromethane	113	70-130	P	%Rec	1	7/7/2022 12:15:46 AM
Surr: Toluene-d8	100	70-130	P	%Rec	1	7/7/2022 12:15:46 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	20000	100		µmhos/c	10	7/6/2022 2:47:48 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO3)	231.1	20.00		mg/L Ca	1	6/30/2022 3:15:43 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/30/2022 3:15:43 PM
Total Alkalinity (as CaCO3)	231.1	20.00		mg/L Ca	1	6/30/2022 3:15:43 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	11000	200	*D	mg/L	1	7/2/2022 12:06:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 6/27/2022 2:10:00 PM

Lab ID: 2206F50-004

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	ND	0.50		mg/L	5	6/30/2022 12:59:33 PM
Chloride	3500	250	*	mg/L	500	7/5/2022 12:56:59 PM
Bromide	5.2	0.50		mg/L	5	6/30/2022 12:59:33 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 12:59:33 PM
Sulfate	1600	250	*	mg/L	500	7/5/2022 12:56:59 PM
Nitrate+Nitrite as N	ND	4.0		mg/L	20	7/11/2022 5:28:16 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	1500	50		mg/L	50	7/11/2022 10:40:31 AM
Magnesium	200	10		mg/L	10	7/11/2022 10:39:10 AM
Potassium	39	10		mg/L	10	7/11/2022 10:39:10 AM
Sodium	2000	50		mg/L	50	7/11/2022 10:40:31 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Toluene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Ethylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Naphthalene	ND	2.0		µg/L	1	7/7/2022 2:38:16 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 2:38:16 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 2:38:16 AM
Acetone	ND	10		µg/L	1	7/7/2022 2:38:16 AM
Bromobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Bromoform	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Bromomethane	ND	3.0		µg/L	1	7/7/2022 2:38:16 AM
2-Butanone	ND	10		µg/L	1	7/7/2022 2:38:16 AM
Carbon disulfide	ND	10		µg/L	1	7/7/2022 2:38:16 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Chlorobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Chloroethane	ND	2.0		µg/L	1	7/7/2022 2:38:16 AM
Chloroform	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Chloromethane	ND	3.0		µg/L	1	7/7/2022 2:38:16 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 6/27/2022 2:10:00 PM

Lab ID: 2206F50-004

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/7/2022 2:38:16 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Dibromomethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/7/2022 2:38:16 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
2-Hexanone	ND	10		µg/L	1	7/7/2022 2:38:16 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/7/2022 2:38:16 AM
Methylene Chloride	ND	3.0		µg/L	1	7/7/2022 2:38:16 AM
n-Butylbenzene	ND	3.0		µg/L	1	7/7/2022 2:38:16 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Styrene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/7/2022 2:38:16 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/7/2022 2:38:16 AM
Vinyl chloride	ND	1.0		µg/L	1	7/7/2022 2:38:16 AM
Xylenes, Total	ND	1.5		µg/L	1	7/7/2022 2:38:16 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10

Project: Salty Dog

Collection Date: 6/27/2022 2:10:00 PM

Lab ID: 2206F50-004

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	7/7/2022 2:38:16 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	7/7/2022 2:38:16 AM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	7/7/2022 2:38:16 AM
Surr: Toluene-d8	98.9	70-130		%Rec	1	7/7/2022 2:38:16 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	18000	100		µmhos/c	10	7/6/2022 2:56:29 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO ₃)	170.8	20.00		mg/L Ca	1	6/30/2022 3:29:17 PM
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/30/2022 3:29:17 PM
Total Alkalinity (as CaCO ₃)	170.8	20.00		mg/L Ca	1	6/30/2022 3:29:17 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	10100	200	*D	mg/L	1	7/2/2022 12:06:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 6/28/2022 10:30:00 AM

Lab ID: 2206F50-005

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	0.86	0.50		mg/L	5	6/30/2022 1:25:16 PM
Chloride	2300	250	*	mg/L	500	7/5/2022 1:09:51 PM
Bromide	3.9	0.50		mg/L	5	6/30/2022 1:25:16 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 1:25:16 PM
Sulfate	4000	250	*	mg/L	500	7/5/2022 1:09:51 PM
Nitrate+Nitrite as N	2.3	2.0		mg/L	10	7/11/2022 5:41:08 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	560	10		mg/L	10	7/11/2022 10:41:52 AM
Magnesium	220	5.0		mg/L	5	7/7/2022 2:19:08 PM
Potassium	18	5.0		mg/L	5	7/7/2022 2:19:08 PM
Sodium	3300	50		mg/L	50	7/11/2022 10:43:08 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Toluene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Ethylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Naphthalene	ND	2.0		µg/L	1	7/7/2022 3:06:50 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 3:06:50 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 3:06:50 AM
Acetone	ND	10		µg/L	1	7/7/2022 3:06:50 AM
Bromobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Bromoform	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Bromomethane	ND	3.0		µg/L	1	7/7/2022 3:06:50 AM
2-Butanone	ND	10		µg/L	1	7/7/2022 3:06:50 AM
Carbon disulfide	ND	10		µg/L	1	7/7/2022 3:06:50 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Chlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Chloroethane	ND	2.0		µg/L	1	7/7/2022 3:06:50 AM
Chloroform	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Chloromethane	ND	3.0		µg/L	1	7/7/2022 3:06:50 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 6/28/2022 10:30:00 AM

Lab ID: 2206F50-005

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/7/2022 3:06:50 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Dibromomethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/7/2022 3:06:50 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
2-Hexanone	ND	10		µg/L	1	7/7/2022 3:06:50 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/7/2022 3:06:50 AM
Methylene Chloride	ND	3.0		µg/L	1	7/7/2022 3:06:50 AM
n-Butylbenzene	ND	3.0		µg/L	1	7/7/2022 3:06:50 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Styrene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/7/2022 3:06:50 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/7/2022 3:06:50 AM
Vinyl chloride	ND	1.0		µg/L	1	7/7/2022 3:06:50 AM
Xylenes, Total	ND	1.5		µg/L	1	7/7/2022 3:06:50 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06

Project: Salty Dog

Collection Date: 6/28/2022 10:30:00 AM

Lab ID: 2206F50-005

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	7/7/2022 3:06:50 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	7/7/2022 3:06:50 AM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	7/7/2022 3:06:50 AM
Surr: Toluene-d8	101	70-130		%Rec	1	7/7/2022 3:06:50 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	20000	100		µmhos/c	10	7/6/2022 2:59:26 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO3)	276.0	20.00		mg/L Ca	1	6/30/2022 3:41:15 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/30/2022 3:41:15 PM
Total Alkalinity (as CaCO3)	276.0	20.00		mg/L Ca	1	6/30/2022 3:41:15 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	11800	200	*D	mg/L	1	7/5/2022 7:46:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 6/28/2022 10:45:00 AM

Lab ID: 2206F50-006

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	0.78	0.50		mg/L	5	6/30/2022 2:16:44 PM
Chloride	2200	100	*	mg/L	200	7/5/2022 1:48:27 PM
Bromide	3.1	0.50		mg/L	5	6/30/2022 2:16:44 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 2:16:44 PM
Sulfate	2300	100	*	mg/L	200	7/5/2022 1:48:27 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	7/11/2022 5:54:00 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	810	10		mg/L	10	7/11/2022 10:44:21 AM
Magnesium	99	10		mg/L	10	7/11/2022 10:44:21 AM
Potassium	12	10		mg/L	10	7/11/2022 10:44:21 AM
Sodium	2000	50		mg/L	50	7/11/2022 10:46:01 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Toluene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Ethylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Naphthalene	ND	2.0		µg/L	1	7/7/2022 3:35:20 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 3:35:20 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 3:35:20 AM
Acetone	ND	10		µg/L	1	7/7/2022 3:35:20 AM
Bromobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Bromoform	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Bromomethane	ND	3.0		µg/L	1	7/7/2022 3:35:20 AM
2-Butanone	ND	10		µg/L	1	7/7/2022 3:35:20 AM
Carbon disulfide	ND	10		µg/L	1	7/7/2022 3:35:20 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Chlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Chloroethane	ND	2.0		µg/L	1	7/7/2022 3:35:20 AM
Chloroform	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Chloromethane	ND	3.0		µg/L	1	7/7/2022 3:35:20 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 6/28/2022 10:45:00 AM

Lab ID: 2206F50-006

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/7/2022 3:35:20 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Dibromomethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/7/2022 3:35:20 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
2-Hexanone	ND	10		µg/L	1	7/7/2022 3:35:20 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/7/2022 3:35:20 AM
Methylene Chloride	ND	3.0		µg/L	1	7/7/2022 3:35:20 AM
n-Butylbenzene	ND	3.0		µg/L	1	7/7/2022 3:35:20 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Styrene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/7/2022 3:35:20 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/7/2022 3:35:20 AM
Vinyl chloride	ND	1.0		µg/L	1	7/7/2022 3:35:20 AM
Xylenes, Total	ND	1.5		µg/L	1	7/7/2022 3:35:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14

Project: Salty Dog

Collection Date: 6/28/2022 10:45:00 AM

Lab ID: 2206F50-006

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	7/7/2022 3:35:20 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	7/7/2022 3:35:20 AM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	7/7/2022 3:35:20 AM
Surr: Toluene-d8	98.6	70-130		%Rec	1	7/7/2022 3:35:20 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	14000	100		µmhos/c	10	7/6/2022 3:02:25 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO ₃)	216.5	20.00		mg/L Ca	1	6/30/2022 3:55:54 PM
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	6/30/2022 3:55:54 PM
Total Alkalinity (as CaCO ₃)	216.5	20.00		mg/L Ca	1	6/30/2022 3:55:54 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	8060	100	*D	mg/L	1	7/5/2022 7:46:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 6/28/2022 11:20:00 AM

Lab ID: 2206F50-007

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	1.2	0.50		mg/L	5	6/30/2022 2:42:28 PM
Chloride	430	25	*	mg/L	50	7/5/2022 2:01:18 PM
Bromide	0.98	0.50		mg/L	5	6/30/2022 2:42:28 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 2:42:28 PM
Sulfate	2200	25	*	mg/L	50	7/5/2022 2:01:18 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/30/2022 11:17:09 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	570	10		mg/L	10	7/11/2022 10:47:38 AM
Magnesium	83	10		mg/L	10	7/11/2022 10:47:38 AM
Potassium	13	10		mg/L	10	7/11/2022 10:47:38 AM
Sodium	580	10		mg/L	10	7/11/2022 10:47:38 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Toluene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Ethylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Naphthalene	ND	2.0		µg/L	1	7/7/2022 4:03:48 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 4:03:48 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 4:03:48 AM
Acetone	ND	10		µg/L	1	7/7/2022 4:03:48 AM
Bromobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Bromoform	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Bromomethane	ND	3.0		µg/L	1	7/7/2022 4:03:48 AM
2-Butanone	ND	10		µg/L	1	7/7/2022 4:03:48 AM
Carbon disulfide	ND	10		µg/L	1	7/7/2022 4:03:48 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Chlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Chloroethane	ND	2.0		µg/L	1	7/7/2022 4:03:48 AM
Chloroform	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Chloromethane	ND	3.0		µg/L	1	7/7/2022 4:03:48 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 6/28/2022 11:20:00 AM

Lab ID: 2206F50-007

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/7/2022 4:03:48 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Dibromomethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/7/2022 4:03:48 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
2-Hexanone	ND	10		µg/L	1	7/7/2022 4:03:48 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/7/2022 4:03:48 AM
Methylene Chloride	ND	3.0		µg/L	1	7/7/2022 4:03:48 AM
n-Butylbenzene	ND	3.0		µg/L	1	7/7/2022 4:03:48 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Styrene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/7/2022 4:03:48 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/7/2022 4:03:48 AM
Vinyl chloride	ND	1.0		µg/L	1	7/7/2022 4:03:48 AM
Xylenes, Total	ND	1.5		µg/L	1	7/7/2022 4:03:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15

Project: Salty Dog

Collection Date: 6/28/2022 11:20:00 AM

Lab ID: 2206F50-007

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	7/7/2022 4:03:48 AM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	7/7/2022 4:03:48 AM
Surr: Dibromofluoromethane	117	70-130		%Rec	1	7/7/2022 4:03:48 AM
Surr: Toluene-d8	100	70-130		%Rec	1	7/7/2022 4:03:48 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	4900	10		µmhos/c	1	7/6/2022 2:09:46 PM
SM2320B: ALKALINITY						Analyst: LRN
Bicarbonate (As CaCO3)	215.0	20.00		mg/L Ca	1	6/30/2022 4:08:58 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/30/2022 4:08:58 PM
Total Alkalinity (as CaCO3)	215.0	20.00		mg/L Ca	1	6/30/2022 4:08:58 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	4030	200	*D	mg/L	1	7/5/2022 7:46:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 6/28/2022 11:40:00 AM

Lab ID: 2206F50-008

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CAS
Fluoride	1.0	0.50		mg/L	5	6/30/2022 3:08:12 PM
Chloride	970	50	*	mg/L	100	7/5/2022 2:14:10 PM
Bromide	1.8	0.50		mg/L	5	6/30/2022 3:08:12 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/30/2022 3:08:12 PM
Sulfate	2200	50	*	mg/L	100	7/5/2022 2:14:10 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/30/2022 11:30:01 PM
EPA METHOD 200.7: METALS						Analyst: ELS
Calcium	990	20		mg/L	20	7/11/2022 11:06:16 AM
Magnesium	190	5.0		mg/L	5	7/11/2022 11:02:06 AM
Potassium	52	5.0		mg/L	5	7/11/2022 11:02:06 AM
Sodium	1100	20		mg/L	20	7/11/2022 11:06:16 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Toluene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Ethylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Naphthalene	ND	2.0		µg/L	1	7/7/2022 4:32:19 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 4:32:19 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	7/7/2022 4:32:19 AM
Acetone	ND	10		µg/L	1	7/7/2022 4:32:19 AM
Bromobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Bromodichloromethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Bromoform	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Bromomethane	ND	3.0		µg/L	1	7/7/2022 4:32:19 AM
2-Butanone	ND	10		µg/L	1	7/7/2022 4:32:19 AM
Carbon disulfide	ND	10		µg/L	1	7/7/2022 4:32:19 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Chlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Chloroethane	ND	2.0		µg/L	1	7/7/2022 4:32:19 AM
Chloroform	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Chloromethane	ND	3.0		µg/L	1	7/7/2022 4:32:19 AM
2-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
4-Chlorotoluene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
cis-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 6/28/2022 11:40:00 AM

Lab ID: 2206F50-008

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/7/2022 4:32:19 AM
Dibromochloromethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Dibromomethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	7/7/2022 4:32:19 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
2-Hexanone	ND	10		µg/L	1	7/7/2022 4:32:19 AM
Isopropylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	7/7/2022 4:32:19 AM
Methylene Chloride	ND	3.0		µg/L	1	7/7/2022 4:32:19 AM
n-Butylbenzene	ND	3.0		µg/L	1	7/7/2022 4:32:19 AM
n-Propylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
sec-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Styrene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
tert-Butylbenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/7/2022 4:32:19 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
trans-1,2-DCE	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/7/2022 4:32:19 AM
Vinyl chloride	ND	1.0		µg/L	1	7/7/2022 4:32:19 AM
Xylenes, Total	ND	1.5		µg/L	1	7/7/2022 4:32:19 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit
	S	% Recovery outside of range due to dilution or matrix interference

B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2206F50

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09

Project: Salty Dog

Collection Date: 6/28/2022 11:40:00 AM

Lab ID: 2206F50-008

Matrix: AQUEOUS

Received Date: 6/29/2022 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	7/7/2022 4:32:19 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	7/7/2022 4:32:19 AM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	7/7/2022 4:32:19 AM
Surr: Toluene-d8	98.9	70-130		%Rec	1	7/7/2022 4:32:19 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	7200	10		µmhos/c	1	7/6/2022 7:59:53 PM
SM2320B: ALKALINITY						Analyst: CAS
Bicarbonate (As CaCO3)	242.5	20.00		mg/L Ca	1	7/6/2022 7:59:53 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/6/2022 7:59:53 PM
Total Alkalinity (as CaCO3)	242.5	20.00		mg/L Ca	1	7/6/2022 7:59:53 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	5370	200	*D	mg/L	1	7/5/2022 7:46:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: MB-68506	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 68506	RunNo: 89314								
Prep Date: 7/1/2022	Analysis Date: 7/7/2022	SeqNo: 3176263 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCSLL-68506	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 68506	RunNo: 89314								
Prep Date: 7/1/2022	Analysis Date: 7/7/2022	SeqNo: 3176264 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	ND	1.0	0.5000	0	94.2	50	150			
Magnesium	ND	1.0	0.5000	0	96.5	50	150			
Potassium	ND	1.0	0.5000	0	91.4	50	150			
Sodium	ND	1.0	0.5000	0	106	50	150			

Sample ID: LCS-68506	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 68506	RunNo: 89314								
Prep Date: 7/1/2022	Analysis Date: 7/7/2022	SeqNo: 3176265 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	49	1.0	50.00	0	97.8	85	115			
Magnesium	49	1.0	50.00	0	98.7	85	115			
Potassium	50	1.0	50.00	0	99.1	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			

Sample ID: 2206F50-008CMS	SampType: MS	TestCode: EPA Method 200.7: Metals								
Client ID: MW09	Batch ID: 68506	RunNo: 89420								
Prep Date: 7/1/2022	Analysis Date: 7/11/2022	SeqNo: 3183454 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Magnesium	240	5.0	50.00	191.3	98.6	70	130			
Potassium	96	5.0	50.00	52.06	87.8	70	130			

Sample ID: 2206F50-008CMSD	SampType: MSD	TestCode: EPA Method 200.7: Metals								
Client ID: MW09	Batch ID: 68506	RunNo: 89420								
Prep Date: 7/1/2022	Analysis Date: 7/11/2022	SeqNo: 3183455 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Magnesium	240	5.0	50.00	191.3	90.2	70	130	1.76	20	
Potassium	94	5.0	50.00	52.06	84.6	70	130	1.70	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R89176	RunNo: 89176								
Prep Date:	Analysis Date: 6/30/2022	SeqNo: 3169614 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R89176	RunNo: 89176								
Prep Date:	Analysis Date: 6/30/2022	SeqNo: 3169615 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.3	90	110			
Bromide	2.4	0.10	2.500	0	96.5	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	92.6	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.6	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R89249	RunNo: 89249								
Prep Date:	Analysis Date: 7/5/2022	SeqNo: 3173045 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R89249	RunNo: 89249								
Prep Date:	Analysis Date: 7/5/2022	SeqNo: 3173046 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.7	90	110			
Sulfate	10	0.50	10.00	0	103	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A89388	RunNo: 89388								
Prep Date:	Analysis Date: 7/12/2022	SeqNo: 3179902 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50
25-Jul-22

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: LCS		SampType: lcs			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW		Batch ID: A89388			RunNo: 89388						
Prep Date:		Analysis Date: 7/12/2022			SeqNo: 3179903		Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N		3.5	0.20	3.500	0	101	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R89293		RunNo: 89293							
Prep Date:	Analysis Date: 7/6/2022		SeqNo: 3175685		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Sample ID: 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B89293		RunNo: 89293							
Prep Date:	Analysis Date: 7/7/2022		SeqNo: 3175686		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	98.1	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.3	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID: 2206f50-001a ms	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW-18	Batch ID: R89293			RunNo: 89293						
Prep Date:	Analysis Date: 7/6/2022			SeqNo: 3175704			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.7	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY**Project:** Salty Dog

Sample ID: 2206f50-001a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES								
Client ID: MW-18	Batch ID: R89293	RunNo: 89293								
Prep Date:	Analysis Date: 7/6/2022	SeqNo: 3175705	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130	2.73	20	
Toluene	19	1.0	20.00	0	95.6	70	130	6.13	20	
Chlorobenzene	19	1.0	20.00	0	96.1	70	130	8.49	20	
1,1-Dichloroethene	20	1.0	20.00	0	98.2	70	130	1.54	20	
Trichloroethene (TCE)	20	1.0	20.00	0	99.5	70	130	4.29	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130	0	0	
Surr: Dibromofluoromethane	12		10.00		116	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		97.7	70	130	0	0	

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R89293	RunNo: 89293								
Prep Date:	Analysis Date: 7/6/2022	SeqNo: 3175727	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50
25-Jul-22

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R89293	RunNo: 89293								
Prep Date:	Analysis Date: 7/6/2022	SeqNo: 3175727 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R89293	RunNo: 89293								
Prep Date:	Analysis Date: 7/6/2022	SeqNo: 3175727 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	12		10.00		116	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: B89293	RunNo: 89293								
Prep Date:	Analysis Date: 7/7/2022	SeqNo: 3175728 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B89293			RunNo: 89293						
Prep Date:	Analysis Date: 7/7/2022			SeqNo: 3175728		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: B89293	RunNo: 89293								
Prep Date:	Analysis Date: 7/7/2022	SeqNo: 3175728 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R89321	RunNo: 89321								
Prep Date:	Analysis Date: 7/7/2022	SeqNo: 3176709 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		115	70	130			
Surr: Toluene-d8	9.5		10.00		94.5	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R89321	RunNo: 89321								
Prep Date:	Analysis Date: 7/7/2022	SeqNo: 3176727 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R89321			RunNo: 89321						
Prep Date:	Analysis Date: 7/7/2022			SeqNo: 3176727		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R89321		RunNo: 89321							
Prep Date:	Analysis Date: 7/7/2022		SeqNo: 3176727		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	12		10.00		116	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: Ics-1 99.6uS eC	SampType: Ics		TestCode: SM2510B: Specific Conductance							
Client ID: LCSW	Batch ID: R89285		RunNo: 89285							
Prep Date:	Analysis Date: 7/6/2022		SeqNo: 3175250		Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.60	0	102	85	115			

Sample ID: Ics-2 99.6 uS eC	SampType: Ics		TestCode: SM2510B: Specific Conductance							
Client ID: LCSW	Batch ID: A89285		RunNo: 89285							
Prep Date:	Analysis Date: 7/6/2022		SeqNo: 3175282		Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.60	0	105	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50

25-Jul-22

Client: HILCORP ENERGY

Project: Salty Dog

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R89180	RunNo: 89180								
Prep Date:	Analysis Date: 6/30/2022	SeqNo: 3169962 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R89180	RunNo: 89180								
Prep Date:	Analysis Date: 6/30/2022	SeqNo: 3169963 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.84	20.00	80.00	0	93.5	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R89180	RunNo: 89180								
Prep Date:	Analysis Date: 6/30/2022	SeqNo: 3169985 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R89180	RunNo: 89180								
Prep Date:	Analysis Date: 6/30/2022	SeqNo: 3169986 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.64	20.00	80.00	0	93.3	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: A89285	RunNo: 89285								
Prep Date:	Analysis Date: 7/6/2022	SeqNo: 3175219 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: A89285	RunNo: 89285								
Prep Date:	Analysis Date: 7/6/2022	SeqNo: 3175220 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.00	20.00	80.00	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F50
25-Jul-22

Client: HILCORP ENERGY
Project: Salty Dog

Sample ID: MB-68491	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 68491	RunNo: 89201								
Prep Date: 6/30/2022	Analysis Date: 7/2/2022	SeqNo: 3170877 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-68491	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 68491	RunNo: 89201								
Prep Date: 6/30/2022	Analysis Date: 7/2/2022	SeqNo: 3170878 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Sample ID: MB-68524	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 68524	RunNo: 89232								
Prep Date: 7/4/2022	Analysis Date: 7/5/2022	SeqNo: 3172137 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-68524	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 68524	RunNo: 89232								
Prep Date: 7/4/2022	Analysis Date: 7/5/2022	SeqNo: 3172138 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

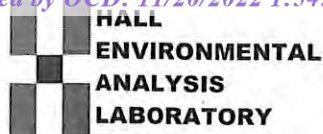
E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **HILCORP ENERGY**Work Order Number: **2206F50**

RcptNo: 1

Received By: **Juan Rojas**

6/29/2022 6:30:00 AM

Completed By: **Cheyenne Cason**

6/29/2022 10:01:50 AM

Reviewed By: *SCC 6/29/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

16
(<2 or >12 unless noted)

Adjusted? *NO*

Checked by: *JD 6/29/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			
2	3.0	Good	Yes			

Chain-of-Custody Record

Client: HilcorpMailing Address: Mitch Killough

Mailing Address:

Phone #: 713-757-5247email or Fax#: mkillough@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ AZ Compliance☐ NELAC ☐ Other☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Sally Dog

Project #:

Project Manager:

Stuart Hyde

Sampler:

Greg PuleseOn Ice: ☐ Yes ☐ No# of Coolers: 2Cooler Temp (including CF): 10-05-10 (°C)

Container Type and #

SVBS multiple

Preservative Type

HCl multiple

HEAL No.

220650

Date

6/27 12:20

6/27 12:45

6/27 13:30

6/27 14:10

6/28 10:30

6/28 10:45

6/28 11:20

6/28 11:40

Sample Name

MW 18

MW 12

MW 13

MW 10

MW 06

MW 14

MW 15

MW 09

Matrix

GW

↓

↓

↓

Relinquished by:

Berry Palmer

Relinquished by:

Chadwater

Date:

6/28/22 1319

Date:

6/28/22 1806

Received by:

Ant Wat

Received by:

Ant Wat

Date

6/28/22 1319

Date

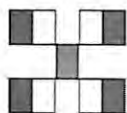
6/29/22 6:30

Remarks:

Cations (Ca, Mg, K, Na)

Anions (Br, Cl, SO₄²⁻, F⁻, Nitrate + Nitrite, P)

CC: shayde@ensolum.com



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMB's (8021)

TPH: 8015D (GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

VOCs by 8260

Cations

Anions

Alkalinity

pH



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 10, 2022

Stuart Hyde
Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX:

RE: Salty Dog Pipeline

OrderNo.: 2209D44

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/24/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-18

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 9:45:00 AM

Lab ID: 2209D44-001

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	0.88	0.50		mg/L	5	9/27/2022 9:26:23 AM	R91351
Chloride	3100	250	*	mg/L	500	9/29/2022 3:20:48 PM	R91438
Bromide	4.3	0.50		mg/L	5	9/27/2022 9:26:23 AM	R91351
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/27/2022 9:26:23 AM	R91351
Sulfate	2000	250	*	mg/L	500	9/29/2022 3:20:48 PM	R91438
Nitrate+Nitrite as N	3.3	2.0		mg/L	10	9/29/2022 5:00:08 PM	R91438
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	16000	100		µmhos/c	10	10/2/2022 11:16:20 AM	R91476
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	222.6	20.00		mg/L Ca	1	9/29/2022 4:54:30 PM	R91435
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/29/2022 4:54:30 PM	R91435
Total Alkalinity (as CaCO ₃)	222.6	20.00		mg/L Ca	1	9/29/2022 4:54:30 PM	R91435
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	8630	200	*D	mg/L	1	9/29/2022 11:51:00 AM	70440
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	7.34		H	pH units	1	9/29/2022 4:54:30 PM	R91435
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	870	10		mg/L	10	10/3/2022 11:24:15 AM	70456
Magnesium	130	5.0		mg/L	5	9/29/2022 3:14:15 PM	70456
Potassium	20	1.0		mg/L	1	9/29/2022 3:10:19 PM	70456
Sodium	2800	100		mg/L	100	10/4/2022 11:08:49 AM	70456
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Toluene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Ethylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Naphthalene	ND	2.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Acetone	ND	10		µg/L	1	9/29/2022 4:46:55 PM	A91425
Bromobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-18

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 9:45:00 AM

Lab ID: 2209D44-001

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Bromomethane	ND	3.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
2-Butanone	ND	10		µg/L	1	9/29/2022 4:46:55 PM	A91425
Carbon disulfide	ND	10		µg/L	1	9/29/2022 4:46:55 PM	A91425
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Chlorobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Chloroethane	ND	2.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Chloroform	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Chloromethane	ND	3.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Dibromomethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
2-Hexanone	ND	10		µg/L	1	9/29/2022 4:46:55 PM	A91425
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2022 4:46:55 PM	A91425
Methylene Chloride	ND	3.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Styrene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2022 4:46:55 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 29

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-18

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 9:45:00 AM

Lab ID: 2209D44-001

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Vinyl chloride	ND	1.0		µg/L	1	9/29/2022 4:46:55 PM	A91425
Xylenes, Total	ND	1.5		µg/L	1	9/29/2022 4:46:55 PM	A91425
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	9/29/2022 4:46:55 PM	A91425
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2022 4:46:55 PM	A91425
Surr: Dibromofluoromethane	114	70-130		%Rec	1	9/29/2022 4:46:55 PM	A91425
Surr: Toluene-d8	99.2	70-130		%Rec	1	9/29/2022 4:46:55 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-12

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:15:00 AM

Lab ID: 2209D44-002

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	0.64	0.50		mg/L	5	9/27/2022 10:43:37 AM	R91351
Chloride	3700	250	*	mg/L	500	9/29/2022 3:33:13 PM	R91438
Bromide	4.3	0.50		mg/L	5	9/27/2022 10:43:37 AM	R91351
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/27/2022 10:43:37 AM	R91351
Sulfate	2600	250	*	mg/L	500	9/29/2022 3:33:13 PM	R91438
Nitrate+Nitrite as N	5.2	2.0		mg/L	10	9/29/2022 5:49:45 PM	R91438
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	16000	100		µmhos/c	10	10/2/2022 11:19:22 AM	R91476
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	226.6	20.00		mg/L Ca	1	9/29/2022 5:19:57 PM	R91435
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/29/2022 5:19:57 PM	R91435
Total Alkalinity (as CaCO ₃)	226.6	20.00		mg/L Ca	1	9/29/2022 5:19:57 PM	R91435
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	8900	200	*D	mg/L	1	9/29/2022 11:51:00 AM	70440
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	7.45		H	pH units	1	9/29/2022 5:19:57 PM	R91435
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	490	10		mg/L	10	10/3/2022 11:26:55 AM	70456
Magnesium	73	1.0		mg/L	1	9/29/2022 3:25:19 PM	70456
Potassium	20	1.0		mg/L	1	9/29/2022 3:25:19 PM	70456
Sodium	3200	100		mg/L	100	10/4/2022 11:10:25 AM	70456
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Toluene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Ethylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Naphthalene	ND	2.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Acetone	ND	10		µg/L	1	9/29/2022 5:13:51 PM	A91425
Bromobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-12

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:15:00 AM

Lab ID: 2209D44-002

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Bromomethane	ND	3.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
2-Butanone	ND	10		µg/L	1	9/29/2022 5:13:51 PM	A91425
Carbon disulfide	ND	10		µg/L	1	9/29/2022 5:13:51 PM	A91425
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Chlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Chloroethane	ND	2.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Chloroform	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Chloromethane	ND	3.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Dibromomethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
2-Hexanone	ND	10		µg/L	1	9/29/2022 5:13:51 PM	A91425
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2022 5:13:51 PM	A91425
Methylene Chloride	ND	3.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Styrene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2022 5:13:51 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-12

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:15:00 AM

Lab ID: 2209D44-002

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Vinyl chloride	ND	1.0		µg/L	1	9/29/2022 5:13:51 PM	A91425
Xylenes, Total	ND	1.5		µg/L	1	9/29/2022 5:13:51 PM	A91425
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	9/29/2022 5:13:51 PM	A91425
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	9/29/2022 5:13:51 PM	A91425
Surr: Dibromofluoromethane	113	70-130		%Rec	1	9/29/2022 5:13:51 PM	A91425
Surr: Toluene-d8	100	70-130		%Rec	1	9/29/2022 5:13:51 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-10

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 11:10:00 AM

Lab ID: 2209D44-003

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	0.71	0.50		mg/L	5	9/27/2022 11:09:20 AM	R91351
Chloride	3300	250	*	mg/L	500	9/29/2022 3:45:38 PM	R91438
Bromide	4.5	0.50		mg/L	5	9/27/2022 11:09:20 AM	R91351
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/27/2022 11:09:20 AM	R91351
Sulfate	1600	250	*	mg/L	500	9/29/2022 3:45:38 PM	R91438
Nitrate+Nitrite as N	ND	4.0		mg/L	20	9/29/2022 6:02:09 PM	R91438
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	15000	100		µmhos/c	10	10/2/2022 11:23:22 AM	R91476
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	180.7	20.00		mg/L Ca	1	9/29/2022 5:32:23 PM	R91435
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/29/2022 5:32:23 PM	R91435
Total Alkalinity (as CaCO ₃)	180.7	20.00		mg/L Ca	1	9/29/2022 5:32:23 PM	R91435
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	9200	200	*D	mg/L	1	9/29/2022 11:51:00 AM	70440
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	7.51		H	pH units	1	9/29/2022 5:32:23 PM	R91435
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	920	10		mg/L	10	10/3/2022 11:34:16 AM	70456
Magnesium	120	5.0		mg/L	5	9/29/2022 3:29:17 PM	70456
Potassium	18	1.0		mg/L	1	9/29/2022 3:27:58 PM	70456
Sodium	1800	20		mg/L	20	10/3/2022 11:35:39 AM	70456
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Toluene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Ethylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Naphthalene	ND	2.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Acetone	ND	10		µg/L	1	9/29/2022 5:40:47 PM	A91425
Bromobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-10

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 11:10:00 AM

Lab ID: 2209D44-003

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Bromomethane	ND	3.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
2-Butanone	ND	10		µg/L	1	9/29/2022 5:40:47 PM	A91425
Carbon disulfide	ND	10		µg/L	1	9/29/2022 5:40:47 PM	A91425
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Chlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Chloroethane	ND	2.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Chloroform	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Chloromethane	ND	3.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Dibromomethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
2-Hexanone	ND	10		µg/L	1	9/29/2022 5:40:47 PM	A91425
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2022 5:40:47 PM	A91425
Methylene Chloride	ND	3.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Styrene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2022 5:40:47 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-10

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 11:10:00 AM

Lab ID: 2209D44-003

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Vinyl chloride	ND	1.0		µg/L	1	9/29/2022 5:40:47 PM	A91425
Xylenes, Total	ND	1.5		µg/L	1	9/29/2022 5:40:47 PM	A91425
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	9/29/2022 5:40:47 PM	A91425
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	9/29/2022 5:40:47 PM	A91425
Surr: Dibromofluoromethane	110	70-130		%Rec	1	9/29/2022 5:40:47 PM	A91425
Surr: Toluene-d8	99.6	70-130		%Rec	1	9/29/2022 5:40:47 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-13

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:09:00 AM

Lab ID: 2209D44-004

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	0.70	0.50		mg/L	5	9/27/2022 11:35:05 AM	R91351
Chloride	2800	100	*	mg/L	200	9/29/2022 3:58:03 PM	R91438
Bromide	3.6	0.50		mg/L	5	9/27/2022 11:35:05 AM	R91351
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/27/2022 11:35:05 AM	R91351
Sulfate	2500	100	*	mg/L	200	9/29/2022 3:58:03 PM	R91438
Nitrate+Nitrite as N	ND	2.0		mg/L	10	9/29/2022 6:14:34 PM	R91438
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	16000	100		µmhos/c	10	10/2/2022 11:27:22 AM	R91476
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	271.9	20.00		mg/L Ca	1	9/29/2022 5:43:26 PM	R91435
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/29/2022 5:43:26 PM	R91435
Total Alkalinity (as CaCO ₃)	271.9	20.00		mg/L Ca	1	9/29/2022 5:43:26 PM	R91435
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	8950	200	*D	mg/L	1	9/29/2022 11:51:00 AM	70440
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	7.55		H	pH units	1	9/29/2022 5:43:26 PM	R91435
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	710	10		mg/L	10	10/3/2022 11:36:59 AM	70456
Magnesium	86	1.0		mg/L	1	9/29/2022 3:30:35 PM	70456
Potassium	12	1.0		mg/L	1	9/29/2022 3:30:35 PM	70456
Sodium	2800	100		mg/L	100	10/4/2022 11:11:56 AM	70456
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Toluene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Ethylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Naphthalene	ND	2.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Acetone	ND	10		µg/L	1	9/29/2022 6:07:41 PM	A91425
Bromobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-13

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:09:00 AM

Lab ID: 2209D44-004

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Bromomethane	ND	3.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
2-Butanone	ND	10		µg/L	1	9/29/2022 6:07:41 PM	A91425
Carbon disulfide	ND	10		µg/L	1	9/29/2022 6:07:41 PM	A91425
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Chlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Chloroethane	ND	2.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Chloroform	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Chloromethane	ND	3.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Dibromomethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
2-Hexanone	ND	10		µg/L	1	9/29/2022 6:07:41 PM	A91425
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2022 6:07:41 PM	A91425
Methylene Chloride	ND	3.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Styrene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2022 6:07:41 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-13

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:09:00 AM

Lab ID: 2209D44-004

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Vinyl chloride	ND	1.0		µg/L	1	9/29/2022 6:07:41 PM	A91425
Xylenes, Total	ND	1.5		µg/L	1	9/29/2022 6:07:41 PM	A91425
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	9/29/2022 6:07:41 PM	A91425
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	9/29/2022 6:07:41 PM	A91425
Surr: Dibromofluoromethane	113	70-130		%Rec	1	9/29/2022 6:07:41 PM	A91425
Surr: Toluene-d8	102	70-130		%Rec	1	9/29/2022 6:07:41 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-15

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:45:00 AM

Lab ID: 2209D44-005

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	1.2	0.50		mg/L	5	9/27/2022 12:00:48 PM	R91351
Chloride	480	25	*	mg/L	50	9/29/2022 4:10:27 PM	R91438
Bromide	1.0	0.50		mg/L	5	9/27/2022 12:00:48 PM	R91351
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/27/2022 12:00:48 PM	R91351
Sulfate	2100	25	*	mg/L	50	9/29/2022 4:10:27 PM	R91438
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/27/2022 5:35:25 PM	R91351
SM2510B: SPECIFIC CONDUCTANCE							Analyst: CAS
Conductivity	5000	10		µmhos/c	1	9/29/2022 7:45:21 PM	R91435
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	221.8	20.00		mg/L Ca	1	9/29/2022 7:45:21 PM	R91435
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/29/2022 7:45:21 PM	R91435
Total Alkalinity (as CaCO ₃)	221.8	20.00		mg/L Ca	1	9/29/2022 7:45:21 PM	R91435
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	3820	200	*D	mg/L	1	9/30/2022 9:10:00 AM	70454
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	7.43		H	pH units	1	9/29/2022 7:45:21 PM	A91435
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	600	10		mg/L	10	10/3/2022 11:40:12 AM	70456
Magnesium	82	1.0		mg/L	1	9/29/2022 3:33:16 PM	70456
Potassium	14	1.0		mg/L	1	9/29/2022 3:33:16 PM	70456
Sodium	610	10		mg/L	10	10/3/2022 11:40:12 AM	70456
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Toluene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Ethylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Naphthalene	ND	2.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Acetone	ND	10		µg/L	1	9/29/2022 6:34:35 PM	A91425
Bromobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-15

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:45:00 AM

Lab ID: 2209D44-005

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Bromomethane	ND	3.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
2-Butanone	ND	10		µg/L	1	9/29/2022 6:34:35 PM	A91425
Carbon disulfide	ND	10		µg/L	1	9/29/2022 6:34:35 PM	A91425
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Chlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Chloroethane	ND	2.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Chloroform	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Chloromethane	ND	3.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Dibromomethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
2-Hexanone	ND	10		µg/L	1	9/29/2022 6:34:35 PM	A91425
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2022 6:34:35 PM	A91425
Methylene Chloride	ND	3.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Styrene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2022 6:34:35 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-15

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 10:45:00 AM

Lab ID: 2209D44-005

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Vinyl chloride	ND	1.0		µg/L	1	9/29/2022 6:34:35 PM	A91425
Xylenes, Total	ND	1.5		µg/L	1	9/29/2022 6:34:35 PM	A91425
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	9/29/2022 6:34:35 PM	A91425
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2022 6:34:35 PM	A91425
Surr: Dibromofluoromethane	111	70-130		%Rec	1	9/29/2022 6:34:35 PM	A91425
Surr: Toluene-d8	101	70-130		%Rec	1	9/29/2022 6:34:35 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-09

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 11:25:00 AM

Lab ID: 2209D44-006

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	0.62	0.50		mg/L	5	9/27/2022 12:26:33 PM	R91351
Chloride	3500	250	*	mg/L	500	9/29/2022 4:22:53 PM	R91438
Bromide	4.5	0.50		mg/L	5	9/27/2022 12:26:33 PM	R91351
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/27/2022 12:26:33 PM	R91351
Sulfate	2200	250	*	mg/L	500	9/29/2022 4:22:53 PM	R91438
Nitrate+Nitrite as N	ND	2.0		mg/L	10	9/29/2022 6:26:59 PM	R91438
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	15000	100		µmhos/c	10	10/2/2022 11:31:23 AM	R91476
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	263.2	20.00		mg/L Ca	1	9/29/2022 7:57:39 PM	R91435
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	9/29/2022 7:57:39 PM	R91435
Total Alkalinity (as CaCO ₃)	263.2	20.00		mg/L Ca	1	9/29/2022 7:57:39 PM	R91435
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	8750	200	*D	mg/L	1	9/30/2022 9:10:00 AM	70454
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	7.36		H	pH units	1	9/29/2022 7:57:39 PM	A91435
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	1200	20		mg/L	20	10/3/2022 11:43:55 AM	70456
Magnesium	220	5.0		mg/L	5	9/29/2022 3:37:14 PM	70456
Potassium	21	1.0		mg/L	1	9/29/2022 3:35:54 PM	70456
Sodium	1900	20		mg/L	20	10/3/2022 11:43:55 AM	70456
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Toluene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Ethylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Naphthalene	ND	2.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Acetone	ND	10		µg/L	1	9/29/2022 7:01:32 PM	A91425
Bromobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-09

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 11:25:00 AM

Lab ID: 2209D44-006

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Bromoform	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Bromomethane	ND	3.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
2-Butanone	ND	10		µg/L	1	9/29/2022 7:01:32 PM	A91425
Carbon disulfide	ND	10		µg/L	1	9/29/2022 7:01:32 PM	A91425
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Chlorobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Chloroethane	ND	2.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Chloroform	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Chloromethane	ND	3.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Dibromomethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
2-Hexanone	ND	10		µg/L	1	9/29/2022 7:01:32 PM	A91425
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2022 7:01:32 PM	A91425
Methylene Chloride	ND	3.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Styrene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2022 7:01:32 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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Analytical Report

Lab Order 2209D44

Date Reported: 10/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy

Client Sample ID: MW-09

Project: Salty Dog Pipeline

Collection Date: 9/23/2022 11:25:00 AM

Lab ID: 2209D44-006

Matrix: AQUEOUS

Received Date: 9/24/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Vinyl chloride	ND	1.0		µg/L	1	9/29/2022 7:01:32 PM	A91425
Xylenes, Total	ND	1.5		µg/L	1	9/29/2022 7:01:32 PM	A91425
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	9/29/2022 7:01:32 PM	A91425
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	9/29/2022 7:01:32 PM	A91425
Surr: Dibromofluoromethane	114	70-130		%Rec	1	9/29/2022 7:01:32 PM	A91425
Surr: Toluene-d8	99.4	70-130		%Rec	1	9/29/2022 7:01:32 PM	A91425

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: MB-70456	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 70456	RunNo: 91434								
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3273998 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCSLL-70456	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 70456	RunNo: 91434								
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3274002 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	104	50	150			
Magnesium	ND	1.0	0.5000	0	106	50	150			
Potassium	ND	1.0	0.5000	0	119	50	150			
Sodium	ND	1.0	0.5000	0	108	50	150			

Sample ID: LCS-70456	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 70456	RunNo: 91434								
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3274003 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Sample ID: 2209D44-001CMS	SampType: MS	TestCode: EPA Method 200.7: Metals								
Client ID: MW-18	Batch ID: 70456	RunNo: 91434								
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3274110 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	71	1.0	50.00	20.02	102	70	130			

Sample ID: 2209D44-001CMSD	SampType: MSD	TestCode: EPA Method 200.7: Metals								
Client ID: MW-18	Batch ID: 70456	RunNo: 91434								
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3274111 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	69	1.0	50.00	20.02	98.2	70	130	3.01	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Estimated value
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Limit
S % Recovery outside of range due to dilution or matrix interference	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44
10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: 2209D44-001CMS	SampType: MS	TestCode: EPA Method 200.7: Metals
Client ID: MW-18	Batch ID: 70456	RunNo: 91434
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3274113 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Magnesium	170	5.0 50.00 129.8 89.7 70 130

Sample ID: 2209D44-001CMSD	SampType: MSD	TestCode: EPA Method 200.7: Metals
Client ID: MW-18	Batch ID: 70456	RunNo: 91434
Prep Date: 9/28/2022	Analysis Date: 9/29/2022	SeqNo: 3274114 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Magnesium	180	5.0 50.00 129.8 100 70 130 3.02 20

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R91351	RunNo: 91351								
Prep Date:	Analysis Date: 9/27/2022	SeqNo: 3270231 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R91351	RunNo: 91351								
Prep Date:	Analysis Date: 9/27/2022	SeqNo: 3270232 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Bromide	2.5	0.10	2.500	0	98.0	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	91.2	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID: 2209D44-001BMS	SampType: ms	TestCode: EPA Method 300.0: Anions								
Client ID: MW-18	Batch ID: R91351	RunNo: 91351								
Prep Date:	Analysis Date: 9/27/2022	SeqNo: 3270237 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.0	0.50	2.500	0.8780	83.2	79.7	110			
Bromide	16	0.50	12.50	4.340	93.0	91.2	106			

Sample ID: 2209D44-001BMSD	SampType: msd	TestCode: EPA Method 300.0: Anions								
Client ID: MW-18	Batch ID: R91351	RunNo: 91351								
Prep Date:	Analysis Date: 9/27/2022	SeqNo: 3270238 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.0	0.50	2.500	0.8780	83.3	79.7	110	0.0845	20	
Bromide	16	0.50	12.50	4.340	93.4	91.2	106	0.331	20	

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R91438	RunNo: 91438								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274276 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy

Project: Salty Dog Pipeline

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R91438	RunNo: 91438								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274277 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.4	90	110			
Sulfate	9.5	0.50	10.00	0	94.8	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.2	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44
10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: 100ng lcs4	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: A91425			RunNo: 91425						
Prep Date:	Analysis Date: 9/29/2022			SeqNo: 3273283			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	19	1.0	20.00	0	94.4	70	130			
Chlorobenzene	19	1.0	20.00	0	92.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.5	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.4	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A91425			RunNo: 91425						
Prep Date:	Analysis Date: 9/29/2022			SeqNo: 3273299		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy

Project: Salty Dog Pipeline

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: A91425	RunNo: 91425								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3273299 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy

Project: Salty Dog Pipeline

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: A91425	RunNo: 91425								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3273299 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44
10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: Ics-1 98.9uS eC	SampType: Ics	TestCode: SM2510B: Specific Conductance								
Client ID: LCSW	Batch ID: R91435	RunNo: 91435								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274233	Units: µmhos/cm							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	98.90	0	102	85	115			

Sample ID: Ics-1 99.4uS eC	SampType: Ics	TestCode: SM2510B: Specific Conductance								
Client ID: LCSW	Batch ID: R91476	RunNo: 91476								
Prep Date:	Analysis Date: 10/2/2022	SeqNo: 3276186	Units: µmhos/cm							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	99	10	99.40	0	99.2	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy

Project: Salty Dog Pipeline

Sample ID: 2209D44-001B dup		SampType: dup		TestCode: SM4500-H+B / 9040C: pH						
Client ID: MW-18		Batch ID: R91435		RunNo: 91435						
Prep Date:		Analysis Date: 9/29/2022		SeqNo: 3274167		Units: pH units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.32									H

- Qualifiers:
- *

Value exceeds Maximum Contaminant Level.

D

Sample Diluted Due to Matrix

H

Holding times for preparation or analysis exceeded

ND

Not Detected at the Reporting Limit

PQL

Practical Quantitative Limit

S

% Recovery outside of range due to dilution or matrix interference

- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R91435	RunNo: 91435								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274191 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R91435	RunNo: 91435								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274192 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.60	20.00	80.00	0	97.0	90	110			

Sample ID: 2209D44-001B dup	SampType: dup	TestCode: SM2320B: Alkalinity								
Client ID: MW-18	Batch ID: R91435	RunNo: 91435								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274194 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	224.5	20.00						0.859	20	

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R91435	RunNo: 91435								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274214 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R91435	RunNo: 91435								
Prep Date:	Analysis Date: 9/29/2022	SeqNo: 3274215 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.24	20.00	80.00	0	96.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209D44

10-Oct-22

Client: Hilcorp Energy
Project: Salty Dog Pipeline

Sample ID: MB-70440	SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: PBW	Batch ID: 70440		RunNo: 91403							
Prep Date: 9/27/2022	Analysis Date: 9/29/2022		SeqNo: 3272554		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-70440	SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: LCSW	Batch ID: 70440		RunNo: 91403							
Prep Date: 9/27/2022	Analysis Date: 9/29/2022		SeqNo: 3272555		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	0	103	80	120			

Sample ID: MB-70454	SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: PBW	Batch ID: 70454		RunNo: 91428							
Prep Date: 9/28/2022	Analysis Date: 9/30/2022		SeqNo: 3273719		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-70454	SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids							
Client ID: LCSW	Batch ID: 70454		RunNo: 91428							
Prep Date: 9/28/2022	Analysis Date: 9/30/2022		SeqNo: 3273720		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Hilcorp Energy

Work Order Number: 2209D44

RcptNo: 1

Received By: Cheyenne Cason 9/24/2022 7:00:00 AM

Completed By: Cheyenne Cason 9/24/2022 8:16:10 AM

Reviewed By: KPa 9.26.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 12

(<2 or >12 unless noted)

Adjusted? NO

Checked by: gna/26/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			
2	3.6	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp Farmington NM

Mailing Address: 382 Road 3100 Aztec, NM 87410

Billing Address: PO Box 61529 Houston, TX 77208

Phone #: 505-486-9543

email or Fax#: Brandon.Sinclair@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Salty Dog Pipeline

Project #:

Project Manager:

Stuart Hyde

Sampler: Brandon Sinclair / Greg Pulley

On Ice: ☒ Yes ☐ No

of Coolers: 2 36-0-3.6

Cooler Temp (including CP): 4.3-0-4.3

HEAL No. 2209D44

Date Time Matrix Sample Name

9/23 9:45 Water MW-18

10:15 Water MW-12

11:10 Water MW-10

10:09 Water MW-13

10:45 Water MW-15

11:25 Water MW-09

Water

Water

Water

Water

Water

Date: 9/23/22

Time: 1400

Relinquished by: Gregory Poles

Date: 9/23/22

Time: 1810

Relinquished by: Stuart Hyde

Received by: JMT WGA

Via:

Date: 9/23/22

Time: 1400

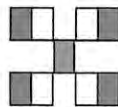
Received by: CMC courier

Via:

Date: 9/24/22

Time: 0700

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Cations/Anions/TDS/pH 500ml, 250ml HNO3, 125ml H2SO4

Volatiles 8260 40ml VOA HCl

RECEIVED

By Mike Buchanan at 3:03 pm, Jan 03, 2024

**ENSOLUM**

November 20, 2022

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Updated Proposed Public Notice and Participation for Stage 1 Abatement Plan

Salty Dog Water Gathering System
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nCS1916853082
Abatement Plan No: AP-139

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), proposes the following updated plan to meet the requirements of 19.15.30.15 of the New Mexico Administrative Code (NMAC) for public notice and participation associated with a Stage 1 Abatement Plan. The *Stage 1 Abatement Plan*, prepared by LT Environmental, Inc. and dated December 20, 2019, was prepared to address soil and groundwater impacts originating from the Salty Dog Water Gathering System.

DISTRIBUTION

Hilcorp will provide written notice of the *Stage 1 Abatement Plan* by United State Postal Service Mail to the following:

- Surface owners of record within 1 mile of the perimeter of the identified impacted area as currently defined in the Stage 1 Abatement Plan. These surface owners are listed in Table 1.
- The County Commission of San Juan County, New Mexico.
- The Office of Natural Resources Trustee for the State of New Mexico (by certified mail).
- The City of Farmington.
- The Navajo Nation (by certified mail).

Hilcorp understands that the NMOCD may include additional persons who have requested notification, as well as other local, state, or federal governmental agencies upon approval of the *Stage 1 Abatement Plan*.

PUBLICATION

Hilcorp will publish the NMOCD approved notice in the Farmington Daily Times, a newspaper of general circulation in San Juan County, New Mexico, and in the Albuquerque Journal, a newspaper of general circulation in the state of New Mexico.

SCHEDULE

Hilcorp will issue public notice within 15 days after approval by the NMOCD of this *Updated Proposed Public Notice and Participation for Stage 1 Abatement Plan*. This includes public notice to the newspapers and mailings to the appropriate local governments and surface owners identified for distribution. The newspaper publication will run for 1 business day.

PROPOSED PUBLIC NOTICE

Hilcorp proposes the following language for public notice:

Hilcorp Energy Company (Hilcorp) announces publication of a Stage 1 Abatement Plan for groundwater impacts identified at the Salty Dog Water Gathering System pipeline release located at latitude 36.721261 degrees (°) and longitude -108.247803° in Unit N of Section 18 of Township 29 North, Range 13 West in San Juan County approximately 1.5 miles southwest of Farmington, New Mexico.

On April 29, 2019, approximately 80 barrels (bbls) of produced water were released from a pipeline due to corrosion. Upon discovery, Hilcorp isolated and de-energized the waterline for repair, dispatched a vacuum truck to the Site for fluid recovery. Initial source removal and subsurface investigation indicated soil in the vadose zone and shallow groundwater occurring at approximately 30 feet to 40 feet below ground surface are impacted above applicable remediation standards defined by the New Mexico Oil Conservation Division (NMOCD). All soil impacted by the release has been delineated, but concentrations of chloride exceeding the NMOCD standard for groundwater have been identified. The extent of groundwater impact has been not delineated but is estimated to be less than 24,000 square feet. No surface water was impacted.

The Director of the NMOCD has approved a Stage 1 Abatement Plan in which Hilcorp will obtain lateral delineation of impacted groundwater. The data obtained from the Stage 1 Abatement Plan will be combined with previously collected subsurface data to complete characterization of the groundwater impacts and to design appropriate remediation. In determining that the Stage 1 Abatement Plan is administratively complete, the NMOCD Director has complied with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC.

Members of the public may view a copy of the Stage 1 Abatement Plan at the NMOCD's Santa Fe office at 1220 South St Francis Drive, # 3, Santa Fe, New Mexico or at the NMOCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NMOCD public database at <http://www.emnrd.state.nm.gov/OCD>.

The NMOCD is accepting written comments and requests for consideration if the NMOCD Director receives them within 30 days after the date of publication of this public notice. A person seeking to comment on a stage 1 abatement plan should submit written comments to:

Mr. Nelson Velez
Environmental Specialist
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NMOCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

Additional information can be obtained from the Harvest project contact:

Mitch Killough
Hilcorp Energy Company
382 Road 3100
Aztec, New Mexico 87410
(713) 757-5247

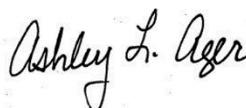
We appreciate the opportunity to provide this proposed public notice to the NMOCD. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

Ensolum, LLC



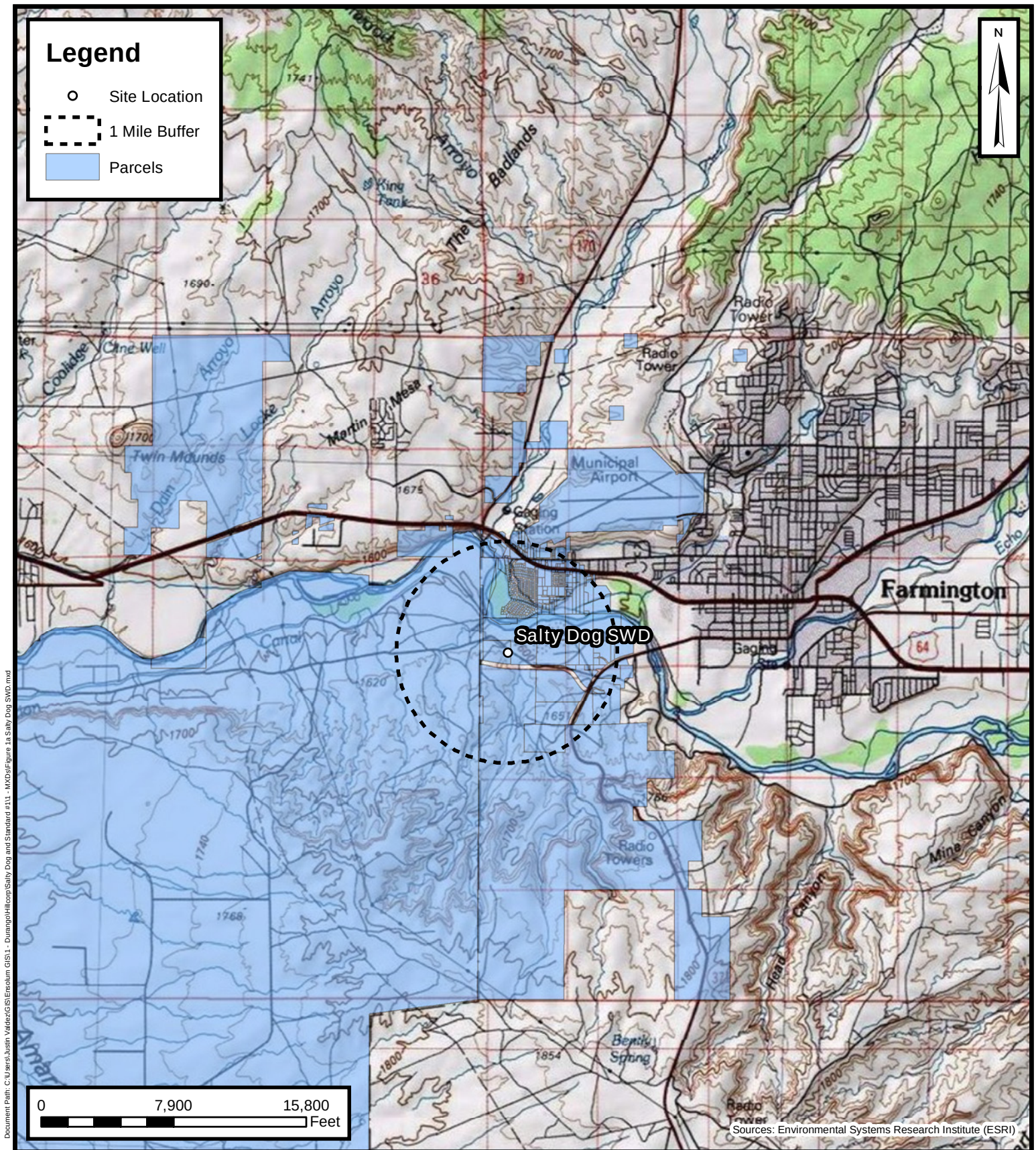
Stuart Hyde, LG
Senior Geologist
(970) 903-1607
shyde@ensolum.com



Ashley Ager, MS, PG
Principal, Geologist
(970) 946-1093
aager@ensolum.com

Attachments:

Figure 1: Surrounding Property Owners
Table: Surrounding Property Owners within 1 Mile



Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2077171365366	1603 W MAIN ST	1661 W MURRY DRIVE LLC		1661 W MURRAY DR	FARMINGTON, NM 87401-3839
2078171220474	1810 ESCONDIDO TRL	1705 7 E 21ST STREET LLC		2808 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2077171502454	PO BOX 36	2303 WEST MAIN LLC		2303 W MAIN ST	BLOOMFIELD, NM 87413
2078171171476	3152 PRONGHORN PATH	2716 PARQUE DE OESTE LLC		2716 PARQUE DE OESTE DR	SAN ANGELO, TX 76901
2078171164374	54 ROAD 3791	338 VALLE BONITA LLC		338 VALLE BONITA DR	FARMINGTON, NM 87401
2077171444468	2226 E MAIN ST	4CT HOLDINGS LLC		2100 W MAIN ST	FARMINGTON, NM 87401
2078171255290	307 LA CROSSE	ACERO LOPEZ JULIO		307 LA CROSSE AVE	FARMINGTON, NM 87401
2078171211411	PO BOX 8044	AMODO BENTLEY DAVID AND ELIZABETH		205 LA GRANGE AVE	NEWCOMB, NM 87455
2078171031500	2402 W MAIN ST	ANDERSON JAY AND SHIRLEY		2402 W MAIN ST	FARMINGTON, NM 87401-0000
2078171139356	348 VALLE VISTA DR	ANDERSON LEON		348 VALLE VISTA DR	FARMINGTON, NM 87401
2078171021402	2407 RIVERVIEW LN	ANDERSON PEGGY		2407 RIVERVIEW LN	FARMINGTON, NM 87401
2078171239374	217 WESTLAND PARK DR	ANDREWS RADELL R		217 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171008432	133 GOODING LN	ANDUJO GIL M AND ROSA R		133 GOODING LN	FARMINGTON, NM 87401
2078171021422	2406 RIVERVIEW LN	ANDUJO GILBERT AND SOCORRO		2406 RIVERVIEW LN	FARMINGTON, NM 87401
2078171046402	2417 RIVERVIEW LN	ANDUJO RAMIREZ MARINA		2417 RIVERVIEW LN	FARMINGTON, NM 87401
2078171259417	2902 LA PALMA PL	ANTONIAN DAVID A AND LUDWIG LORI ANN		2902 LA PALMA PL	FARMINGTON, NM 87401
2078171221489	5760 PINEHURST DR	ARMSTRONG BILL AND BETTY REVOCABLE TRUST		2807 PARQUE DEL NORTE DR #A	FARMINGTON, NM 87402
2078171228341	2811 LA NAPA ST	ARROYO MARIA D AND JUAN A		2811 LA NAPA ST	FARMINGTON, NM 87401-0000
2078171278305	311 LA CUESTA AVE	ASMUS ERNEST C AND ELIZABETH A		311 LA CUESTA AVE	FARMINGTON, NM 87401-3726
2078171149471	PO BOX 491	ATCITY PETE AND CONNIE		2700 PARQUE DE OESTE DR	SHIPROCK, NM 87420
2078171041420	2416 RIVERVIEW LN	ATENCIO STEVE D AND MARIA		2416 RIVERVIEW LN	FARMINGTON, NM 87401-3292
2077171516441	608 RIDGE LEA CT	AYERS BRYAN		120 GOODING LN	FARMINGTON, NM 87401
2077171508425	608 RIDGE LEA CT	AYERS BRYAN		120 GOODING LN	FARMINGTON, NM 87401
2077171470493	750 N 17TH ST	B AND B MERRITT REAL ESTATE LLC ATTN MIK		2112 W MAIN ST	LAS CRUCES, NM 88005-4153
2078171138373	1400 LA PLATA HWY	BARNETT CLIFTON		336 VALLE VISTA DR	FARMINGTON, NM 87401-1809
2078171215337	2807 LA NAPA ST	BAYALE GENEVIEVE J		2807 LA NAPA ST	FARMINGTON, NM 87401
2078171031422	2410 RIVERVIEW LN	BEASLEY DENNIS C AND FRANCES R		2410 RIVERVIEW LN	FARMINGTON, NM 87401-3292
2078171283272	2907 LA PUENTE PL	BECENTI CARMELIA J		2907 LA PUENTE PL	FARMINGTON, NM 87401
2078171155473	2704 PARQUE DE OESTE DR	BECENTI DARLENE		2704 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171164380	PO BOX 1603	BECENTI NARVEL P		334 VALLE BONITA DR	KIRTLAND, NM 87417
2078171015402	1300 BRYNIE ST	BECKER JOEY AND SUE		2405 RIVERVIEW LN	FARMINGTON, NM 87401
2078172396059	3151 W MAIN ST	BEERS C DAVID TRUST		3151 W MAIN ST	FARMINGTON, NM 87401
2078171164347	360 VALLE BONITA DR	BEGAY BERTHA S		360 VALLE BONITA DR	FARMINGTON, NM 87401
2078171195399	206 LA GRANGE AVE	BELEN THOMPSON PETRINA C AND THOMPSON BR		206 LA GRANGE AVE	FARMINGTON, NM 87401
2078171164391	308 W MAIN ST	BENALLY ALEXANDER		326 VALLE BONITA DR	FARMINGTON, NM 87401
2078171138368	340 VALLE VISTA DR	BENALLY GAILYN		340 VALLE VISTA DR	FARMINGTON, NM 87401
2078171211403	207 LA GRANGE AVE	BENALLY JESSICA		207 LA GRANGE AVE	FARMINGTON, NM 87401
2078171195350	220 LA GRANGE AVE	BENALLY KENNETH AND STELLA M		220 LA GRANGE AVE	FARMINGTON, NM 874013738
2078171099301	2551 RIVERSIDE DR	BENTLEY ROBERT T AND ANGELA		2551 RIVERSIDE DR	FARMINGTON, NM 874010000
2078171138379	332 VALLE VISTA DR	BETZ JASON HOYT		332 VALLE VISTA DR	FARMINGTON, NM 87401
2078171139340	360 VALLE VISTA DR	BILLIE TERRENCE AND LYNETTE		360 VALLE VISTA DR	FARMINGTON, NM 87401
2078171254386	2904 LA SIERRA PL	BINGHAM RONNIE E AND TAMMY D		2904 LA SIERRA PL	FARMINGTON, NM 87401
2078171260465	3609 CARLTON AVE	BK HOLDINGS LLC		2901 PARQUE DE OESTE DR #A	FARMINGTON, NM 87401
2078171260464	3609 CARLTON AVE	BK HOLDINGS LLC		2901 PARQUE DE OESTE DR #B	FARMINGTON, NM 87401
2078171260462	3609 CARLTON AVE	BK HOLDINGS LLC		2901 PARQUE DE OESTE DR #C	FARMINGTON, NM 87401
2078171260460	3609 CARLTON AVE	BK HOLDINGS LLC		2901 PARQUE DE OESTE DR #D	FARMINGTON, NM 87401
2078171035422	PO BOX 1556	BLACKHORSE BERNIECE A		2412 RIVERVIEW LN	FARMINGTON, NM 87499
2078171213475	22 ROAD 5097	BLOUNT MICHAEL J ET AL		2806 PARQUE DE OESTE DR	BLOOMFIELD, NM 87413
2078171175254	2713 LA PUENTE ST	BOCKHOLD KEITH A AND JACKMAN JOAN A		2713 LA PUENTE ST	FARMINGTON, NM 87401
2078171246250	2815 LA PUENTE ST	BORGSTAHL JON PAUL		2815 LA PUENTE ST	FARMINGTON, NM 87401
2078171163418	306 VALLE BONITA DR	BORGSTAHL RICHARD R		306 VALLE BONITA DR	FARMINGTON, NM 87401
2078171139351	352 VALLE VISTA DR	BOWEN JOSHUA R AND LANA L		352 VALLE VISTA DR	FARMINGTON, NM 874010000
2078171195357	218 LA GRANGE AVE	BRIDGEWATER DAVID AND LEANNE		218 LA GRANGE AVE	FARMINGTON, NM 87401
2078171182290	9802 SWANSBORO	BROWN JAMES R		2713 LA SALLE ST	BAKERSFIELD, CA 93314

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078171154350	9 ROAD 3523	BROWN JEREMY L AND CHRISTIE M		353 VALLE VISTA DR	FLORA VISTA, NM 87415
2078171286297	313 LA CUESTA AVE	BROWN TROY R AND CATHY L		313 LA CUESTA AVE	FARMINGTON, NM 87401-3726
2078171120275	101 E MAIN ST	BS ENTERPRISES LLP		2505 RIVERSIDE DR	FARMINGTON, NM 87401
2078171269399	2907 LA PALMA PL	BUCK HERMAN AND JENNIFER A		2907 LA PALMA PL	FARMINGTON, NM 87401-0000
2078171270251	2901 LA PUENTE ST	BUSTAMANTE WILLIAM B		2901 LA PUENTE ST	FARMINGTON, NM 87401
2078171292267	PO BOX 79	BUTCHKO DAVE ET AL		2909 LA PUENTE PL	CORTEZ, CO 81321-0079
2078171303269	PO BOX 79	BUTCHKO DAVE ET AL		2911 LA PUENTE PL	CORTEZ, CO 81321-0079
2077171434446	1237 N CHACO AVE	C ANN C REAL ESTATE LLC		1917 W MAIN ST	FARMINGTON, NM 87401
2078171273461	706 W 27TH ST	CAI YONG QIANG		2903 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171250362	2902 LA NAPA ST	CALDWELL ANDREW WILLIAM AND SHEA MEGHAN		2902 LA NAPA ST	FARMINGTON, NM 87401
2078171154337	361 VALLE VISTA DR	CAN INVESTMENTS LLC	ARRELLANES CESAR AND NICKS LEANDRA M	361 VALLE VISTA DR	FARMINGTON, NM 87401
2078172106064	541 NORTHGATE LN	CANO JAVIER L		541 NORTHGATE LN	FARMINGTON, NM 87401
2078171163267	12196 COUNTY ROAD 240	CANODE MELANIE		2709 LA PUENTE ST	DURANGO, CO 81301
2078171212489	12196 COUNTY ROAD 240	CANODE MELANIE E		2805 PARQUE DEL NORTE DR	DURANGO, CO 81301
2078171219444	12196 COUNTY ROAD 240	CANODE MELANIE E		2808 LA HABRA ST	DURANGO, CO 81301
2077171350307	1621 W MURRAY DR	CARAVAN STAR LLC		1621 W MURRAY DR #C	FARMINGTON, NM 87401
2078171195393	208 LA GRANGE AVE	CASIAS FRANK AND VICKI LIVING TRUST		208 LA GRANGE AVE	FARMINGTON, NM 87401
2078172057041	528 NORTHGATE LN	CASSIDA CORI		528 NORTHGATE LN	FARMINGTON, NM 87401
2078171274489	5324 BRIDGET AVE SE	CHAFFEE JOHN R AND JEAN V		77 PARQUE DE OESTE DR	AUBURN, WA 98092
2078171076376	2500 RIDGEVIEW DR	CHAVEZ JEROME ANDRES AND TIANA		2500 RIDGEVIEW DR	FARMINGTON, NM 87401
2078171211355	895 PINE DALE LINE	CHAVEZ JESUS AND JULIA		221 LA GRANGE AVE	WENATCHEE, WA 98801
2078171050459	1224 MOCKINGBIRD CIR	CHAVEZ OCTAVIO AND BERTHA		2418 FARMVIEW LN	FARMINGTON, NM 87401
2078171153383	329 VALLE VISTA DR	CHAVEZ PAUL H		329 VALLE VISTA DR	FARMINGTON, NM 87401
2078171154344	357 VALLE VISTA DR	CHAVEZ RAMIREZ LIONEL		357 VALLE VISTA DR	FARMINGTON, NM 87401
2078171238249	2813 LA PUENTE ST	CHYNOWETH CURTIS ARTHUR		2813 LA PUENTE ST	FARMINGTON, NM 87401-3765
2077172263298	105 S HANSELL ST BLDG 714	CIVIL AIR PATROL ATTN GENERAL COUNSEL		1509 W NAVAJO ST #HANGER L2	MAXWELL AFB, AL 36112
2078172191022	501 AIRPORT DR STE 100	CLAYTON INVESTMENT COMPANY		W MAIN ST	FARMINGTON, NM 87401
2078172183013	501 AIRPORT DR STE 100	CLAYTON INVESTMENT COMPANY		W MAIN ST	FARMINGTON, NM 87401
2078171227299	302 LA CROSSE AVE	CLICHEE GARY D AND DEBORAH R		302 LA CROSSE AVE	FARMINGTON, NM 87401
2078171171442	2716 LA HABRA ST	CLY MAUGHN BILL AND KATRINA CANDACE		2716 LA HABRA ST	FARMINGTON, NM 87401
2078171094329	2500 RIVERSIDE DR	COCHRANE RICK G AND KANDICE M		2500 RIVERSIDE DR	FARMINGTON, NM 874013296
2078171166324	2721 LA NAPA ST	COCHRON STEVEN		2721 LA NAPA ST	FARMINGTON, NM 87401
2078171270440	2902 LA HABRA ST APT 3	COMEAX MICHAEL		2902 LA HABRA ST	FARMINGTON, NM 87401
2078171177328	2729 LA NAPA ST	COMER GARRETT AND JULIA		2729 LA NAPA ST	FARMINGTON, NM 87401
2078171120311	2601 RIVERSIDE DR	CONLEY CHRISTOPHER I AND AMY B		2601 RIVERSIDE DR	FARMINGTON, NM 87401-3230
2078171215248	2807 LAPUENTE ST	COOK TYLER R AND MCCARTY APRIL R		2807 LA PUENTE ST	FARMINGTON, NM 87401
2078171211383	213 LA GRANGE AVE	COOKE EMMA ANNE		213 LA GRANGE AVE	FARMINGTON, NM 87401-0000
2078171263305	308 LA CUESTA AVE	COOPER SCOTT M		308 LA CUESTA AVE	FARMINGTON, NM 87401
2078171208244	2805 LA PUENTE ST	CORTEZ PATRICK A AND JENNIFER D		2805 LA PUENTE ST	FARMINGTON, NM 87401
2078172025030	7301 JEFFERSON ST NE STE F	COUNTRY HOME MHP LLC		2310 W APACHE ST	ALBUQUERQUE, NM 87109
2078171255250	2817 LA PUENTE ST	COX SIERRA FONTANA AND LOGAN AMES		2817 LA PUENTE ST	FARMINGTON, NM 87401
2078171138395	320 VALLE VISTA DR	CRABTREE KIMBER N		320 VALLE VISTA DR	FARMINGTON, NM 87401
2078171005420	108 W QUINCE ST	D AND R DEVELOPERS LLC		2400 RIVERVIEW LN	FARMINGTON, NM 87401
2078171035459	3903 N BUENA VISTA AVE	DAVIS JOHN T III	ORTEGA CHRIS P	2412 FARMVIEW LN	FARMINGTON, NM 87401
2078172058016	10200 SIX PINES DR APT 520	DAVIS MATTHEW PAUL AND STACY Y		508 NORTHGATE LN	SHENANDOAH, TX 77380
2078171077507	3801 W CLARENDON	DBL SYSTEMS 7 LLC		2502 W MAIN ST	PHOENIX, AZ 85019-3717
2078172393058	1328 W MURRAY DR	DEVILBISS NICK G AND SHANNON		W MAIN ST	FARMINGTON, NM 87401
2078172369043	1328 W MURRAY DR	DEVILBISS NICK G AND SHANNON		W MAIN ST	FARMINGTON, NM 87401
2078171223366	220 WESTLAND PARK DR	DEVILBISS RICKY R AND KRISTI R		220 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171234270	2812 LA PUENTE ST	DEWEESE LARRY M AND SONDR A K		2812 LA PUENTE ST	FARMINGTON, NM 87401-3298
2078171274481	15 ROAD 3649	DIMMICK LESLIE		87 PARQUE DE OESTE DR	AZTEC, NM 87410
2078171005459	2400 FARMVIEW RD	DOBBS CYNTHIA S		2400 FARMVIEW LN	FARMINGTON, NM 87401
2078171181372	341 VALLE BONITA DR	DODGE QUENCAVIES		341 VALLE BONITA DR	FARMINGTON, NM 87401
2077171417429	1916 N WAGNER AVE	DONOHUE WILLIAM A AND JEAN L TRUST		200 GOWER RD	FARMINGTON, NM 87401

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
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2077171431349	1916 N WAGNER AVE	DONOHUE WILLIAM A AND JEAN L TRUST		206 S GOWER RD	FARMINGTON, NM 87401
2077171408349	1916 N WAGNER AVE	DONOHUE WILLIAM A AND JEAN L TRUST		206 S GOWER RD	FARMINGTON, NM 87401
2077171416294	1916 N WAGNER AVE	DONOHUE WILLIAM A AND JEAN L TRUST		206 S GOWER RD	FARMINGTON, NM 87401
2077171416446	1916 N WAGNER AVE	DONOHUE WILLIAM A AND JEAN L TRUST		W MAIN ST	FARMINGTON, NM 87401
2078171153416	305 VALLE VISTA DR	DOSUMU CHARLOTTE		305 VALLE VISTA DR	FARMINGTON, NM 87401
2077172263298	PO BOX 420	DUGAN PRODUCTION CORP	DUGAN THOMAS	1300 W NAVAJO ST #HANGER 9.5	FARMINGTON, NM 87499-0420
2078171255308	306 LA CUESTA AVE	DUNCAN APRIL R		306 LA CUESTA AVE	FARMINGTON, NM 87401
2078171181377	337 VALLE BONITA DR	DUNN STEVE AND ROBERTA		337 VALLE BONITA DR	FARMINGTON, NM 87401
2078171223381	7550 HILLSIDE RD APT 2002	DUWENHOEGGER LOIS J		216 WESTLAND PARK DR	AMARILLO, TX 79119
2078171139335	1084 E NAVAJO ST	DYKSTRA DAVID J AND BRENDA L		364 VALLE VISTA DR	FARMINGTON, NM 87401
2078171198066	5640 E CIRCULO TERRA	EATON T JAMES TRUST			TUCSON, AZ 85750-1004
2078171198066	5640 E CIRCULO TERRA	EATON T JAMES TRUST			TUCSON, AZ 85750-1004
2078171137406	312 VALLE VISTA DR	EDDLEMAN JORDAN AND EDDLEMAN SHARI		312 VALLE VISTA DR	FARMINGTON, NM 87401
2078171062414	5302 HILL AND DALE DR	EITEL RANDY J AND DENISE L		137 WESTVIEW LN	FARMINGTON, NM 87402-4810
2077171494061	PO BOX 720	EPISCOPAL CHURCH IN NAVAJOLAND		1851 BISTI HWY	FARMINGTON, NM 874990720
2077170367404	PO BOX 720	EPISCOPAL CHURCH IN NAVAJOLAND		BISTI HWY	FARMINGTON, NM 874990720
2077171484337	2205 W MAIN ST	ERBES ANDREW J	RIZVI SYED IMRAN AND MADARSHAHI SEYEDEH	2205 W MAIN ST	FARMINGTON, NM 87401
2077171467441	3110 PONTIAC DR	ERICKSON AND ERICKSON PARTNERSHIP		2105 W MAIN ST	FARMINGTON, NM 87401
2078171199270	2802 LA PUENTA ST	ESPINOSA ANTHONY D		2802 LA PUENTE ST	FARMINGTON, NM 874013764
2078171164407	PO BOX 2588	ESPINOSA BOBBY J AND ROBIN L		314 VALLE BONITA DR	FARMINGTON, NM 87499
2078171242363	2900 LA NAPA ST	ESPINOZA RAY AND MARY R		2900 LA NAPA ST	FARMINGTON, NM 874013721
2078171164340	364 VALLE BONITA DR	EVANS BILLIE DON III		364 VALLE BONITA DR	FARMINGTON, NM 87401
2078171197474	PO BOX 438	EVANS BYRON D REVOCABLE TRUST	WILL KURT AND TERRI	2802 PARQUE DE OESTE DR	BAYFIELD, CO 81122
2077171422272	6 ROAD 6319	FARMERS MUTUAL DITCH CO			KIRTLAND, NM 87417
2077171428259	6 ROAD 6319	FARMERS MUTUAL DITCH COMPANY			KIRTLAND, NM 874170467
2077172263298	800 MUNICIPAL DR	FARMINGTON CITY OF		1300 W NAVAJO ST	FARMINGTON, NM 87401
2077171347016	800 MUNICIPAL DR	FARMINGTON CITY OF		1611 OJO CT	FARMINGTON, NM 87401
2077171378019	800 MUNICIPAL DR	FARMINGTON CITY OF		1615 OJO CT	FARMINGTON, NM 87401
2077171376048	800 MUNICIPAL DR	FARMINGTON CITY OF		1620 OJO CT	FARMINGTON, NM 87401
2078171304396	800 MUNICIPAL DR	FARMINGTON CITY OF		3010 LA HABRA ST	FARMINGTON, NM 87401
2078172322085	800 MUNICIPAL DR	FARMINGTON CITY OF		3100 W MAIN ST	FARMINGTON, NM 87401
2078172326061	800 MUNICIPAL DR	FARMINGTON CITY OF		3101 W MAIN ST	FARMINGTON, NM 87401
2077171348139	800 MUNICIPAL DR	FARMINGTON CITY OF		OJO CT	FARMINGTON, NM 87401
2078171066199	800 MUNICIPAL DR	FARMINGTON CITY OF			
2078171215511	800 MUNICIPAL DR	FARMINGTON CITY OF			FARMINGTON, NM 87401
2078172401049	800 MUNICIPAL DR	FARMINGTON CITY OF			FARMINGTON, NM 87401
2078171391460	800 MUNICIPAL DR	FARMINGTON CITY OF			FARMINGTON, NM 87401
2078171304497	PO BOX 958	FARMINGTON INVESTMENT CO		W MAIN ST	FARMINGTON, NM 87499
2078171099368	2504 RIDGEVIEW DR	FATE ROBERT J AND ROBERTA K TRUST		2504 RIDGEVIEW DR	FARMINGTON, NM 87401
2078171135461	PO BOX 417	FAVER NORMAN H AND MARTHA K REVOCABLE TR		W MAIN ST	AZTEC, NM 87410
2078171170474	PO BOX 417	FAVER NORMAN H AND MARTHA K REVOCABLE TR		W MAIN ST	AZTEC, NM 87410
2099199900900		FEDERAL			
2099199900900		FEDERAL			
2078171262324	305 LA CUESTA AVE	FITZ ROBERT AND LESLIE		305 LA CUESTA AVE	FARMINGTON, NM 874010000
2077171467342	PO BOX 1230	FOUR CORNERS HOME FOR CHILDREN INC		2103 W MAIN ST	FARMINGTON, NM 87499
2077171434415	PO BOX 1230	FOUR CORNERS HOME FOR CHILDREN INC		2103 W MAIN ST	FARMINGTON, NM 87499
2077171434438	PO BOX 1230	FOUR CORNERS HOME FOR CHILDREN INC		2103 W MAIN ST #Q	FARMINGTON, NM 87499
2078171223373	218 WESTLAND PARK DR	FRANCIS ALFRED AND ALTHEA J		218 WESTLAND PARK DR	FARMINGTON, NM 87401-3734
2078171195379	212 LA GRANGE AVE	FRANKS JIMMY H AND EULA A		212 LA GRANGE AVE	FARMINGTON, NM 87401-3738
2078171193486	3775 NW WISTERIA WAY	FREEMAN MICHAEL AND JULIANNE		2801 PARQUE DEL NORTE DR	CORVALLIS, OR 97337
2078171203488	3775 NW WISTERIA WAY	FREEMAN MICHAEL R AND JULIANNE E		2803 PARQUE DEL NORTE DR	CORVALLIS, OR 97337
2077170233474	241 W 56TH AVE	FREIGHTLINK OF NEW MEXICO LLC		1205 MISSION AVE	DENVER, CO 80216
2078171061321	102 HIDDEN ACRES DR UNIT B	FRYE DONNA		102 HIDDEN ACRES DR	FARMINGTON, NM 874013266
2078171095275	102 HIDDEN ACRES DR UNIT B	FRYE DONNA		2503 RIVERSIDE DR	FARMINGTON, NM 874013266

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078171166441	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		2712 LA HABRA ST	FARMINGTON, NM 87401
2078171184331	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		2733 LA NAPA ST	FARMINGTON, NM 87401
2078171180428	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		301 VALLE BONITA DR	FARMINGTON, NM 87401
2078171180421	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		305 VALLE BONITA DR	FARMINGTON, NM 87401
2078171180416	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		309 VALLE BONITA DR	FARMINGTON, NM 87401
2078171180410	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		313 VALLE BONITA DR	FARMINGTON, NM 87401
2078171180405	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		317 VALLE BONITA DR	FARMINGTON, NM 87401
2078171180399	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		321 VALLE BONITA DR	FARMINGTON, NM 87401
2078171180394	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		325 VALLE BONITA DR	FARMINGTON, NM 87401
2078171181388	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		329 VALLE BONITA DR	FARMINGTON, NM 87401
2078171181383	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J		333 VALLE BONITA DR	FARMINGTON, NM 87401
2078171192314	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J AND MARIE S TRUST		2718 LA SALLE ST	FARMINGTON, NM 87401
2078171200247	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J AND MARIE S TRUST		2803 LA PUENTE ST	FARMINGTON, NM 87401
2078171221323	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J AND MARIE S TRUST		2806 LA SALLE ST	FARMINGTON, NM 87401
2078171214321	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J TRUST		2804 LA SALLE ST	FARMINGTON, NM 87401
2078171229325	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J TRUST		2808 LA SALLE ST	FARMINGTON, NM 87401
2078171164385	2014 SAN JUAN BLVD STE H	GABALDON STEVEN J TRUST		330 VALLE BONITA DR	FARMINGTON, NM 87401
2078171183479	2724 PARQUE DE OESTE DR	GABEL JEFF A		2724 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171016352	307 N WALL AVE	GARCIA ANTHONY AND KARLENE	HOPPER MICHAEL AND JO ANNE	211 GOODING LN	FARMINGTON, NM 87401
2078171056375	715 WINTER SOLSTICE	GARCIA ANTHONY D AND KARLENE	SPELLBRING SHANNON E	2400 RIDGEVIEW DR	FARMINGTON, NM 87401
2078171203335	2805 LA NAPA ST	GARCIA CHRIS ETAL		2805 LA NAPA ST	FARMINGTON, NM 874013728
2078171244279	308 LA CROSSE AVE	GARCIA JOSEPH G		308 LA CROSSE AVE	FARMINGTON, NM 87401-3760
2078171195365	8912 W CUSTER LN	GARCIA SHIRLEY J ETAL		216 LA GRANGE AVE	PEORIA, AZ 85381
2077171485447	PO BOX 109	GARDEN SPOT PRODUCE INC ATTN ERICKSON LA		2121 W MAIN ST	FARMINGTON, NM 874990109
2077171485422	PO BOX 109	GARDEN SPOT PRODUCE INC ATTN ERICKSON LA		2203 W MAIN ST	FARMINGTON, NM 874990109
2078171143292	2704 LA SALLE ST	GARDENHIRE STEVE C AND WENDY L		2704 LA SALLE ST	FARMINGTON, NM 87401-3768
2078171137401	316 VALLE VISTA DR	GARNENEZ NICO M ETAL		316 VALLE VISTA DR	FARMINGTON, NM 87401-0000
2078171211377	PO BOX 1697	GARNENEZ PENNYE A		215 LA GRANGE AVE	FARMINGTON, NM 87499
2077170384492	620 DIAMOND ST	GOBER JIMMIE D TRUST		BISTI HWY	FARMINGTON, NM 87401
2077171512359	230 S GOODING LN	GOFF LARRY ET AL		230 GOODING LN	FARMINGTON, NM 874013209
2077171507325	230 S GOODING LN	GOFF LARRY ET AL		230 GOODING LN	FARMINGTON, NM 874013209
2077171509380	210 S GOODING LN	GOFF LINDA M		210 GOODING LN	FARMINGTON, NM 87401
2077171507374	220 S GOODING LN	GOFF MAXINE TRUST		220 GOODING LN	FARMINGTON, NM 87401
2077171509396	220 S GOODING LN	GOFF MAXINE TRUSTEE		200 GOODING LN	FARMINGTON, NM 87401-3209
2077171522394	220 S GOODING LN	GOFF MAXINE TRUSTEE		206 GOODING LN	FARMINGTON, NM 87401-3209
2078171189438	2437 COUNTY ROAD 141	GOMEZ CAROLE AND GARRY TRUST		2800 LA HABRA ST	DURANGO, CO 81303
2078171164363	346 VALLE BONITA DR	GOMEZ ELIAZAR AND MARGARITA		346 VALLE BONITA DR	FARMINGTON, NM 87401-0000
2078171135450	204 VALLE VISTE DR	GOMEZ JOSEPH M		204 VALLE VISTA DR	FARMINGTON, NM 87401
2078171301290	1050 GRANDE AVE	GONZALES LAWRENCE AND GONZALES ANTHONY		2910 LA PUENTE PL	DEL NORTE, CO 81132
2078171011442	2403 FARMVIEW LN	GONZALEZ EDGAR IVAN AND SINALOA GLORIA E		2403 FARMVIEW LN	FARMINGTON, NM 87401
2078171183459	2721 PARQUE DE OESTE DR	GOOD DONYA AND STEPHEN		2721 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171192249	2801 LA PUENTA ST	GOURNEAU DOUGLAS J JR AND KIMBERLY ASPAS		2801 LA PUENTE ST	FARMINGTON, NM 87401
2077171244014	5310 W WILD DESERT LN	GRAVES FAMILY INVEST LTD PARTNERSHIP		BISTI HWY	TUCSON, AZ 857428209
2078171153317	2709 LA NAPA ST	GURULE ALONZO SEDRICK		2709 LA NAPA ST	FARMINGTON, NM 874010000
2078171299230	2903 LA PUENTE ST	GUTIERREZ TITO AND SABRINA ANN		LA PUENTE PL	FARMINGTON, NM 87401
2078171279251	2903 LA PUENTE ST	GUTIERREZ TITO FERNANDO AND SABRINA ANN		2903 LA PUENTE ST	FARMINGTON, NM 87401
2078171090501	620 VENADA CT	GVM TRUST	DUMAS ROCKY	2506 W MAIN ST	FARMINGTON, NM 87401
2078171107509	620 VENADA CT	GVM TRUST	DUMAS ROCKY	2600 W MAIN ST	FARMINGTON, NM 87401
2078171090513	620 VENADA CT	GVM TRUST	DUMAS ROCKY	W APACHE ST	FARMINGTON, NM 87401
2078171095510	620 VENADA CT	GVM TRUST	DUMAS ROCKY	W MAIN ST	FARMINGTON, NM 87401
2078171139346	1741 VISTA DE COLINAS DR	HAANES ERIK T		356 VALLE VISTA DR	RIO RANCHO, NM 87124
2078171065344	2806 E 30TH ST	HAMBLIN TALON		2403 RIDGEVIEW DR	FARMINGTON, NM 87402
2078172058021	3 ROAD 2579	HARDY JONATHAN L		512 NORTHGATE LN	AZTEC, NM 87410
2078171211417	203 LA GRANGE AVE	HARRIS ROBERT AND KATHLEEN		203 LA GRANGE AVE	FARMINGTON, NM 87401-0000

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078171154372	423 NM 173	HARTSFIELD NORMAN LEROY AND BETHANY M		337 VALLE VISTA DR	AZTEC, NM 87401
2078171083299	2501 RIVERSIDE DR	HARWOOD TOMMY L		2501 RIVERSIDE DR	FARMINGTON, NM 87401
2078171135444	208 VALLE VISTA DR	HAWKINS DANIEL AND KAYLA		208 VALLE VISTA DR	FARMINGTON, NM 87401-0000
2078171164358	350 VALLE BONITA DR	HAYNIE KIMBERLY A		350 VALLE BONITA DR	FARMINGTON, NM 87401
2078171211398	4046 E CORONADO RD	HAZEN JOHN R AND SUSAN M		209 LA GRANGE AVE	LAKE HAVASU CITY, AZ 864041739
2078171264425	PO BOX 1507	HELLER BRUCE ETAL		2903 LA HABRA ST	DURANGO, CO 81302
2078171195385	210 LA GRANGE AVE	HENDRICKS STEVEN T AND ALLISON E		210 LA GRANGE AVE	FARMINGTON, NM 87401-0000
2078171149452	2701 PARQUE DE OESTE DR	HENDRICKS WELDON JR		2701 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171244303	303 LA CROSSE AVE	HENSON TIM A AND CHERYL L		303 LA CROSSE AVE	FARMINGTON, NM 87401
2078171137422	300 VALLE VISTA DR	HEREDIA MARCELINO AND CONSUELO		300 VALLE VISTA DR	FARMINGTON, NM 87401
2078171057459	2420 FARMVIEW LN	HERNANDEZ CARMEN AND JUAN CARLOS		2420 FARMVIEW LN	FARMINGTON, NM 87401
2078171223393	212 WESTLAND PARK DR	HERRERA MICHELLE		212 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171177477	2720 PARQUE DE OESTE DR	HERZOG KEVIN AND LISETTE		2720 PARQUE DE OESTE DR	FARMINGTON, NM 874010000
2078171152273	2705 LA SALLE ST	HEWEY JONES C ET AL		2705 LA SALLE ST	FARMINGTON, NM 874013769
2078171156277	25 LA PAZ ST	HEWITT GEORGIA L		2707 LA SALLE ST	ROSWELL, NM 88201
2078171279510	65 CASA LINDA CT	HODGES RICHARD L TRUSTEES		65 CASA LINDA CT	FARMINGTON, NM 87401-3700
2078171268513	65 CASA LINDA CT	HODGES RICHARD L TRUSTEES		W APACHE ST	FARMINGTON, NM 87401-3700
2078171158300	2708 LA SALLE ST	HOFFER F J CLARK		2708 LA SALLE ST	FARMINGTON, NM 87401
2078171134472	110 VALLE VISTA DR	HOLLINGSWORTH CAMERON		110 VALLE VISTA DR	FARMINGTON, NM 874010000
2078171249272	310 LA CROSSE AVE	HORST GARY WAYNE AND TERESA A		310 LA CROSSE AVE	FARMINGTON, NM 874013760
2078171246521	480 SW 87TH PL	ICE CUBE ENTERPRISES LLC	DOOM VENTURES LLC	2851 W APACHE ST	OCALA, FL 34476
2078171251514	480 SW 87TH PL	ICE CUBE ENTERPRISES LLC	DOOM VENTURES LLC	WESTLAND PARK DR	OCALA, FL 34476
2078171112460	12711 CANDELARIA RD NE	JABEZ 99 LLC		2603 W MAIN ST	ALBUQUERQUE, NM 87112
2078171230278	309 LA BELLE AVE	JACK DANIEL J		309 LA BELLE AVE	FARMINGTON, NM 87401-3757
2078171267276	2900 LA PUENTE	JACOBSON JON M		2900 LA PUENTE ST	FARMINGTON, NM 87401
2078171138390	324 VALLE VISTA DR	JAMES CORY R AND KAILEE M		324 VALLE VISTA DR	FARMINGTON, NM 87401-0000
2078171134466	120 VALLE VISTA DR	JAMES RAMONA		120 VALLE VISTA DR	FARMINGTON, NM 87401
2078171181366	343 VALLE BONITA DR	JAQUEZ MATTHEW D		343 VALLE BONITA DR	FARMINGTON, NM 87401
2078171158320	2713 LA NAPA ST	JARAMILLO BRIAN AND ROSS JEREMY		2713 LA NAPA ST	FARMINGTON, NM 87401
2078171195422	804 SANTA BARBARA DR	JD INVESTMENT PROPERTIES LLC		200 LA GRANGE AVE	FARMINGTON, NM 87401
2078171204283	304 LABELLE AVE	JENSEN PERRY AND TAMMI TRUST		304 LA BELLE AVE	FARMINGTON, NM 87401
2078171137417	304 VALLE VISTA DR	JOHN DELLIA		304 VALLE VISTA DR	FARMINGTON, NM 87401
2078171040459	PO BOX 1705	JOHNSON BRADY OR LORI		2414 FARMVIEW LN	FARMINGTON, NM 87499
2078171062426	133 WESTVIEW LN	JOHNSON ERWIN AND VERLA		133 WESTVIEW LN	FARMINGTON, NM 87401
2078171258397	2905 LA PALMA PL	JOHNSON JEREMY C		2905 LA PALMA PL	FARMINGTON, NM 87401
2078171027303	PO BOX 1889	JOHNSON JOY NAOMI LIVING TRUST		2425 RIDGEVIEW DR	FARMINGTON, NM 87499
2078171025344	PO BOX 1889	JOHNSON JOY NAOMI LIVING TRUST		RIDGEVIEW DR	FARMINGTON, NM 87499
2078171080080	2105 SANDYRIDGE DR	JOHNSTON CAROLYN TRUST ATTN LINDA JOHSTO		2690 UPPER FRUITLAND HWY	CARLSBAD, NM 88220
2078171225460	2105 SANDYRIDGE DR	JOHNSTON CAROLYN TRUST ATTN LINDA JOHSTO		2809 PARQUE DE OESTE DR	CARLSBAD, NM 88220
2078171223359	222 WESTLAND PARK DR	JORDAN ROCKY		222 WESTLAND PARK DR	FARMINGTON, NM 87401-0000
2078171166455	4822 CAMARON AVE	K SQUARED LLC		2711 PARQUE DE OESTE DR	FARMINGTON, NM 87402
2078171225284	307 LA BELLE AVE	KAKOS PETER J		307 LA BELLE AVE	FARMINGTON, NM 87401-3757
2078171172306	2712 LA SALLE	KAMBEITZ DESTINY		2712 LA SALLE ST	FARMINGTON, NM 87401
2078171044432	130 WESTVIEW LN	KAYAANI TULLY AND MANNIE CORFINA A		130 WESTVIEW LN	FARMINGTON, NM 87402
2077172517058	PO BOX 96	KEITH THOMAS CHARLES AND NANCY		2306 W APACHE ST	FARMINGTON, NM 87499
2078171041402	2415 RIVERVIEW LN	KELEWOOD STEVEN		2415 RIVERVIEW LN	FARMINGTON, NM 87401-3295
2078171219289	305 LA BELLE AVE	KELLY SCOTT D ET AL		305 LA BELLE AVE	FARMINGTON, NM 87401-0000
2078171268291	312 LA CUESTA	KENNEDY NITA M		312 LA CUESTA AVE	FARMINGTON, NM 874013758
2078172057036	524 NORTHGATE LN	KENNETT MARSHA ET AL		524 NORTHGATE LN	FARMINGTON, NM 87401-3280
2078171182355	353 VALLE BONITA DR	KINSEL JESSE		353 VALLE BONITA DR	FARMINGTON, NM 87401
2078171036402	2413 RIVERVIEW LN	KIRBY JAMES K		2413 RIVERVIEW LN	FARMINGTON, NM 87401
2078171154361	345 VALLE VISTA DR	KOKES KEATON DAWSON		345 VALLE VISTA DR	FARMINGTON, NM 87401
2077170304498	5232 E HAWTHORNE PL	KRIVOKAPICH BOSKO AND ANNIE JO TRS ET A		BISTI HWY	TUCSON, AZ 85711
2078172239020	5232 E HAWTHORNE PLC	KRIVOKAPICH BOSKO AND ANNIE JO TRUST ET		W MAIN ST	TUCSON, AZ 85711

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078172211041	401 CERRILLOS DR	KRONIG RONALD A		W MAIN ST	FARMINGTON, NM 87401
2078171235444	6125 CARL ST	KUCHERA MILES A ET AL		2812 LA HABRA ST	FARMINGTON, NM 87401-0000
2078171041376	2350 RIDGEVIEW DR	KURTZ JOHN L AND MARIA		2350 RIDGEVIEW DR	FARMINGTON, NM 87401
2078171261370	2907 LA SIERRA PL	LABNO JULIE A		2907 LA SIERRA PL	FARMINGTON, NM 87401
2078171120509	684 E 9TH AVE	LADWIG TERRY		2608 W MAIN ST	SALT LAKE CITY, UT 84103
2078171139362	344 VALLE VISTA DR	LAKE TONY AND DELRENA		344 VALLE VISTA DR	FARMINGTON, NM 874010000
2078171230249	2811 LA PUENTE ST	LANDRY TERRENCE J AND RUTH H		2811 LA PUENTE ST	FARMINGTON, NM 87401
2078171222408	208 WESTLAND PARK DR	LAPAHIE ALVIN AND WILMA DEE		208 WESTLAND PARK DR	FARMINGTON, NM 87401-3734
2078171256427	2901 LA HABRA ST	LAPER MICHAEL J AND ELIZABETH A		2901 LA HABRA ST	FARMINGTON, NM 874010000
2078171120375	2600 RIDGEVIEW DR	LARE MAX L AND JOANN		2600 RIDGEVIEW DR	FARMINGTON, NM 87401-3262
2078171267415	2904 LA PALMA PL	LARSON GUY L AND SHIRLEY E		2904 LA PALMA PL	FARMINGTON, NM 87401
2078171120329	2602 RIVERSIDE DR	LATHAM ELDEN R AND CHARLOTTE L		2602 RIVERSIDE DR	FARMINGTON, NM 87401
2078171209301	301 LABELLE AVE	LATTIN WESLEY L		301 LA BELLE AVE	FARMINGTON, NM 87401
2078171245458	210 VALLEY VIEW CR	LAURMAR LLC		2813 PARQUE DE OESTE DR	DURANGO, CO 81301
2078171181361	349 VALLE BONITA DR	LAUTER JULIE DE AND KUNTZ TIMOTHY		349 VALLE BONITA DR	FARMINGTON, NM 87401
2078171041468	2501 W MAIN ST	LECHUGA TRANSPORT INC		2501 W MAIN ST	FARMINGTON, NM 87401-3237
2078171165303	2710 LA SALLE ST	LECLAIRE CORY		2710 LA SALLE ST	FARMINGTON, NM 87401
2078171255332	303 LA CUESTA AVE	LECLAIRE RUBY M ET AL TRUST		303 LA CUESTA AVE	FARMINGTON, NM 874010000
2078171259361	2904 LA NAPA ST	LEE GERTRUDE		2904 LA NAPA ST	FARMINGTON, NM 87401
2078171138384	328 VALLE VISTA DR	LEE KEVIN AND ROCHELLE DENISE		328 VALLE VISTA DR	FARMINGTON, NM 87401
2078171198289	302 LA BELLE AVE	LEE LIZABETH		302 LA BELLE AVE	FARMINGTON, NM 87401
2078171155453	PO BOX 985	LEE ROSITA M		2703 PARQUE DE OESTE DR	KIRTLAND, NM 87417
2078171062407	2040 CLEARWATER CP NE	LLOYD JOHN J ET AL		139 WESTVIEW LN	RIO RANCHO, NM 87144
2078171160440	1301 E NAVAJO ST UNIT 1106	LOFTEN KEVIN		2708 LA HABRA ST	FARMINGTON, NM 87401
2078171005402	2401 RIVERVIEW LN	LOPEZ GENEVIEVE		2401 RIVERVIEW LN	FARMINGTON, NM 87401
2078171008519	2400 W MAIN ST	LOS HERMANITOS PROPERTIES LLC		2311 W APACHE ST	FARMINGTON, NM 87401
2078171014498	2400 W MAIN ST	LOS HERMANITOS PROPERTIES LLC		2400 W MAIN ST	FARMINGTON, NM 87401
2078171042516	2400 W MAIN ST	LOS HERMANITOS PROPERTIES LLC		2410 W MAIN ST	FARMINGTON, NM 87401
2078171056469	3520 CALLE CUERVO NW	LUBRICAR PROPERTIES II LC		2507 W MAIN ST	ALBUQUERQUE, NM 87114
2078171005442	2401 FARMVIEW LN	LUCERO ISAAC J AND LORETTA B	NEVAREZ CESAR U	2401 FARMVIEW LN	FARMINGTON, NM 87401
2078171011402	550 COUNTY ROAD 329	LUCERO JOSE D AND MARGARET A		2403 RIVERVIEW LN	IGNACIO, CO 81137
2078171035439	550 COUNTY ROAD 329	LUCERO JOSE D ET AL		2413 FARMVIEW LN	IGNACIO, CO 81137
2078172268012	PO BOX 537	LUCYS LUCK LLC		W MAIN ST	BLANCO, NM 87412
2078172281013	PO BOX 537	LUCYS LUCK LLC		W MAIN ST	BLANCO, NM 87412
2078172275037	PO BOX 537	LUCYS LUCK LLC		W MAIN ST	BLANCO, NM 87412
2078171210425	1417 CAMINA ENTRADA	M AND H HOLDINGS LLC	BURNHAM DANIEL AND CAROL A	2801 LA HABRA ST	FARMINGTON, NM 87401
2078171047420	4782 SUNRISE CIR	MACE PRISCILLA AND MACE MECHELLE		2418 RIVERVIEW LN	FARMINGTON, NM 87401
2078171213295	303 LA BELLE AVE	MACE ROCKY C II		303 LA BELLE AVE	FARMINGTON, NM 87401
2077171394425	310 N SCHWARTZ AVE	MAESTAS JOHNNY D AND ERLINDA M TRUST		1701 W MAIN ST	FARMINGTON, NM 87401-5549
2078171153394	12 ROAD 5151	MAHON REVOCABLE TRUST ATTN MAHON SCOTT		321 VALLE VISTA DR	BLOOMFIELD, NM 87413
2078171197441	PO BOX 388	MAJLUF MOISES A TRUST		2802 LA HABRA ST	FARMINGTON, NM 87499
2078171203442	PO BOX 388	MAJLUF MOISES A TRUST		2804 LA HABRA ST	FARMINGTON, NM 87499
2078171259477	PO BOX 388	MAJLUF MOISES A TRUST		88 PARQUE DE OESTE DR	FARMINGTON, NM 87499
2078171240429	5011 TAMPICO WAY	MAK INVESTMENTS LLC		200 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171216458	5011 TAMPICO WAY	MAK INVESTMENTS LLC		2807 PARQUE DE OESTE DR	FARMINGTON, NM 87402
2078171213511	301 MC DONALD RD	MALONE JAMES E AND DEBORAH ANN ET AL		100 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171211389	211 LA GRANGE AVE	MANZANARES EMMA ROSE		211 LA GRANGE AVE	FARMINGTON, NM 874013712
2078171262356	110 SIESTA KEY CT	MAREZ FRANCES		2906 LA NAPA ST	WINDSOR, CO 80550
2078171150437	2700 LA HABRA ST	MARIA GERALDO AND DELIDA		2700 LA HABRA ST	FARMINGTON, NM 87401
2078171270452	3209 N MOUNTAIN VIEW DR	MARIPOSA PROPERTIES LLC		135 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171230489	PO BOX 3086	MARIPOSA PROPERTIES LLC		2809 PARQUE DEL NORTE DR #1-4	FARMINGTON, NM 87499
2078171240489	PO BOX 3086	MARIPOSA PROPERTIES LLC		2811 PARQUE DEL NORTE DR #1-4	FARMINGTON, NM 87499
2078171258498	3209 N MOUNTAIN VIEW DR	MARIPOSA PROPERTIES LLC		2930 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171256505	3209 N MOUNTAIN VIEW DR	MARIPOSA PROPERTIES LLC		2940 PARQUE DE OESTE DR	FARMINGTON, NM 87401

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078171244444	800 E 30TH ST STE A	MARSHALL MELANIE G TRUST		136 WESTLAND PARK DR	FARMINGTON, NM 87410
2078171229294	304 LA CROSSE AVE	MARTINEZ PAUL A AND TERRY		304 LA CROSSE AVE	FARMINGTON, NM 87401
2078171101419	2607 W MAIN ST	MARTINEZ PAUL V AND LOUISA L		2607 W MAIN ST	FARMINGTON, NM 874013239
2078171137434	216 VALLE VISTA DR	MARTINEZ RYAN K		216 VALLE VISTA DR	FARMINGTON, NM 87401-3231
2078171192296	300 LA BELLE AVE	MATHENY FLOYD EDWARD III AND SUSAN ELLEN		300 LA BELLE AVE	FARMINGTON, NM 87401-3756
2078171227444	7631 TUSCANY WAY	MCCARTY BRYAN F AND TESIA K		2810 LA HABRA ST	FARMINGTON, NM 87402-8273
2078171211363	219 LAGRANGE AVE	MCCOMBE THOMAS IV AND TANDA L		219 LA GRANGE AVE	FARMINGTON, NM 87401
2078171134455	6630 CODY DR UNIT 1203	MCKEEN JERRY		200 VALLE VISTA DR	WEST DES MOINES, IA 502662498
2078172245059	1640 GARDEN WAY SW	MEDINA FREDERICK AND MARIA TRUST		W MAIN ST	ALBUQUERQUE, NM 87105
2078171195407	5402 THOMAS DR	MEECHAN JASON AND MELISSA		204 LA GRANGE AVE	FARMINGTON, NM 87402
2078172058011	504 NORTHGATE LN	MENDOZA RAFAEL A AND FRANCISCA		504 NORTHGATE LN	FARMINGTON, NM 874013280
2078171062439	129 WESTVIEW LN	MERAZ MARIA ET AL		129 WESTVIEW LN	FARMINGTON, NM 87401-3291
2078171011420	2402 RIVERVIEW LN	MERCADO JOEL AND JANELLE SENA		2402 RIVERVIEW LN	FARMINGTON, NM 87401-0000
2078171026402	2409 RIVERVIEW LN	MERCADO JOSE LUIS ETUX		2409 RIVERVIEW LN #202	FARMINGTON, NM 87401
2078171016422	2404 RIVERVIEW LN	MERCADO RAFAEL AND REBECCA		2404 RIVERVIEW LN	FARMINGTON, NM 87401
2078172058031	520 NORTHGATE LN	MERRELL STEVEN AND WENDELYN	ANGLIN DAVID	520 NORTHGATE LN	FARMINGTON, NM 87401
2078171044427	4201 SKYLINE DR	MIHELICH GLORIA R		132 WESTVIEW LN	FARMINGTON, NM 87401-9223
2077171511505	4201 SKYLINE DR	MIHELICH GLORIA R		2300 W MAIN ST	FARMINGTON, NM 87401
2078171153410	309 VALLE VISTA DR	MINSHALL LLOYD AND NANCY		309 VALLE VISTA DR	FARMINGTON, NM 87401
2078171261284	309 LA CROSSE	MITCHELL CARL L		309 LA CROSSE AVE	FARMINGTON, NM 87401-3761
2078171243478	5108 LEE LN	MOFFITT MIKI RENAY		2814 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171274471	72 TRUSTLE LN	MOLER DAVID		99 PARQUE DE OESTE DR	DURANGO, CO 81303
2078171008427	135 S GOODING LN	MONROE THELMA RUTH TRUST	ESCARSEGA-MENDOZA CLEMENTE	135 GOODING LN	FARMINGTON, NM 87401
2078171016439	2402 FARMVIEW LN	MONTOYA RICHARD AND CAROL		2405 FARMVIEW LN	FARMINGTON, NM 87401
2078171011459	2405 FARMVIEW LN	MONTOYA RICHARD M AND CAROL		2402 FARMVIEW LN	FARMINGTON, NM 87401
2078171119419	2605 W MAIN ST TRL 7	MONTOYA SALLY TRUST		2605 W MAIN ST	FARMINGTON, NM 87401
2078171183251	10 ROAD 5499	MOORE DAVID		2715 LA PUENTE ST	FARMINGTON, NM 87401
2078171243399	2901 LA PALMA PL	MORRIS SHIRLEY J		2901 LA PALMA PL	FARMINGTON, NM 87401
2078171177457	210 VALLEY VIEW DR	MORRISSEY PATRICK AND DENA		2719 PARQUE DE OESTE DR	DURANGO, CO 81301
2078171164396	322 VALLE BONITA DR	MORROW SHAWN VINCENT AND RYLEIGH SKYE		322 VALLE BONITA DR	FARMINGTON, NM 87401
2078171137439	212 VALLE VISTA DR	MUNETAL WALTER		212 VALLE VISTA DR	FARMINGTON, NM 87401-0000
2078171041442	1004 S LAKE ST	MURRAY TRUST		2417 FARMVIEW LN	FARMINGTON, NM 87401
2078171041500	1230 PEACH TREE ST NE STE 3100	NAM REAL ESTATE LLC		2404 W MAIN ST	ATLANTA, GA 30309
2077170401516	PO BOX 1558	NAVAJO ENGINEERING AND CONST AUTHORITY A		1790 BISTI HWY	FARMINGTON, NM 87499-1558
2077171404066	PO BOX 1558	NAVAJO ENGINEERING AND CONST AUTHORITY A		1790 BISTI HWY	FARMINGTON, NM 87499-1558
2077170421516	PO BOX 1558	NAVAJO ENGINEERING AND CONST AUTHORITY A		1790 BISTI HWY	FARMINGTON, NM 87499-1558
2077170410516	PO BOX 1558	NAVAJO ENGINEERING AND CONST AUTHORITY A		1790 BISTI HWY	FARMINGTON, NM 87499-1558
2999999999999		NAVAJO INDIAN RESERVATION		49 ROAD 6940	
2077171449375	PO BOX 1230	NAVAJO MISSION INC.		2103 W MAIN ST	FARMINGTON, NM 874991230
2078170062439	PO BOX 2249	NAVAJO NATION ATTN NAVAJO LAND DEPARTMEN		BISTI HWY	WINDOW ROCK, AZ 86515
2078172157030	1300 BASIN RD	NEWLON MARY A TRUST		2700 W APACHE ST	FARMINGTON, NM 87401-8104
2078171189455	712 E NORTHRIDGE AVE	NIU CHRISTINA		2801 PARQUE DE OESTE DR	GLENDORA, CA 91741
2077171479477	PO BOX 2766	NIZHONI PROPERTIES TRUST		2210 W MAIN ST	FARMINGTON, NM 87499
2078171138515	1515 N ACADEMY BLVD	NORTHERN PROPERTIES I LLC ATTN WENDY'S		2610 W MAIN ST	COLORADO SPRINGS, CO 80909
2078171202332	2803 LA NAPA ST	NUTT WILLIAM J AND SANDRA K		2803 LA NAPA ST	FARMINGTON, NM 87401
2077171228131	2273 RIVER RD	OLDCASTLE SW GROUP INC		1370 NM 371 #B	GRAND JUNCTION, CO 815057179
2078170063315	PO BOX 16	OLDCASTLE SW GROUP INC DBA FOUR CORNERS		2100 BISTI HWY	FARMINGTON, NM 87499
2078171247373	2903 LA SIERRA PL	OLSSON SCOTT M AND KATHLEEN S		2903 LA SIERRA PL	FARMINGTON, NM 874013723
2078171154355	126 E MAIN ST	PADILLA BRANDON D		349 VALLE VISTA DR	FARMINGTON, NM 87401
2078171242343	2903 LA NAPA ST	PARK DAVID H		2903 LA NAPA ST	FARMINGTON, NM 87401
2078171253344	2903 LA NAPA ST	PARK DAVID H		2903 LA NAPA ST	FARMINGTON, NM 87401-0000
2078172199027	10625 N 66TH ST	PARKER MARY ANN ET AL		2700 W APACHE ST	SCOTTSDALE, AZ 85254
2078172199027	10625 N 66TH ST	PARKER MARY ANN ET AL		2700 W APACHE ST	SCOTTSDALE, AZ 85254
2078172199027	10625 N 66TH ST	PARKER MARY ANN ET AL		2700 W APACHE ST	SCOTTSDALE, AZ 85254

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078172171030	10625 N 66TH ST	PARKER MARY ANN ET AL		2702 W APACHE ST	SCOTTSDALE, AZ 85254
2078172184040	10625 N 66TH ST	PARKER MARY ANN ET AL		2706 W APACHE ST	SCOTTSDALE, AZ 85254
2078172217087	10625 N 66TH ST	PARKER MARY ANN ET AL			SCOTTSDALE, AZ 85254
2078172207044	10625 N 66TH ST	PARKER MARY ANN ET AL			SCOTTSDALE, AZ 85254
2078171172326	2725 LA NAPA ST	PAUL LEXUS AND YOUNG ANDREAS		2725 LA NAPA ST	FARMINGTON, NM 87401
2078171025422	1015 GLADE LN TRLR 81	PESQUEIRA GARROBO ADRIAN A		2408 RIVERVIEW LN	FARMINGTON, NM 874010000
2078171262251	2819 LA PUENTE ST	PHILLIPS JASON L ETAL		2819 LA PUENTE ST	FARMINGTON, NM 874010000
2078171025439	2409 FARMVIEW LN	PLATERO HERBERT AND JENNIE		2409 FARMVIEW LN	FARMINGTON, NM 87401-3289
2078171261487	800 E 30TH ST BLDG 4 STE A	POLA JULIA ATTN SUNWEST PROPERTIES		76 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171209276	306 LA BELLE AVE	POTTER PAULINE G ET AL		306 LA BELLE AVE	FARMINGTON, NM 87401
2078172185082	2704 W APACHE ST	PRUITT JOHN AND ACKLEY SUNNY		W MAIN ST	FARMINGTON, NM 87401
2078172222044	2501 GLADE RD	PRUITT MARGERY ETAL			FARMINGTON , NM 87401
2078172222044	2501 GLADE RD	PRUITT MARGERY ETAL			FARMINGTON , NM 87401
2078171177444	PO BOX 5683	PUNO MELANIE		2720 LA HABRA ST	FARMINGTON, NM 87499
2078171250399	2903 LA PALMA PL	QUESADA DANIEL J AND RENEE A		2903 LA PALMA PL	FARMINGTON, NM 87401
2078171180277	2712 LA PUENTE ST	RAMOS RICHARD C TRUST		2712 LA PUENTE ST	FARMINGTON, NM 87401
2078171198456	322 NM 170	RANDALL INVESTMENTS GROUP LLC		2803 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171207458	322 NM 170	RANDALL INVESTMENTS GROUP LLC		2805 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171062456	127 WESTVIEW LN	RAYMOND CHARLES BLANCHE JAMES AND CHARLE		127 WESTVIEW LN	FARMINGTON, NM 87401
2078171304280	2912 LA PUENTA PL	RAYMOND SCOTTY AND ALEATA		2912 LA PUENTE PL	FARMINGTON, NM 874014900
2078171016459	2 ROAD 5760	RDC HOLDINGS LLC		2404 FARMVIEW LN	FARMINGTON, NM 87401
2078171235420	6456 CASTLE ROCK CIR	RESIDENTIAL RENTALS LLC		204 WESTLAND PARK DR	FARMINGTON, NM 87402
2078171223418	6456 CASTLE ROCK CIR	RESIDENTIAL RENTALS LLC		206 WESTLAND PARK DR	FARMINGTON, NM 87402
2078171269408	6456 CASTLE ROCK CIR	RESIDENTIAL RENTALS LLC		2906 LA PALMA PL	FARMINGTON, NM 87402
2078172085030	2500 W APACHE ST	RHAC NORTHGATE LLC		2500 W APACHE ST	FARMINGTON, NM 87401-0000
2078171047442	PO BOX 331	RHAMES CARL AND DONNA		2419 FARMVIEW LN	FARMINGTON, NM 87499
2078171262388	2906 LA SIERRA PL	RICKS FAUN L		2906 LA SIERRA PL	FARMINGTON, NM 87401
2078171268388	2908 LA SIERRA PL	RICKS ROGER D AND PEGGY A		2908 LA SIERRA PL	FARMINGTON, NM 874010000
2078171065294	2403 RIVERSIDE DR	RILEY LEROY		2403 RIVERSIDE DR	FARMINGTON, NM 874013285
2078171222305	2403 RIVERSIDE DR	RILEY LEROY AND ANN		2805 LA SALLE ST	FARMINGTON, NM 874013285
2078171238285	2403 RIVERSIDE DR	RILEY LEROY JR AND ANN M		306 LA CROSSE AVE	FARMINGTON, NM 87401-0000
2078171165475	2712 PARQUE DE OESTE DR	RILEY NOLAN RHEN		2712 PARQUE DE OESTE DR	FARMINGTON, NM 87401-0000
2078171031402	2411 RIVERVIEW LN	RIVERA TIM T AND ESTHER D		2411 RIVERVIEW LN	FARMINGTON, NM 87401
2078171246329	301 LA CUESTA AVE	ROBERTS JASON AND CRYSTAL		301 LA CUESTA AVE	FARMINGTON, NM 87401
2078171195372	214 LA GRANGE AVE	ROBERTS MARILYN		214 LA GRANGE AVE	FARMINGTON, NM 87401-0000
2078171182348	357 VALLE BONITA DR	ROBINSON ROBERT L AND CARENDA F		357 VALLE BONITA DR	FARMINGTON, NM 87401
2078171163322	2717 LA NAPA ST	ROCK RHIANNON ET AL		2717 LA NAPA ST	FARMINGTON, NM 87401
2078171062433	131 WESTVIEW LN	ROGER COX AND ASSOCIATES INC	GOULD SHADIE LELAND II	131 WESTVIEW LN	FARMINGTON, NM 87401-0000
2078171062453	125 WESTVIEW LN	ROGER COX WESTERN DEVELOPERS	MERAZ JESUS J AND GLADYS F	125 WESTVIEW LN	FARMINGTON, NM 87401
2078171045459	2405 FARMVIEW LN	ROGER COX WESTERN DEVELOPERS	MONTOYA RICHARD AND CAROL	2416 FARMVIEW LN	FARMINGTON, NM 87401
2078171025459	2408 FARMVIEW LN	ROJAS OSCAR AND GUADALUPE		2408 FARMVIEW LN	FARMINGTON, NM 87401
2078171031459	2408 FARMVIEW LN	ROJAS OSCAR AND GUADALUPE		2410 FARMVIEW LN	FARMINGTON, NM 874013287
2078171051402	2408 FARMVIEW LN	ROJAS OSCAR AND GUADALUPE		2419 RIVERVIEW LN	FARMINGTON, NM 874013287
2078171021459	2408 FARMVIEW LN	ROJAS OSCAR AND GUADALUPE ET AL		2406 FARMVIEW LN	FARMINGTON, NM 87401
2077170422308	PO BOX 28	ROLLING WATER LLC		BISTI HWY	FARMINGTON, NM 87499
2077170488430	PO BOX 28	ROLLING WATER LLC		BISTI HWY	FARMINGTON, NM 874990028
2078171240391	2900 LA SIERRA PL	ROOP BILL AND STACY		2900 LA SIERRA PL	FARMINGTON, NM 87401
2078170411330	PO BOX 1257	ROSE GARDEN CEMETERY		UPPER FRUITLAND HWY	FRUITLAND, NM 874161257
2078171223386	214 WESTLAND PARK DR	RUSSELL EW		214 WESTLAND PARK DR	FARMINGTON, NM 87401-3734
2078171161454	PO BOX 5643	RUSSELL LAMANDA		2707 PARQUE DE OESTE DR	FARMINGTON, NM 87499
2078171221339	2809 LA NAPA ST	RUSSELL LISA		2809 LA NAPA ST	FARMINGTON, NM 87401
2078171265298	310 LA CUESTA	SALAZAR NAZARIO E AND YAZZIE LUCINDA M		310 LA CUESTA AVE	FARMINGTON, NM 87401
2078171098385	2504 1/2 RIDGEVIEW DR	SALTZGIVER KERENA AND DAVE		2504 1/2 RIDGEVIEW DR	FARMINGTON, NM 87401
2078171136313	2701 LA NAPA ST	SANCHEZ ROBERT H JR		2701 LA NAPA ST	FARMINGTON, NM 87401

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2077171461198	PO BOX 267	SCHMITT REVOCABLE TRUST		UPPER FRUITLAND HWY	KIRTLAND, NM 87417
2078171215269	308 LA BELLE AVE	SCHNABEL CARROLL A	DEVILBISS RICK AND KRISTI	308 LA BELLE AVE	FARMINGTON, NM 874013756
2078171250417	2900 LA PALMA PL	SCHOFIELD JEFFRY D AND REBEKAH L		2900 LA PALMA PL	FARMINGTON, NM 87401-0000
2078171269317	307 LA CUESTA AVE	SCHRAMM CHRISTOPHER D AND ERICA R		307 LA CUESTA AVE	FARMINGTON, NM 874013759
2078171246388	3204 MOUNTAIN VIEW DR	SEAVEY BRIAN WINFIELD AND LISA		2902 LA SIERRA PL	FARMINGTON, NM 87401
2078172058026	PO BOX 1966	SESCHILLIE REYNOLD AND EVELYN R		516 NORTHGATE LN	FARMINGTON, NM 874991966
2078171047321	2401 RIDGEVIEW DR	SHAFFER T C AND SHARON	STRONG JOSHUA E AND AMANDA E	RIDGEVIEW DR	FARMINGTON, NM 87401
2078171195412	202 LA GRANGE AVE	SHORTY JACLYN		202 LA GRANGE AVE	FARMINGTON, NM 87401
2078171235459	707 CLOVIS DR	SIGLE SHANE		2811 PARQUE DE OESTE DR	DURANGO, CO 81301
2078171271282	2904 LA PUENTE ST	SILVA GARY		2904 LA PUENTE ST	FARMINGTON, NM 87401
2078171153377	1944 REDONDO PEAK DR NW	SIRMANS DEBBRA J		333 VALLE VISTA DR	ALBUQUERQUE, NM 87120
2078171250313	300 LA CUESTA	SMITH DAVID MARTIN AND JENNIFER NICOLE		300 LA CUESTA AVE	FARMINGTON, NM 87401
2078171163413	310 VALLE BONITA	SMITH JULIUS AND VERONICA L		310 VALLE BONITA DR	FARMINGTON, NM 87401
2077170462462	P O BOX 16	STAKER AND PARSON CO ATTN: S VAL STAKER			
2078171149255	PO BOX 16	STAKER PAVING AND CONST INC DBA FOUR COR			FARMINGTON, NM 874990016
2077170429495	P O BOX 16	STAKER PAVING AND CONSTRUCTION ATTN: S V			
2078171179309	2714 LA SALLE ST	STIMSON SCOTT R AND TAMMI G		2714 LA SALLE ST	FARMINGTON, NM 87401-0000
2078171167259	2711 LA PUENTE ST	STOLTZ JACK F AND STOLTZ JASON TASSO		2711 LA PUENTE ST	FARMINGTON, NM 87401
2078171153399	317 VALLE VISTA DR	STRAATE DAVID E AND DANIELLE E		317 VALLE VISTA DR	FARMINGTON, NM 87401
2078171238310	301 LA CROSSE AVE	STRANGE THOMAS H AND LAURA J		301 LA CROSSE AVE	FARMINGTON, NM 87401-0000
2078171080435	601 CERRILLOS DR	STRICKLAND PROPERTIES LLC ET AL		2575 W MAIN ST	FARMINGTON, NM 87401
2078171049344	2401 RIDGEVIEW DR	STRONG JOSHUA E AND AMANDA E		2401 RIDGEVIEW DR	FARMINGTON, NM 87401
2078171153422	617 W CEDAR ST	TAFOYA JOHN D		301 VALLE VISTA DR	FARMINGTON, NM 87401-5934
2078171031439	2411 FARMVIEW LN	TESSCUR INVESTMENTS LLC	CANO MANUEL G LOZANO ET UX	2411 FARMVIEW LN	FARMINGTON, NM 87401
2078171190471	6320 CALLY LILY CIR NE	THELEN DONALD C AND CONNIE M		2800 PARQUE DE OESTE DR	ALBUQUERQUE, NM 87111
2078171227474	6320 CALLY LILY CIR NE	THELEN DONALD C AND CONNIE M		2810 PARQUE DE OESTE DR	ALBUQUERQUE, NM 87111
2078171183445	2724 LA HABRA ST	THOMAS MONICA		2724 LA HABRA ST	FARMINGTON, NM 87401
2078172303118	851 DEER TRAIL ST	THOMASON MICHAEL L AND JACQUELINE TRUST		805 DEER TRAIL ST	FARMINGTON, NM 87401
2078171138328	368 VALLE VISTA DR	TODACHEENE JACQUELINE		368 VALLE VISTA DR	FARMINGTON, NM 874010000
2078171137428	220 VALLE VISTA DR	TOEHE PRESTON B ETAL		220 VALLE VISTA DR	FARMINGTON, NM 87401
2078171153405	313 VALLE VISTA DR	TOLBERT JEFFREY M		313 VALLE VISTA DR	FARMINGTON, NM 87401-0000
2078171337070	221 SILVERWOOD WAY	TRES TSE ROCKS LLC ET AL ATTN BARNARD MA		UPPER FRUITLAND HWY	EL PASO, TX 79922
2078171340066	221 SILVERWOOD WAY	TRES TSE ROCKS LLC ET AL ATTN BARNARD MA		UPPER FRUITLAND HWY	EL PASO, TX 79922
2078171164352	354 VALLE BONITA DR	TRUJILLO GERALD		354 VALLE BONITA DR	FARMINGTON, NM 87401
2078171160474	2708 PARQUE DE OESTE DR	TSOSIE ERIC AND ERIN D		2708 PARQUE DE OESTE DR	FARMINGTON, NM 874010000
2077172263298	3700 E MAIN ST	TUBB SCOTT		1090 W NAVAJO ST #HANGER H11.7	FARMINGTON, NM 87401
2077171518454	4005 SKYLINE DR	TUDAFM PROPERTIES LLC ATTN NINA P SASAK		2311 W MAIN ST	FARMINGTON, NM 874019219
2078171137412	308 VALLE VISTA DR	TWIDT MAGDA L		308 VALLE VISTA DR	FARMINGTON, NM 87401-0000
2077170367516	904 SCHOFIELD LN	UNITED FOOD STORE NO 3 INC		BISTI HWY	FARMINGTON, NM 87401
2078171021467	732 W ARRINGTON ST	UNITED LAUNDRIES INCORPORATED		201 GOODING LN	FARMINGTON, NM 87401
2900400900400		USA IN TRUST FOR NAVAJO TRIBE			
2900400900400		USA IN TRUST FOR NAVAJO TRIBE			
2078171218425	60 ROAD 3791	VALDEZ DWAYNE ESTATE		2803 LA HABRA ST	FARMINGTON, NM 87401
2078171155439	1616 N FAIRVIEW AVE APT 27	VALENZUELA RAMOS DIANA		2704 LA HABRA ST	FARMINGTON, NM 87401
2078171134461	4721 SUNDANCE RD	VELASQUEZ NATHAN I		130 VALLE VISTA DR	FARMINGTON, NM 874010000
2078171021439	900 N WATSON AVE	VILLARREAL JOSE A AND MARQUITA E		2407 FARMVIEW LN	FARMINGTON, NM 87401-9130
2078171173287	2708 LA PUENTE ST	VITALI ACHILLE G AND THERESA		2708 LA PUENTE ST	FARMINGTON, NM 874013762
2078171255370	2905 LA SIERRA PL	WALTERS DOUGLAS J AND DARCY J		2905 LA SIERRA PL	FARMINGTON, NM 87401
2078171062420	4107 DARBY LN	WARNER JODY		135 WESTVIEW LN	FARMINGTON, NM 87402
2078171289290	315 LA CUESTA AVE	WARNER MARK E AND FRANCES F		315 LA CUESTA AVE	FARMINGTON, NM 87401-0000
2078171153388	325 VALLE VISTA DR	WATCHMAN MANUEL		325 VALLE VISTA DR	FARMINGTON, NM 87401
2078171223249	PO BOX 79	WEBSTER T K AND BUTCHKO DAVE		2809 LA PUENTE ST	CORTEZ, CO 81321
2078171186311	PO BOX 79	WEBSTER TK ET AL		2716 LA SALLE ST	CORTEZ, CO 81321
2078171249297	305 LA CROSSE AVE	WEGLEY DEBORAH G		305 LA CROSSE AVE	FARMINGTON, NM 874010000

Salty Dog Water Gathering System - Surrounding Property Owners within 1 Mile					
Parcel No.	Parcel Location Address	Owner Name	Owner Name 2	Owner Physical Address	Owner City State Zip
2078171107345	3331 BEAR CANYON LN	WELLS LEWIS F JR AND KIMBERLI A		2503 RIDGEVIEW DR	PLEASANT GRV, UT 84062-8016
2078171190279	2714 LA PUENTE ST	WENTZ JESSE		2714 LA PUENTE ST	FARMINGTON, NM 87401-0000
2077170502519	1112 ALPINE ST	WERNER JOHN F AND LUCILLE E TRUST		1851 BISTI HWY	FARMINGTON, NM 87401
2078172144030	PO BOX 197	WEST APACHE MINI STORAGE LLC		2650 W APACHE ST	BOKEELIA, FL 33922
2078171158520	PO BOX 592809 TX1-047	WESTERN REFINING RETAIL LLC		2700 W MAIN ST	SAN ANTONIO, TX 78259
2078171260463	2901 PARQUE DE OESTE DR	WESTLAND PARK CONDOMINIUM COMMON AREA			
2078171261442	1810 ESCONDIDO TRL	WESTLAND PARK DRIVE LLC		139 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171205474	802 E 20TH ST	WESTLAND PARK INVESTMENT LLC		2804 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171235474	802 E 20TH ST	WESTLAND PARK INVESTMENT LLC		2812 PARQUE DE OESTE DR	FARMINGTON, NM 87401
2078171224428	2010 PINON FRONTAGE RD	WESTON RANDALL D AND JOSEPHINE		2805 LA HABRA ST	FARMINGTON, NM 87401-6500
2078171147314	1416 LEEWARD CIR	WESTWARD HO LLC		2705 LA NAPA ST	KEMAH, TX 77565
2078171223402	210 WESTLAND PARK DR	WHEELER ANTHONY L AND MEGANN		210 WESTLAND PARK DR	FARMINGTON, NM 87401
2078171164402	PO BOX 1214	WHITE ROSELINDA		318 VALLE BONITA DR	FORT DEFIANCE, AZ 86504
2078171164369	342 VALLE BONITA DR	WHITELEY ALEX JOHN AND KAMIRAN TATE		342 VALLE BONITA DR	FARMINGTON, NM 87401
2078171057402	2421 RIVERVIEW LN	WHITEN CHARLES E AND SANDI L		2421 RIVERVIEW LN	FARMINGTON, NM 87401
2078171269420	PO BOX 438	WILL PROPERTIES LLC		2905 LA HABRA ST	BAYFIELD, CO 81122-0438
2077171301070	5750 RAIL ROAD	WILLEMS JAMES AND LISA TRUST		1616 BISTI HWY	FARMINGTON, NM 87402-5298
2078171207319	707 ASHURST DR	WILSON DELORES A TRUST		2802 LA SALLE ST	FARMINGTON, NM 87401
2078171154366	707 ASHURST DR	WILSON DELORES A TRUST		341 VALLE VISTA DR	FARMINGTON, NM 87401-5718
2078171232426	723 8TH AVE	WILSON LIERIN BORN		2807 LA HABRA ST	DURANGO, CO 81301
2078171202313	2800 LA SALLE ST	WILSON RICHARD A		2800 LA SALLE ST	FARMINGTON, NM 874013775
2078171200330	2801 LA NAPA ST	WOJCIK FRED AND BARBARA		2801 LA NAPA ST	FARMINGTON, NM 87401
2078172129030	PO BOX 1123	WOOD PERRY		2600 W APACHE ST	FARMINGTON, NM 87499
2078171144280	2703 LA SALLE ST	WOODALL WILLIAM E JR		2703 LA SALLE ST	FARMINGTON, NM 874013769
2078172058006	500 NORTHGATE LN	WOODS DONNA K		500 NORTHGATE LN	FARMINGTON, NM 87401-3280
2078171063331	100 S HIDDEN ACRES	WRIGHT CHRISTINE N		100 HIDDEN ACRES DR	FARMINGTON, NM 87401-3266
2078171151297	2706 LA SALLE ST	WRIGHT JEANNIE M		2706 LA SALLE ST	FARMINGTON, NM 87401-0000
2078171163425	302 VALLE BONITA DR	WYNAS KAEGAN AND BRUCE DAWNISHA		302 VALLE BONITA DR	FARMINGTON, NM 87401
2078171211369	217 LA GRANGE AVE	YAZZIE LUCILLE M		217 LA GRANGE AVE	FARMINGTON, NM 874013712
2078171172456	2715 PARQUE DE OESTE DR	YOUELL MICHAEL A AND KAITLYN		2715 PARQUE DE OESTE DR	FARMINGTON, NM 87401

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 160234

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 160234
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	None	1/3/2024