

REVIEWED

By Nelson Velez at 3:06 pm, Oct 21, 2022

Stage 1 Abatement Plan determined to be administratively complete. In addition, OCD approves the draft of the Public Notice and Participation Proposal (OCD approval letter at end of report).

STAGE 1 ABATEMENT PLAN

SALTY DOG WATER GATHERING SYSTEM SAN JUAN COUNTY, NEW MEXICO

December 2019

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LT Environmental, Inc.
Advancing Opportunity



STAGE 1 ABATEMENT PLAN

SALTY DOG WATER GATHERING SYSTEM SAN JUAN COUNTY, NEW MEXICO

Project Number: 017819014

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Prepared by:

Josh Adams
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December 20, 2019

Date

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Reviewed by:

Ashley Ager, M.S., P.G.
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December 20, 2019

Date



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STAGE 1 ABATEMENT PLAN

LT Environmental, Inc. (LTE), on behalf of Hilcorp Lower 48 (Hilcorp), presents the following Stage 1 Abatement Plan associated with subsurface impacts encountered at the Salty Dog Water Transfer Station pipeline release (Site). This plan follows the proposed recommendations in a Remediation Work Plan in response to identification of elevated chloride and benzene in groundwater during investigation of a release of produced water at the Site. The plan proposes a site investigation to define site conditions for determining an effective abatement option. The subsequent sections of this plan detail the Site description and history, previous investigations, and Site geologic and hydrologic characteristics, activities. The plan proposes additional remediation activities and provides a proposed schedule for completion of those activities per New Mexico Administrative Code (NMAC) 19.15.29.





1.0 SITE DESCRIPTION AND BACKGROUND

The Salty Dog Water Transfer Station (Site) is located approximately 1,146 feet south of the San Juan River in Unit N of Section 18 of Township 29 North, Range 13 West, San Juan County, New Mexico. The Site is approximately 1.5 miles southwest of Four Corners Regional Airport, north of the Upper Fruitland Highway (Indian Route 36) (Figure 1). The Site is an active water gathering system. On April 29, 2019, 80 barrels (bbls) of produced water were released from a waterline due to corrosion. Upon discovery, Hilcorp Lower 48 (Hilcorp) isolated and de-energized the waterline for repair, dispatched a vacuum truck to the Site for fluid recovery, and submitted an initial C-141 to the New Mexico Oil Conservation Division (NMOCD) on May 13, 2019. The NMOCD assigned incident number NCS1916853082 to the release.

1.1 Regional Geology and Hydrology

The area is regionally described as the Naha and Tsegi Holocene alluvium. To the south of the Site lies the Farmington Sandstone Member of the Kirkland formation as well as eolian sand that is Pleistocene to Holocene in age derived from weathering of the Cretaceous Farmington Sandstone. To the east of the Site lies Quaternary alluvium and to the north of the Site lies the San Juan River and its associated Holocene channel and floodplain alluvium (Baltz and West, 1967). The Holocene alluvium at the Site near the banks of the San Juan consists of clay, silt, sand, gravel, and cobbles that represent the typical lithologies consistent of valley-fill deposits along the banks of the the San Juan River (Brown, 1976).

Due to its proximity to the river, Quaternary alluvium on the banks of the San Juan often hosts shallow groundwater aquifers (Stone et al, 1983). Hydraulic conductivity of these types of aquifers range from low to high throughout the San Juan Basin (Brown, 1976). Transmissivity values vary widely depending on lithology and thickness of the fill materials with values ranging from 40,000 square feet per day (ft²/d) in the Animas River Valley (Dinwiddie and Motts, 1964) to less than 1,000 ft²/d in the Puerco River Valley (Shomaker, 1971, p. 87-90). Much of the groundwater in these valley fill deposits on the San Juan River come from drainage of irrigated lands that receive most of their groundwater from underlying and adjacent bedrock. The groundwater quality in these types of valley fill aquifers is heavily influenced by their source and are characterized by high dissolved-solids concentrations and elevated specific conductance values (Brown, 1976).

The Site is approximately 1,146 feet south of the San Juan River and approximately 25 feet higher in elevation. The Site is also approximately 1,300 feet northwest (downgradient) of a former gravel pit where the excavations have filled with water over time. Multiple unnamed first order tributaries to the San Juan River (arroyos) are located within one mile of the Site.

1.2 Local Geology and Hydrology

Geology at the Site consists mainly of sands, silts, clays, gravel, and cobbles eroded and deposited from the Farmington Sandstone Member of the Kirkland Formation (Mytton, 1983). Sediment at the Site is



consistent with valley-fill deposits along the San Juan River. LT Environmental (LTE) Boring Logs are included as Appendix A.

Lithologic observations from sediment collected in boreholes at the Site indicate groundwater is present between approximately 22.5 to 35 feet below ground surface (bgs). Generally, groundwater at the Site flows to the northwest, along the drainage channel to the north and towards the San Juan River.

1.3 Land and Water Use

Surface land use surrounding the Site consists of surface sand and gravel mining of alluvial deposits and natural gas development. The nearest residence is located approximately 1,600 feet northwest of the Site. Water within the shallow aquifer at the Site is primarily used for irrigation and, in rare cases, where groundwater quality is higher for domestic use.

The closest water well to the Site is SJ-03509 located approximately 1,800 feet north of the Site (Figure 2); however, no water data is available for this well. The closest water well with reported data is SJ-02635 with a depth to groundwater reported at 11 feet bgs and total depth of the well at 23 feet bgs. That water well is located approximately 3,000 feet north of the Site (Figure 2). Figure 2 shows any inventory of wells within a one-mile radius of the Site.

The nearest significant water course to the Site is an unnamed arroyo located approximately 830 feet to the southeast (Figure 2). Due to the proximity of the release and a significant water course and the depths of the impacted water, it is unlikely that the release will affect any surface water.

1.4 Initial Response

On April 29, 2019, 80 barrels (bbls) of produced water were released due to a waterline failure approximately 250 yards east of the natural gas well RPC 18-3. Upon discovery, the waterline was isolated, de-energized, and repaired. A vacuum truck was dispatched to the Site and recovered approximately 65 bbls of produced water. An initial C-141 was submitted to the NMOCD on March 13, 2019 and assigned incident number NCS1907233330. LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 New Mexico Administrative Code (NMAC). Due to the Site having a depth to groundwater of less than 50 feet the following NMOCD Table 1 Closure Criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

Hilcorp responded by excavating to remove impacted soil in order to repair the pipeline. Hilcorp ultimately excavated approximately 160 cubic yards (yds³) of impacted soil at the Site. The total extent of the excavation was approximately 45 feet by 85 feet with an average depth of eight feet bgs (Figure 3).

On June 24, 2019, Hilcorp retained LTE to delineate the Site. A drilling schedule was identified but had to be revised due to changes in drill rig availability that required a change in drilling subcontractors. As a result, delineation activities did not begin until August 30, 2019. Hilcorp requested an extension to the 90-day requirement for site characterization or closure reporting required in 19.15.29.11.A NMAC and proposed a new deadline of September 27, 2019.





Initial drilling activities took place in August 2019; however, desired depths were not achieved due to shallow refusal of the hollow-stem auger in the cobbles at the Site. Subsequently, full delineation was not achieved during the initial drilling event. LTE submitted a Site Investigation Report to the NMOCD on September 27, 2019, in which Hilcorp requested a second extension from the NMOCD to achieve delineation of the impacted soil. The NMOCD granted the extension with the conditions of approval and instituted a deadline of November 18, 2019, to submit a Remediation Work Plan.

A Remediation Work Plan was submitted to the NMOCD on November 18, 2019, in which the findings from the initial soil and groundwater investigation were presented. The Remediation Work Plan showed that soil impacts at the Site had been delineated but the impacts to groundwater had not. The Remediation Work Plan stated that Hilcorp would submit a Stage 1 Abatement Plan with proposed groundwater delineation and a draft Public Participation Plan by December 20, 2019. If the identified impacts to groundwater are confirmed to be the result the original pipeline release and no other historical source, Hilcorp proposed submitting a Stage 2 Abatement Plan by February 28, 2019, with proposed remediation options for impacted groundwater and soil.





2.0 SOIL AND GROUNDWATER SITE INVESTIGATION

After the release, LTE conducted soil and groundwater investigations at the Site to delineate the vertical and lateral extent of the impact. LTE utilized both hollow-stem auger and sonic drilling rigs to advance soil borings and install monitoring wells at the Site. Soil and groundwater samples were collected during these efforts to assess subsurface conditions and potential contaminant concentrations.

2.1 Excavation Samples and Source Characterization

Methods of sample collection, sample types, sample locations, and the analytes sampled were discussed within the Remediation Work Plan submitted to the NMOCD on November 18, 2019.

2.2 Delineation Activities

Between August 28, 2019, and October 22, 2019, LTE conducted soil delineation activities at the Site using a 75 Central Mining Equipment (CME) hollow-stem auger drilling rig and a sonic drilling rig. A total of 15 boreholes were advanced at the Site, ranging from 12 feet to 40 feet bgs. Soil borings were advanced near the release point, then outward from the known impacted area/open excavation. Methods used for field characterization of soil and descriptions of the soil borings are described within the Remediation Work Plan submitted to the NMOCD on November 18, 2019. Location of all boreholes are presented on Figure 3 and Figure 4. Figure 5 depicts the obstructions to delineation activities, including a water diversion channel and berm associated with the on-site gravel pit operations, which limited drill rig access. LTE Boring Logs are included as Appendix A.

2.3 Monitoring Well Installation

A total of ten monitoring wells have been installed at the Site to-date with depths ranging between 30 and 40 feet bgs. Methods for the installation of groundwater wells are described in the Remediation Work Plan submitted to the NMOCD on November 18, 2019. Well Completion Diagrams are included on LTE Boring Logs (Appendix A).

2.4 Monitoring Well Development and Groundwater Sampling

Methods of well development, surveying of top-of-casing, sample collection procedures, and the analytes sampled are discussed within the Remediation Work Plan submitted to the NMOCD on November 18, 2019. LTE's Monitoring Well Development Forms are included as Appendix C, LTE's Groundwater Sample Collection Forms are included as Appendix D, and groundwater monitoring well locations are presented on Figure 6.



3.0 RESULTS

3.1 Soil Sample Results

Laboratory analytical results of soil samples collected by LTE during excavation and delineation sampling indicate concentrations of benzene and total BTEX were compliant with the NMOCD Closure Criteria for all soil samples. Two soil samples (MW07@2'-4 and Red Surface Soil) contained TPH values exceeding the NMOCD Closure Criteria with concentrations of 286 mg/kg and 880 mg/kg, respectively. All other results from collected samples were below laboratory detection limits for TPH values. No photo-ionization detector (PID) results from field screening samples indicated the presence of hydrocarbons; the highest PID reading for field screening was 9.1 parts per million (ppm) in soil sample "MW02 @ 2'-4'".

All source-characterization soil samples (Ex Bottom, NE wall of Ex, SW wall of Ex, and Red Surface Soil) exceeded the NMOCD Closure Criteria for chloride with concentrations ranging from 6,300 mg/kg in the bottom of the excavation to 57,000 mg/kg in the stained soils near the excavation.

Soil samples collected from borings (MW02, MW06, MW07, MW09, MW10, MW12, MW13, and MW15) contained chloride concentrations exceeding the NMOCD Closure Criteria of 600 mg/kg. Overall, chloride exceedances ranged from 670 mg/kg in MW10 (at 12.5 feet to 15 feet) to 9,500 mg/kg in MW07 (at 2 feet to 4 feet). Figure 3 shows soil sample results for soil within the vadose zone groundwater interface (VZGI), which occurs from surface to approximately 20 to 30 feet bgs at the Site depending on the well location. Chloride concentrations in the vadose-zone soil range from below the laboratory detection limit at distance in all directions from the release point to 9,500 mg/kg in MW07 at 2 feet to 4 feet bgs (close to the release point). Figure 4 shows soil-sample results for soil within the VZGI, which occurs from approximately 20 to 40 feet bgs at the Site depending on the well location. Chloride concentrations in the soils collected from the VZGI ranged from below the laboratory detection limit in MW03 (west of the release) and MW08 (northeast of the release) to greater than 1,000 mg/kg in all directions from the release (MW06, MW09, MW10, MW12, MW13, and MW15). The soil analytical results, as compared to the NMOCD Closure Criteria, are presented on Figures 3 and 4 and summarized in Table 1. The laboratory analytical reports are included as Appendix E.

3.2 Groundwater Results

Depth to groundwater ranged from 23.10 feet below top-of-casing (btoc) in MW08 to 33.98 feet btoc in MW03. Based on measured groundwater elevation data, the groundwater flow direction is to the northwest with an overall change in elevation of 0.43 feet from the most upgradient well (MW15) to the most downgradient well (MW12). The average groundwater gradient between MW15 and MW12 was calculated to be approximately 0.002 feet per foot during the October 24, 2019 monitoring event. Groundwater elevations are summarized in Table 2. Groundwater elevations and inferred flow direction are presented on Figure 6.

Laboratory analytical results of the groundwater samples collected from MW12 on October 24, 2019, indicate that concentrations of benzene exceeded the New Mexico Water Quality Control Commission (NMWQCC) standards with a concentration of 26 micrograms per liter ($\mu\text{g/l}$). All other groundwater sample concentrations were below the laboratory detection limit for volatile organic compounds (VOCs). The NMWQCC standards for sulfate and chloride were exceeded in all 10 groundwater samples;



concentrations of sulfate ranged from 1,600 milligrams per liter (mg/L) in MW03 to 3,100 mg/L in MW08; concentrations of chloride ranged from 1,500 mg/L in MW08 to 27,000 mg/L in MW12. Fluoride concentrations in MW08 and MW13 also exceeded the NMWQCC standards with values of 2.8 mg/L and 4.4 mg/L, respectively. Analytical results indicated that concentrations exceeding the NMWQCC standard for total dissolved solids (TDS) were detected in all groundwater samples, with concentrations ranging from 6,370 mg/L in MW15 to 57,000 mg/L in MW12. All other analytes from groundwater samples collected during this sampling event were compliant with the NMWQCC standards for groundwater. Groundwater analytical results for benzene, chloride, and TDS are presented in Figure 6 and summarized in Table 3. The complete laboratory report is included in Appendix E.

3.3 Quality Assurance

Sampling and analytical techniques have been identified in the text above and conform with the references identified in Subsection B of 20.6.2.3107 NMAC and with 20.6.4.14 NMAC of the groundwater quality standards for interstate and intrastate surface waters in New Mexico.



4.0 CONCLUSIONS

4.1 Soil

Petroleum hydrocarbon and chloride impacts to soil were delineated by LTE during the 2019 delineation events. Figure 3 presents VZGI soil sample results, in which all outermost delineation points are compliant with the NMOCD Closure Criteria. However, petroleum-hydrocarbon and chloride-impacted soil still remain at the surface near the pipeline and within and surrounding the excavation at depths ranging from surface to 25 feet bgs. The lateral impact extent of chloride and petroleum-hydrocarbon soils is estimated to be approximately 30 feet by 90 feet. It is estimated that approximately 1,000 cubic yards of impacted soil remain in place at the Site within the VZGI. This soil was likely impacted as a result of the pipeline release. The VZGI soil impacted by the release has been delineated (Figure 3).

Chloride concentrations exceeding NMOCD Closure Criteria are present deeper within the saturated soil and near the VZGI. Figure 4 depicts the elevated chloride concentrations in the VZGI soil, which are observed in both upgradient and downgradient borings. The elevated chloride concentrations may be naturally occurring or originate from upgradient sources. Groundwater samples collected from upgradient wells (MW08 and MW15) also contain elevated chloride concentrations that likely are contributing to increased concentrations detected in saturated soil samples. Elevated chloride concentrations in the VZGI are not fully delineated laterally, but concentrations detected at elevated levels are within range of concentrations detected upgradient and therefore not likely the result of the release.

4.2 Groundwater

As discussed above, soil within the VZGI contain elevated concentrations of chloride in both upgradient and downgradient areas. Similar results are observed in groundwater samples collected at the Site. Shallow aquifers within the San Juan River valley have been documented to contain elevated chloride and TDS concentrations (Stone, 1983), suggesting the upgradient groundwater data quality may be representative of naturally-occurring conditions.

Although there is likely a natural contribution to elevated chloride concentrations at the Site, the data demonstrates an order of magnitude increase of TDS and chloride concentrations between upgradient wells and wells located near the release. Based on the data collected in upgradient wells, background concentrations of chloride and TDS range from 1,500 to 1,600 and 6,370 to 7,700 mg/L, respectively. Groundwater near the release contains chloride and TDS concentrations up to 27,000 and 57,000 mg/L, respectively.

Sulfate concentrations above the NMWQCC standards were observed in every groundwater sample collected at the Site; however, the distribution and similar concentrations detected across the Site suggest that these elevated levels are likely background concentrations. Two wells sampled (MW08 and MW13) contained fluoride concentrations above the NMWQCC standards. Fluoride in these wells is also interpreted to be naturally occurring in the aquifer, as again it is observed both cross- to up- and down-gradient of the release. As such, LTE proposes to eliminate these constituents as contaminants of concern.

Benzene was the only other constituent detected in groundwater at the Site at concentrations exceeding the NMWQCC standard. Benzene was detected in only one monitoring well (MW12). No detectable benzene concentrations were observed in any other groundwater or soil samples collected at the Site. Although soil samples collected near the release contained TPH concentrations exceeding the NMOCD



Closure Criteria, no detectable BTEX concentrations were observed. The benzene detected in monitoring well MW12 is likely from a different source and is not related to the original pipeline release.

4.2 Historical and Current Land Use

Prior to any oil and gas operations at the Site, the surrounding area was heavily mined for aggregates. A review of the historical imagery from the Site on the San Juan County assessor's maps shows the proximity of the Site to multiple historical mining operations. During these operations, the surface and subsurface of the Site was affected by excavation, soil stockpiling, construction activities, equipment storage, water storage, and the potential leaching of fluids used at the surface by the mining companies. Mining and water-storage activities continue to this day adjacent to this Site. Previous and current operations may have contributed to elevated background concentrations of chloride, sulfate, fluoride, and TDS at the Site.



5.0 RECOMMENDATIONS

5.1 Proposed Groundwater Delineation

LTE proposes to return to the Site to delineate benzene in groundwater utilizing a sonic drilling rig. LTE will investigate potential upgradient sources for chloride and TDS, then delineate the release as necessary. Initially, LTE proposes to install an additional five soil borings to be converted into monitoring wells. During this event, four monitoring wells (MW17, MW18, MW19, and MW20) will be installed to delineate the identified benzene impacts. LTE will continue to step out until benzene is delineated. At the same time, four soil borings (MW21, MW22, MW23, MW24) will be advanced in areas of historic mining operations to assess background concentrations of chloride and TDS by sampling soil and groundwater from the borings.

Based on results of the upgradient sampling, LTE proposes to install at least one additional monitoring well (MW16) to delineate the lateral extent of chloride impacted groundwater. Additionally, wells will be drilled as needed to delineate chloride and TDS. It is anticipated these wells will be drilled to 40 feet bgs. Figure 7 depicts the proposed locations for the monitoring wells. New Mexico Office of the State Engineer (NMOSE) permits will be obtained prior to the drilling for new monitoring wells.

Soil borings will be logged by an LTE geologist who will inspect the soil for visual staining and the presence or absence of odor. The soil will be characterized by visually inspecting the soil samples, field screening the soil headspace using a PID to monitor for the presence of organic vapors and the presence of chloride using Hatch® Quantab® titrator stripes. A minimum of two soil samples will be collected from each soil boring, but LTE anticipates collecting more to accurately characterize chloride concentrations. Soil samples will be submitted for laboratory analysis of TPH- gasoline range organics (GRO), TPH- diesel range organics (DRO), and TPH- motor oil range organics (MRO) by United States Environmental Protection Agency (EPA) Method 8015, BTEX by EPA Method 8021, and chloride by EPA Method 300.0. LTE will determine a background concentration of chloride and TDS in on-site wells exceeding the established background concentrations.

LTE will convert all other boreholes to monitoring wells in order to investigate impacted groundwater. Monitoring wells will be advanced a minimum of three feet into saturated soils. Monitoring wells will be constructed with of 2-inch Schedule 40 polyvinyl chloride (PVC) casing and schedule 40 PVC 0.010-inch slotted screen. Wells will be completed with 10-20 silica sand pack to two feet above the screen interval, then two feet of hydrated bentonite seal, then grouted to ground surface. The wells will be completed with aboveground locking, steel protective casing. All surface installations will be cemented into the ground.

Following well construction, monitoring wells will be developed using a disposable bailer to remove 10 well casing volumes of groundwater or until the well purges dry. Monitoring wells will be allowed to recharge for at least 24 hours after development prior to the collection of groundwater samples. To accurately determine groundwater elevations, a rotating laser level surveying tool will be used to obtain elevation of the top-of-casing for each well.



Groundwater monitoring wells will be sampled by purging a minimum of three well casing volumes from each well and collecting parameters of the purged groundwater until the parameters stabilize. Groundwater samples will be submitted for analysis of VOCs by EPA Method 8260B, general water chemistry (GWC) parameters including 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.

5.2 Proposed Schedule

LTE proposes to begin the delineation activities in the first quarter 2020 based on approval of this plan. LTE reserves the right to change the scheduled based on the approval date of this plan. Once delineation is achieved, and if impacts are determined to be the results of the pipeline release, Hilcorp will submit a Stage 2 Abatement Plan within 90 days of receiving the final laboratory analytical results from the delineation. Hilcorp will provide written notice, as approved by the NMOCD, of the Stage 1 and Stage 2 abatement plans to the following persons:

- Surface owners of record within 1 mile of the perimeter of the identified impacted area as currently defined in this Abatement Plan.
- The County Commission of San Juan County, New Mexico
- The Office of Natural Resources Trustee for the State of New Mexico
- The City of Farmington
- The Navajo Nation

Hilcorp will provide Public Notice within 15 days of notice from NMOCD that this Stage 1 Abatement Plan is administratively complete as required per NMAC 19.15.30.15.

LTE appreciates the opportunity to provide this report to the NMOCD. If you have any questions or comments regarding this Stage 1 Abatement Plan, do not hesitate to contact Ms. Ashley Ager at (970) 385-1096 or via email at aager@ltenv.com or Jennifer Deal at (505)-599-3400 or via email at jdeal@hilcorp.com.



6.0 REFERENCES

Baltz, E.H. Jr., and West S.W., 1967, Ground-water resources of the southwestern part of the Jicarilla Apache Indian Reservation and adjacent areas, New Mexico: US Geological Survey, Water-supply paper 1576-H, 89p.

Brown, D.R., 1976, Hydrology and water resources of the Aztec quadrangle, San Juan County, New Mexico: M.S. thesis, New Mexico Institute of Mining and Technology, 174p.

Dinwiddie, G. A., and Motts, W. S., 1964, Availability of ground water in parts of Acoma and Laguna Indian Reservation, New Mexico: U.S. Geological Survey, Water-supply Paper 1576-E, 65p.

Mytton, J.W., 1983, Geologic map of Chaco Canyon 30'x60' quadrangle showing coal zones of Fruitland Formation, San Juan, Rio Arriba, and Sandoval Counties, New Mexico: US Geological Survey map.

Shomaker, J. W., 1971, Water resources of Fort Wingate Army Depot and adjacent areas, McKinley County, New Mexico: U. S. Geological Survey, Open-file Rept. 87-90p.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, *Hydrogeology and Water Resources of the San Juan Basin, New Mexico*, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.



FIGURES



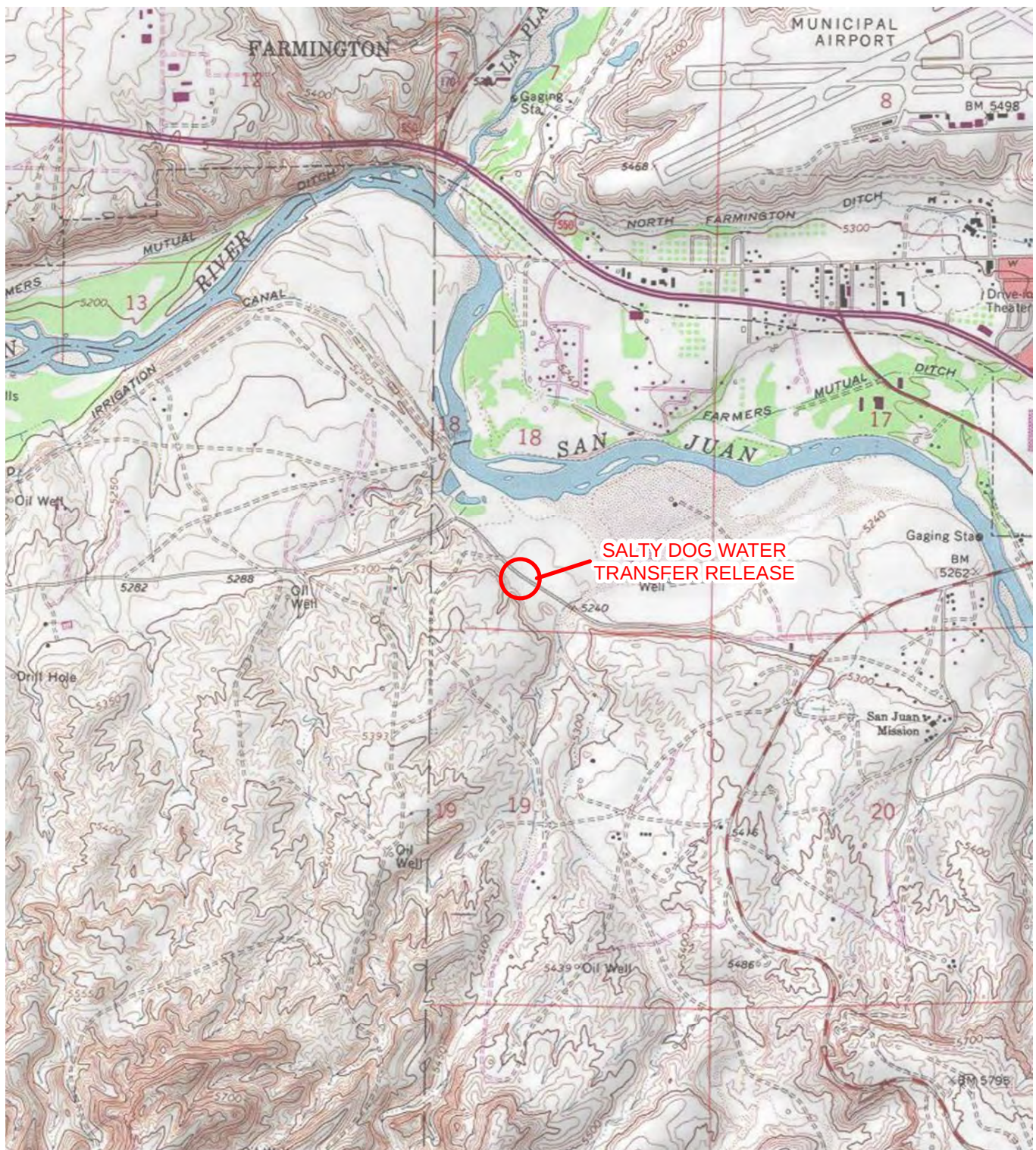


IMAGE COURTESY OF ESRI/USGS

LEGEND SITE LOCATION

0 2,000 4,000
Feet

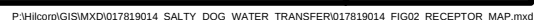


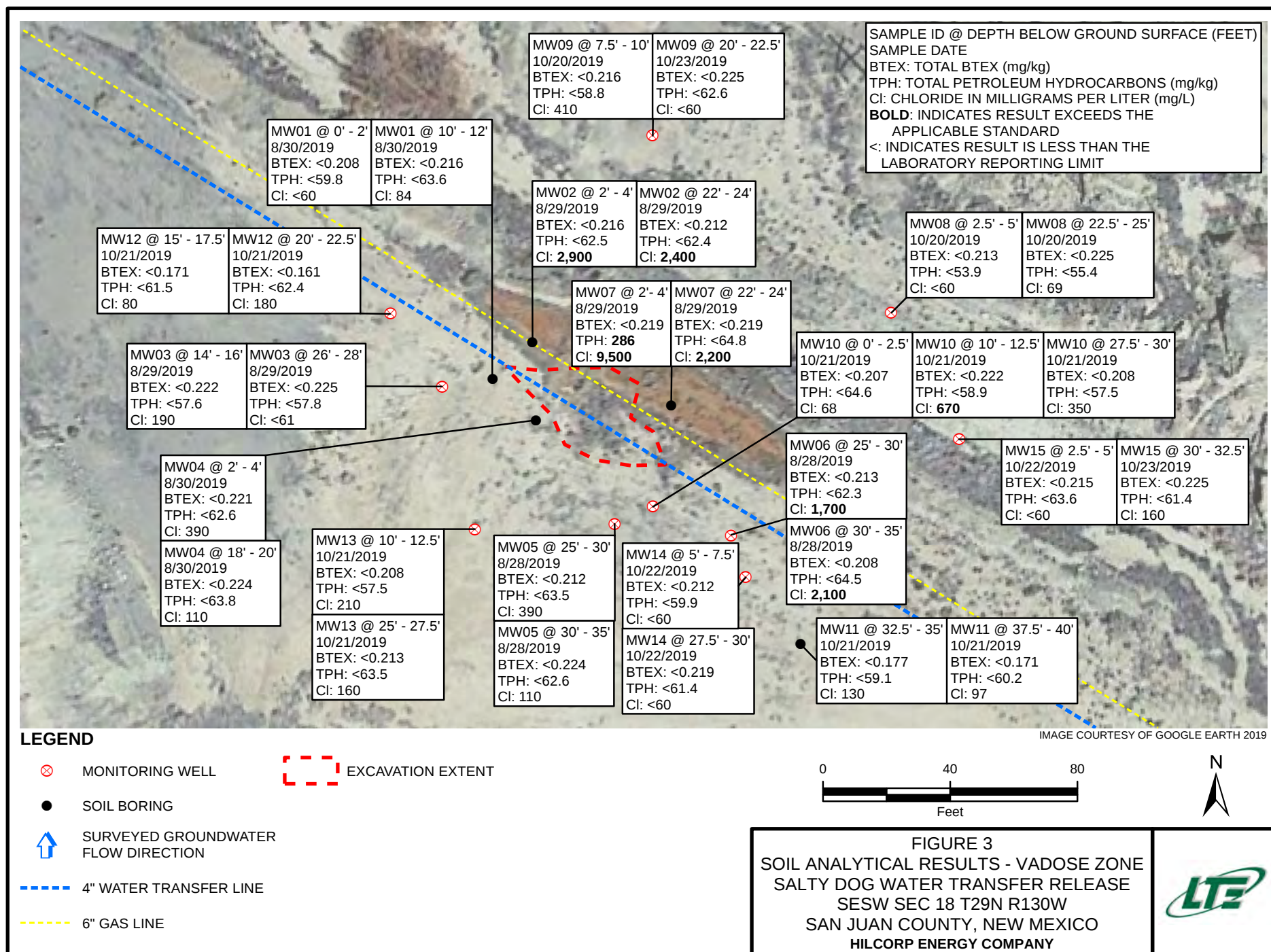
NEW MEXICO

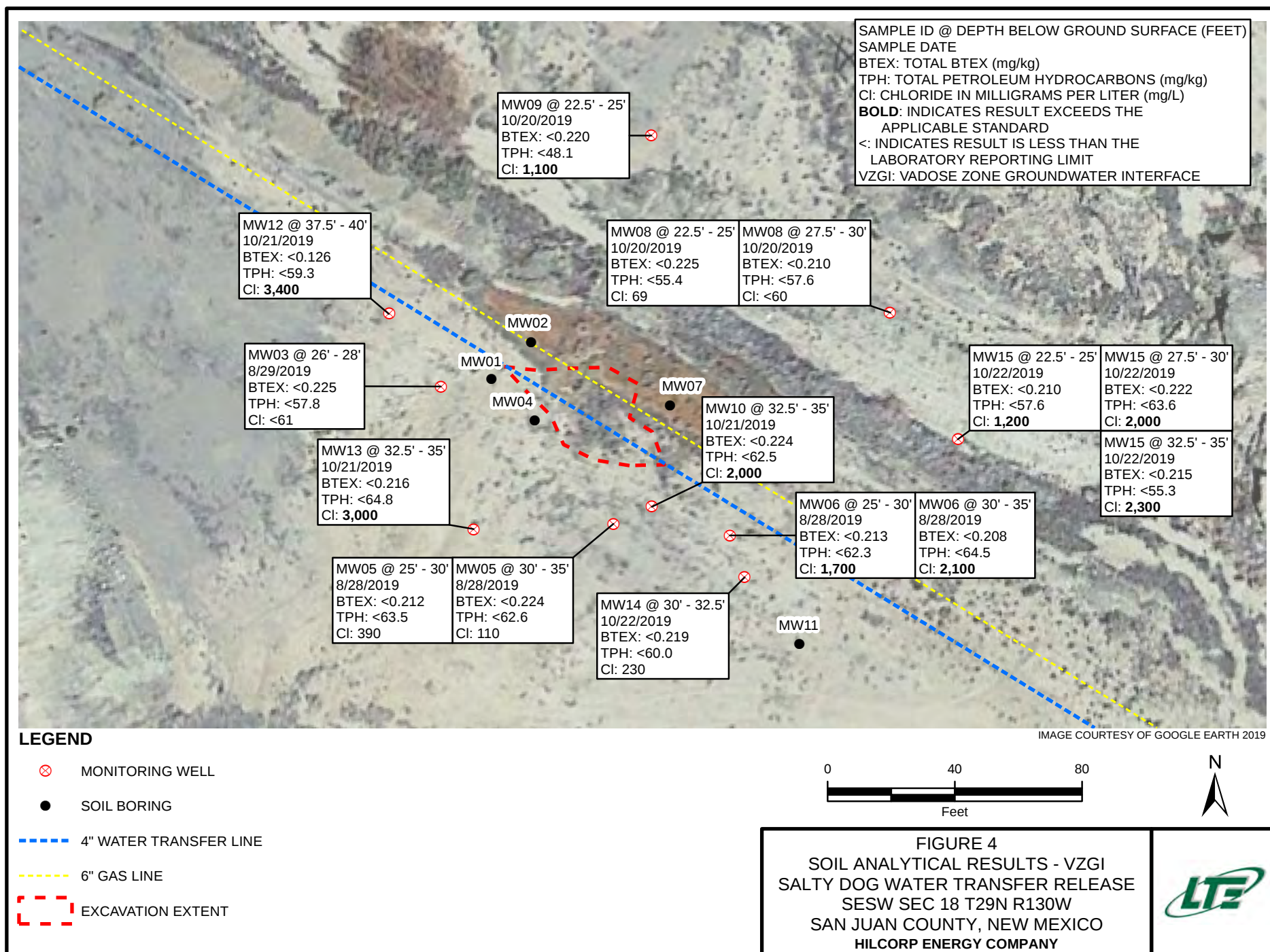
FIGURE 1
SITE LOCATION MAP
SALTY DOG WATER TRANSFER RELEASE
SESW SEC 18 T29N R13W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

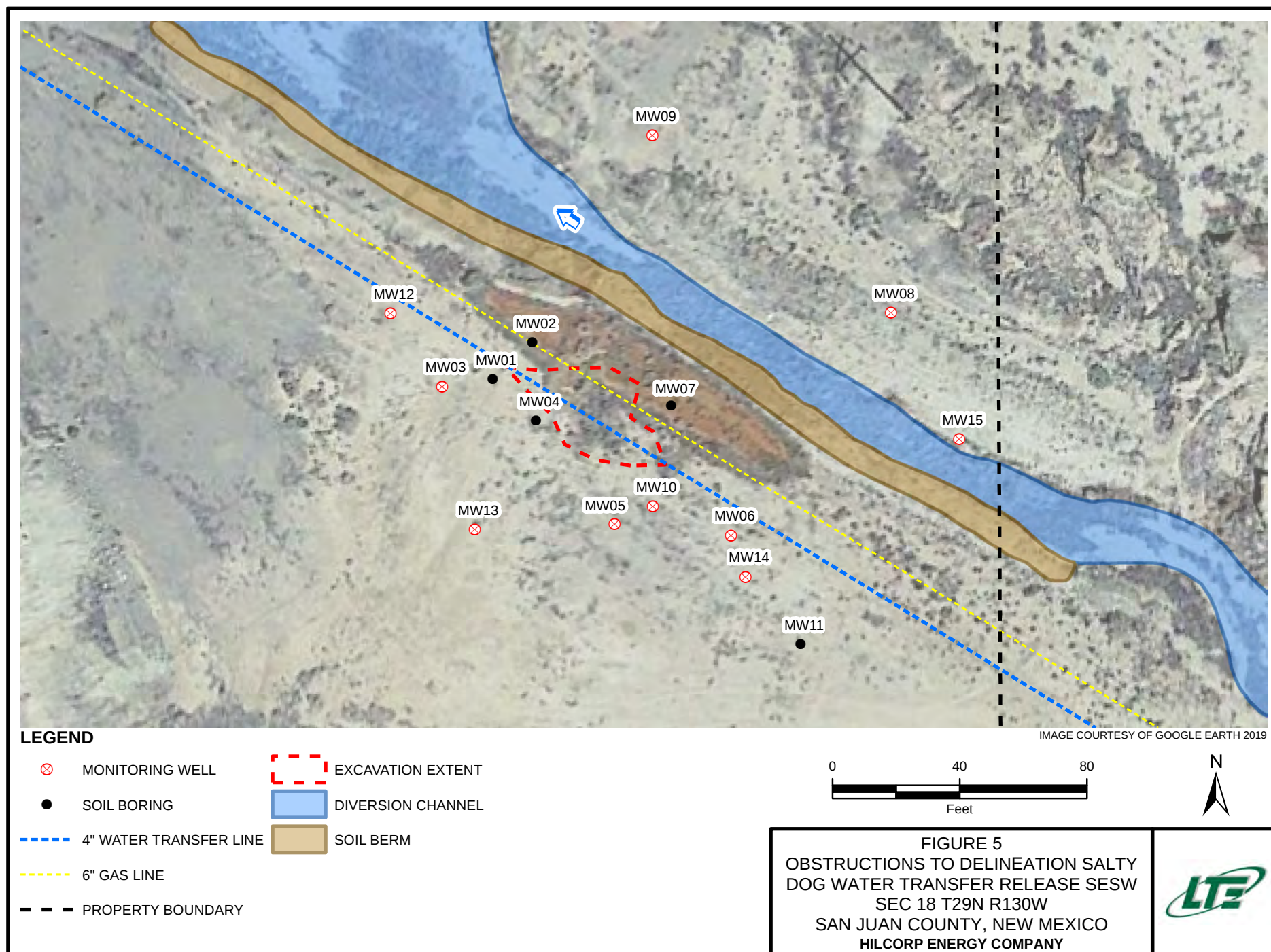


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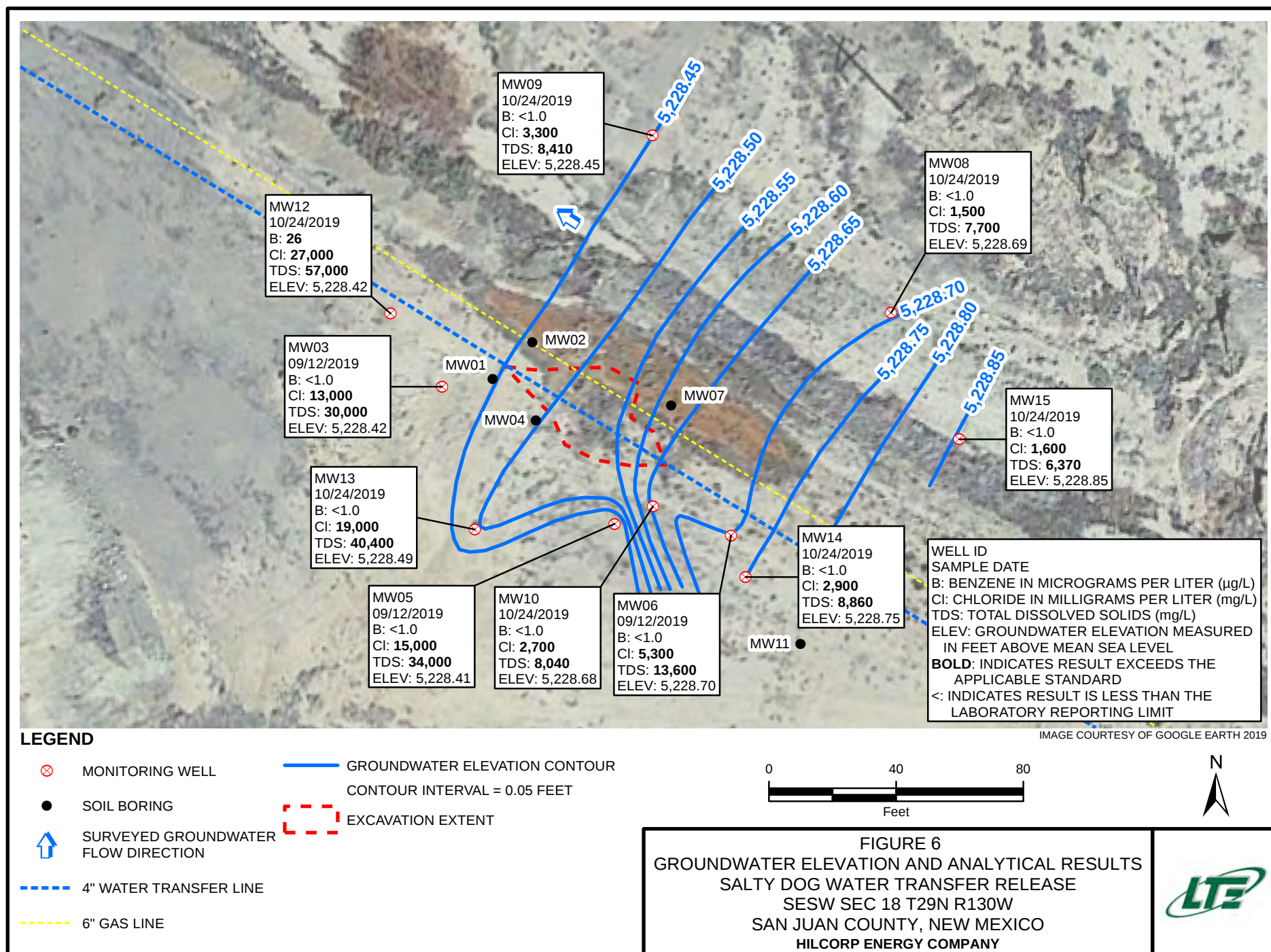








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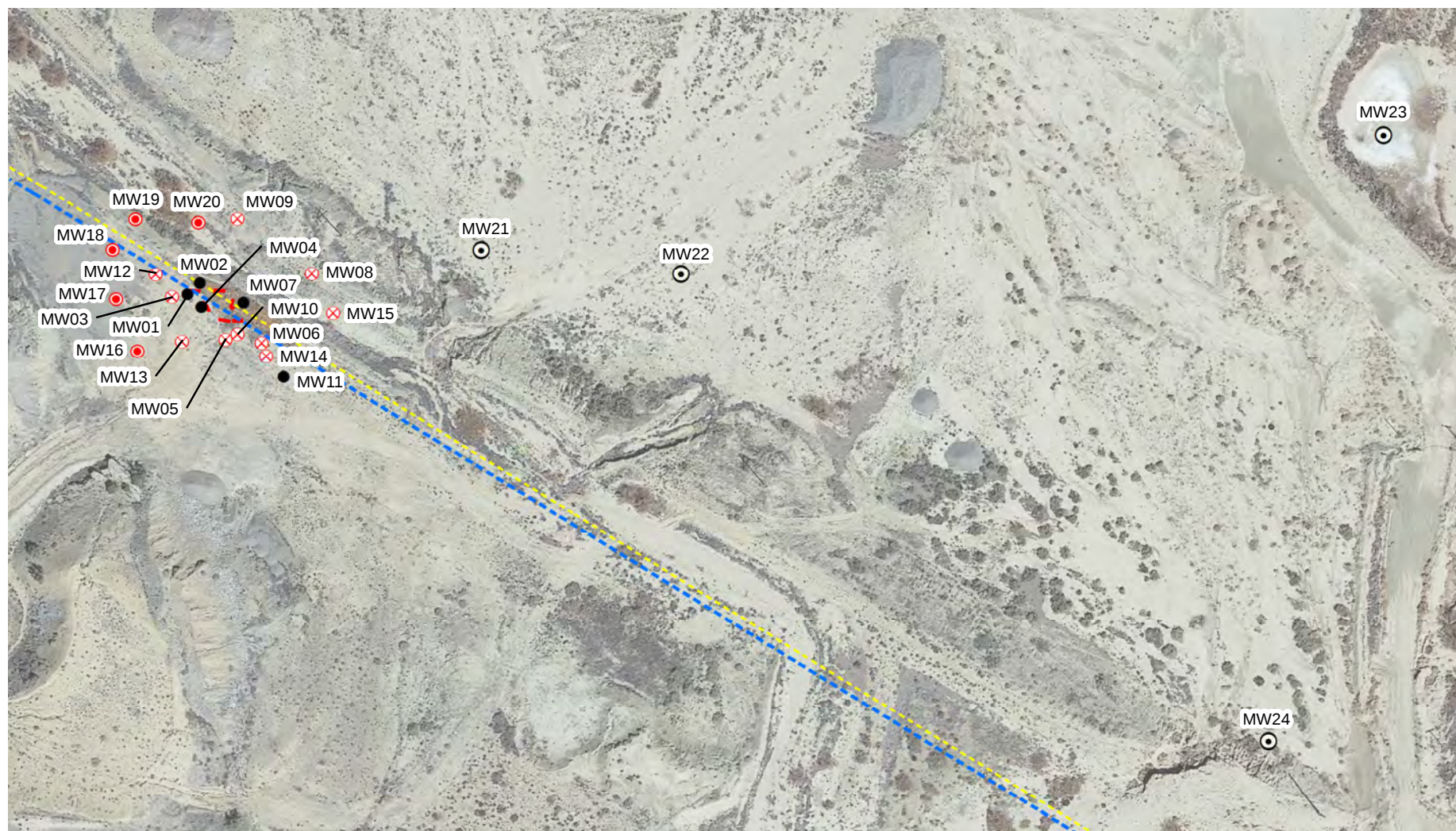


IMAGE COURTESY OF GOOGLE EARTH 2019

LEGEND

- | | | | |
|---|--------------------------|---------|------------------------|
| ⊗ | MONITORING WELL | ---- | 4" WATER TRANSFER LINE |
| ● | PROPOSED MONITORING WELL | ---- | 6" GAS LINE |
| ● | SOIL BORING | - - - - | EXCAVATION EXTENT |
| ⊙ | PROPOSED SOIL BORING | | |

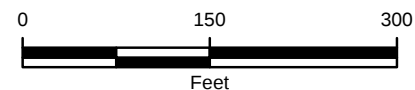


FIGURE 7
PROPOSED MONITORING WELL LOCATIONS
SALT DOG WATER TRANSFER RELEASE
SESW SEC 18 T29N R130W
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY



P:\Hilcorp\GIS\MXD\017819014_SALT DOG WATER TRANSFER\017819014_FIG07_PROPOSED_MW_LOC_2019.mxd

TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Chloride (ppm)**	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
Source Characterization Samples													
Ex. Bottom	8/28/2019	NA	NA	<0.024	<0.047	<0.047	<0.095	<0.213	14,000	<4.7	<9.0	<45	<58.7
NE Wall of Ex	8/30/2019	NA	NA	<0.023	<0.047	<0.047	<0.093	<0.210	6,300	<4.7	<9.5	<47	<61.2
SW Wall of Ex	8/30/2019	NA	NA	<0.025	<0.050	<0.050	<0.099	<0.224	7,300	<5.0	<9.6	<48	<62.6
Red Surface Soil	10/21/2019	0.0	6,100	<0.024	<0.047	<0.047	<0.094	<0.212	57,000	<4.7	130	750	880
Soil Boring Samples													
MW01 @ 0' - 2'	8/30/2019	1.9	NA	<0.023	<0.046	<0.046	<0.093	<0.208	<60	<4.6	<9.2	<46	<59.8
MW01 @ 8' - 10'	8/30/2019	1.0	NA	<0.023	<0.047	<0.047	<0.094	<0.211	75	<4.7	<9.4	<47	<61.1
MW01 @ 10' - 12'	8/30/2019	1.0	NA	<0.024	<0.048	<0.048	<0.096	<0.216	84	<4.8	<9.8	<49	<63.6
MW02 @ 2' - 4'	8/29/2019	9.1	NA	<0.024	<0.048	<0.048	<0.096	<0.216	2,900	<4.8	<9.7	<48	<62.5
MW02 @ 16' - 18'	8/29/2019	4.8	NA	<0.025	<0.050	<0.050	<0.10	<0.225	1,800	<5.0	<8.6	<43	<56.6
MW02 @ 22' - 24'	8/29/2019	1.9	NA	<0.023	<0.047	<0.047	<0.094	<0.212	2,400	<4.7	<9.7	<48	<62.4
MW03 @ 14' - 16'	8/29/2019	7.6	NA	<0.025	<0.049	<0.049	<0.099	<0.222	190	<4.9	<8.7	<44	<57.6
MW03 @ 26' - 28'	8/29/2019	2.7	NA	<0.025	<0.050	<0.050	<0.10	<0.225	<61	<5.0	<8.8	<44	<57.8
MW04 @ 2' - 4'	8/30/2019	0.4	NA	<0.025	<0.049	<0.049	<0.098	<0.221	390	<4.9	<9.7	<48	<62.6
MW04 @ 16' - 18'	8/30/2019	1.1	NA	<0.023	<0.047	<0.047	<0.093	<0.210	160	<4.7	<9.7	<49	<63.4
MW04 @ 18' - 20'	8/30/2019	1.2	NA	<0.025	<0.050	<0.050	<0.099	<0.224	110	<5.0	<9.8	<49	<63.8
MW05 @ 25' - 30'	8/28/2019	5.0	NA	<0.024	<0.047	<0.047	<0.094	<0.212	390	<4.7	<9.8	<49	<63.5
MW05 @ 30' - 35'	8/28/2019	1.9	NA	<0.025	<0.050	<0.050	<0.099	<0.224	110	<5.0	<9.6	<48	<62.6
MW06 @ 25' - 30'	8/28/2019	1.9	NA	<0.024	<0.047	<0.047	<0.095	<0.213	1,700	<4.7	<9.6	<48	<62.3
MW06 @ 30' - 35'	8/28/2019	0.8	NA	<0.023	<0.046	<0.046	<0.093	<0.208	2,100	<4.6	<9.9	<50	<64.5
MW07 @ 2' - 4'	8/29/2019	5.0	NA	<0.024	<0.049	<0.049	<0.097	<0.219	9,500	<4.9	36	250	286
MW07 @ 22' - 24'	8/29/2019	5.0	NA	<0.024	<0.049	<0.049	<0.097	<0.219	2,200	<4.9	<9.9	<50	<64.8
MW08 @ 2.5' - 5'	10/20/2019	0.2	<128	<0.024	<0.047	<0.047	<0.095	<0.213	<60	<4.7	<8.2	<41	<53.9
MW08 @ 20' - 22.5'	10/20/2019	0.4	<128	<0.025	<0.050	<0.050	<0.10	<0.225	<60	<5.0	<9.2	<46	<60.2
MW08 @ 22.5' - 25'	10/20/2019	0.3	<128	<0.025	<0.050	<0.050	<0.10	<0.225	69	<5.0	<8.4	<42	<55.4
MW08 @ 27.5' - 30'	10/20/2019	0.4	<128	<0.023	<0.047	<0.047	<0.093	<0.210	<60	<4.7	<8.9	<44	<57.6
MW09 @ 7.5' - 10'	10/20/2019	0.2	244	<0.024	<0.048	<0.048	<0.096	<0.216	410	<4.8	<9.0	<45	<58.8
MW09 @ 12.5' - 15'	10/20/2019	0.2	356	<0.025	<0.049	<0.049	<0.099	<0.222	370	<4.9	<9.6	<48	<62.5
MW09 @ 20' - 22.5'	10/23/2019	0.2	<128	<0.025	<0.050	<0.050	<0.10	<0.225	<60	<5.0	<9.6	<48	<62.6
MW09 @ 22.5' - 25'	10/20/2019	0.2	1,148	<0.024	<0.049	<0.049	<0.098	<0.220	1,100	<4.9	<7.2	<36	<48.1
MW09 @ 27.5' - 30'	10/20/2019	0.2	212	<0.023	<0.046	<0.046	<0.092	<0.207	370	<4.6	<9.2	<46	<59.8
MW10 @ 0' - 2.5'	10/21/2019	0.2	<128	<0.023	<0.046	<0.046	<0.092	<0.207	68	<4.6	<10	<50	<64.6
MW10 @ 2.5' - 5'	10/21/2019	0.3	<128	<0.024	<0.048	<0.048	<0.096	<0.216	120	<4.8	<9.3	<47	<61.1
MW10 @ 7.5' - 10'	10/21/2019	0.1	<128	<0.024	<0.048	<0.048	<0.096	<0.216	63	<4.8	<8.5	<42	<55.3
MW10 @ 10' - 12.5'	10/21/2019	0.9	776	<0.025	<0.049	<0.049	<0.099	<0.222	670	<4.9	<9.0	<45	<58.9
MW10 @ 12.5' - 15'	10/21/2019	0.6	<128	<0.025	<0.050	<0.050	<0.10	<0.225	140	<5.0	<7.7	<39	<51.7



TABLE 1
SOIL ANALYTICAL RESULTS

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Chloride (ppm)**	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
MW10 @ 15 - 17.5'	10/21/2019	0.6	<128	<0.025	<0.050	<0.050	<0.10	<0.225	79	<5.0	<8.6	<43	<56.6
MW10 @ 17.5 - 20'	10/21/2019	0.4	184	<0.024	<0.048	<0.048	<0.096	<0.216	190	<4.8	<9.1	<45	<58.9
MW10 @ 20 - 22.5'	10/21/2019	0.4	184	<0.024	<0.049	<0.049	<0.098	<0.220	120	<4.9	<8.5	<43	<56.4
MW10 @ 22.5 - 25'	10/21/2019	0.2	<128	<0.024	<0.048	<0.048	<0.096	<0.216	<60	<4.8	<9.5	<48	<62.3
MW10 @ 25 - 27.5'	10/21/2019	0.4	184	<0.024	<0.048	<0.048	<0.096	<0.216	210	<4.8	<8.8	<44	<57.6
MW10 @ 27.5 - 30'	10/21/2019	0.7	988	<0.023	<0.046	<0.046	<0.093	<0.208	350	<4.6	<8.9	<44	<57.5
MW10 @ 30 - 32.5'	10/21/2019	0.2	656	<0.023	<0.046	<0.046	<0.093	<0.208	350	<4.6	<8.8	<44	<57.4
MW10 @ 32.5 - 35'	10/21/2019	0.2	1,148	<0.025	<0.050	<0.050	<0.099	<0.224	2,000	<5.0	<9.5	<48	<62.5
MW10 @ 37.5 - 40'	10/21/2019	0.6	<128	<0.024	<0.047	<0.047	<0.095	<0.213	240	<4.7	<8.4	<42	<55.1
MW11 @ 32.5 - 35'	10/21/2019	1.6	<128	<0.020	<0.039	<0.039	<0.079	<0.177	130	<3.9	<9.2	<46	<59.1
MW11 @ 37.5 - 40'	10/21/2019	0.7	<128	<0.019	<0.038	<0.038	<0.076	<0.171	97	<3.8	<9.4	<47	<60.2
MW12 @ 15 - 17.5'	10/21/2019	0.5	280	<0.019	<0.038	<0.038	<0.076	<0.171	80	<3.8	<9.7	<48	<61.5
MW12 @ 20 - 22.5'	10/21/2019	0.3	356	<0.018	<0.036	<0.036	<0.071	<0.161	180	<3.6	<9.8	<49	<62.4
MW12 @ 35 - 37.5'	10/21/2019	0.3	280	<0.014	<0.027	<0.027	<0.055	<0.123	200	<2.7	<9.4	<47	<59.1
MW12 @ 37.5 - 40'	10/21/2019	0.3	5,420	<0.014	<0.028	<0.028	<0.056	<0.126	3,400	<2.8	<9.5	<47	<59.3
MW13 @ 10 - 12.5'	10/21/2019	0.3	212	<0.023	<0.046	<0.046	<0.093	<0.208	210	<4.6	<8.9	<44	<57.5
MW13 @ 25 - 27.5'	10/21/2019	1.0	156	<0.024	<0.047	<0.047	<0.095	<0.213	160	<4.7	<9.8	<49	<63.5
MW13 @ 32.5 - 35'	10/21/2019	0.4	2,472	<0.024	<0.048	<0.048	<0.096	<0.216	3,000	<4.8	<10	<50	<64.8
MW13 @ 37.5 - 40'	10/21/2019	0.3	<128	<0.023	<0.047	<0.047	<0.094	<0.211	<60	<4.7	<9.1	<46	<59.8
MW14 @ 5 - 7.5'	10/22/2019	0.8	<128	<0.024	<0.047	<0.047	<0.094	<0.212	<60	<4.7	<9.2	<46	<59.9
MW14 @ 20 - 22.5'	10/22/2019	1.0	212	<0.024	<0.047	<0.047	<0.094	<0.212	270	<4.7	<9.8	<49	<63.5
MW14 @ 25 - 27.5'	10/22/2019	2.5	184	<0.025	<0.050	<0.050	<0.099	<0.224	75	<5.0	<9.7	<48	<62.7
MW14 @ 27.5 - 30'	10/22/2019	2.2	<128	<0.024	<0.049	<0.049	<0.097	<0.219	<60	<4.9	<9.5	<47	<61.4
MW14 @ 30 - 32.5'	10/22/2019	2.1	128	<0.024	<0.049	<0.049	<0.097	<0.219	230	<4.9	<9.1	<46	<60.0



TABLE 1
SOIL ANALYTICAL RESULTS

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Soil Sample Identification	Sample Date	Field Headspace (ppm)	Chloride (ppm)**	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
MW15 @ 2.5 - 5'	10/22/2019	0.0	<128	<0.024	<0.048	<0.048	<0.095	<0.215	<60	<4.8	<9.8	<49	<63.6
MW15 @ 22.5 - 25'	10/22/2019	0.0	400	<0.023	<0.047	<0.047	<0.093	<0.210	1,200	<4.7	<8.9	<44	<57.6
MW15 @ 27.5 - 30'	10/22/2019	0.0	988	<0.025	<0.049	<0.049	<0.099	<0.222	2,000	<4.9	<9.7	<49	<63.6
MW15 @ 30 - 32.5'	10/23/2019	0.1	212	<0.025	<0.050	<0.050	<0.10	<0.225	160	<5.0	<9.4	<47	<61.4
MW15 @ 32.5 - 35'	10/22/2019	0.0	2,472	<0.024	<0.048	<0.048	<0.095	<0.215	2,300	<4.8	<8.5	<42	<55.3
MW15 @ 37.5 - 40'	10/22/2019	0.0	<128	<0.023	<0.046	<0.046	<0.093	<0.208	96	<4.6	<8.7	<43	<56.3
NMOCD Closure Criteria		NE	NE	10	NE	NE	NE	50	600	NE	NE	NE	100

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 ELEVATION SUMMARY

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Well ID	Sample Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
MW03	9/12/2019	5,262.40	33.62	5,228.78
	10/22/2019		33.92	5,228.48
	10/24/2019		33.98	5,228.42
MW05	9/12/2019	5,262.11	33.36	5,228.75
	10/22/2019		33.70	5,228.41
	10/24/2019		33.70	5,228.41
MW06	9/12/2019	5,261.78	32.74	5,229.04
	10/22/2019		33.05	5,228.73
	10/24/2019		33.08	5,228.70
MW08	10/22/2019	5,252.50	23.80	5,228.70
	10/24/2019		23.81	5,228.69
MW09	10/22/2019	5,252.38	23.94	5,228.44
	10/24/2019		23.93	5,228.45
MW10	10/22/2019	5,259.28	30.59	5,228.69
	10/24/2019		30.60	5,228.68
MW12	10/22/2019	5,259.25	30.85	5,228.40
	10/24/2019		30.83	5,228.42
MW13	10/22/2019	5,260.32	31.81	5,228.51
	10/24/2019		31.83	5,228.49
MW14	10/22/2019	5,259.67	30.92	5,228.75
	10/24/2019		30.92	5,228.75
MW15	10/22/2019	5,256.00	27.20	5,234.58
	10/24/2019		27.15	5,228.85

Notes:

AMSL - above mean sea level

BTOC - below top of casing



TABLE 3
GROUNDWATER ANALYTICAL RESULTS

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Analyte	NMWQCC Standard	Unit	MW03	MW05	MW06	MW08	MW09	MW10	MW12	MW13	MW14	MW15
			12-Sep	12-Sep	12-Sep	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct
USEPA Method 8260B - Volatiles												
benzene	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	26	<1.0	<1.0	<1.0
toluene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	12	<1.0	<1.0	<1.0
ethylbenzene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.6	<1.0	<1.0	<1.0
methyl tert-butyl ether (MTBE)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethylbenzene	620	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane (EDC)	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane (EDB)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
naphthalene	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
2-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
acetone	NE	µg/L	<10	<10	<10	11	<10	<10	<10	<10	<10	<10
bromobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromodichloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromoform	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromomethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-butanone	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
carbon disulfide	NE	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
carbon tetrachloride	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloroethane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
chloroform	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloromethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
dibromochloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dibromomethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dichlorodifluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	25	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethene	5	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TABLE 3
GROUNDWATER ANALYTICAL RESULTS

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Analyte	NMWQCC Standard	Unit	MW03	MW05	MW06	MW08	MW09	MW10	MW12	MW13	MW14	MW15
			12-Sep	12-Sep	12-Sep	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct
1,3-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-dichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
hexachlorobutadiene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-hexanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyltoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-methyl-2-pentanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
methylene chloride	100	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-butylbenzene	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-propylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
styrene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	10	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tetrachloroethene (PCE)	20	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	60	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichloroethene (TCE)	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichlorofluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
vinyl chloride	1	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
xlenes, total	620	µg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	22	<1.5	<1.5	<1.5

TABLE 3
GROUNDWATER ANALYTICAL RESULTS

SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY

Analyte	NMWQCC Standard	Unit	MW03	MW05	MW06	MW08	MW09	MW10	MW12	MW13	MW14	MW15
			12-Sep	12-Sep	12-Sep	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct
USEPA Method 300.0: Anions												
bromide	NE	mg/L	13	15	5.5	2.4	3.9	3.4	35	24	3.9	2.7
chloride	250	mg/L	13,000	15,000	5,300	1,500	3,300	2,700	27,000	19,000	2,900	1,600
sulfate	600	mg/L	1,600	2,300	2,300	3,100	1,900	2,200	2,400	1,600	1,900	1,700
fluoride	1.6	mg/L	<10	<1.0	<1.0	2.8	<0.50	<0.50	<0.50	4.4	<0.50	<0.50
Nitrogen, Nitrite as N	NE	mg/L	19	20	<10	<0.50	<2.0	<2.0	<20	<20	<2.0	<0.50
Nitrogen, Nitrate as N	NE	mg/L	<10	21	1.0	3.0	3.1	3.5	<20	<20	5.8	2.1
phosphorus, orthophosphate (As P)	NE	mg/L	<50	<5.0	<5.0	<10	<2.5	<10	<2.5	<2.5	<2.5	<2.5
USEPA Method 6010B: Dissolved Metals												
Calcium	NE	mg/L	2,500	2,100	1,100	580	1,100	600	2,800	3,400	960	720
Magnesium	NE	mg/L	390	750	170	200	190	82	400	440	160	130
Potassium	NE	mg/L	27	25	16	9.0	14	9.1	75	37	12	9.5
Sodium	NE	mg/L	6,600	7,800	3,500	1,800	1,600	2,300	18,000	11,000	1,900	1,400
Standard Method 2320B: Alkalinity												
bicarbonate (As CaCO3)	NE	mg/L	137.8	153.9	200.8	NT	NT	NT	NT	NT	NT	NT
carbonate (As CaCO3)	NE	mg/L	<2.000	<2.000	<2.000	NT	NT	NT	NT	NT	NT	NT
total alkalinity	NE	mg/L	137.8	153.9	200.8	NT	NT	NT	NT	NT	NT	NT

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS**

**SALTY DOG WATER GATHERING SYSTEM
SAN JUAN COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY**

Analyte	NMWQCC Standard	Unit	MW03	MW05	MW06	MW08	MW09	MW10	MW12	MW13	MW14	MW15
			12-Sep	12-Sep	12-Sep	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct	24-Oct
Standard Method 2510B: Specefic Conductance												
conductivity	NE	µmhos/c	45,000	54,000	22,000	NT	NT	NT	NT	NT	NT	NT
USEPA Method SM2540C Modified: Total Dissolved Solids												
total dissolved solids	1,000	mg/L	30,000	34,000	13,600	7,700	8,410	8,040	57,000	40,400	8,860	6,370
USEPA Method SM4500-H+B/9040C: PH												
pH	6-9	pH units	7.41	7.25	7.49	7.76	7.35	7.24	7.34	7.17	7.29	7.45

Notes:**BOLD** - indicates concentration exceeds the NMWQCC standard

µg/L - micrograms per liter

µmhos/c - micro ohms per centimeter

mg/L - milligrams per liter

NE - not established

NMWQCC - New Mexico Water Quality Control Commission

NT - not tested

USEPA - United States Environmental Protection Agency

APPENDIX A: LTE BORING LOGS



			
BORING LOG/MONITORING WELL COMPLETION DIAGRAM			
Boring/Well Number: MWD1		Project: Salty Dog	
Date: 8 30 19		Project Number: 017819014	
Logged By:		Drilled By: Enviro-Drill	
Elevation: 5,258'	Detector: PID/Quantab Chloride strips	Drilling Method: Hollow Stem Auger	Sampling Method: Split Spoon 24"
Gravel Pack: NA	Seal: Hydrated Bentonite Chips	Grout: NA	
Casing Type: NA	Diameter: Length:	Hole Diameter: 8"	Depth to Liquid: —
Screen Type: NA	Slot: Diameter: Length:	Total Depth: 12'	Depth to Water: —

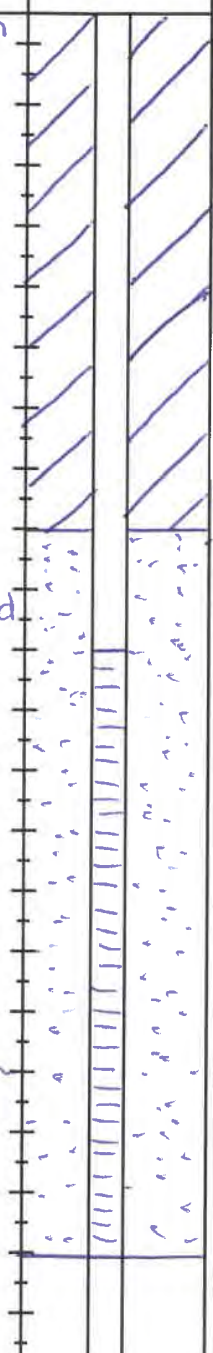
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0				Brown fine to medium silty sand.	
	Dry	1.9	No		1	1		Sm	CI = <2840 ppm	
					2					
	Dry	2.5	No		3	2		Sm	SAA CI = <2840 ppm	
					4					
	Dry	1.3	No		5	3		Sm	SAA CI = <2840 ppm	
					6					
	Dry	0.8	No		7	4		Sm	SAA CI = <2840 ppm	
					8					
	Dry	1.0	No		9	5		Sm	SAA CI = <2840 ppm	
					10					
	Dry	1.4	No		11	6			SAA CI = <2840 ppm	
					12					
					13				TD = 12', stopped due to clean samples.	
					14					
					15					

								BORING LOG/MONITORING WELL COMPLETION DIAGRAM											
												Boring/Well Number: <u>MW02</u>				Project: <u>Salty Dog</u>			
												Date: <u>8.29.19</u>				Project Number: <u>017819014</u>			
												Logged By: <u>CM</u>				Drilled By: <u>Enviro-Drill</u>			
Elevation: <u>5,258'</u>		Detector: <u>PID/Quantab</u> <u>chloride strips</u>		Drilling Method: <u>Hollow Stem Auger</u>				Sampling Method: <u>Split Spoon 24"</u>											
Gravel Pack: <u>NA</u>				Seal: <u>Hydrated Bentonite Chips</u>				Grout: <u>NA</u>											
Casing Type: <u>NA</u>				Diameter: _____ Length: _____				Hole Diameter: <u>8"</u>		Depth to Liquid: _____									
Screen Type: <u>NA</u>				Slot: _____ Diameter: _____ Length: _____				Total Depth: <u>24'</u>		Depth to Water: _____									
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks		Well Completion								
	<u>Dry</u>	<u>3.3</u>	<u>No</u>		<u>0</u>			<u>SP-SM</u>	<u>Dark brown, poorly graded sand with silt and gravel</u>										
					<u>1</u>	<u>1</u>			<u>CI = 1020 ppm</u>										
					<u>2</u>														
	<u>Dry</u>	<u>9.1</u>	<u>No</u>	<u>MW02 2'-4'</u>	<u>3</u>	<u>2</u>		<u>SP-SM</u>	<u>SAA</u>										
					<u>4</u>				<u>CI = 1370 ppm</u>										
	<u>Dry</u>	<u>1.0</u>	<u>No</u>		<u>5</u>	<u>3</u>		<u>SP-SM</u>	<u>SAA</u>										
					<u>6</u>				<u>CI = 1020</u>										
	<u>Dry</u>	<u>3.7</u>	<u>No</u>		<u>7</u>	<u>4</u>		<u>SP-SM</u>	<u>SAA</u>										
					<u>8</u>				<u>CI = 910 ppm</u>										
	<u>Dry</u>	<u>1.5</u>	<u>No</u>		<u>9</u>	<u>5</u>		<u>SP-SM</u>	<u>SAA</u>										
					<u>10</u>				<u>CI = 910 ppm</u>										
	<u>Dry</u>	<u>3.1</u>	<u>No</u>		<u>11</u>	<u>6</u>		<u>SP-SM</u>	<u>SAA</u>										
					<u>12</u>				<u>CI = 820 ppm</u>										
	<u>Dry</u>	<u>2.8</u>	<u>No</u>		<u>13</u>	<u>7</u>		<u>SP-SM</u>	<u>SAA</u>										
					<u>14</u>				<u>CI = 910 ppm</u>										
					<u>15</u>														

										Boring/Well # <u>mw02</u> Project: <u>Salty Dog</u> Project # <u>017819014</u> Date <u>8-29-19</u>	
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion	
	Dry	1.4	No		15	8		SP-Sm	SAA Cl = 820ppm		
					16						
	Dry	4.8	No		17	9		SP-Sm	SAA Cl = 640ppm		
					18						
	Dry	3.1	No		19	10		SP-Sm	SAA Cl = 1500ppm		
					20						
	Dry	2.4	No		21	11		SP-Sm	SAA Cl = 820ppm		
					22						
	Dry	1.9	No		23	12		SP-Sm	SAA Cl = 1020ppm		
					24						
					25				TD = 24'		
					26				Hit refusal, cobbles.		
					27						
					28						
					29						
					30						
					31						
					32						
					33						
					34						
					35						
					36						
					37						

			
BORING LOG/MONITORING WELL COMPLETION DIAGRAM			
Boring/Well Number: MW03		Project: Salty Dog	
Date: 8.29.19		Project Number: 017819014	
Logged By: cm		Drilled By: Enviro-Drill	
Elevation: 5,258'	Detector: PID/Quantab Chloride strips	Drilling Method: Hollow Stem Auger	Sampling Method: Split Spoon 24"
Gravel Pack: 10-20 Silica Sand 23'-35'		Seal: Hydrated Bentonite Chips	Grout: Bentonite-Cement Slurry
Casing Type: Schedule 40 PVC 0'-25'	Diameter: 2"	Length: 25'	Hole Diameter: 8"
Screen Type: Schedule 40 PVC 0.010" 25'-35'	Diameter: 2"	Length: 10'	Total Depth: 35'
Depth to Liquid: 32'			Depth to Water: 32'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
					0					
	Dry	1.5	No		1	1		Sm	Brown fine silty sand with gravel Cl = 430ppm	
					2					
	Dry	2.0	No		3	2		Sm	SAA Cl = 430ppm	
					4					
	Dry	3.7	No		5	3		Sm	SAA Cl = 430ppm	
					6					
	Dry	4.4	No		7	4		Sm	Brown fine silty sand. Cl = 430ppm	
					8					
	Dry	4.7	No		9	5		Sm	SAA Cl = 430ppm	
					10					
	Dry	2.4	No		11	6		Sm	SAA Cl = 430ppm	
					12					
	Dry	-	-		13	7			No recovery, cobbles	
					14					
					15					

										Boring/Well #	MW03
										Project:	Salty Dog
										Project #	017819014
										Date	8-29-19
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion	
	Dry	7.6	No	50mm 91-14	15	8		SM	Brown fine silty sand with gravel Cl = 300ppm		
					16			SM			
	Dry	6.9	No		17	9		SM	Brown fine silty sand Cl = <30ppm		
					18						
	Dry	5.7	No		19	10		SM	SFA Cl = <30ppm		
					20						
	Dry	9.8	No		21	11		SM	Brown fine silty sand Cl = <30ppm		
					22						
	Dry	11.1	No		23	12		SM	Brown, orange fine silty sand Cl = <30ppm		
					24						
	Dry	7.2	No		25	13		SW-SM	Black, brown well graded sand with silt and gravel Cl = <30ppm		
					26						
	Dry	2.7	No	50mm 88-28	27	14		SW-SM	SFA Cl = <30ppm		
					28						
	moist	—	No		29	15			No recovery		
					30						
	Wet	1.9	No		31	16		SW-SM	Dark brown silt Cl = <30ppm		
					32						
	Wet	4	No		33	17		SW-SM	Dark brown silty sand Cl = 910ppm		
					34						
	Wet	2.6	No		35	18			SFA Cl = 640ppm		
					36				TD = 35' Gwe 32'		
					37						



= Sand



= screen



= Bentonite-Cement Slurry



= casing

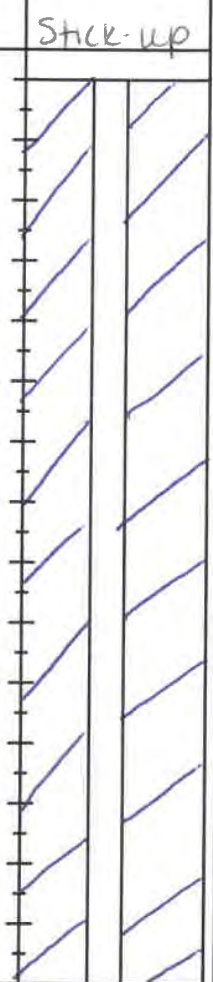
~~~~~ = Ground water

|                                                                                  |                                              |                                                                                    |                                           |
|----------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------|
|  |                                              |  |                                           |
|                                                                                  |                                              |                                                                                    |                                           |
| <b>BORING LOG/MONITORING WELL COMPLETION DIAGRAM</b>                             |                                              |                                                                                    |                                           |
| Boring/Well Number: <u>mw04</u>                                                  |                                              | Project: <u>Salty Dog</u>                                                          |                                           |
| Date: <u>8.30.19</u>                                                             |                                              | Project Number: <u>017819014</u>                                                   |                                           |
| Logged By: <u>CM</u>                                                             |                                              | Drilled By: <u>Enviro-Drill</u>                                                    |                                           |
| Elevation: <u>5,258'</u>                                                         | Detector: <u>PID/Quantab Chloride Strips</u> |                                                                                    | Drilling Method: <u>Hollow Stem Auger</u> |
| Gravel Pack: <u>NA</u>                                                           | Seal: <u>Hydrated Bentonite Chips</u>        |                                                                                    | Sampling Method: <u>Split Spoon</u>       |
| Casing Type: <u>NA</u>                                                           | Diameter: _____                              | Length: _____                                                                      | Hole Diameter: <u>8"</u>                  |
| Screen Type: <u>NA</u>                                                           | Slot: _____                                  | Diameter: _____                                                                    | Length: _____                             |
|                                                                                  |                                              | Total Depth: <u>21'</u>                                                            | Depth to Liquid: _____                    |
|                                                                                  |                                              | Depth to Water: _____                                                              |                                           |

| Penetration Resistance | Moisture Content | Vapor (ppm) | HC Staining? | Sample #   | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks                    | Well Completion |
|------------------------|------------------|-------------|--------------|------------|------------------|------------|----------|----------------|--------------------------------------|-----------------|
|                        |                  |             |              |            | 0                |            |          | SM             | Brown very fine silty sand w/ gravel |                 |
|                        | Dry              | 0.5         | No           |            | 1                | 1          |          | SM             | CI = <2840ppm                        |                 |
|                        |                  |             |              |            | 2                |            |          |                |                                      |                 |
|                        | Dry              | 0.4         | No           | mw04 2'-4" | 3                | 2          |          | SM             | SAA CI = <2840ppm                    |                 |
|                        |                  |             |              |            | 4                |            |          |                |                                      |                 |
|                        | Dry              | 0.3         | No           |            | 5                | 3          |          | SM             | Brown silty sand                     |                 |
|                        |                  |             |              |            | 6                |            |          |                | CI = <2840ppm                        |                 |
|                        | Dry              | 0.6         | No           |            | 7                | 4          |          | SM             | SAA CI = <2840ppm                    |                 |
|                        |                  |             |              |            | 8                |            |          |                |                                      |                 |
|                        | Dry              | 0.6         | No           |            | 9                | 5          |          | SM             | Brown silty sand                     |                 |
|                        |                  |             |              |            | 10               |            |          |                | CI = <2840ppm                        |                 |
|                        | Dry              | 0.4         | No           |            | 11               | 6          |          | SM             | SAA CI = <2840ppm                    |                 |
|                        |                  |             |              |            | 12               |            |          |                |                                      |                 |
|                        | Dry              | 0.6         | No           |            | 13               | 7          |          | SM             | SAA CI = <2840ppm                    |                 |
|                        |                  |             |              |            | 14               |            |          |                |                                      |                 |
|                        |                  |             |              |            | 15               |            |          |                |                                      |                 |

|  |                  |             |          |              |                  |            |          |                |                                       | Boring/Well # <u>mw04</u>  |  |
|-----------------------------------------------------------------------------------|------------------|-------------|----------|--------------|------------------|------------|----------|----------------|---------------------------------------|----------------------------|--|
|                                                                                   |                  |             |          |              |                  |            |          |                |                                       | Project: <u>Salt Dog</u>   |  |
|                                                                                   |                  |             |          |              |                  |            |          |                |                                       | Project # <u>017819014</u> |  |
|                                                                                   |                  |             |          |              |                  |            |          |                |                                       | Date <u>8.30.19</u>        |  |
| Penetration Resistance                                                            | Moisture Content | Vapor (ppm) | Staining | Sample #     | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks                     | Well Completion            |  |
|                                                                                   | Dry              | 1.1         | No       | 5            | 15               | 8          |          |                | Brown silty sand with gravel          |                            |  |
|                                                                                   |                  |             |          |              | 16               |            |          |                | Cl = 2840ppm                          |                            |  |
|                                                                                   | Dry              | 0.6         | No       | mw04 16'-18' | 17               | 9          |          |                | SAA Cl = 2840ppm                      |                            |  |
|                                                                                   |                  |             |          |              | 18               |            |          |                |                                       |                            |  |
|                                                                                   | Dry              | 1.2         | No       | mw04 18'-20' | 19               | 10         |          |                | SAA Cl = 2840ppm                      |                            |  |
|                                                                                   |                  |             |          |              | 20               |            |          |                |                                       |                            |  |
|                                                                                   | Dry              | -           |          |              | 21               | 11         |          |                | No Recovery, cobbles                  |                            |  |
|                                                                                   |                  |             |          |              | 22               |            |          |                | TD = 21', Hit refusal due to cobbles. |                            |  |
|                                                                                   |                  |             |          |              | 23               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 24               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 25               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 26               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 27               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 28               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 29               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 30               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 31               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 32               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 33               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 34               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 35               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 36               |            |          |                |                                       |                            |  |
|                                                                                   |                  |             |          |              | 37               |            |          |                |                                       |                            |  |

|                                                                                  |                                            |                                                                                    |                                              |          |                  |            |          |                |                               |                                                                                      |
|----------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------|----------|------------------|------------|----------|----------------|-------------------------------|--------------------------------------------------------------------------------------|
|  |                                            |  |                                              |          |                  |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          |                  |            |          |                |                               |                                                                                      |
| <b>BORING LOG/MONITORING WELL COMPLETION DIAGRAM</b>                             |                                            |                                                                                    |                                              |          |                  |            |          |                |                               |                                                                                      |
| Boring/Well Number: <b>MW05</b>                                                  |                                            | Project: <b>Salty Dog</b>                                                          |                                              |          |                  |            |          |                |                               |                                                                                      |
| Date: <b>8-28-19</b>                                                             |                                            | Project Number: <b>017819014</b>                                                   |                                              |          |                  |            |          |                |                               |                                                                                      |
| Logged By: <b>cm</b>                                                             |                                            | Drilled By: <b>Enviro-Drill</b>                                                    |                                              |          |                  |            |          |                |                               |                                                                                      |
| Elevation: <b>5,258'</b>                                                         | Detector: <b>PID/Quantab chloride tabs</b> | Drilling Method: <b>Hollow Stem Auger</b>                                          | Sampling Method: <b>Split Spoon</b>          |          |                  |            |          |                |                               |                                                                                      |
| Gravel Pack: <b>10-20 Silica Sand</b>                                            | <b>23'-35'</b>                             | Seal: <b>Hydrated Bentonite Chips</b>                                              | Grout: <b>Bentonite-Cement Slurry 0'-23'</b> |          |                  |            |          |                |                               |                                                                                      |
| Casing Type: <b>Schedule 40 PVC</b>                                              | <b>0'-25'</b>                              | Diameter: <b>2"</b>                                                                | Length: <b>25'</b>                           |          |                  |            |          |                |                               |                                                                                      |
| Screen Type: <b>Schedule 40 PVC</b>                                              | Slot: <b>0.010"</b>                        | Diameter: <b>2"</b>                                                                | Length: <b>10'</b>                           |          |                  |            |          |                |                               |                                                                                      |
|                                                                                  | <b>25'-35'</b>                             |                                                                                    | <b>35'</b>                                   |          |                  |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    | <b>29'</b>                                   |          |                  |            |          |                |                               |                                                                                      |
| Penetration Resistance                                                           | Moisture Content                           | Vapor (ppm)                                                                        | HC Staining?                                 | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks             | Well Completion                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 0                |            |          |                | Brown silty sand              |  |
|                                                                                  |                                            |                                                                                    |                                              |          | 1                |            |          |                | Cl = <30ppm                   |                                                                                      |
|                                                                                  | Dry                                        | 3.4                                                                                | No                                           |          | 2                | 1          |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 3                |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 4                |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 5                |            |          |                |                               |                                                                                      |
|                                                                                  | Dry                                        | —                                                                                  | No                                           |          | 6                |            |          |                | SAA                           |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 7                | 2          |          |                | Not enough recovery to sample |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 8                |            |          |                | Cl = 490ppm                   |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 9                |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 10               |            |          |                |                               |                                                                                      |
|                                                                                  | Dry                                        | 5.3                                                                                | No                                           |          | 11               |            |          |                | Brown silty sand with gravel  |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 12               | 3          |          |                | Cl = <30ppm                   |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 13               |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 14               |            |          |                |                               |                                                                                      |
|                                                                                  |                                            |                                                                                    |                                              |          | 15               |            |          |                |                               |                                                                                      |

|  |                  |             |          |              |                  |            |          |                |                                     | Boring/Well # <u>MW05</u><br>Project: <u>Salty Dog</u><br>Project # <u>01781914</u><br>Date <u>8-28-19</u> |  |
|----------------------------------------------------------------------------------|------------------|-------------|----------|--------------|------------------|------------|----------|----------------|-------------------------------------|------------------------------------------------------------------------------------------------------------|--|
| Penetration Resistance                                                           | Moisture Content | Vapor (ppm) | Staining | Sample #     | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks                   | Well Completion                                                                                            |  |
|                                                                                  |                  |             |          |              | 15               |            |          | SM             | Brown silty sand                    |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 16               |            |          |                | Cl = 230ppm                         |                                                                                                            |  |
|                                                                                  | moist            | 3.9         | No       |              | 17               | 4          |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 18               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 19               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 20               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 21               |            |          | SM             | Brown silty sand with gravel.       |                                                                                                            |  |
|                                                                                  | moist            | 8.8         | No       |              | 22               | 5          |          |                | Cl = 230ppm                         |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 23               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 24               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 25               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 26               |            |          | SM             | Brown silty sand                    |                                                                                                            |  |
|                                                                                  | Wet              | 5           | No       | MW05 25'-30' | 27               | 6          |          |                | Cl = 360ppm                         |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 28               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 29               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 30               |            |          |                | GW @ 29'                            |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 31               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 32               |            |          |                | Gray silt, compact.                 |                                                                                                            |  |
|                                                                                  | Dry              | 1.9         | No       | MW05 30'-35' | 33               | 7          |          |                | Cl = 230ppm                         |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 34               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 35               |            |          |                |                                     |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 36               |            |          |                | TD = 35', stopped after hitting GW. |                                                                                                            |  |
|                                                                                  |                  |             |          |              | 37               |            |          |                |                                     |                                                                                                            |  |

 = Sand   
  = Screen   
  = Casing   
  = Bentonite-Cement Slurry  
 = Ground water

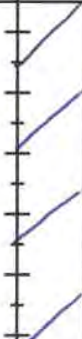
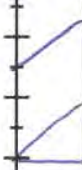


Advancing Opportunity

## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

|                     |                           |                  |                          |
|---------------------|---------------------------|------------------|--------------------------|
| Boring/Well Number: | MW06                      | Project:         | Salty Dog                |
| Date:               | 8.28.19                   | Project Number:  | 017819014                |
| Logged By:          | cm                        | Drilled By:      | Enviro-Drill             |
| Elevation:          | 5,258'                    | Drilling Method: | Hollow Stem Auger        |
| Detector:           | PID/quantab chloride tabs | Sampling Method: | Split Spoon              |
| Gravel Pack:        | 10-20 Silica Sand         | Seal:            | Hydrated Bentonite Chips |
| Casing Type:        | Schedule 40 PVC           | Grout:           | Bentonite-Cement Slurry  |
| Screen Type:        | Schedule 40 PVC           | Hole Diameter:   | 8"                       |
| Slot:               | 0.010"                    | Depth to Liquid: | 24"                      |
| Diameter:           | 2"                        | Length:          | 25'                      |
| Length:             | 10'                       | Total Depth:     | 35'                      |
| 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 |
|------------------------|------------------|-------------|--------------|----------|------------------|------------|----------|----------------|-----------------------------------|-----------------|
|                        |                  |             |              |          | 0                |            |          |                | Brown fine silty sand             | Stick-up        |
|                        |                  |             |              |          | 1                |            |          |                | Cl = <30ppm                       |                 |
|                        | Dry              | 3.6         | No           |          | 2                | 1          |          | Sm             |                                   |                 |
|                        |                  |             |              |          | 3                |            |          |                |                                   |                 |
|                        |                  |             |              |          | 4                |            |          |                |                                   |                 |
|                        |                  |             |              |          | 5                |            |          |                |                                   |                 |
|                        |                  |             |              |          | 6                |            |          |                | Brown fine silty sand with gravel |                 |
|                        | moist            | 30          | No           |          | 7                | 2          |          | Sm             | Cl = 360ppm                       |                 |
|                        |                  |             |              |          | 8                |            |          |                |                                   |                 |
|                        |                  |             |              |          | 9                |            |          |                |                                   |                 |
|                        |                  |             |              |          | 10               |            |          |                |                                   |                 |
|                        |                  |             |              |          | 11               |            |          |                | SAA                               |                 |
|                        | Dry              | 2.4         | No           |          | 12               | 3          |          | sm             | Cl = <30ppm                       |                 |
|                        |                  |             |              |          | 13               |            |          |                |                                   |                 |
|                        |                  |             |              |          | 14               |            |          |                |                                   |                 |
|                        |                  |             |              |          | 15               |            |          |                |                                   |                 |

|  |                  |             |          |          |                  |            |          | Boring/Well # <u>MW06</u><br>Project: <u>Salty Dog</u><br>Project # <u>017819014</u><br>Date <u>8-28-19</u> |                                                              |                                                                                       |
|----------------------------------------------------------------------------------|------------------|-------------|----------|----------|------------------|------------|----------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Penetration Resistance                                                           | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type                                                                                              | Lithology/Remarks                                            | Well Completion                                                                       |
|                                                                                  |                  |             |          |          | 15               |            |          |                                                                                                             | SAA<br>Cl = 300ppm<br>SM                                     |    |
|                                                                                  |                  |             |          |          | 16               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  | moist            | 1.3         | No       |          | 17               | 4          |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 18               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 19               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 20               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 21               |            |          |                                                                                                             | SAA<br>Cl = 230ppm<br>SM                                     |   |
|                                                                                  | Dry              | 1.7         | No       |          | 22               | 5          |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 23               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 24               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 25               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 26               |            |          |                                                                                                             | Brown silty sand<br>Cl = 1370ppm<br>SM                       |  |
|                                                                                  |                  |             |          |          | 27               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  | Wet              | 1.9         | No       |          | 28               | 6          |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 29               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 30               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 31               |            |          |                                                                                                             | Gray silt. compact<br>Cl = 1370ppm<br>TD = 35' with GW @ 29' |  |
|                                                                                  |                  |             |          |          | 32               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  | Dry              | 0.8         | No       |          | 33               | 7          |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 34               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 35               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 36               |            |          |                                                                                                             |                                                              |                                                                                       |
|                                                                                  |                  |             |          |          | 37               |            |          |                                                                                                             |                                                              |                                                                                       |

 = Sand  
  = Screen  
  = Casing  
  = Bentonite Cement Slurry  
 ~~~~~ = Ground water



Advancing Opportunity

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW07Project: Salty DogDate: 8-29-19Project Number: 017819014Logged By: CMDrilled By: Enviro-DrillElevation: 5,258'Detector: PID/quantab chloride tabsDrilling Method: Hollow Stem AugerSampling Method: Split Spoon 24"Gravel Pack: NASeal: Hydrated Bentonite ChipsGrout: BentoCasing Type: NADiameter: Length: Hole Diameter: 8"Depth to Liquid: —Screen Type: NA

Slot:

Diameter: Length: Total Depth: 24'Depth to Water: —

| Penetration Resistance | Moisture Content | Vapor (ppm) | HC Staining? | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
|------------------------|------------------|-------------|--------------|------------|------------------|------------|----------|----------------|------------------------------------|-----------------|
| | Dry | 1.0 | No | | 0 | | | Sm | Dark brown silty sand | |
| | | | | | 1 | 1 | | | Cl = 1500ppm | |
| | | | | | 2 | | | | | |
| | Dry | 5.0 | No | MW07 2'-4' | 3 | 2 | | Sm | SAA Cl = 2100ppm | |
| | | | | | 4 | | | | | |
| | Dry | 1.8 | No | | 5 | 3 | | Sm | SAA Cl = 1020ppm | |
| | | | | | 6 | | | | | |
| | Dry | 3.4 | No | | 7 | 4 | | Sm | SAA Cl = 640ppm | |
| | | | | | 8 | | | | | |
| | Dry | 4.6 | No | | 9 | 5 | | Sm | SAA Cl = 1130ppm | |
| | | | | | 10 | | | | | |
| | Dry | 2.0 | No | | 11 | 6 | | Sm | SAA Cl = 820ppm | |
| | | | | | 12 | | | | | |
| | Dry | 1.9 | No | | 13 | 7 | | Sm | Dark brown silty sand with gravel. | |
| | | | | | 14 | | | | Cl = 1020ppm | |
| | | | | | 15 | | | | | |

|  | | | | | | | | | | Boring/Well # | mW07 | |
|---|------------------|-------------|----------|------------|------------------|------------|----------|----------------|--|-----------------|-----------|--|
| | | | | | | | | | | Project: | Salty Dog | |
| | | | | | | | | | | Project # | 017819014 | |
| | | | | | | | | | | Date | 08.29.19 | |
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | | |
| | Dry | 0.8 | No | | 15 | 8 | | SM | SAT CI = 1020 ppm | | | |
| | | | | | 16 | | | | | | | |
| | Dry | 1.0 | No | | 17 | 9 | | SM | SAT CI = 1130 ppm | | | |
| | | | | | 18 | | | | | | | |
| | Dry | 4.5 | No | | 19 | 10 | | SM | SAT CI = 1250 ppm | | | |
| | | | | | 20 | | | | | | | |
| | Dry | 4.3 | No | | 21 | 11 | | SM | SAT CI = 1370 ppm | | | |
| | | | | | 22 | | | | | | | |
| | Dry | 50 | No | ite 28-24' | 23 | 12 | | SP | Dark brown poorly graded sand. CI = 1500 | | | |
| | | | | | 24 | | | | | | | |
| | | | | | 25 | | | | | | | |
| | | | | | 26 | | | | TD = 24', Hit refusal to cobbles. | | | |
| | | | | | 27 | | | | | | | |
| | | | | | 28 | | | | | | | |
| | | | | | 29 | | | | | | | |
| | | | | | 30 | | | | | | | |
| | | | | | 31 | | | | | | | |
| | | | | | 32 | | | | | | | |
| | | | | | 33 | | | | | | | |
| | | | | | 34 | | | | | | | |
| | | | | | 35 | | | | | | | |
| | | | | | 36 | | | | | | | |
| | | | | | 37 | | | | | | | |



BORING LOG/MONITORING WELL COMPLETION DIAGRAM

| | |
|--|---------------------------------------|
| Boring/Well Number:
MW08 | Project:
Salty Dog |
| Date:
10-20-19 | Project Number:
017819014 |
| Logged By:
JA | Drilled By:
Cascade |
| Drilling Method:
Sonic | Sampling Method:
Continuous |
| Seal:
Hydrated Bentonite Chips | Grout:
17-0 |
| Diameter:
2" | Length:
15'-0" |
| Hole Diameter:
6" | Depth to Liquid:
35 |
| Diameter:
2" | Length:
10' 25-15' |
| Total Depth:
35 | Depth to Water:
23 |

| | |
|--|--------------------------------------|
| Elevation:
5,258' | Detector:
PID/Quantab |
| Gravel Pack:
10/20 silica sand 25-13 | Casing Type:
Sched. 40 PVC |
| Screen Type:
Sched. 40 slotted 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 |
|------------------------|------------------|-------------|--------------|--------------------|------------------|------------|----------|----------------|----------------------------|-----------------|
| | | | | | 0 | | | | | Stick up |
| | dry | 0.1 | NO | MW08 @ 0-2.5' 1447 | 1 | 0.5 | | SM | brown silty sand w/ gravel | |
| | | | | | 2 | | | | Cl = <128 ppm (ND) | |
| | | | | | 3 | | | | | |
| | dry | 0.2 | NO | MW08 @ 2.5-5' 1449 | 4 | | | SM | SAA | |
| | | | | | 5 | | | | Cl = <128 ppm (ND) | |
| | | | | | 6 | | | | | |
| | dry | 0.5 | NO | MW08 @ 5-7.5' 1451 | 7 | 5-10 | | | SAA | |
| | | | | | 8 | | | | Cl = <128 ppm (ND) | |
| | | | | | 9 | | | | SAA, moist | |
| | moist | 0.0 | NO | | 10 | | | | Cl = <128 ppm (ND) | |
| | | | | | 11 | | | | NR | |
| | | | | | 12 | | | | | |
| | | | | | 13 | | | | | |
| | moist | 0.7 | NO | | 14 | | | | SAA | |
| | | | | | 15 | | | | Cl = <128 ppm (ND) | |

|  | | | | | | | | Boring/Well # | <p>MW08</p> | |
|---|------------------|-------------|----------|----------|------------------|------------|----------|----------------|--|-----------------|
| | | | | | | | | Project: | <p>01789014</p> | |
| | | | | | | | | Project # | <p>Salty Dog</p> | |
| | | | | | | | | Date | <p>10-20-17</p> | |
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
| | M | 0.1 | NO | | 15 | 15-20 | | | SAA | |
| | | | | | 16 | | | | Cl = <128ppm (ND) | |
| | | | | | 17 | | | | | |
| | M | 0.1 | NO | | 18 | | | SM | SAA | |
| | | | | | 19 | | | | Cl = <128ppm (ND) | |
| | | | | | 20 | | | | | |
| | M | 0.4 | NO | | 21 | 20-25 | | | Cl = <128ppm (ND) GW encountered @ 23' bgs | |
| | | | | | 22 | | | | | |
| | SAT | 0.3 | NO | | 23 | | | CL | brown lean clay w/ sand | |
| | | | | | 24 | | | SP-SM | poorly graded sand w/ silt SATURATED | |
| | | | | | 25 | | | | Cl = <128ppm (0.9) | |
| | M | 0.3 | NO | | 26 | | | | brown lean clay w sand | |
| | | | | | 27 | 25-30 | | CL | | |
| | M | 0.4 | NO | | 28 | | | SM | silty sand w/ gravel | |
| | | | | | 29 | | | | | |
| | | | | | 30 | | | | | |
| | | | | | 31 | | | | | |
| | | | | | 32 | | | | TD @ 30 backfill to 25' to set well | |
| | | | | | 33 | | | | | |
| | | | | | 34 | | | | | |
| | | | | | 35 | | | | | |
| | | | | | 36 | | | | | |
| | | | | | 37 | | | | | |

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|---|------------------------------|--|------------------------------------|---------------------|------------------|------------|----------|----------------|----------------------------|-----------------|
| | | BORING LOG/MONITORING WELL COMPLETION DIAGRAM | | | | | | | | |
| Boring/Well Number: <u>MW09</u> | | Project: <u>Salty Dog</u> | | | | | | | | |
| Date: <u>10-00-19</u> | | Project Number: <u>017819014</u> | | | | | | | | |
| Logged By: <u>JA</u> | | Drilled By: <u>Cascade</u> | | | | | | | | |
| Elevation: <u>5,258'</u> | Detector: <u>PIP/Quantab</u> | Drilling Method: <u>Sonic</u> | Sampling Method: <u>Continuous</u> | | | | | | | |
| Gravel Pack: <u>10/20 silica sand 30-17'</u> | | Seal: <u>Hydrated Bentonite Chips 10-17'</u> | Grout: <u>0-10</u> | | | | | | | |
| Casing Type: <u>SCH40 PVC</u> | Diameter: <u>2</u> | Length: <u>20</u> | Hole Diameter: <u>6"</u> | | | | | | | |
| Screen Type: <u>0.010"</u> | Diameter: <u>2</u> | Length: <u>10</u> | Total Depth: <u>30</u> | | | | | | | |
| | | Depth to Liquid: <u>22.5</u> | | | | | | | | |
| | | Depth to Water: <u>22.5</u> | | | | | | | | |
| Penetration Resistance | Moisture Content | Vapor (ppm) | HC Staining? | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
| | | | | | 0 | | | | | |
| | Dry | 0.2 | NO | | 1 | | | SM | brown silty sand w/ gravel | |
| | | | | | 2 | | | | cl = <128 ppm (ND) | |
| | | | | | 3 | 0-5 | | | | |
| | Dry | 0.2 | NO | | 4 | | | SM | SAA | |
| | | | | | 5 | | | | cl = <128 ppm (ND) | |
| | | | | | 6 | | | SM | SAA | |
| | Dry | 0.3 | NO | | 7 | | | | cl = 228 (2.1) ppm | |
| | | | | | 8 | 5-10 | | | | |
| | M | 0.2 | NO | MW09 @ 7.5-10 1722 | 9 | | | SM | SAA, moist | |
| | | | | | 10 | | | | cl = 244 (2.4) | |
| | | | | | 11 | | | SM | SAA, few gravel | Xx |
| | M | 0.2 | NO | | 12 | | | | cl = <128 (ND) | Xy |
| | | | | | 13 | 10-15 | | | | Xx |
| | M | 0.2 | NO | MW09 @ 12.5-15 1722 | 14 | | | SM | SAA | Xy |
| | | | | | 15 | | | | cl = 356 ppm (2.8) | Xy |

|  | | | | | | | | | | Boring/Well # <u>MW04</u>
Project: <u>Salty Dog</u>
Project # <u>017819014</u>
Date <u>10-20-19</u> | |
|---|------------------|-------------|----------|------------------------|------------------|------------|----------|----------------|----------------------------|--|----|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | M | 0.2 | NO | | 15 | | | | SAA | XX | XX |
| | | | | | 16 | | | | CI = 280 ppm (2.4) | XX | XX |
| | | | | | 17 | 15-20 | | SM | | XX | XX |
| | M | 0.3 | NO | | 18 | | | | SAA | XX | XX |
| | | | | | 19 | | | | CI = 184 ppm (1.8) | | |
| | | | | | 20 | | | | GW @ 22.5' | | |
| | VM | 0.2 | NO | | 21 | | | CI | lean clay w/sand | | |
| | | | | | 22 | | | | brown very moist | | |
| | | | | | 23 | | | | CI = 1128 ppm (CND) | | |
| | SAT | 0.2 | NO | MW04
275-30
1724 | 24 | | | SP-SM | poorly graded sand w/silty | | |
| | | | | | 25 | 25-30 | | | saturated | | |
| | | | | | 26 | | | | CI = 1,148 ppm (5.4) | | |
| | VM | 0.2 | NO | | 27 | | | SM | brown silty-sand | | |
| | | | | | 28 | | | | CI = 156 ppm (1.6) | | |
| | SAT/ | | NO | MW04
275-30
1726 | 29 | | | | SAA, bottom 6" | | |
| | VM | | | | 30 | | | | Saturated | | |
| | | | | | 31 | | | | CI = 212 ppm (2.0) | | |
| | | | | | 32 | | | | | | |
| | | | | | 33 | | | | TDE 30' | | |
| | | | | | 34 | | | | | | |
| | | | | | 35 | | | | | | |
| | | | | | 36 | | | | | | |
| | | | | | 37 | | | | | | |



BORING LOG/MONITORING WELL COMPLETION DIAGRAM

| | | | |
|---|---|-------------------------------|---------------------------------------|
| Boring/Well Number:
MW10 | Project:
Salty Dog | | |
| Date:
10-21-14 | Project Number:
017819014 | | |
| Logged By:
JA/SH | Drilled By:
Cascade | | |
| Elevation:
5,258' | Detector:
PID/Quantah | | Sampling Method:
Continuous |
| Gravel Pack:
10/20 Sand 40-28' | Seal:
Hydrated Bentonite Chips 28-25' | | Grout:
0-25 |
| Casing Type:
Sch. 40 PVC | Diameter:
2" | Length:
30' | Hole Diameter:
6" |
| Screen Type:
Sch. 40 PK slotted | Slot:
0.010" | Diameter:
2" | Length:
10' |
| Total Depth:
40 | | Depth to Liquid:
30 | |

| Penetration Resistance | Moisture Content | Vapor (ppm) | HC Staining? | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
|------------------------|------------------|-------------|--------------|----------|------------------|------------|----------|----------------|----------------------------|-----------------|
| | | | | | 0 | | | | brown silty sand w/ gravel | Stick-up |
| | Dry | 0.2 | NO | 1352 | 1 | | | SM | Cl = <128 ppm (0.4) | |
| | | | | | 2 | | | | | |
| | Dry | 0.3 | NO | 1350 | 3 | | | SM | SAA | |
| | | | | | 4 | | | | Cl = <128 ppm (ND) | |
| | | | | | 5 | | | | | |
| | NR | | | | 6 | | | | NR | |
| | | | | | 7 | | | | | |
| | | | | | 8 | | | | | |
| | | | | 1356 | 9 | | | SAR | 1356 SAA | |
| | | | | | 10 | | | | Cl = <128 ppm (ND) | |
| | Dry | 0.9 | NO | 1356 | 11 | | | SM | SAA | |
| | | | | | 12 | | | | Cl = 776 ppm (4.4) | |
| | Dry | 0.6 | NO | 1400 | 13 | | | | | |
| | | | | | 14 | | | | SAA | |
| | | | | | 15 | | | | Cl = <128 ppm (ND) | |

|  | | | | | | | | | | Boring/Well # <u>MW 10</u>
Project: <u>Salty Dog</u>
Project # <u>017319014</u>
Date <u>10-21-19</u> | |
|---|------------------|-------------|----------|----------|------------------|------------|----------|----------------|--|---|----|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | | | | | 15 | | | | | | |
| | Dry | 0.6 | NO | 1402 | 16 | | | SM | SAA
Cl = 128 ppm (1.0) | | |
| | | | | | 17 | 15-20 | | | | | |
| | Dry | 0.4 | NO | 1403 | 18 | | | SM | SAA
Cl = 184 ppm (1.8) | | |
| | | | | | 19 | | | | | | |
| | | | | | 20 | 20-25 | | | | | |
| | Dry | 0.4 | NO | 1404 | 21 | | | SM | SAA
Cl = 184 ppm (1.8) | | |
| | | | | | 22 | | | | | | |
| | M | 0.2 | NO | 1405 | 23 | | | SM | SAA, cobbles
Cl = 128 ppm | | |
| | | | | | 24 | | | | | | |
| | | | | | 25 | | | | | | |
| | VM | 0.4 | NO | 1406 | 26 | | | SM | SAA
Cl = 184 ppm (1.8) | XX | XX |
| | | | | | 27 | | | | GW @ 30' | XX | XX |
| | | | | | 28 | 25-30 | | | | XX | XX |
| | VM | 0.7 | NO | 1408 | 29 | | | SM | SAA, bottom 6" very moist almost SAT
Cl = 988 ppm (5.0) | XX | XX |
| | | | | | 30 | | | | | | |
| | SAT | 0.2 | NO | 1410 | 31 | | | CL | brown silt w/sand cohesive saturatd
Some gravel
Cl = 656 ppm (4.0) | | |
| | | | | | 32 | | | | | | |
| | | | | | 33 | 20-35 | | | | | |
| | Dry | 6.2 | NO | 1412 | 34 | | | CH | fat clay w/sand
Cl = 1,148 ppm (5.4) | | |
| | | | | | 35 | | | | | | |
| | | | | | 36 | | | | NR | | |
| | | | | | 37 | | | | | | |

|  | | | | | | | | | Boring/Well #
Project:
Project #
Date | |
|---|------------------|-------------|----------|----------|------------------|------------|----------|----------------|--|-----------------|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
| | | | | | 37 | | | | | |
| | | | | | 38 | | | | | |
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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

| | |
|--|---------------------------------------|
| Boring/Well Number:
<i>MW 11</i> | Project:
<i>Salty Dog</i> |
| Date:
<i>10-21-19</i> | Project Number:
<i>017819014</i> |
| Logged By:
<i>JA/SH</i> | Drilled By:
<i>Cascade</i> |
| Drilling Method:
<i>Sonic</i> | Sampling Method:
<i>Continuous</i> |
| Seal:
<i>Hydrated Bentonite Chips</i> | Grout: |
| Diameter:
<i>4</i> | Length:
<i>40</i> |
| Hole Diameter: | Depth to Liquid: |
| Diameter:
<i>4</i> | Length:
<i>40</i> |
| Total Depth:
<i>40</i> | Depth to Water:
<i>NO</i> |

Elevation: *5,258'* Detector: *PID/Quantab*

Gravel Pack: *10/20 silica*

Casing Type: *SA/SH* Slot: *2000*

Screen Type: *SA/SH* Diameter: *4* Length: *40* Total Depth: *40* Depth to Water: *NO*

| Penetration Resistance | Moisture Content | Vapor (ppm) | HC Staining? | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
|------------------------|------------------|-------------|--------------|----------|------------------|------------|--------------|----------------|----------------------------------|-----------------|
| | | | | | 0 | | | | <i>brown silty sand w/gravel</i> | |
| | <i>dry</i> | <i>0.3</i> | <i>NO</i> | | 1 | | | <i>SM</i> | <i>cl = <128ppm (NO)</i> | |
| | | | | | 2 | | | | | |
| | <i>dry</i> | <i>0.1</i> | <i>NO</i> | | 3 | | <i>0-5</i> | | | |
| | | | | | 4 | | | <i>SM</i> | <i>AA</i> | |
| | | | | | 5 | | | | <i>cl = <128ppm (0.6)</i> | |
| | <i>dry</i> | <i>0.0</i> | <i>NO</i> | | 6 | | | <i>SM</i> | <i>SAA, few gravel</i> | |
| | | | | | 7 | | | | <i>cl = <128ppm (NO)</i> | |
| | | | | | 8 | | <i>5-10</i> | | | |
| | <i>dry</i> | <i>0.1</i> | <i>NO</i> | | 9 | | | <i>SM</i> | <i>SAA, no gravel</i> | |
| | | | | | 10 | | | | <i>cl = <128ppm (0.2)</i> | |
| | <i>dry</i> | <i>0.0</i> | <i>NO</i> | | 11 | | | <i>SM</i> | <i>SAA, gravel/cobbles</i> | |
| | | | | | 12 | | | | <i>cl = <128ppm (NO)</i> | |
| | | | | | 13 | | <i>10-15</i> | | | |
| | <i>dry</i> | <i>0.1</i> | <i>NO</i> | | 14 | | | <i>SM</i> | <i>SAA</i> | |
| | | | | | 15 | | | | <i>cl = <128ppm (0.4)</i> | |

|  | | | | | | | | | | Boring/Well # <u>MW11</u>
Project: <u>Salty Dog</u>
Project # <u>017819014</u>
Date <u>10-21-19</u> | |
|---|------------------|-------------|----------|---------------------|------------------|------------|----------|----------------|---------------------------------------|--|--|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | | | | | 15 | | | SM | SAA | | |
| | dry | 0.3 | NO | | 16 | | | SM | Cl = <128ppm (0.6) | | |
| | | | | | 17 | | | | | | |
| | | | | | 18 | 15-20 | | SM | SAA | | |
| | dry | 0.8 | NO | | 19 | | | SM | Cl = <128ppm (0.2) | | |
| | | | | | 20 | | | | | | |
| | dry | 1.1 | NO | | 21 | | | CH | grey/brown sandy clay (fat) claystone | | |
| | | | | | 22 | | | | high plas, high cohesion | | |
| | | | | | 23 | 20-25 | | | | | |
| | dry | 1.1 | NO | | 24 | | | CH | SAA | | |
| | | | | | 25 | | | | Cl = <128ppm (ND) | | |
| | | | | | 26 | | | CH | SAA | | |
| | dry | 0.5 | NO | | 27 | | | CH | Cl = <128ppm (0.6) | | |
| | | | | | 28 | 25-30 | | | | | |
| | dry | 1.2 | NO | | 29 | | | CH | SAA | | |
| | | | | | 30 | | | | Cl = <128ppm (0.6) | | |
| | | | | | 31 | | | | SAA | | |
| | dry | 1.6 | NO | | 32 | | | | | | |
| | | | | | 33 | 30-35 | | SM | grey/brown sandstone w/ some silt | | |
| | dry | 1.6 | NO | MW11 @ 32.5-35 1417 | 34 | | | SM | Cl = <128 (0.8) | | |
| | | | | | 35 | | | | SAA | | |
| | dry | 0.4 | NO | | 36 | | | | Cl = <128 (0.4) | | |
| | | | | | 37 | | | | | | |

|  | | | | | | | | | Boring/Well # | MW11 | |
|---|------------------|-------------|----------|---------------------|------------------|------------|----------|----------------|---|-------------------|--|
| | | | | | | | | | Project: | Sgt. H. P. O'Neil | |
| | | | | | | | | | Project # | 017614012 | |
| | | | | | | | | | Date | 10-21-19 | |
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | | | | | 37 | | | | | | |
| | | | | | 38 | 35-40 | | SM | SAA | | |
| | DFY | 0.7 | NO | MW11 @ 37.5-40 1400 | 39 | | | | cl = <128ppm (0.6) | | |
| | | | | | 40 | | | | | | |
| | | | | | 41 | | | | TDE 40' | | |
| | | | | | 42 | | | | No well set due to lack of H ₂ O | | |
| | | | | | 43 | | | | | | |
| | | | | | 44 | | | | | | |
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| | | BORING LOG/MONITORING WELL COMPLETION DIAGRAM | |
| Boring/Well Number: MW-12 | | Project: Salty Dog | |
| Date: 10-21-19 | | Project Number: 017819014 | |
| Logged By: JA/SH | | Drilled By: Cascade | |
| Elevation: 5,258' | | Detector: PID/Quantab | |
| Gravel Pack: 10/20 Silica Sand 40-27 | | Drilling Method: Sonic | |
| Casing Type: Sch. 40 PVC | | Seal: Hydrated Bentonite Chips 27-25 | |
| Screen Type: Sch. 40 PVC slotted | | Slot: 0.010" | |
| Diameter: 2" | | Length: 30' | |
| Hole Diameter: 6" | | Depth to Liquid: 35' | |
| Total Depth: 40' | | Depth to Water: 35' | |

| Penetration Resistance | Moisture Content | Vapor (ppm) | HC Staining? | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
|------------------------|------------------|-------------|--------------|----------|------------------|------------|----------|----------------|--|-----------------|
| | | | | | 0 | | | | | |
| | dry | 0.5 | NO | | 1 | | | SM | Brown silty sand w/ gravel and cobbles low plas, low coh | |
| | | | | | 2 | | | | Cl = <128ppm (0.4) | |
| | dry | 0.3 | NO | | 3 | | | SM | SAA | |
| | | | | | 4 | | | | Cl = <128ppm (1.0) | |
| | | | | | 5 | | | | | |
| | dry | 0.7 | NO | | 6 | | | SM | SAA, few gravel no cobbles | |
| | | | | | 7 | | | | Cl = <128ppm (ND) | |
| | | | | | 8 | | | SM | SAA w/ cobbles | |
| | dry | 0.5 | NO | | 9 | | | | Cl = <128ppm (ND) | |
| | | | | | 10 | | | | | |
| | dry | 0.3 | NO | | 11 | | | SM | SAA | |
| | | | | | 12 | | | | Cl = <128ppm (ND) | |
| | M | 0.5 | NO | | 13 | | | SM | SAA, no gravel or cobbles | |
| | | | | | 14 | | | | Cl = <128 (0.6) | |
| | | | | | 15 | | | | | |

|  | | | | | | | | | | Boring/Well # <u>MW12</u>
Project: <u>Salt Bay</u>
Project # <u>017819014</u>
Date <u>10-21-19</u> | |
|---|------------------|-------------|----------|---------------------|------------------|------------|----------|----------------|--|---|--|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | | | | | 15 | | | | | | |
| | M | 0.5 | NO | MW12 @ 15-17.5 1500 | 16 | | | SM | SAA
Cl = 280 ppm (2.4) | | |
| | | | | | 17 | | | | | | |
| | M | 0.4 | NO | | 18 | 15-20 | | SM | SAA
Cl = 180 (0.6) | | |
| | | | | | 19 | | | | | | |
| | | | | | 20 | | | | | | |
| | M | 0.3 | NO | MW12 @ 20-22.5 1502 | 21 | | | SM | SAA, less silt
Cl = 356 (2.8) | | |
| | | | | | 22 | | | | | | |
| | M | 0.3 | NO | | 23 | 20-25 | | SM | SAA
Cl = 128 (1.0) | | |
| | | | | | 24 | | | | | | |
| | | | | | 25 | | | | | | |
| | M | 0.3 | NO | | 26 | | | SM | SAA
Cl = 128 (1.0) | xx | |
| | | | | | 27 | | | | | xx | |
| | | | | | 28 | | | | | xx | |
| | M | 0.2 | NO | | 29 | | | SM | SAA, very moist
Cl = 128 (0.8) | | |
| | | | | | 30 | | | | | | |
| | | | | | 31 | | | | NR | | |
| | | | | | 32 | | | | | | |
| | | | | | 33 | | | | | | |
| | VM SAT. | 0.3 | NO | | 34 | | | | SAA, very moist/
sat
Cl = 156 (1.6) | | |
| | | | | | 35 | | | | | | |
| | SAT | 0.3 | NO | MW12 @ 35-37.5 1505 | 36 | | | SP-SM | poorly graded sand w/silt
Saturated
Cl = 280 ppm (2.4) | | |
| | | | | | 37 | | | | | | |

|  | | | | | | | | Boring/Well # | MW12 | |
|---|------------------|-------------|----------|-------------------------|------------------|------------|----------|----------------|--|-----------------|
| | | | | | | | | Project: | Silty clay | |
| | | | | | | | | Project # | 017819014 | |
| | | | | | | | | Date | 10-21-19 | |
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
| | | | ↑ | | 37 | | | | | |
| | | | | | 38 | 35-40 | | | | |
| | SAT | 0.3 | NA | MW12
37.5-40
ISOZ | 39 | | | SP5 | SAA, some black organic colors and Fe staining
C = 5,420 (5.4 high range) | |
| | | | | | 40 | | | | | |
| | | | | | 41 | | | | TOC 4.0' | |
| | | | | | 42 | | | | | |
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| | | | |
| BORING LOG/MONITORING WELL COMPLETION DIAGRAM | | | |
| Boring/Well Number: MW13 | | Project: Salty Dog | |
| Date: 10-21-19 | | Project Number: 017819014 | |
| Logged By: JA | | Drilled By: Cascade | |
| Elevation: 5,258' | | Detector: PID/Quantah | |
| Gravel Pack: 10/20 silica sand 40-28 | | Seal: Hydrated Bentonite Chips 28-23 | |
| Casing Type: SCH 40 PVC | | Grout: 23-0 | |
| Screen Type: Slot: 0.010" | | Diameter: 2 | Length: 30 |
| | | Diameter: 2 | Length: 10 |
| | | Hole Diameter: 6" | Depth to Liquid: |
| | | 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 | 0.3 | NO | | 0 | | | SM | brown silty sand w/ gravel + cobbles
Cl = 128 ppm (0.25) | snick-up |
| | | | | | 1 | | | | | |
| | | | | | 2 | | | | | |
| | dry | 0.4 | NO | | 3 | 0-5 | | SM | SAA
Cl = 128 ppm (0.1) | |
| | | | | | 4 | | | | | |
| | | | | | 5 | | | | | |
| | dry | 0.3 | NO | | 6 | | | SM | SAA, few gravel
no cobbles
Cl = 128 ppm (1.0) | |
| | | | | | 7 | | | | | |
| | dry | 0.3 | NO | | 8 | 5-10 | | SM | SAA
Cl = 128 ppm (1.2) | |
| | | | | | 9 | | | | | |
| | | | | | 10 | 6-8 | | | | |
| | dry | 0.3 | NO | MWB
e
10-125
1438 | 11 | | | SM | SAA gravel + cobbles
Cl = 212 ppm (2p) | |
| | | | | | 12 | | | | | |
| | dry | 0.3 | NO | | 13 | | | SM | SAA
Cl = 128 ppm (1.2) | |
| | | | | | 14 | | | | | |
| | | | | | 15 | | | | | |

|  | | | | | | | | | | Boring/Well # <u>MW13</u>
Project: <u>Salty Dog</u>
Project # <u>017819014</u>
Date <u>10-21-19</u> | |
|---|------------------|-------------|----------|----------|------------------|------------|----------|----------------|--|--|--|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | | | | | 15 | | | | | | |
| | dry | 0.5 | NO | | 16 | | | SM | SAA, large cobbles
cl = 68 (1.5) | | |
| | | | | | 17 | 1520 | | | | | |
| | dry | 0.3 | NO | | 18 | | | SM | SAA
cl = < 128 ppm (1.1) | | |
| | | | | | 19 | | | | | | |
| | | | | | 20 | | | | | | |
| | dry | 0.7 | NO | | 21 | | | | SAA
cl = < 128 ppm (1.1) | | |
| | | | | | 22 | | | | | | |
| | | | | | 23 | 2075 | | | | | |
| | dry | 0.6 | NO | | 24 | | | | SAA
cl = < 128 ppm (0.8) | XX | |
| | | | | | 25 | | | | | XX | |
| | | | | | 26 | | | | SAA
cl = 156 ppm (1.7) | XX | |
| | | | | | 27 | | | | | XX | |
| | | | | | 28 | 2530 | | | GW@30' | XX | |
| | VM SAT | 0.7 | NO | | 29 | | | | SAA cl = < 128 (0.8)
bottom 6" increased clay/silt and saturation | | |
| | | | | | 30 | | | | | | |
| | SAT | 0.4 | NO | | 31 | | | | | | |
| | | | | | 32 | | | | poorly graded sand w/ silt, brown, saturated | | |
| | | | | | 33 | 3075 | | SP-SM | | | |
| | | | | | 34 | | | | cl = 1748 ppm (6.6)
cl = 2,472 ppm (7.6) | | |
| | SAT | 0.4 | NO | | 35 | | | | dk brown fat clay w/ sand (claystone) | | |
| | | | | | 36 | | | | | | |
| | dry | 0.8 | NO | | 37 | | | | grey sandy silt+stone
cl = < 128 ppm (ND) | | |

|  | | | | | | | | | Boring/Well # <u>MW13</u>
Project: <u>Salty Dog</u>
Project # <u>017819014</u>
Date <u>10-21-19</u> | |
|---|------------------|-------------|----------|---------------------|------------------|------------|----------|----------------|--|-----------------|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion |
| | | | ↑ | | 37 | | | SM | grey sandy siltstone (bedrock) | |
| | | | | | 38 | | | | | |
| | dry | 0.3 | NO | MW13 @ 37.5-40 1444 | 39 | | | SM | cl = <128 ppm (0.1) SAA | |
| | | | | | 40 | | | | | |
| | | | | | 41 | | | | TD @ 40' | |
| | | | | | 42 | | | | | |
| | | | | | 43 | | | | | |
| | | | | | 44 | | | | | |
| | | | | | 45 | | | | | |
| | | | | | 46 | | | | | |
| | | | | | 47 | | | | | |
| | | | | | 48 | | | | | |
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| | | | | | 50 | | | | | |
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| | | | | | 58 | | | | | |
| | | | | | 59 | | | | | |



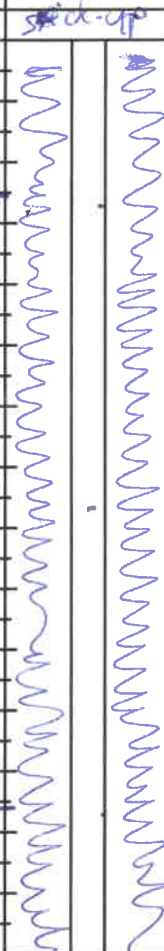
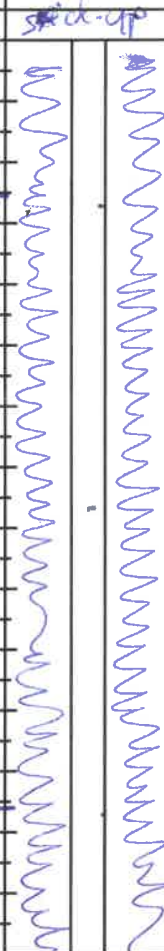
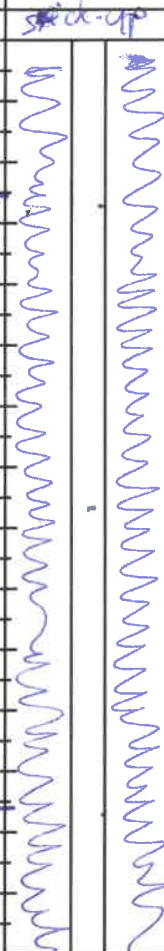
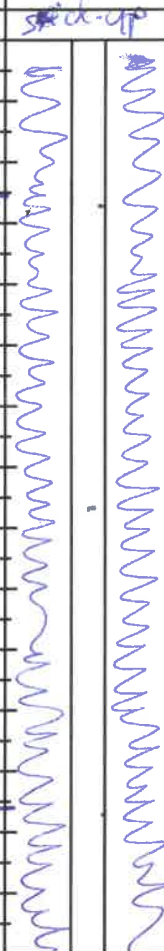
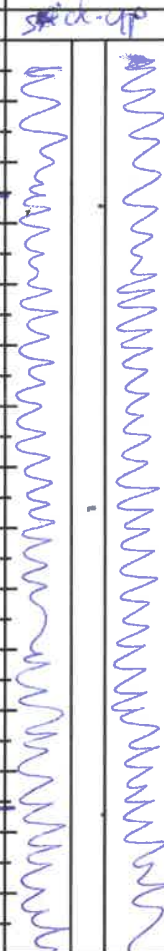
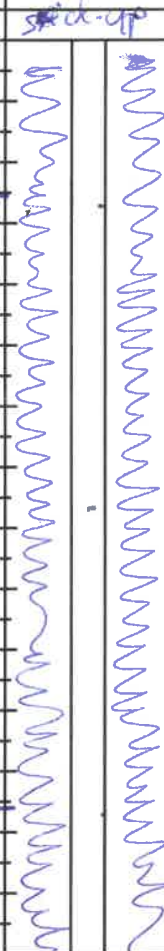
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

| | |
|---------------------------------------|---------------------------------------|
| Boring/Well Number: MW14 | Project: Salty Dog |
| Date: 10-22-19 | Project Number: 017819014 |
| Logged By: SA | Drilled By: Cascade |
| Elevation: 5,258' | Detector: PID/Quantab |
| Gravel Pack: 10/20 silica sand 35-23' | Seal: Hydrated Bentonite Chips 23-20' |
| Casing Type: SCH40AK | Grout: 20-0' |
| Screen Type: Slot: 0.010" | Diameter: 2" |
| | Length: 10' |
| | Hole Diameter: 6' |
| | Depth to Liquid: 30' |
| | Total Depth: 35' |
| | 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 |
|------------------------|------------------|-------------|--------------|----------------|------------------|------------|----------|----------------|---------------------------|-----------------|
| | | | | | 0 | | | SM | brown silty sand w/gravel | Spick up |
| | dry | 0.7 | NO | | 1 | | | SM | Cl = <128ppm (0.8) | |
| | | | | | 2 | | | | | |
| | dry | 1.0 | NO | | 3 | 0-5 | | SM | SAA | |
| | | | | | 4 | | | | Cl = <128ppm (0.8) | |
| | | | | | 5 | | | | | |
| | dry | 0.8 | NO | MW14 @ 50-7.5' | 6 | | | SM | SAA, no gravel | |
| | | | | | 7 | | | | Cl = <128ppm (ND) | |
| | | | | | 8 | 5-10 | | | | |
| | dry | 0.8 | NO | | 9 | | | SM | SAA | |
| | | | | | 10 | 10-15 | | | Cl = <128ppm (ND) | |
| | dry | 0.8 | NO | | 11 | | | | SAA w/gravel and cobbles | |
| | | | | | 12 | | | SM | Cl = <128ppm (ND) | |
| | dry | 0.9 | NO | | 13 | | | | | |
| | | | | | 14 | | | SM | SAA | |
| | | | | | 15 | | | | Cl = <126ppm (0.8) | |

|  | | | | | | | | | | Boring/Well # <u>MW14</u>
Project: <u>Sally Dog</u>
Project # <u>017810014</u>
Date <u>10-22-19</u> | |
|---|------------------|-------------|----------|-----------------|------------------|------------|----------|----------------|--|--|--|
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | dry | 1.1 | NO | | 15 | | | SM | SAA
Cl = 128ppm (0.8) | | |
| | | | | | 16 | | | | | | |
| | | | | | 17 | | | | | | |
| | dry | 1.0 | NO | | 18 | 15-20 | | SM | SAA
Cl = 128ppm (0.6) | | |
| | | | | | 19 | | | | | | |
| | M | 1.0 | NO | MW14 @ 20-22.5' | 20 | | | SM | SAA, moist
Cl = 212ppm (2.0) | | |
| | | | | | 21 | | | | | | |
| | | | | | 22 | | | | | | |
| | M | 0.4 | NO | | 23 | 20-25 | | SM | Cl = 128ppm (0.6) SAA, increased
GW @ 30.5' Fines | | |
| | | | | | 24 | | | | | | |
| | | | | | 25 | | | | | | |
| | M | 2.5 | NO | MW14 @ 25-27.5' | 26 | | | SM | SAA
Cl = 184ppm (1.8) | | |
| | | | | | 27 | | | | | | |
| | M | 2.2 | NO | MW14 @ 27.5-30' | 28 | 25-30 | | SM/CH | SAA, bottom 6" is
fat clay w/ sand
Cl = 128ppm (0.8) | | |
| | | | | | 29 | | | | | | |
| | | | | | 30 | | | CH | fat clay w/ sand | | |
| | SAT | 2.1 | NO | MW14 @ 30-32.5' | 31 | | | | Cl = 128ppm (1.8) Cl = 128ppm (1.8) | | |
| | | | | | 32 | | | ML | Sand
silt w/ sand | | |
| | | | | | 33 | 30-35 | | | | | |
| | SAT | 2.2 | NO | | 34 | | | | Cl = 128ppm (1.8) | | |
| | dry | | | | 35 | | | CH | grey clay stone (bedrock) | | |
| | | | | | 36 | | | | | | |
| | | | | | 37 | | | | TDE 35' | | |

| | | | |
|--|------------------------------|--|---|
|  | |  | |
| | | | |
| BORING LOG/MONITORING WELL COMPLETION DIAGRAM | | | |
| Boring/Well Number: MW15 | | Project: Salty Dog | |
| Date: 10-22-19 | | Project Number: 017819014 | |
| Logged By: JA | | Drilled By: Cascade | |
| Elevation: 5,258' | Detector: PID/Quantab | Drilling Method: Sonic | Sampling Method: Continuous |
| Gravel Pack: 10/20 silica sand 35-22 | | Seal: Hydrated Bentonite Chips 22-18 | Grout: 18-0 |
| Casing Type: SC140 PVC | Slot: 0.010" | Diameter: 2" Length: 25 | Hole Diameter: 2" Depth to Liquid: 30 |
| Screen Type: SC140 PVC | Slot: 0.010" | Diameter: 2" Length: 10 | 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 |
|------------------------|------------------|-------------|--------------|------------------------|------------------|------------|----------|----------------|---|--|
| | | | | | 0 | | | | brown silty sand w/ some interbedded (thin) clay
Cl = <128 ppm (0.1) |  |
| | dry | 0.0 | NO | | 1 | | | SM | | |
| | | | | | 2 | | | | | |
| | dry | 0.0 | NO | MW15
P 255'
1610 | 3 | 0-5 | | SP-SM | poorly graded sand w/ silt
Cl = <128 ppm (0.1) |  |
| | | | | | 4 | | | | | |
| | | | | | 5 | | | | | |
| | dry | 0.0 | NO | | 6 | | | SP-SM | SAA
Cl = <128 ppm (0.1) |  |
| | | | | | 7 | | | | | |
| | | | | | 8 | 5-10 | | | | |
| | dry | 0.0 | NO | | 9 | | | SP-SM | SAA
Cl = <128 ppm (0.1) |  |
| | | | | | 10 | | | | | |
| | | | | | 11 | | | | | |
| | dry | 0.2 | NO | | 12 | | | SP-SM | SAA
Cl = <128 ppm (0.2) |  |
| | | | | | 13 | 10-15 | | | | |
| | | | | | 14 | | | | | |
| | M | 0.3 | NO | | 15 | | | S ₂ | brown silty sand
Cl = <128 ppm (0.2) |  |
| | | | | | | | | | | |

|  | | | | | | | | | | Boring/Well # | MW15 |
|---|------------------|-------------|----------|-----------------|------------------|------------|----------|----------------|----------------------------|-----------------|-----------|
| | | | | | | | | | | Project: | Salty Dog |
| | | | | | | | | | | Project # | 017819014 |
| | | | | | | | | | | Date | 10-22-19 |
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | M | 0.2 | NO | | 15 | | | | SAA | | |
| | | | | | 16 | | | SM | CI = <128ppm (0.2) | | |
| | | | | | 17 | | | | | | |
| | M | 0.2 | NO | | 18 | 15-20 | | SM | SAA | | |
| | | | | | 19 | | | | CI = <128ppm (0.2) | | |
| | | | | | 20 | | | | | | |
| | M | 0.4 | NO | | 21 | | | SM | SAA | | |
| | | | | | 22 | | | | CI = <128ppm (0.9) | | |
| | M | 0.0 | NO | MW15 @ 25-35' | 23 | 20-25 | | SM | SAA | | |
| | VM | 0.0 | | | 24 | | | | CI = 400 (3.1) | | |
| | | | | | 25 | | | CH | fat clay w/ sand | | |
| | VM | 0.0 | NO | | 26 | | | | CI = <128ppm (0.1) | | |
| | | | | | 27 | | | SM | brown silty sand | | |
| | VM | 0.0 | NO | MW15 @ 25-35' | 28 | 25-30 | | | CI = 988ppm (5.0) | | |
| | | | | | 29 | | | | | | |
| | SA | 0.1 | NO | | 30 | | | CH | fat clay w/ sand | | |
| | | | | | 31 | | | SM | poorly graded sand w/ silt | | |
| | | | | | 32 | | | | CI = 212 (2.1) | | |
| | SA | 0.0 | NO | MW15 @ 32.5-35' | 33 | 30-35 | | | SAA w/ few cobbles | | |
| | | | | | 34 | | | | CI = 2,472 (76) | | |
| | | | | | 35 | | | | | | |
| | dry | 0.8 | NO | | 36 | 35-40 | | CH | grey claystone (bedrock) | | |
| | | | | | 37 | | | | CI = <128 (0.1) | | |

|  | | | | | | | | | Boring/Well # | MW15 | |
|---|------------------|-------------|----------|------------|------------------|------------|----------|----------------|--------------------|-----------------|--|
| | | | | | | | | | Project: | Salty Dog | |
| | | | | | | | | | Project # | 017819014 | |
| | | | | | | | | | Date | 10-22-19 | |
| Penetration Resistance | Moisture Content | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Run | Recovery | Soil/Rock Type | Lithology/Remarks | Well Completion | |
| | | | ↑ | | 37 | | | | | | |
| | dry | 0.0 | NO | MUS C 1060 | 38 | 354 | | CH | SAA | | |
| | | | | | 39 | | | | Cl = <128 ppm(0.1) | | |
| | | | | | 40 | | | | TD @ 40' | | |
| | | | | | 41 | | | | Backfill to 35' | | |
| | | | | | 42 | | | | w/ bentonite | | |
| | | | | | 43 | | | | | | |
| | | | | | 44 | | | | | | |
| | | | | | 45 | | | | | | |
| | | | | | 46 | | | | | | |
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| | | | | | 58 | | | | | | |
| | | | | | 59 | | | | | | |

APPENDIX B: MONITORING WELL DEVELOPMENT FORMS



Monitoring Well Development Form



LT Environmental, Inc.

848 East Second Avenue
Durango, Colorado 81301
T 970.385.1096

Project Name: Salty Dog Water Transfer Station

Project Number: 17819014

Well Name: MW03

Sampler: Eric Carroll

Start Date: 9/9/2019

Start Time:

Depth to Water: 33.6'

Time: 10:50

Total Depth of Well: 36 50

Depth to Product: NA

Casing Volume: 4.7 10 casing volumes

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well)

Method of Purging: Dedicated PVC Bailer

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: Dry @ 0.7 gallons Very turbid, silty, light brown, no
sheen, no odor

Describe Deviations from SOP:

Signature: 

Date: 9/9/2019



LT Environmental, Inc.

848 East Second Avenue
Durango, Colorado 81301
T 970.385.1096

Monitoring Well Development Form

Project Name: Salty Dog Water Transfer Station

Project Number: 17819014

Well Name: MWO5

Sampler: Eric Carroll

Start Date: 9/9/2019

Start Time: 11:00

Depth to Water: 33.46

Total Depth of Well: 38.41

Time:

Depth to Product:

Casing Volume: 8.0 gal = 10 casing volumes

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well)

Method of Purging: Dedicated PVC Bailer

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: Bailed dry @ 1 gallon, very turbid, silty, 1/2 brown
no Sheen / odor. Effervescent

Describe Deviations from SOP:

Signature:

Signature: Jim Carroll

Date:

9/9/2019

Monitoring Well Development Form



LT Environmental, Inc.

848 East Second Avenue
Durango, Colorado 81301
T 970.385.1096

Project Name: Salty Dog Water Transfer Station

Project Number: 17819014

Well Name: MWOG

Sampler: Eric Carroll

Start Date: 9/9/2019

Start Time: 11:30

Depth to Water: 32.77

Total Depth of Well: 38.01

Time:

Depth to Product: NA

Casing Volume: 8.5 is 10 casing vol.

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well)

Method of Purging: Dedicated PVC Bailer

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: Dry @ 1.3 gallons, very turbid, silty, lt brown
effervescent, no green/odor

Describe Deviations from SOP:

Signature: *Wm. L. W.*

Date: 9/9/2019



848 East Second Avenue
Durango, Colorado 81301
T 970.385.1096

Date: 10/22/2019



LT Environmental, Inc.

848 East Second Avenue
Durango, Colorado 81301
T 970.385.1096

Monitoring Well Development Form

Project Name: Salty Dog Water Transfer Station

Project Number: 017819014

Well Name: MV -9

Sampler: 75

Start Date: 10/22/19

Start Time: 1710

Depth to Water: 23.94

Total Depth of Well: 30.33

Time:

Depth to Product:

Casing Volume:

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well)

Method of Purging: Dedicated PVC Bailer

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: bailed dry @ 29910-5

Describe Deviations from SOP:

Signature:

Date: 10/22/2019

~~2249 North Ridge Avenue Suite 10~~

(970) 385-1096

Project Name: Heubrand #1 Salty Poy
Project Number: 21317602 017819014
Well Name: MW10 Sampler: SA
Start Date: 10-22-19 Start Time: 1500
Depth to Water: 30.60 Total Depth of Well: 40.37
Time: _____ Depth to Product: ND
Casing Volume: 16 gallons (height of water column * 0.1631 for 2" well or 0.6524 for 4")
Method of Purging: Dedicated PVC Bailer
Method of Sampling: Dedicated PVC Bailer

[illegible]**Comments:**

well bailed dry after 13 gallon purge



(970) 385-1096

-848 E. 2nd Ave

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: bailed dry @ 2 gallons



LT Environmental, Inc.

~~2248 North 10th Avenue Suite 48~~

Durango, Colorado 81301

(970) 385-1096

848 E. 2nd Ave

Monitoring Well Development Form

Project Name:

Project Number:

Well Name:

Start Date:

Depth to Water:

Time:

Sampler TS

Start Time: 1540

Total Depth of Well: 40.19

Depth to Product: _____

Casing Volume: $8.38 \times 0.1691 = 1.36 \times 10 = 13.7$

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well)

Method of Purging: Dedicated PVC Bailer

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: Railed dry @ 10 gallons



~~2243 North Ridge Avenue Suite 12~~

(970) 385-1096

-848 E. 2nd Ave

Project Name: Sheridan Creek #4
Project Number: 0178190006

Well Name: MW-14 Sampler: TJ
Start Date: 10/22/19 Start Time: _____
Depth to Water: 30.92 Total Depth of Well: 35.20
Time: _____ Depth to Product: _____

Casing Volume: $4.28 \times 0.1631 = 0.69 \times 10 = 6.9$ (height of water column * 0.1631 for 2" well or 0.6524 for
Method of Purging: Dedicated PVC Bailer
Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: bailed dry after 2.0 gallon purge



~~2049-NORTH BRIDGE AVENUE SWIM-18~~

(970) 385-1096

-848 E. 2nd Ave

Project Name: Standard Salty Log
Project Number: 0178170006 017812014

Well Name: MW-15 Sampler: 15

Start Date: 10/22/19 Start Time: _____

Depth to Water: 27.20 Total Depth of Well: 38.26
Time: _____ Depth to Product: _____

Casing Volume: $11.06 \times .1631 = 1.8 \times 10 = 18$ (height of water column * 0.1631 for 2" well or 0.6524 for 4" well)

Method of Purging: Dedicated PVC Bailer

Method of Sampling: Dedicated PVC Bailer

[illegible]

Comments: bailed dr-1 @ 3 galls-1

APPENDIX C: GROUNDWATER SAMPLE COLLECTION FORMS





LT Environmental, Inc.

848 E. 2nd Ave.
Durango, Colorado 81301
T 970.385.1096

Groundwater Sample Collection Form

Project Name: Semi-Annual Groundwater Monitoring
Project Number: 017818010

Project Location: Salty Dog Water Transfer Station
Sampler: Caitlin McGinn

Sample ID: MW03
Sample Date: 9.12.19

Matrix: Groundwater

Sample Date: 9.12.19

Sample Time: 1433

Laboratory: Hall Environmental

Shipping Method: Hand Delivery

Analyses: Extended list 8026 TDS, pH, Cations/Anions

Depth to Water: 33.62
Time: 1103

Total Depth of Well: 37.24
Depth to Product: —

Vol. of Water to Purge: 1.7 gal (height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols
Method of Purging: Bailing
Method of Sampling: Bailer

[illegible]

Comments: Well did not recharge, sampled 3 vials. Nitric acid bottle (7mL) half of unpreserved bottle.

Describe Deviations from SOP: was not able to purge 1.7 gallons
from well.

Signature: Caiti ymes Date: 9-12-17



Advancing Opportunity

LT Environmental, Inc.

848 E. 2nd Ave.

Durango, Colorado 81301

T 970.385.1096

Groundwater Sample Collection Form

Project Name: Semi-Annual Groundwater Monitoring
Project Number: 017818010

Project Location: Salty Dog Water Transfer Station
 Sampler: Caitlin McGinn

Sample ID: MW05

Matrix: Groundwater

Sample Date: 9.12.19

Sample Time: 1335

Laboratory: Hall Environmental

Shipping Method: Hand Delivery

Analyses: 8024, TDS, pH, Cations/Anions

Depth to Water: 33.36

Total Depth of Well: 38.40

Time: 1104

Depth to Product: —

Vol. of Water to Purge: 2.5 gallons

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: Boiling

Method of Sampling: Building

[illegible]

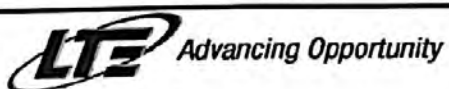
Comments: Well did not recharge, sampled 3voas, Nitric acid bottle (1mL), Sulfuric Acid Bottle (1ml), * unpreserved bottle.

Describe Deviations from SOP:

Did not purge 2.5 gallons.

Signature: Caiti CMC

Date: 9.12.19



LT Environmental, Inc.

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Durango, Colorado 81301
T 970.385.1096

Groundwater Sample Collection Form

Project Name: Semi-Annual Groundwater Monitoring
Project Number: 017818010

Project Location: Salty Dog Water Transfer Station
 Sampler: Caitlin McGinn

Sample ID: MW06
Sample Date: 9.12.19

Matrix: Groundwater

Sample Date: 9.12.19

Sample Time: 1402

Laboratory: Hall Environmental

Shipping Method: Hand Delivery

Analyses: 8026, TDS, pH, Cations/Anions

Depth to Water: 32.74

Total Depth of Well: 37.94

Time: 1109

Depth to Product: —

Vol. of Water to Purge: 2.5 gallons

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: Baiting

Method of Sampling: Bulling

[illegible]

Comments: Well recharged slowly. Sampled 3vacs, Nitric acid (1ml), Sulfuric acid (1ml), unpreserved bottle.

Describe Deviations from SOP:

Did not purge 7.5 gallons.

Signature: Caitlin W.

Date: 9.12.19



Advancing Opportunity

LT Environmental, Inc.

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Durango, Colorado 81301

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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station
Project Number: 017819014

Project Location: Salty Dog Pipeline
 Sampler: Josh Adams

Sample ID: MW08
 Sample Date: 10/24/2019
 Laboratory: Hall Environmental
 Analyses: VOC's, TDS, pH, cation/anions

Matrix: Groundwater
Sample Time: 1005
Shipping Method: Hand Delivery

Depth to Water: 23.81
Time: 0945

Total Depth of Well: 25.18
Depth to Product: ND

Vol. of Water to Purge: 0.75 gallons (height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: first bailer 1/4 full, grab sample

Describe Deviations from SOP: grab sample due to insufficient H_2O

Signature:

Date: 10/24/2019



Advancing Opportunity

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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station

Project Number: 017819014

Project Location: Salty Dog Pipeline

Sampler: Josh Adams

Sample ID: MWOA

Matrix: Groundwater

Sample Date: 10/24/2019

Sample Time: 1050

Laboratory: Hall Environmental

Shipping Method: Hand Delivery

Analyses: VOC's, TDS, pH, cation/anions

Depth to Water: 23.93

Total Depth of Well: 30.18

Time: 1030

Depth to Product: ND

Vol. of Water to Purge: 30 gallons

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

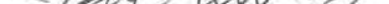
Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: Sampled @ 1050

Describe Deviations from SOP:

Signature:  Date: 10/24/2019

Date: 10/24/2019



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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station

Project Number: 017819014

Sample ID: MW10

Sample Date: 10/24/2019

Laboratory: Hall Environmental

Analyses: VOC's, TDS, pH, cation/anions

Project Location: Salty Dog Pipeline

Sampler: Stuart Hyde

Matrix: Groundwater

Sample Time: 1040

Shipping Method: Hand Delivery

Depth to Water: 30.60

Time: 1000

Total Depth of Well: 40.35

Depth to Product: 10.55

Vol. of Water to Purge: 4.9 gallons

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: sampled @ 1040

Describe Deviations from SOP:

Signature: 

Date: 10/24/2019



Advancing Opportunity

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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station

Project Number: 017819014

Project Location: Salty Dog Pipeline

Location: Sandy Dog Pipeline
 Sampler: _____

Sample ID: Mw12

Matrix: Groundwater

Sample Date: 10/24/2019

Sample Time: 1150

Laboratory: Hall Environmental

Shipping Method: Hand Delivery

Analyses: VOC's, TDS, pH, cation/anions

Depth to Water: 30.83

Total Depth of Well: 39.01

Time: 1120

Depth to Product: ND

Vol. of Water to Purge: 4.00

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: Sampled @ 1150

Describe Deviations from SOP:

Signature:  **Date:** 10/24/2019

Date: 10/24/2019



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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station

Project Number: 017819014

Project Location: Salty Dog Pipeline

Sampler: Smart Hyde

Sample ID: MW13

Sample Date: 10/24/2019

Laboratory: Hall Environmental

Analyses: VOC's, TDS, pH, cation/anions

Matrix: Groundwater

Sample Time: 1140

Shipping Method: Hand Delivery

Depth to Water: 31.83

Time: 1100

Total Depth of Well: 40.40

Depth to Product: 1

Vol. of Water to Purge: 4.4 gallons (height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: Sample @ 1140

Describe Deviations from SOP:

Signature:

Date: 10/24/2019



Advancing Opportunity

LT Environmental, Inc.

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Durango, Colorado 81301

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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station
Project Number: 017819014

Project Location: Salty Dog Pipeline
 Sampler: Stuart Hyde

Sample ID: MW 14
Sample Date: 10/24/2019
Laboratory: Hall Environmental
Analyses: VOC's, TDS, pH, cation/anions

Matrix: Groundwater
Sample Time: 0940
Shipping Method: Hand Delivery

Depth to Water: 30.92
Time: 0900

Total Depth of Well: 35.42
Depth to Product: _____

Vol. of Water to Purge: 2.5 gallons

(height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: sampled @ 0940

Describe Deviations from SOP:

Signature:  **Date:** 10/24/2019

Date: 10/24/2019



LT Environmental, Inc.

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Durango, Colorado 81301

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Groundwater Sample Collection Form

Project Name: Salty Dog Water Transfer Station
Project Number: 017819014

Project Location: Salty Dog Pipeline
 Sampler: Josh Adams

Sample ID: **AW15**

Matrix: Groundwater

Sample Date: 10/24/2019

Sample Time: 0935

Laboratory: Hall Environmental

Shipping Method: Hand Delivery

Analyses: VOC's, TDS, pH, cation/anions

Depth to Water: 27.15
Time: 0900

Total Depth of Well: 38.23
Depth to Product: ND

Vol. of Water to Purge: 5.5 gal (height of water column * 0.1631 for 2" well or 0.6524 for 4" well) * 3 well vols

Method of Purging: PVC Bailer

Method of Sampling: PVC Bailer

[illegible]

Comments: sampled @ 0935

Describe Deviations from SOP:

Signature:  **Date:** 10/24/2019

Date: 10/24/2019

APPENDIX D: LABORATORY ANALYTICAL RESULTS





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

September 09, 2019

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

RE: Salty Dog

OrderNo.: 1909112

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 20 sample(s) on 9/4/2019 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05 25'-30'

Project: Salty Dog

Collection Date: 8/28/2019 12:00:00 PM

Lab ID: 1909112-001

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 9/5/2019 4:53:11 PM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 9/5/2019 4:53:11 PM |
| Surr: DNOP | 107 | 70-130 | | %Rec | 1 | 9/5/2019 4:53:11 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/5/2019 12:47:18 PM |
| Surr: BFB | 97.6 | 77.4-118 | | %Rec | 1 | 9/5/2019 12:47:18 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 12:47:18 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 12:47:18 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 12:47:18 PM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 9/5/2019 12:47:18 PM |
| Surr: 4-Bromofluorobenzene | 86.2 | 80-120 | | %Rec | 1 | 9/5/2019 12:47:18 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CJS |
| Chloride | 390 | 60 | | mg/Kg | 20 | 9/5/2019 5:32:32 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 1 of 25

Analytical Report

Lab Order 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW05 30'-35'

Project: Salty Dog

Collection Date: 8/28/2019 12:15:00 PM

Lab ID: 1909112-002

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 9/5/2019 6:06:10 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 9/5/2019 6:06:10 PM |
| Surr: DNOP | 103 | 70-130 | | %Rec | 1 | 9/5/2019 6:06:10 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 9/5/2019 1:55:52 PM |
| Surr: BFB | 97.9 | 77.4-118 | | %Rec | 1 | 9/5/2019 1:55:52 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/5/2019 1:55:52 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 1:55:52 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 1:55:52 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 9/5/2019 1:55:52 PM |
| Surr: 4-Bromofluorobenzene | 87.0 | 80-120 | | %Rec | 1 | 9/5/2019 1:55:52 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CJS |
| Chloride | 110 | 60 | | mg/Kg | 20 | 9/5/2019 5:44:57 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Ex. Bottom

Project: Salty Dog

Collection Date: 8/28/2019 1:10:00 PM

Lab ID: 1909112-003

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|-----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 9/5/2019 6:30:34 PM |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 9/5/2019 6:30:34 PM |
| Surr: DNOP | 77.2 | 70-130 | | %Rec | 1 | 9/5/2019 6:30:34 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/5/2019 3:04:34 PM |
| Surr: BFB | 98.3 | 77.4-118 | | %Rec | 1 | 9/5/2019 3:04:34 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 3:04:34 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 3:04:34 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 3:04:34 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 9/5/2019 3:04:34 PM |
| Surr: 4-Bromofluorobenzene | 86.2 | 80-120 | | %Rec | 1 | 9/5/2019 3:04:34 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 14000 | 600 | | mg/Kg | 200 | 9/6/2019 9:58:00 AM |

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

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | 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 25

Analytical Report

Lab Order 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06 25'-30'

Project: Salty Dog

Collection Date: 8/28/2019 3:15:00 PM

Lab ID: 1909112-004

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 9/5/2019 6:55:03 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 9/5/2019 6:55:03 PM |
| Surr: DNOP | 95.5 | 70-130 | | %Rec | 1 | 9/5/2019 6:55:03 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/5/2019 3:27:30 PM |
| Surr: BFB | 98.9 | 77.4-118 | | %Rec | 1 | 9/5/2019 3:27:30 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 3:27:30 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 3:27:30 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 3:27:30 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 9/5/2019 3:27:30 PM |
| Surr: 4-Bromofluorobenzene | 86.2 | 80-120 | | %Rec | 1 | 9/5/2019 3:27:30 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CJS |
| Chloride | 1700 | 60 | | mg/Kg | 20 | 9/5/2019 6:34:36 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW06 30'-35'

Project: Salty Dog

Collection Date: 8/28/2019 3:17:00 PM

Lab ID: 1909112-005

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 9/5/2019 7:19:20 PM |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 9/5/2019 7:19:20 PM |
| Surr: DNOP | 96.7 | 70-130 | | %Rec | 1 | 9/5/2019 7:19:20 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 9/5/2019 3:50:23 PM |
| Surr: BFB | 98.4 | 77.4-118 | | %Rec | 1 | 9/5/2019 3:50:23 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 9/5/2019 3:50:23 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 9/5/2019 3:50:23 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 9/5/2019 3:50:23 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 9/5/2019 3:50:23 PM |
| Surr: 4-Bromofluorobenzene | 85.2 | 80-120 | | %Rec | 1 | 9/5/2019 3:50:23 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CJS |
| Chloride | 2100 | 60 | | mg/Kg | 20 | 9/5/2019 6:47:00 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW07 2'-4'

Project: Salty Dog

Collection Date: 8/29/2019 12:20:00 PM

Lab ID: 1909112-006

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|-----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | 36 | 9.3 | | mg/Kg | 1 | 9/5/2019 7:43:32 PM |
| Motor Oil Range Organics (MRO) | 250 | 47 | | mg/Kg | 1 | 9/5/2019 7:43:32 PM |
| Surr: DNOP | 103 | 70-130 | | %Rec | 1 | 9/5/2019 7:43:32 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 9/5/2019 6:30:46 PM |
| Surr: BFB | 98.3 | 77.4-118 | | %Rec | 1 | 9/5/2019 6:30:46 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 6:30:46 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 6:30:46 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 6:30:46 PM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 9/5/2019 6:30:46 PM |
| Surr: 4-Bromofluorobenzene | 85.8 | 80-120 | | %Rec | 1 | 9/5/2019 6:30:46 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 9600 | 300 | | mg/Kg | 100 | 9/6/2019 10:10:25 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW07 22'-24'

Project: Salty Dog

Collection Date: 8/29/2019 12:22:00 PM

Lab ID: 1909112-007

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 9/5/2019 8:07:47 PM |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 9/5/2019 8:07:47 PM |
| Surr: DNOP | 99.0 | 70-130 | | %Rec | 1 | 9/5/2019 8:07:47 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 9/5/2019 6:53:37 PM |
| Surr: BFB | 99.9 | 77.4-118 | | %Rec | 1 | 9/5/2019 6:53:37 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 6:53:37 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 6:53:37 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 6:53:37 PM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 9/5/2019 6:53:37 PM |
| Surr: 4-Bromofluorobenzene | 87.9 | 80-120 | | %Rec | 1 | 9/5/2019 6:53:37 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 2200 | 150 | | mg/Kg | 50 | 9/6/2019 10:22:49 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW02 2'-4'

Project: Salty Dog

Collection Date: 8/29/2019 12:36:00 PM

Lab ID: 1909112-008

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 9/5/2019 8:32:19 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 9/5/2019 8:32:19 PM |
| Surr: DNOP | 97.4 | 70-130 | | %Rec | 1 | 9/5/2019 8:32:19 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 9/5/2019 7:16:27 PM |
| Surr: BFB | 101 | 77.4-118 | | %Rec | 1 | 9/5/2019 7:16:27 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 7:16:27 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 9/5/2019 7:16:27 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 9/5/2019 7:16:27 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 9/5/2019 7:16:27 PM |
| Surr: 4-Bromofluorobenzene | 88.5 | 80-120 | | %Rec | 1 | 9/5/2019 7:16:27 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 2900 | 150 | | mg/Kg | 50 | 9/6/2019 10:35:13 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW02 16'-18'

Project: Salty Dog

Collection Date: 8/29/2019 12:38:00 PM

Lab ID: 1909112-009

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 8.6 | | mg/Kg | 1 | 9/5/2019 8:57:04 PM |
| Motor Oil Range Organics (MRO) | ND | 43 | | mg/Kg | 1 | 9/5/2019 8:57:04 PM |
| Surr: DNOP | 96.8 | 70-130 | | %Rec | 1 | 9/5/2019 8:57:04 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 9/5/2019 7:39:17 PM |
| Surr: BFB | 97.3 | 77.4-118 | | %Rec | 1 | 9/5/2019 7:39:17 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/5/2019 7:39:17 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 7:39:17 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 7:39:17 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 9/5/2019 7:39:17 PM |
| Surr: 4-Bromofluorobenzene | 84.4 | 80-120 | | %Rec | 1 | 9/5/2019 7:39:17 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 1800 | 60 | | mg/Kg | 20 | 9/5/2019 8:42:10 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03 14'-16'

Project: Salty Dog

Collection Date: 8/29/2019 3:08:00 PM

Lab ID: 1909112-010

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 8.7 | | mg/Kg | 1 | 9/5/2019 9:21:51 PM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 9/5/2019 9:21:51 PM |
| Surr: DNOP | 96.1 | 70-130 | | %Rec | 1 | 9/5/2019 9:21:51 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 9/5/2019 8:02:07 PM |
| Surr: BFB | 97.9 | 77.4-118 | | %Rec | 1 | 9/5/2019 8:02:07 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/5/2019 8:02:07 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 8:02:07 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 8:02:07 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 9/5/2019 8:02:07 PM |
| Surr: 4-Bromofluorobenzene | 84.8 | 80-120 | | %Rec | 1 | 9/5/2019 8:02:07 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 190 | 60 | | mg/Kg | 20 | 9/5/2019 8:54:34 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW03 26'-28'

Project: Salty Dog

Collection Date: 8/29/2019 3:11:00 PM

Lab ID: 1909112-011

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 8.8 | | mg/Kg | 1 | 9/5/2019 9:46:39 PM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 9/5/2019 9:46:39 PM |
| Surr: DNOP | 116 | 70-130 | | %Rec | 1 | 9/5/2019 9:46:39 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 9/5/2019 8:24:59 PM |
| Surr: BFB | 99.8 | 77.4-118 | | %Rec | 1 | 9/5/2019 8:24:59 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/5/2019 8:24:59 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 8:24:59 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 8:24:59 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 9/5/2019 8:24:59 PM |
| Surr: 4-Bromofluorobenzene | 86.5 | 80-120 | | %Rec | 1 | 9/5/2019 8:24:59 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | ND | 61 | | mg/Kg | 20 | 9/5/2019 9:06:58 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW02 22'-24'

Project: Salty Dog

Collection Date: 8/29/2019 3:16:00 PM

Lab ID: 1909112-012

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 9/5/2019 10:11:17 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 9/5/2019 10:11:17 PM |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 9/5/2019 10:11:17 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/5/2019 8:47:49 PM |
| Surr: BFB | 96.5 | 77.4-118 | | %Rec | 1 | 9/5/2019 8:47:49 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 9/5/2019 8:47:49 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 8:47:49 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 8:47:49 PM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 9/5/2019 8:47:49 PM |
| Surr: 4-Bromofluorobenzene | 83.7 | 80-120 | | %Rec | 1 | 9/5/2019 8:47:49 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 2400 | 60 | | mg/Kg | 20 | 9/5/2019 9:19:22 PM |

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

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW01 0'-2'

Project: Salty Dog

Collection Date: 8/30/2019 5:28:00 PM

Lab ID: 1909112-013

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 9/5/2019 10:35:57 PM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 9/5/2019 10:35:57 PM |
| Surr: DNOP | 117 | 70-130 | | %Rec | 1 | 9/5/2019 10:35:57 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 9/5/2019 9:10:40 PM |
| Surr: BFB | 96.3 | 77.4-118 | | %Rec | 1 | 9/5/2019 9:10:40 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 9/5/2019 9:10:40 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 9/5/2019 9:10:40 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 9/5/2019 9:10:40 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 9/5/2019 9:10:40 PM |
| Surr: 4-Bromofluorobenzene | 82.9 | 80-120 | | %Rec | 1 | 9/5/2019 9:10:40 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | ND | 60 | | mg/Kg | 20 | 9/5/2019 9:31:47 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW01 8'-10'

Project: Salty Dog

Collection Date: 8/30/2019 5:32:00 PM

Lab ID: 1909112-014

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 9/6/2019 9:16:19 AM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 9/6/2019 9:16:19 AM |
| Surr: DNOP | 70.2 | 70-130 | | %Rec | 1 | 9/6/2019 9:16:19 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/5/2019 9:33:28 PM |
| Surr: BFB | 98.8 | 77.4-118 | | %Rec | 1 | 9/5/2019 9:33:28 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 9/5/2019 9:33:28 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 9:33:28 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 9:33:28 PM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 9/5/2019 9:33:28 PM |
| Surr: 4-Bromofluorobenzene | 85.7 | 80-120 | | %Rec | 1 | 9/5/2019 9:33:28 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 75 | 60 | | mg/Kg | 20 | 9/5/2019 9:44:12 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW01 10'-12'

Project: Salty Dog

Collection Date: 8/30/2019 5:34:00 PM

Lab ID: 1909112-015

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 9/6/2019 12:50:15 PM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 9/6/2019 12:50:15 PM |
| Surr: DNOP | 95.9 | 70-130 | | %Rec | 1 | 9/6/2019 12:50:15 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 9/5/2019 9:56:15 PM |
| Surr: BFB | 99.7 | 77.4-118 | | %Rec | 1 | 9/5/2019 9:56:15 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 9/5/2019 9:56:15 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 9/5/2019 9:56:15 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 9/5/2019 9:56:15 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 9/5/2019 9:56:15 PM |
| Surr: 4-Bromofluorobenzene | 86.6 | 80-120 | | %Rec | 1 | 9/5/2019 9:56:15 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 84 | 60 | | mg/Kg | 20 | 9/5/2019 9:56:36 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW04 2'-4'

Project: Salty Dog

Collection Date: 8/30/2019 5:43:00 PM

Lab ID: 1909112-016

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 9/5/2019 11:49:59 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 9/5/2019 11:49:59 PM |
| Surr: DNOP | 103 | 70-130 | | %Rec | 1 | 9/5/2019 11:49:59 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 9/5/2019 11:05:36 PM |
| Surr: BFB | 100 | 77.4-118 | | %Rec | 1 | 9/5/2019 11:05:36 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/5/2019 11:05:36 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 11:05:36 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 9/5/2019 11:05:36 PM |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 9/5/2019 11:05:36 PM |
| Surr: 4-Bromofluorobenzene | 86.9 | 80-120 | | %Rec | 1 | 9/5/2019 11:05:36 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 390 | 60 | | mg/Kg | 20 | 9/5/2019 10:09:00 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW04 16'-18'

Project: Salty Dog

Collection Date: 8/30/2019 5:44:00 PM

Lab ID: 1909112-017

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 9/6/2019 12:14:44 AM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 9/6/2019 12:14:44 AM |
| Surr: DNOP | 102 | 70-130 | | %Rec | 1 | 9/6/2019 12:14:44 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/5/2019 11:28:39 PM |
| Surr: BFB | 99.8 | 77.4-118 | | %Rec | 1 | 9/5/2019 11:28:39 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 9/5/2019 11:28:39 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 11:28:39 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/5/2019 11:28:39 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 9/5/2019 11:28:39 PM |
| Surr: 4-Bromofluorobenzene | 86.0 | 80-120 | | %Rec | 1 | 9/5/2019 11:28:39 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 160 | 59 | | mg/Kg | 20 | 9/5/2019 10:46:13 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW04 18'-20'

Project: Salty Dog

Collection Date: 8/30/2019 5:45:00 PM

Lab ID: 1909112-018

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 9/6/2019 12:39:31 AM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 9/6/2019 12:39:31 AM |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 9/6/2019 12:39:31 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 9/5/2019 11:51:43 PM |
| Surr: BFB | 102 | 77.4-118 | | %Rec | 1 | 9/5/2019 11:51:43 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/5/2019 11:51:43 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 11:51:43 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 9/5/2019 11:51:43 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 9/5/2019 11:51:43 PM |
| Surr: 4-Bromofluorobenzene | 86.1 | 80-120 | | %Rec | 1 | 9/5/2019 11:51:43 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 110 | 60 | | mg/Kg | 20 | 9/5/2019 10:58:38 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: NE Wall of Ex.

Project: Salty Dog

Collection Date: 8/30/2019 5:53:00 PM

Lab ID: 1909112-019

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|-----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 9/6/2019 1:04:13 AM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 9/6/2019 1:04:13 AM |
| Surr: DNOP | 130 | 70-130 | | %Rec | 1 | 9/6/2019 1:04:13 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 9/6/2019 12:14:50 AM |
| Surr: BFB | 99.4 | 77.4-118 | | %Rec | 1 | 9/6/2019 12:14:50 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 9/6/2019 12:14:50 AM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 9/6/2019 12:14:50 AM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 9/6/2019 12:14:50 AM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 9/6/2019 12:14:50 AM |
| Surr: 4-Bromofluorobenzene | 84.7 | 80-120 | | %Rec | 1 | 9/6/2019 12:14:50 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 6400 | 300 | | mg/Kg | 100 | 9/6/2019 10:47:38 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 1909112

Date Reported: 9/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SW Wall of Ex.

Project: Salty Dog

Collection Date: 8/30/2019 5:54:00 PM

Lab ID: 1909112-020

Matrix: SOIL

Received Date: 9/4/2019 8:00:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|-----|----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: JME |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 9/6/2019 1:28:53 AM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 9/6/2019 1:28:53 AM |
| Surr: DNOP | 114 | 70-130 | | %Rec | 1 | 9/6/2019 1:28:53 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 9/6/2019 12:37:58 AM |
| Surr: BFB | 96.7 | 77.4-118 | | %Rec | 1 | 9/6/2019 12:37:58 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 9/6/2019 12:37:58 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 9/6/2019 12:37:58 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 9/6/2019 12:37:58 AM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 9/6/2019 12:37:58 AM |
| Surr: 4-Bromofluorobenzene | 83.7 | 80-120 | | %Rec | 1 | 9/6/2019 12:37:58 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 7300 | 300 | | mg/Kg | 100 | 9/6/2019 11:00:02 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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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1909112

09-Sep-19

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

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-47308 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 47308 | RunNo: 62662 | | | | | | | | |
| Prep Date: 9/5/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134941 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-47308 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 47308 | RunNo: 62662 | | | | | | | | |
| Prep Date: 9/5/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134942 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 96.4 | 90 | 110 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-47303 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 47303 | RunNo: 62696 | | | | | | | | |
| Prep Date: 9/5/2019 | Analysis Date: 9/5/2019 | SeqNo: 2135270 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-47303 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 47303 | RunNo: 62696 | | | | | | | | |
| Prep Date: 9/5/2019 | Analysis Date: 9/5/2019 | SeqNo: 2135271 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 16 | 1.5 | 15.00 | 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

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#: 1909112

09-Sep-19

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

| Sample ID: MB-47264 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 47264 | RunNo: 62665 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134752 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 | 12 | | 10.00 | | 122 | 70 | 130 | | | |

| Sample ID: LCS-47264 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 47264 | RunNo: 62665 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134753 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 102 | 63.9 | 124 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 95.7 | 70 | 130 | | | |

| Sample ID: 1909112-001AMS | SampType: MS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW05 25'-30' | Batch ID: 47264 | RunNo: 62665 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134761 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 9.6 | 47.76 | 0 | 97.3 | 57 | 142 | | | |
| Surr: DNOP | 4.5 | | 4.776 | | 93.8 | 70 | 130 | | | |

| Sample ID: 1909112-001AMSD | SampType: MSD | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|-----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: MW05 25'-30' | Batch ID: 47264 | RunNo: 62665 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134763 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 9.5 | 47.53 | 0 | 96.9 | 57 | 142 | 0.981 | 20 | |
| Surr: DNOP | 4.4 | | 4.753 | | 93.4 | 70 | 130 | 0 | 0 | |

| Sample ID: LCS-47315 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 47315 | RunNo: 62698 | | | | | | | | |
| Prep Date: 9/6/2019 | Analysis Date: 9/6/2019 | SeqNo: 2135320 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 48 | 10 | 50.00 | 0 | 96.2 | 63.9 | 124 | | | |
| Surr: DNOP | 4.6 | | 5.000 | | 91.9 | 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#: 1909112

09-Sep-19

Client: HILCORP ENERGY

Project: Salty Dog

| | | | | | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------|--|----------|---------------------|------|----------|------|
| Sample ID: MB-47315 | | SampType: MBLK | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: PBS | | Batch ID: 47315 | | | RunNo: 62698 | | | | | |
| Prep Date: 9/6/2019 | | Analysis Date: 9/6/2019 | | | SeqNo: 2135321 | | 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 | | 96.5 | 70 | 130 | | | |

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#: 1909112

09-Sep-19

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

| Sample ID: MB-47263 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134562 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 | 990 | | 1000 | | 99.1 | 77.4 | 118 | | | |

| Sample ID: LCS-47263 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134563 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 94.9 | 80 | 120 | | | |
| Surr: BFB | 1200 | | 1000 | | 116 | 77.4 | 118 | | | |

| Sample ID: 1909112-001AMS | SampType: MS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|----------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW05 25'-30' | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134565 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25 | 4.8 | 24.06 | 0 | 103 | 69.1 | 142 | | | |
| Surr: BFB | 1100 | | 962.5 | | 115 | 77.4 | 118 | | | |

| Sample ID: 1909112-001AMSD | SampType: MSD | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-----------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW05 25'-30' | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134566 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23 | 4.7 | 23.39 | 0 | 99.6 | 69.1 | 142 | 6.51 | 20 | |
| Surr: BFB | 1100 | | 935.5 | | 119 | 77.4 | 118 | 0 | 0 | S |

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#: 1909112

09-Sep-19

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

| Sample ID: MB-47263 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134599 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 | | 87.9 | 80 | 120 | | | |

| Sample ID: LCS-47263 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134600 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.98 | 0.025 | 1.000 | 0 | 98.1 | 80 | 120 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 100 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 103 | 80 | 120 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 101 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.95 | | 1.000 | | 94.7 | 80 | 120 | | | |

| Sample ID: 1909112-002AMS | SampType: MS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW05 30'-35' | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134603 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.023 | 0.9294 | 0.004208 | 110 | 76 | 123 | | | |
| Toluene | 1.1 | 0.046 | 0.9294 | 0.004485 | 118 | 80.3 | 127 | | | |
| Ethylbenzene | 1.1 | 0.046 | 0.9294 | 0 | 121 | 80.2 | 131 | | | |
| Xylenes, Total | 3.3 | 0.093 | 2.788 | 0 | 118 | 78 | 133 | | | |
| Surr: 4-Bromofluorobenzene | 0.89 | | 0.9294 | | 95.4 | 80 | 120 | | | |

| Sample ID: 1909112-002AMSD | SampType: MSD | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|-----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: MW05 30'-35' | Batch ID: 47263 | RunNo: 62668 | | | | | | | | |
| Prep Date: 9/4/2019 | Analysis Date: 9/5/2019 | SeqNo: 2134604 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.025 | 0.9940 | 0.004208 | 103 | 76 | 123 | 0.423 | 20 | |
| Toluene | 1.1 | 0.050 | 0.9940 | 0.004485 | 109 | 80.3 | 127 | 1.29 | 20 | |
| Ethylbenzene | 1.1 | 0.050 | 0.9940 | 0 | 113 | 80.2 | 131 | 0.813 | 20 | |
| Xylenes, Total | 3.2 | 0.099 | 2.982 | 0 | 109 | 78 | 133 | 1.67 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.92 | | 0.9940 | | 92.5 | 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

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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: 1909112

RcptNo: 1

Received By: Daniel Marquez

9/4/2019 8:00:00 AM

Completed By: Erin Melendrez

9/4/2019 9:58:20 AM

Reviewed By: ENM

9/4/19

[Handwritten initials]

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° 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:
(≤2 or >12 unless noted)

Adjusted? _____

Checked by: DAD 9/4/19

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 °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.3 | Good | Yes | | | |
| 2 | 3.0 | Good | Yes | | | |

Chain-of-Custody Record

Client: Hilcorp
Jennifer Deal
 Mailing Address: 382 Rd 3100
Aztec, NM 87410
 Phone #: 505-324-5128
 email or Fax#: jdeal@hilcorp.com
 QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
 Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other _____
☒ EDD (Type) PDF

Turn-Around Time:

☐ Standard☒ Rush Next day

Project Name:

Salty Dog

Project #:

017819014

Project Manager:

Josh AdamsSampler: C. McGinnOn Ice: ☒ Yes ☐ No# of Coolers: 2Cooler Temp (including CF): 0.7-0.4-0.3 / 3.4-0.4-3.0Container
Type and #Preservative
Type

HEAL No.

1909112

| Date | Time | Matrix | Sample Name |
|---------|------|--------|--------------|
| 8-28-19 | 1200 | Soil | MW05 25'-30' |
| | 1215 | | MW05 30'-35' |
| | 1310 | | Ex. Bottom |
| | 1515 | | MW06 25'-30' |
| | 1517 | | MW06 30'-35' |
| 8-29-19 | 1220 | | MW07 2'-4' |
| | 1222 | | MW07 22'-24' |
| | 1236 | | MW02 2'-4' |
| | 1238 | | MW02 16'x18' |
| | 1508 | | MW03 14'-16' |
| | 1511 | | MW03 26'-28' |
| | 1516 | | MW02 22'-24' |

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
| 402 jar | cool | -001 |
| | | -002 |
| | | -003 |
| | | -004 |
| | | -005 |
| | | -006 |
| | | -007 |
| | | -008 |
| | | -009 |
| | | -010 |
| | | -011 |
| | | -012 |

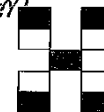
Date: 9-3-19 Time: 8:50 Relinquished by: Caitlyn Mess

Received by: [Signature] Via: _____ Date: 9-3-19 Time: 8:50

Date: 9/3/19 Time: 1845 Relinquished by: [Signature]

Received by: [Signature] Via: _____ Date: 9/3/19 Time: 1845

Remarks:

cc: jadams@tenv.comHALL 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 (8024) | TPH: 8015D (GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cd, Cr, Pb, Ni, NO ₃ , NO ₂ , PO ₄ , SO ₄ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | | | | | | | | | | |
|------------------------------|------------------------------|----------------------------|--------------------|--------------------------|---------------|---|------------|-----------------|---------------------------------|--|--|--|--|--|--|--|--|--|--|
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |
| X | X | | | | | X | | | | | | | | | | | | | |

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.

9/3/19 2100[Signature][Signature] courier9/4/19 8:00



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 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 | | |

Page 2 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 |
| 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 CaCO ₃) | 200.8 | 20.00 | | mg/L Ca | 1 | 9/16/2019 11:44:27 AM | R62955 |
| Carbonate (As CaCO ₃) | ND | 2.000 | | mg/L Ca | 1 | 9/16/2019 11:44:27 AM | R62955 |
| Total Alkalinity (as CaCO ₃) | 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 | | |

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

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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: 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. | 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: 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

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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-1 99.8uS eC | | SampType: lcs | | | 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

Page 16 of 19

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. | 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-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. | 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 | | |



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

Completed By: Yazmine Garduno

9/13/2019 8:44:55 AM

Reviewed By:

YB 9/13/19

Leah Baca
Yazmine Garduno

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 | | | | |

Chain-of-Custody Record

Client: Hilcorp
Jenifer Deal
Mailing Address: 382 Rd 3100
Aztec, NM 87410
Phone #: 505-324-5128
email or Fax#: jdeal@hilcorp.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other _____
☒ EDD (Type) PDF

Turn-Around Time: Results by
Monday @ 3pm
☐ Standard ☒ Rush 2 day

Project Name: Salty Dog

| | |
|------------|-----------|
| Project #: | 017819014 |
|------------|-----------|

Project Manager:
Josh Adams

Sampler: C. McGinn
 On Ice: ☒ Yes ☐ No

of Coolers: (1)

Cooler Temp (including CF): $4.1 + 0.3 = 4.4C$

| | | |
|-------------------------|----------------------|----------------------|
| Container
Type and # | Preservative
Type | HEAL No.
19091009 |
|-------------------------|----------------------|----------------------|

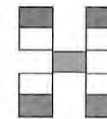
[illegible]

| | | |
|---------------|-------------|----------------------------|
| Date: 9-12-19 | Time: 11:05 | Relinquished by: Caidi Mae |
|---------------|-------------|----------------------------|

| | | |
|---------------|------------|-------------------------------------|
| Date: 9/12/19 | Time: 1752 | Relinquished by: <i>[Signature]</i> |
|---------------|------------|-------------------------------------|

| | | | |
|------------------|------|---------|------|
| Received by: | Via: | Date | Time |
| <i>Chris Hae</i> | | 9/12/19 | 1603 |

| | | | |
|--------------|-------------------|----------------|-------------|
| Received by: | Via: <i>comer</i> | Date | Time |
| <i>Heck</i> | | <i>9/13/14</i> | <i>0815</i> |



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: jadamms@ltnv.com
cmeginne@ltnv.com

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

November 01, 2019

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

RE: Salty Dog

OrderNo.: 1910B55

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 31 sample(s) on 10/22/2019 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW08@ 2.5-5'

Project: Salty Dog

Collection Date: 10/20/2019 2:49:00 PM

Lab ID: 1910B55-002

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.2 | | mg/Kg | 1 | 10/24/2019 6:23:33 PM |
| Motor Oil Range Organics (MRO) | ND | 41 | | mg/Kg | 1 | 10/24/2019 6:23:33 PM |
| Surr: DNOP | 124 | 70-130 | | %Rec | 1 | 10/24/2019 6:23:33 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/23/2019 7:05:34 PM |
| Surr: BFB | 92.4 | 77.4-118 | | %Rec | 1 | 10/23/2019 7:05:34 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/23/2019 7:05:34 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/23/2019 7:05:34 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/23/2019 7:05:34 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 10/23/2019 7:05:34 PM |
| Surr: 4-Bromofluorobenzene | 93.3 | 80-120 | | %Rec | 1 | 10/23/2019 7:05:34 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/23/2019 8:46:17 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 1 of 38

Analytical Report

Lab Order 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW08@ 20-22.5'

Project: Salty Dog

Collection Date: 10/20/2019 2:54:00 PM

Lab ID: 1910B55-004

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 10/24/2019 4:36:42 AM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 10/24/2019 4:36:42 AM |
| Surr: DNOP | 110 | 70-130 | | %Rec | 1 | 10/24/2019 4:36:42 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 10/23/2019 8:36:49 PM |
| Surr: BFB | 92.9 | 77.4-118 | | %Rec | 1 | 10/23/2019 8:36:49 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/23/2019 8:36:49 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 10/23/2019 8:36:49 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 10/23/2019 8:36:49 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 10/23/2019 8:36:49 PM |
| Surr: 4-Bromofluorobenzene | 93.1 | 80-120 | | %Rec | 1 | 10/23/2019 8:36:49 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/23/2019 9:35:54 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW08@ 22.5-25'

Project: Salty Dog

Collection Date: 10/20/2019 2:58:00 PM

Lab ID: 1910B55-005

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.4 | | mg/Kg | 1 | 10/24/2019 4:58:26 AM |
| Motor Oil Range Organics (MRO) | ND | 42 | | mg/Kg | 1 | 10/24/2019 4:58:26 AM |
| Surr: DNOP | 94.2 | 70-130 | | %Rec | 1 | 10/24/2019 4:58:26 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 10/23/2019 8:59:43 PM |
| Surr: BFB | 90.1 | 77.4-118 | | %Rec | 1 | 10/23/2019 8:59:43 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/23/2019 8:59:43 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 10/23/2019 8:59:43 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 10/23/2019 8:59:43 PM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 10/23/2019 8:59:43 PM |
| Surr: 4-Bromofluorobenzene | 90.0 | 80-120 | | %Rec | 1 | 10/23/2019 8:59:43 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 69 | 60 | | mg/Kg | 20 | 10/23/2019 9:48:18 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW08@ 27.5-30'

Project: Salty Dog

Collection Date: 10/20/2019 3:00:00 PM

Lab ID: 1910B55-006

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.9 | | mg/Kg | 1 | 10/24/2019 5:20:23 AM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 10/24/2019 5:20:23 AM |
| Surr: DNOP | 98.2 | 70-130 | | %Rec | 1 | 10/24/2019 5:20:23 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/23/2019 9:22:36 PM |
| Surr: BFB | 89.8 | 77.4-118 | | %Rec | 1 | 10/23/2019 9:22:36 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/23/2019 9:22:36 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/23/2019 9:22:36 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/23/2019 9:22:36 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/23/2019 9:22:36 PM |
| Surr: 4-Bromofluorobenzene | 89.9 | 80-120 | | %Rec | 1 | 10/23/2019 9:22:36 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/23/2019 10:00:43 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09@ 7.5-10'

Project: Salty Dog

Collection Date: 10/20/2019 5:20:00 PM

Lab ID: 1910B55-007

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 10/24/2019 5:42:12 AM |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 10/24/2019 5:42:12 AM |
| Surr: DNOP | 145 | 70-130 | S | %Rec | 1 | 10/24/2019 5:42:12 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/23/2019 10:08:25 PM |
| Surr: BFB | 91.7 | 77.4-118 | | %Rec | 1 | 10/23/2019 10:08:25 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/23/2019 10:08:25 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/23/2019 10:08:25 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/23/2019 10:08:25 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/23/2019 10:08:25 PM |
| Surr: 4-Bromofluorobenzene | 90.5 | 80-120 | | %Rec | 1 | 10/23/2019 10:08:25 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 410 | 60 | | mg/Kg | 20 | 10/23/2019 10:13:07 PM |

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

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09@12.5-15'

Project: Salty Dog

Collection Date: 10/20/2019 5:22:00 PM

Lab ID: 1910B55-008

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 10/24/2019 6:04:06 AM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 10/24/2019 6:04:06 AM |
| Surr: DNOP | 96.6 | 70-130 | | %Rec | 1 | 10/24/2019 6:04:06 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/23/2019 11:17:35 PM |
| Surr: BFB | 99.1 | 77.4-118 | | %Rec | 1 | 10/23/2019 11:17:35 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/23/2019 11:17:35 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/23/2019 11:17:35 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/23/2019 11:17:35 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 10/23/2019 11:17:35 PM |
| Surr: 4-Bromofluorobenzene | 97.8 | 80-120 | | %Rec | 1 | 10/23/2019 11:17:35 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 370 | 60 | | mg/Kg | 20 | 10/23/2019 10:25:32 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09@ 22.5-25'

Project: Salty Dog

Collection Date: 10/20/2019 5:24:00 PM

Lab ID: 1910B55-009

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 7.2 | | mg/Kg | 1 | 10/24/2019 6:25:58 AM |
| Motor Oil Range Organics (MRO) | ND | 36 | | mg/Kg | 1 | 10/24/2019 6:25:58 AM |
| Surr: DNOP | 92.7 | 70-130 | | %Rec | 1 | 10/24/2019 6:25:58 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/23/2019 11:40:40 PM |
| Surr: BFB | 98.8 | 77.4-118 | | %Rec | 1 | 10/23/2019 11:40:40 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/23/2019 11:40:40 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/23/2019 11:40:40 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/23/2019 11:40:40 PM |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 10/23/2019 11:40:40 PM |
| Surr: 4-Bromofluorobenzene | 97.2 | 80-120 | | %Rec | 1 | 10/23/2019 11:40:40 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 1100 | 60 | | mg/Kg | 20 | 10/23/2019 10:37:57 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW09@ 27.5-30'

Project: Salty Dog

Collection Date: 10/20/2019 5:26:00 PM

Lab ID: 1910B55-010

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 10/24/2019 6:48:02 AM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 10/24/2019 6:48:02 AM |
| Surr: DNOP | 105 | 70-130 | | %Rec | 1 | 10/24/2019 6:48:02 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 10/24/2019 12:03:43 AM |
| Surr: BFB | 96.3 | 77.4-118 | | %Rec | 1 | 10/24/2019 12:03:43 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 12:03:43 AM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 12:03:43 AM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 12:03:43 AM |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 10/24/2019 12:03:43 AM |
| Surr: 4-Bromofluorobenzene | 91.8 | 80-120 | | %Rec | 1 | 10/24/2019 12:03:43 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 370 | 60 | | mg/Kg | 20 | 10/23/2019 11:15:11 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 0-2.5'

Project: Salty Dog

Collection Date: 10/21/2019 1:52:00 PM

Lab ID: 1910B55-011

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 10/24/2019 7:09:55 AM |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 10/24/2019 7:09:55 AM |
| Surr: DNOP | 144 | 70-130 | S | %Rec | 1 | 10/24/2019 7:09:55 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 10/24/2019 12:26:43 AM |
| Surr: BFB | 96.4 | 77.4-118 | | %Rec | 1 | 10/24/2019 12:26:43 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 12:26:43 AM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 12:26:43 AM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 12:26:43 AM |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 10/24/2019 12:26:43 AM |
| Surr: 4-Bromofluorobenzene | 93.1 | 80-120 | | %Rec | 1 | 10/24/2019 12:26:43 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 68 | 60 | | mg/Kg | 20 | 10/23/2019 11:27:36 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 2.5-5'

Project: Salty Dog

Collection Date: 10/21/2019 1:50:00 PM

Lab ID: 1910B55-012

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.3 | | mg/Kg | 1 | 10/24/2019 7:32:00 AM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 10/24/2019 7:32:00 AM |
| Surr: DNOP | 142 | 70-130 | S | %Rec | 1 | 10/24/2019 7:32:00 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 12:49:48 AM |
| Surr: BFB | 94.2 | 77.4-118 | | %Rec | 1 | 10/24/2019 12:49:48 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 12:49:48 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 12:49:48 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 12:49:48 AM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/24/2019 12:49:48 AM |
| Surr: 4-Bromofluorobenzene | 91.0 | 80-120 | | %Rec | 1 | 10/24/2019 12:49:48 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 120 | 60 | | mg/Kg | 20 | 10/23/2019 11:40:00 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 7.5-10'

Project: Salty Dog

Collection Date: 10/21/2019 1:56:00 PM

Lab ID: 1910B55-013

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.5 | | mg/Kg | 1 | 10/24/2019 7:54:02 AM |
| Motor Oil Range Organics (MRO) | ND | 42 | | mg/Kg | 1 | 10/24/2019 7:54:02 AM |
| Surr: DNOP | 87.5 | 70-130 | | %Rec | 1 | 10/24/2019 7:54:02 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 1:12:50 AM |
| Surr: BFB | 94.7 | 77.4-118 | | %Rec | 1 | 10/24/2019 1:12:50 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 1:12:50 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 1:12:50 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 1:12:50 AM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/24/2019 1:12:50 AM |
| Surr: 4-Bromofluorobenzene | 92.2 | 80-120 | | %Rec | 1 | 10/24/2019 1:12:50 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 63 | 60 | | mg/Kg | 20 | 10/23/2019 8:14:48 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 10-12.5'

Project: Salty Dog

Collection Date: 10/21/2019 1:58:00 PM

Lab ID: 1910B55-014

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.0 | | mg/Kg | 1 | 10/24/2019 8:16:01 AM |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 10/24/2019 8:16:01 AM |
| Surr: DNOP | 115 | 70-130 | | %Rec | 1 | 10/24/2019 8:16:01 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/24/2019 1:35:51 AM |
| Surr: BFB | 90.5 | 77.4-118 | | %Rec | 1 | 10/24/2019 1:35:51 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/24/2019 1:35:51 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/24/2019 1:35:51 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/24/2019 1:35:51 AM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 10/24/2019 1:35:51 AM |
| Surr: 4-Bromofluorobenzene | 87.8 | 80-120 | | %Rec | 1 | 10/24/2019 1:35:51 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 670 | 60 | | mg/Kg | 20 | 10/23/2019 8:51:50 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 12.5-15'

Project: Salty Dog

Collection Date: 10/21/2019 2:00:00 PM

Lab ID: 1910B55-015

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 7.7 | | mg/Kg | 1 | 10/25/2019 8:35:03 AM |
| Motor Oil Range Organics (MRO) | ND | 39 | | mg/Kg | 1 | 10/25/2019 8:35:03 AM |
| Surr: DNOP | 92.0 | 70-130 | | %Rec | 1 | 10/25/2019 8:35:03 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 10/24/2019 1:58:53 AM |
| Surr: BFB | 94.5 | 77.4-118 | | %Rec | 1 | 10/24/2019 1:58:53 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/24/2019 1:58:53 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 10/24/2019 1:58:53 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 10/24/2019 1:58:53 AM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 10/24/2019 1:58:53 AM |
| Surr: 4-Bromofluorobenzene | 90.7 | 80-120 | | %Rec | 1 | 10/24/2019 1:58:53 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 140 | 60 | | mg/Kg | 20 | 10/23/2019 9:28:53 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@15-17.5'

Project: Salty Dog

Collection Date: 10/21/2019 2:02:00 PM

Lab ID: 1910B55-016

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.6 | | mg/Kg | 1 | 10/24/2019 9:00:09 AM |
| Motor Oil Range Organics (MRO) | ND | 43 | | mg/Kg | 1 | 10/24/2019 9:00:09 AM |
| Surr: DNOP | 93.9 | 70-130 | | %Rec | 1 | 10/24/2019 9:00:09 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 10/24/2019 2:21:57 AM |
| Surr: BFB | 95.4 | 77.4-118 | | %Rec | 1 | 10/24/2019 2:21:57 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/24/2019 2:21:57 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 10/24/2019 2:21:57 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 10/24/2019 2:21:57 AM |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 10/24/2019 2:21:57 AM |
| Surr: 4-Bromofluorobenzene | 92.2 | 80-120 | | %Rec | 1 | 10/24/2019 2:21:57 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 79 | 60 | | mg/Kg | 20 | 10/23/2019 9:41:13 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 17.5-20'

Project: Salty Dog

Collection Date: 10/21/2019 2:03:00 PM

Lab ID: 1910B55-017

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.1 | | mg/Kg | 1 | 10/24/2019 9:22:09 AM |
| Motor Oil Range Organics (MRO) | ND | 45 | | mg/Kg | 1 | 10/24/2019 9:22:09 AM |
| Surr: DNOP | 103 | 70-130 | | %Rec | 1 | 10/24/2019 9:22:09 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 2:45:00 AM |
| Surr: BFB | 94.6 | 77.4-118 | | %Rec | 1 | 10/24/2019 2:45:00 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 2:45:00 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 2:45:00 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 2:45:00 AM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/24/2019 2:45:00 AM |
| Surr: 4-Bromofluorobenzene | 90.7 | 80-120 | | %Rec | 1 | 10/24/2019 2:45:00 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 190 | 60 | | mg/Kg | 20 | 10/23/2019 9:53:34 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 20-22.5

Project: Salty Dog

Collection Date: 10/21/2019 2:04:00 PM

Lab ID: 1910B55-018

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.5 | | mg/Kg | 1 | 10/24/2019 9:44:21 AM |
| Motor Oil Range Organics (MRO) | ND | 43 | | mg/Kg | 1 | 10/24/2019 9:44:21 AM |
| Surr: DNOP | 105 | 70-130 | | %Rec | 1 | 10/24/2019 9:44:21 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/24/2019 3:54:05 AM |
| Surr: BFB | 94.8 | 77.4-118 | | %Rec | 1 | 10/24/2019 3:54:05 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 3:54:05 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/24/2019 3:54:05 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/24/2019 3:54:05 AM |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 10/24/2019 3:54:05 AM |
| Surr: 4-Bromofluorobenzene | 92.5 | 80-120 | | %Rec | 1 | 10/24/2019 3:54:05 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 120 | 61 | | mg/Kg | 20 | 10/23/2019 10:05:55 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 22.5-25'

Project: Salty Dog

Collection Date: 10/21/2019 2:05:00 PM

Lab ID: 1910B55-019

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 10/25/2019 8:29:23 AM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 10/25/2019 8:29:23 AM |
| Surr: DNOP | 90.0 | 70-130 | | %Rec | 1 | 10/25/2019 8:29:23 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 4:17:01 AM |
| Surr: BFB | 94.5 | 77.4-118 | | %Rec | 1 | 10/24/2019 4:17:01 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 4:17:01 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 4:17:01 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 4:17:01 AM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/24/2019 4:17:01 AM |
| Surr: 4-Bromofluorobenzene | 93.8 | 80-120 | | %Rec | 1 | 10/24/2019 4:17:01 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/24/2019 7:11:19 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 25-27.5'

Project: Salty Dog

Collection Date: 10/21/2019 2:06:00 PM

Lab ID: 1910B55-020

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.8 | | mg/Kg | 1 | 10/25/2019 8:51:32 AM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 10/25/2019 8:51:32 AM |
| Surr: DNOP | 104 | 70-130 | | %Rec | 1 | 10/25/2019 8:51:32 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 4:40:02 AM |
| Surr: BFB | 94.9 | 77.4-118 | | %Rec | 1 | 10/24/2019 4:40:02 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 4:40:02 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 4:40:02 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 4:40:02 AM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/24/2019 4:40:02 AM |
| Surr: 4-Bromofluorobenzene | 91.2 | 80-120 | | %Rec | 1 | 10/24/2019 4:40:02 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 210 | 60 | | mg/Kg | 20 | 10/25/2019 8:52:44 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 27.5-30'

Project: Salty Dog

Collection Date: 10/21/2019 2:08:00 PM

Lab ID: 1910B55-021

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.9 | | mg/Kg | 1 | 10/25/2019 9:13:40 AM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 10/25/2019 9:13:40 AM |
| Surr: DNOP | 93.3 | 70-130 | | %Rec | 1 | 10/25/2019 9:13:40 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 10/24/2019 7:50:49 PM |
| Surr: BFB | 88.8 | 77.4-118 | | %Rec | 1 | 10/24/2019 7:50:49 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 7:50:49 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 7:50:49 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 7:50:49 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/24/2019 7:50:49 PM |
| Surr: 4-Bromofluorobenzene | 90.0 | 80-120 | | %Rec | 1 | 10/24/2019 7:50:49 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 350 | 60 | | mg/Kg | 20 | 10/25/2019 9:05:09 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 30-32.5

Project: Salty Dog

Collection Date: 10/21/2019 2:10:00 PM

Lab ID: 1910B55-022

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.8 | | mg/Kg | 1 | 10/25/2019 9:35:45 AM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 10/25/2019 9:35:45 AM |
| Surr: DNOP | 97.0 | 70-130 | | %Rec | 1 | 10/25/2019 9:35:45 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 10/24/2019 8:13:41 PM |
| Surr: BFB | 93.3 | 77.4-118 | | %Rec | 1 | 10/24/2019 8:13:41 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 8:13:41 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 8:13:41 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 8:13:41 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/24/2019 8:13:41 PM |
| Surr: 4-Bromofluorobenzene | 93.8 | 80-120 | | %Rec | 1 | 10/24/2019 8:13:41 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 350 | 60 | | mg/Kg | 20 | 10/25/2019 9:17:34 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 32.5-35'

Project: Salty Dog

Collection Date: 10/21/2019 2:12:00 PM

Lab ID: 1910B55-023

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 10/25/2019 9:57:41 AM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 10/25/2019 9:57:41 AM |
| Surr: DNOP | 99.4 | 70-130 | | %Rec | 1 | 10/25/2019 9:57:41 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 10/24/2019 8:36:30 PM |
| Surr: BFB | 94.6 | 77.4-118 | | %Rec | 1 | 10/24/2019 8:36:30 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/24/2019 8:36:30 PM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 10/24/2019 8:36:30 PM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 10/24/2019 8:36:30 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 10/24/2019 8:36:30 PM |
| Surr: 4-Bromofluorobenzene | 95.0 | 80-120 | | %Rec | 1 | 10/24/2019 8:36:30 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 2000 | 150 | | mg/Kg | 50 | 10/25/2019 9:29:59 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW10@ 37.5-40'

Project: Salty Dog

Collection Date: 10/21/2019 2:15:00 PM

Lab ID: 1910B55-024

Matrix: SOIL

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.4 | | mg/Kg | 1 | 10/25/2019 10:19:43 AM |
| Motor Oil Range Organics (MRO) | ND | 42 | | mg/Kg | 1 | 10/25/2019 10:19:43 AM |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 10/25/2019 10:19:43 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/24/2019 8:59:23 PM |
| Surr: BFB | 93.2 | 77.4-118 | | %Rec | 1 | 10/24/2019 8:59:23 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 8:59:23 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/24/2019 8:59:23 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/24/2019 8:59:23 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 10/24/2019 8:59:23 PM |
| Surr: 4-Bromofluorobenzene | 93.4 | 80-120 | | %Rec | 1 | 10/24/2019 8:59:23 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 240 | 60 | | mg/Kg | 20 | 10/25/2019 9:42:23 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW11@ 32.5-35'

Project: Salty Dog

Collection Date: 10/21/2019 2:17:00 PM

Lab ID: 1910B55-025

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 10/24/2019 2:02:42 AM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 10/24/2019 2:02:42 AM |
| Surr: DNOP | 88.4 | 70-130 | | %Rec | 1 | 10/24/2019 2:02:42 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.9 | | mg/Kg | 1 | 10/24/2019 2:44:10 PM |
| Surr: BFB | 92.1 | 77.4-118 | | %Rec | 1 | 10/24/2019 2:44:10 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.020 | | mg/Kg | 1 | 10/24/2019 2:44:10 PM |
| Toluene | ND | 0.039 | | mg/Kg | 1 | 10/24/2019 2:44:10 PM |
| Ethylbenzene | ND | 0.039 | | mg/Kg | 1 | 10/24/2019 2:44:10 PM |
| Xylenes, Total | ND | 0.079 | | mg/Kg | 1 | 10/24/2019 2:44:10 PM |
| Surr: 4-Bromofluorobenzene | 96.4 | 80-120 | | %Rec | 1 | 10/24/2019 2:44:10 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 130 | 60 | | mg/Kg | 20 | 10/24/2019 10:56:39 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW11@ 37.5-40'

Project: Salty Dog

Collection Date: 10/21/2019 2:20:00 PM

Lab ID: 1910B55-026

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 10/24/2019 1:40:47 AM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 10/24/2019 1:40:47 AM |
| Surr: DNOP | 83.4 | 70-130 | | %Rec | 1 | 10/24/2019 1:40:47 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.8 | | mg/Kg | 1 | 10/24/2019 3:07:29 PM |
| Surr: BFB | 89.7 | 77.4-118 | | %Rec | 1 | 10/24/2019 3:07:29 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.019 | | mg/Kg | 1 | 10/24/2019 3:07:29 PM |
| Toluene | ND | 0.038 | | mg/Kg | 1 | 10/24/2019 3:07:29 PM |
| Ethylbenzene | ND | 0.038 | | mg/Kg | 1 | 10/24/2019 3:07:29 PM |
| Xylenes, Total | ND | 0.076 | | mg/Kg | 1 | 10/24/2019 3:07:29 PM |
| Surr: 4-Bromofluorobenzene | 93.6 | 80-120 | | %Rec | 1 | 10/24/2019 3:07:29 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 97 | 60 | | mg/Kg | 20 | 10/24/2019 11:09:04 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12@ 15-17.5'

Project: Salty Dog

Collection Date: 10/21/2019 3:00:00 PM

Lab ID: 1910B55-027

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 10/24/2019 1:18:42 AM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 10/24/2019 1:18:42 AM |
| Surr: DNOP | 93.7 | 70-130 | | %Rec | 1 | 10/24/2019 1:18:42 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.8 | | mg/Kg | 1 | 10/24/2019 3:30:45 PM |
| Surr: BFB | 90.4 | 77.4-118 | | %Rec | 1 | 10/24/2019 3:30:45 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.019 | | mg/Kg | 1 | 10/24/2019 3:30:45 PM |
| Toluene | ND | 0.038 | | mg/Kg | 1 | 10/24/2019 3:30:45 PM |
| Ethylbenzene | ND | 0.038 | | mg/Kg | 1 | 10/24/2019 3:30:45 PM |
| Xylenes, Total | ND | 0.076 | | mg/Kg | 1 | 10/24/2019 3:30:45 PM |
| Surr: 4-Bromofluorobenzene | 95.3 | 80-120 | | %Rec | 1 | 10/24/2019 3:30:45 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 80 | 60 | | mg/Kg | 20 | 10/24/2019 11:21:29 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12@ 20-22.5'

Project: Salty Dog

Collection Date: 10/21/2019 3:02:00 PM

Lab ID: 1910B55-028

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 10/24/2019 12:56:32 AM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 10/24/2019 12:56:32 AM |
| Surr: DNOP | 94.7 | 70-130 | | %Rec | 1 | 10/24/2019 12:56:32 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.6 | | mg/Kg | 1 | 10/25/2019 2:41:54 AM |
| Surr: BFB | 92.5 | 77.4-118 | | %Rec | 1 | 10/25/2019 2:41:54 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.018 | | mg/Kg | 1 | 10/25/2019 2:41:54 AM |
| Toluene | ND | 0.036 | | mg/Kg | 1 | 10/25/2019 2:41:54 AM |
| Ethylbenzene | ND | 0.036 | | mg/Kg | 1 | 10/25/2019 2:41:54 AM |
| Xylenes, Total | ND | 0.071 | | mg/Kg | 1 | 10/25/2019 2:41:54 AM |
| Surr: 4-Bromofluorobenzene | 91.3 | 80-120 | | %Rec | 1 | 10/25/2019 2:41:54 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 180 | 59 | | mg/Kg | 20 | 10/24/2019 11:33:53 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12@ 35-37.5'

Project: Salty Dog

Collection Date: 10/21/2019 3:05:00 PM

Lab ID: 1910B55-029

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 10/24/2019 12:34:17 AM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 10/24/2019 12:34:17 AM |
| Surr: DNOP | 93.6 | 70-130 | | %Rec | 1 | 10/24/2019 12:34:17 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 2.7 | | mg/Kg | 1 | 10/25/2019 3:04:40 AM |
| Surr: BFB | 94.0 | 77.4-118 | | %Rec | 1 | 10/25/2019 3:04:40 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.014 | | mg/Kg | 1 | 10/25/2019 3:04:40 AM |
| Toluene | ND | 0.027 | | mg/Kg | 1 | 10/25/2019 3:04:40 AM |
| Ethylbenzene | ND | 0.027 | | mg/Kg | 1 | 10/25/2019 3:04:40 AM |
| Xylenes, Total | ND | 0.055 | | mg/Kg | 1 | 10/25/2019 3:04:40 AM |
| Surr: 4-Bromofluorobenzene | 92.9 | 80-120 | | %Rec | 1 | 10/25/2019 3:04:40 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: CAS |
| Chloride | 200 | 60 | | mg/Kg | 20 | 10/24/2019 11:46:17 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW12@ 37.5-40'

Project: Salty Dog

Collection Date: 10/21/2019 3:07:00 PM

Lab ID: 1910B55-030

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 10/25/2019 10:41:34 AM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 10/25/2019 10:41:34 AM |
| Surr: DNOP | 99.1 | 70-130 | | %Rec | 1 | 10/25/2019 10:41:34 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 2.8 | | mg/Kg | 1 | 10/25/2019 4:12:54 AM |
| Surr: BFB | 94.2 | 77.4-118 | | %Rec | 1 | 10/25/2019 4:12:54 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.014 | | mg/Kg | 1 | 10/25/2019 4:12:54 AM |
| Toluene | ND | 0.028 | | mg/Kg | 1 | 10/25/2019 4:12:54 AM |
| Ethylbenzene | ND | 0.028 | | mg/Kg | 1 | 10/25/2019 4:12:54 AM |
| Xylenes, Total | ND | 0.056 | | mg/Kg | 1 | 10/25/2019 4:12:54 AM |
| Surr: 4-Bromofluorobenzene | 94.5 | 80-120 | | %Rec | 1 | 10/25/2019 4:12:54 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 3400 | 150 | | mg/Kg | 50 | 10/25/2019 9:54:48 AM |

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

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | 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 1910B55

Date Reported: 11/1/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Red Surface Oil

Project: Salty Dog

Collection Date: 10/21/2019 2:21:00 PM

Lab ID: 1910B55-031

Matrix: MEOH (SOIL)

Received Date: 10/22/2019 8:15:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|------|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | 130 | 92 | | mg/Kg | 10 | 10/25/2019 11:47:04 AM |
| Motor Oil Range Organics (MRO) | 750 | 460 | | mg/Kg | 10 | 10/25/2019 11:47:04 AM |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 10/25/2019 11:47:04 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/25/2019 4:35:39 AM |
| Surr: BFB | 100 | 77.4-118 | | %Rec | 1 | 10/25/2019 4:35:39 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/25/2019 4:35:39 AM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 4:35:39 AM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 4:35:39 AM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 10/25/2019 4:35:39 AM |
| Surr: 4-Bromofluorobenzene | 92.7 | 80-120 | | %Rec | 1 | 10/25/2019 4:35:39 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 57000 | 3000 | | mg/Kg | 1000 | 10/25/2019 10:07:12 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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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1910B55

01-Nov-19

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

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-48334 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 48334 | RunNo: 63893 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/23/2019 | SeqNo: 2185870 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-48334 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 48334 | RunNo: 63893 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/23/2019 | SeqNo: 2185871 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 16 | 1.5 | 15.00 | 0 | 103 | 90 | 110 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-48348 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 48348 | RunNo: 63930 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/23/2019 | SeqNo: 2186249 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-48348 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 48348 | RunNo: 63930 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/23/2019 | SeqNo: 2186250 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 15 | 1.5 | 15.00 | 0 | 97.6 | 90 | 110 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-48364 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 48364 | RunNo: 63938 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187704 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-48364 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 48364 | RunNo: 63938 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187705 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 16 | 1.5 | 15.00 | 0 | 106 | 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

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

WO#: 1910B55

01-Nov-19

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

| Sample ID: LCS-48316 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48316 | RunNo: 63888 | | | | | | | | |
| Prep Date: 10/22/2019 | Analysis Date: 10/23/2019 | SeqNo: 2184751 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 97.9 | 63.9 | 124 | | | |
| Surr: DNOP | 4.7 | | 5.000 | | 94.5 | 70 | 130 | | | |

| Sample ID: MB-48316 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48316 | RunNo: 63888 | | | | | | | | |
| Prep Date: 10/22/2019 | Analysis Date: 10/23/2019 | SeqNo: 2184752 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 | 9.5 | | 10.00 | | 94.6 | 70 | 130 | | | |

| Sample ID: MB-48332 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48332 | RunNo: 63890 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/23/2019 | SeqNo: 2184756 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 | 9.3 | | 10.00 | | 93.4 | 70 | 130 | | | |

| Sample ID: LCS-48332 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48332 | RunNo: 63890 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/23/2019 | SeqNo: 2184768 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 98.3 | 63.9 | 124 | | | |
| Surr: DNOP | 3.9 | | 5.000 | | 77.3 | 70 | 130 | | | |

| Sample ID: LCS-48342 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48342 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2186013 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 97.4 | 63.9 | 124 | | | |
| Surr: DNOP | 3.7 | | 5.000 | | 74.5 | 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

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

WO#: 1910B55

01-Nov-19

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

| Sample ID: MB-48342 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|--|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48342 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2186015 | 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 | 9.1 | | 10.00 | | 91.5 | 70 | 130 | | | |

| Sample ID: LCS-48344 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48344 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187663 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.8 | | 5.000 | | 95.0 | 70 | 130 | | | |

| Sample ID: MB-48344 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48344 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187664 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 11 | | 10.00 | | 109 | 70 | 130 | | | |

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#: 1910B55

01-Nov-19

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

| Sample ID: MB-48304 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48304 | RunNo: 63899 | | | | | | | | |
| Prep Date: 10/22/2019 | Analysis Date: 10/23/2019 | SeqNo: 2185284 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 | 920 | | 1000 | | 92.3 | 77.4 | 118 | | | |

| Sample ID: LCS-48304 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48304 | RunNo: 63899 | | | | | | | | |
| Prep Date: 10/22/2019 | Analysis Date: 10/23/2019 | SeqNo: 2185285 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 100 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 105 | 77.4 | 118 | | | |

| Sample ID: 1910B55-001AMS | SampType: MS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW08@ 0-2.5' | Batch ID: 48304 | RunNo: 63899 | | | | | | | | |
| Prep Date: 10/22/2019 | Analysis Date: 10/23/2019 | SeqNo: 2185287 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27 | 4.9 | 24.44 | 0 | 110 | 69.1 | 142 | | | |
| Surr: BFB | 1000 | | 977.5 | | 105 | 77.4 | 118 | | | |

| Sample ID: 1910B55-001AMSD | SampType: MSD | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW08@ 0-2.5' | Batch ID: 48304 | RunNo: 63899 | | | | | | | | |
| Prep Date: 10/22/2019 | Analysis Date: 10/23/2019 | SeqNo: 2185288 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26 | 5.0 | 24.93 | 0 | 106 | 69.1 | 142 | 2.40 | 20 | |
| Surr: BFB | 1100 | | 997.0 | | 108 | 77.4 | 118 | 0 | 0 | |

| Sample ID: RB | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: G63935 | RunNo: 63935 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2186991 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 | 940 | | 1000 | | 93.7 | 77.4 | 118 | | | |

| Sample ID: 2.5UG GRO LCS | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|---------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: G63935 | RunNo: 63935 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2186992 Units: mg/Kg | | | | | | | | |
| 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#: 1910B55

01-Nov-19

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

| Sample ID: 2.5UG GRO LCS | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|---------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: G63935 | RunNo: 63935 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2186992 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 94.5 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 110 | 77.4 | 118 | | | |

| Sample ID: MB-48339 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2186999 | | 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 | 910 | | 1000 | | 91.5 | 77.4 | 118 | | | |

| Sample ID: LCS-48339 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187000 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 97.8 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 110 | 77.4 | 118 | | | |

| Sample ID: RB | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: G63934 | RunNo: 63934 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2187063 | | 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 | 930 | | 1000 | | 93.3 | 77.4 | 118 | | | |

| Sample ID: 2.5UG GRO LCS | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|---------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: G63934 | RunNo: 63934 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2187064 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 95.0 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 105 | 77.4 | 118 | | | |

| Sample ID: MB-48341 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187070 | | Units: %Rec | | | | | | |
| 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#: **1910B55**

01-Nov-19

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

| Sample ID: MB-48341 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187070 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 930 | | 1000 | | 92.9 | 77.4 | 118 | | | |

| Sample ID: LCS-48341 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187071 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1000 | | 1000 | | 102 | 77.4 | 118 | | | |

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#: 1910B55

01-Nov-19

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

| | | | | | | | | | | |
|-----------------------|--------|---------------------------|-----------|---------------------------------------|------|--------------|-----------|------|----------|------|
| Sample ID: MB-48304 | | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
| Client ID: PBS | | Batch ID: 48304 | | RunNo: 63899 | | | | | | |
| Prep Date: 10/22/2019 | | Analysis Date: 10/23/2019 | | SeqNo: 2185320 | | 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 | 0.91 | | 1.000 | | 91.5 | 80 | 120 | | | |

| | | | | | | | | | | |
|------------------------------|--------|----------------------------------|-----------|--|------|---------------------|-----------|------|----------|------|
| Sample ID: LCS-48304 | | SampType: LCS | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
| Client ID: LCSS | | Batch ID: 48304 | | RunNo: 63899 | | | | | | |
| Prep Date: 10/22/2019 | | Analysis Date: 10/23/2019 | | SeqNo: 2185321 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|----------------------------|------|-------|-------|---|------|----|-----|--|--|--|
| Benzene | 0.88 | 0.025 | 1.000 | 0 | 88.3 | 80 | 120 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 92.5 | 80 | 120 | | | |
| Ethylbenzene | 0.93 | 0.050 | 1.000 | 0 | 93.2 | 80 | 120 | | | |
| Xylenes, Total | 2.7 | 0.10 | 3.000 | 0 | 91.3 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.95 | | 1.000 | | 95.1 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------------|--------|----------------------------------|-----------|--|------|---------------------|-----------|------|----------|------|
| Sample ID: 1910B55-002AMS | | SampType: MS | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
| Client ID: MW08@ 2.5-5' | | Batch ID: 48304 | | RunNo: 63899 | | | | | | |
| Prep Date: 10/22/2019 | | Analysis Date: 10/23/2019 | | SeqNo: 2185324 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|----------------------------|------|-------|--------|----------|------|------|-----|--|--|--|
| Benzene | 0.99 | 0.024 | 0.9452 | 0.01024 | 104 | 76 | 123 | | | |
| Toluene | 1.0 | 0.047 | 0.9452 | 0.009640 | 109 | 80.3 | 127 | | | |
| Ethylbenzene | 1.1 | 0.047 | 0.9452 | 0.01044 | 111 | 80.2 | 131 | | | |
| Xylenes, Total | 3.1 | 0.095 | 2.836 | 0.02878 | 108 | 78 | 133 | | | |
| Surr: 4-Bromofluorobenzene | 0.93 | | 0.9452 | | 98.5 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|---------------------------------------|------|--------------|-----------|------|----------|------|
| Sample ID: 1910B55-002AMSD | | SampType: MSD | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
| Client ID: MW08@ 2.5-5' | | Batch ID: 48304 | | RunNo: 63899 | | | | | | |
| Prep Date: 10/22/2019 | | Analysis Date: 10/23/2019 | | SeqNo: 2185325 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|----------------------------|------|-------|--------|----------|------|------|-----|------|----|--|
| Benzene | 1.0 | 0.024 | 0.9579 | 0.01024 | 105 | 76 | 123 | 2.14 | 20 | |
| Toluene | 1.1 | 0.048 | 0.9579 | 0.009640 | 110 | 80.3 | 127 | 2.07 | 20 | |
| Ethylbenzene | 1.1 | 0.048 | 0.9579 | 0.01044 | 111 | 80.2 | 131 | 1.52 | 20 | |
| Xylenes, Total | 3.2 | 0.096 | 2.874 | 0.02878 | 109 | 78 | 133 | 2.04 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 0.9579 | | 98.3 | 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

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

WO#: 1910B55

01-Nov-19

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

| Sample ID: RB | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------|----------------------------------|--|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: B63935 | RunNo: 63935 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2187029 | | 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 | 0.95 | | 1.000 | | 95.0 | 80 | 120 | | | |

| Sample ID: 100NG BTEX LCS | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: B63935 | RunNo: 63935 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2187030 | | 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 | 92.8 | 80 | 120 | | | |
| Toluene | 0.96 | 0.050 | 1.000 | 0 | 95.7 | 80 | 120 | | | |
| Ethylbenzene | 0.95 | 0.050 | 1.000 | 0 | 94.8 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 94.0 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 104 | 80 | 120 | | | |

| Sample ID: MB-48339 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187037 | | 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 | 0.92 | | 1.000 | | 91.8 | 80 | 120 | | | |

| Sample ID: LCS-48339 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187038 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.89 | 0.025 | 1.000 | 0 | 89.0 | 80 | 120 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 92.9 | 80 | 120 | | | |
| Ethylbenzene | 0.93 | 0.050 | 1.000 | 0 | 92.9 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 91.8 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 98.5 | 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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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1910B55

01-Nov-19

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

| Sample ID: RB | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: B63934 | RunNo: 63934 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2187084 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 | 0.97 | | 1.000 | | 97.3 | 80 | 120 | | | |

| Sample ID: 100NG BTEX LCS | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: B63934 | RunNo: 63934 | | | | | | | | |
| Prep Date: | Analysis Date: 10/24/2019 | SeqNo: 2187085 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Xylenes, Total | 3.1 | 0.10 | 3.000 | 0 | 102 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 101 | 80 | 120 | | | |

| Sample ID: MB-48341 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187091 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 0.99 | | 1.000 | | 98.8 | 80 | 120 | | | |

| Sample ID: LCS-48341 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187092 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 0.96 | | 1.000 | | 95.8 | 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

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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: 1910B55

RcptNo: 1

Received By: Juan Rojas 10/22/2019 8:15:00 AM

Completed By: Yazmine Garduno 10/22/2019 8:54:46 AM

Reviewed By: DM 10/22/19

Yazmine Garduno

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:
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

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 | 2.2 | Good | | | | |

Chain-of-Custody Record

Client: Hilcorp
Jennifer Deal

Mailing Address:

Phone #:

email or Fax#: jdeal@hilcorp.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☒ EDD (Type) TPE

Turn-Around Time:

☐ Standard

Project Name:

| |
|------------|
| Project #: |
|------------|

Project Manager:

Sampler:

On Ice:

of Coolers:

Cooler Temp (including CF): $7.6 - 0.4 = 7.2$ ($^{\circ}\text{C}$)Container
Type and #Preservative
Type

HEAL No. 10355

BTEX / MTBE / TMB's (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

ENB (Method 504.1)

EDB (Methion 304:1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl⁻, F⁻, Br⁻, NO₃⁻, NO₂⁻, PO₄³⁻, SO₄²⁻

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

2:00:26 AM

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| | | |
|----------------|------------|------------------------------|
| Date: 10-21-19 | Time: 1735 | Relinquished by: [Signature] |
|----------------|------------|------------------------------|

| | | | |
|--------------------|------------|----------|------|
| Received by: | Via: | Date | Time |
| <i>[Signature]</i> | <i>WAG</i> | 10/21/19 | 1730 |

Remarks: CC: jadamze@tenvix.com

| | | |
|----------|-------|------------------|
| Date: | Time: | Relinquished by: |
| 10/21/14 | 1814 | RW Waz |

| | | | |
|--------------------|---------|----------|------|
| Received by: | Via: | Date | Time |
| <i>[Signature]</i> | carrier | 10/22/19 | 8:15 |

Per Josh Cancel simplex - 1 and -3. 4/10/23/1

Chain-of-Custody Record

Client: Hilcorp
Jennifer Deal
 Mailing Address:
 Phone #:
 email or Fax#: jdeal@hilcorp.com
 QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
 Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:

☐ Standard☒ Rush3-day

Project Name:

Salty Dog

Project #:

017819014

Project Manager:

Josh Adams

Sampler:

Josh Adams

On Ice:

☒ Yes☐ No

of Coolers:

1Cooler Temp (including CF): 2.6-0.4 = 2.2

Container Type and #

Preservative Type

HEAL No.

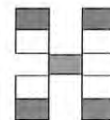
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. |
|-------|------|--------|-----------------|----------------------|-------------------|----------|
| 10/21 | 1356 | S | MW10 @ 7.5-10' | 4oz, 1 | Cool | -013 |
| | 1358 | | MW10 @ 10-12.5' | | | -014 |
| | 1400 | | MW10 @ 12.5-15' | | | -015 |
| | 1402 | | MW10 @ 15-17.5' | | | -016 |
| | 1403 | | MW10 @ 17.5-20' | | | -017 |
| | 1404 | | MW10 @ 20-22.5' | | | -018 |
| | 1405 | | MW10 @ 22.5-25' | | | -019 |
| | 1406 | | MW10 @ 25-27.5' | | | -020 |
| | 1408 | | MW10 @ 27.5-30' | | | -021 |
| | 1410 | | MW10 @ 30-32.5' | | | -022 |
| | 1412 | | MW10 @ 32.5-35' | | | -023 |
| | 1415 | | MW10 @ 37.5-40' | | | -024 |

Date: 10/21/19 Time: 1730 Relinquished by: J Adams

Received by: Carver Via: Carver Date: 10/21/19 Time: 1730

Date: 10/21/19 Time: 1814 Relinquished by: Carver

Received by: Carver Via: carrier Date: 10/22/19 Time: 8:15



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, NO ₃ , NO ₂ , PO ₄ , SO ₄ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | | | | | | | | | | |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|--|--|--|--|--|--|--|--|--|--|
| X | X | | | | | X | | | | | | | | | | | | | |

Remarks: CC: j.adams@henv.com

If necessary, samples submitted to Hall Environmental may be sub-contracted 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

October 28, 2019

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

RE: Salty Dog

OrderNo.: 1910C21

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 14 sample(s) on 10/23/2019 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13@ 10-12.5'

Project: Salty Dog

Collection Date: 10/21/2019 2:38:00 PM

Lab ID: 1910C21-001

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.9 | | mg/Kg | 1 | 10/25/2019 9:46:10 AM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 10/25/2019 9:46:10 AM |
| Surr: DNOP | 105 | 70-130 | | %Rec | 1 | 10/25/2019 9:46:10 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 10/24/2019 10:07:57 PM |
| Surr: BFB | 90.3 | 77.4-118 | | %Rec | 1 | 10/24/2019 10:07:57 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 10:07:57 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 10:07:57 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 10:07:57 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/24/2019 10:07:57 PM |
| Surr: 4-Bromofluorobenzene | 89.5 | 80-120 | | %Rec | 1 | 10/24/2019 10:07:57 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 210 | 60 | | mg/Kg | 20 | 10/24/2019 2:13:31 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 1 of 21

Analytical Report

Lab Order 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13@ 25-27.5'

Project: Salty Dog

Collection Date: 10/21/2019 2:40:00 PM

Lab ID: 1910C21-002

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 10/25/2019 10:10:21 AM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 10/25/2019 10:10:21 AM |
| Surr: DNOP | 97.8 | 70-130 | | %Rec | 1 | 10/25/2019 10:10:21 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/24/2019 10:30:50 PM |
| Surr: BFB | 91.4 | 77.4-118 | | %Rec | 1 | 10/24/2019 10:30:50 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 10:30:50 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/24/2019 10:30:50 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/24/2019 10:30:50 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 10/24/2019 10:30:50 PM |
| Surr: 4-Bromofluorobenzene | 89.3 | 80-120 | | %Rec | 1 | 10/24/2019 10:30:50 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 160 | 60 | | mg/Kg | 20 | 10/24/2019 2:50:44 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13@ 32.5-35'

Project: Salty Dog

Collection Date: 10/21/2019 2:42:00 PM

Lab ID: 1910C21-003

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 10/25/2019 10:34:28 AM |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 10/25/2019 10:34:28 AM |
| Surr: DNOP | 108 | 70-130 | | %Rec | 1 | 10/25/2019 10:34:28 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 11:39:26 PM |
| Surr: BFB | 93.7 | 77.4-118 | | %Rec | 1 | 10/24/2019 11:39:26 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 11:39:26 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 11:39:26 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 11:39:26 PM |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 10/24/2019 11:39:26 PM |
| Surr: 4-Bromofluorobenzene | 92.9 | 80-120 | | %Rec | 1 | 10/24/2019 11:39:26 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 3000 | 150 | | mg/Kg | 50 | 10/25/2019 10:50:39 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW13@ 37.5-40'

Project: Salty Dog

Collection Date: 10/21/2019 2:44:00 PM

Lab ID: 1910C21-004

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.1 | | mg/Kg | 1 | 10/25/2019 10:58:42 AM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 10/25/2019 10:58:42 AM |
| Surr: DNOP | 107 | 70-130 | | %Rec | 1 | 10/25/2019 10:58:42 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/25/2019 12:02:18 AM |
| Surr: BFB | 92.5 | 77.4-118 | | %Rec | 1 | 10/25/2019 12:02:18 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/25/2019 12:02:18 AM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 12:02:18 AM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 12:02:18 AM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 10/25/2019 12:02:18 AM |
| Surr: 4-Bromofluorobenzene | 92.1 | 80-120 | | %Rec | 1 | 10/25/2019 12:02:18 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/24/2019 4:05:11 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 4 of 21

Analytical Report

Lab Order 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14@ 5-7.5'

Project: Salty Dog

Collection Date: 10/22/2019 1:10:00 PM

Lab ID: 1910C21-005

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 10/25/2019 11:22:49 AM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 10/25/2019 11:22:49 AM |
| Surr: DNOP | 109 | 70-130 | | %Rec | 1 | 10/25/2019 11:22:49 AM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/25/2019 12:25:08 AM |
| Surr: BFB | 92.9 | 77.4-118 | | %Rec | 1 | 10/25/2019 12:25:08 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/25/2019 12:25:08 AM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 12:25:08 AM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 12:25:08 AM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 10/25/2019 12:25:08 AM |
| Surr: 4-Bromofluorobenzene | 92.2 | 80-120 | | %Rec | 1 | 10/25/2019 12:25:08 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/24/2019 4:17:36 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 5 of 21

Analytical Report

Lab Order 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14@ 20-22.5'

Project: Salty Dog

Collection Date: 10/22/2019 1:11:00 PM

Lab ID: 1910C21-006

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 10/24/2019 6:26:32 PM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 10/24/2019 6:26:32 PM |
| Surr: DNOP | 101 | 70-130 | | %Rec | 1 | 10/24/2019 6:26:32 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/25/2019 12:47:55 AM |
| Surr: BFB | 91.5 | 77.4-118 | | %Rec | 1 | 10/25/2019 12:47:55 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/25/2019 12:47:55 AM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 12:47:55 AM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/25/2019 12:47:55 AM |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 10/25/2019 12:47:55 AM |
| Surr: 4-Bromofluorobenzene | 90.1 | 80-120 | | %Rec | 1 | 10/25/2019 12:47:55 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 270 | 60 | | mg/Kg | 20 | 10/24/2019 4:30:01 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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Analytical Report

Lab Order 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14@ 25-27.5'

Project: Salty Dog

Collection Date: 10/22/2019 1:12:00 PM

Lab ID: 1910C21-007

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 10/24/2019 6:50:44 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 10/24/2019 6:50:44 PM |
| Surr: DNOP | 106 | 70-130 | | %Rec | 1 | 10/24/2019 6:50:44 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 10/25/2019 1:10:47 AM |
| Surr: BFB | 91.7 | 77.4-118 | | %Rec | 1 | 10/25/2019 1:10:47 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/25/2019 1:10:47 AM |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 10/25/2019 1:10:47 AM |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 10/25/2019 1:10:47 AM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 10/25/2019 1:10:47 AM |
| Surr: 4-Bromofluorobenzene | 91.0 | 80-120 | | %Rec | 1 | 10/25/2019 1:10:47 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 75 | 60 | | mg/Kg | 20 | 10/25/2019 10:19:36 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14@ 27.5-30'

Project: Salty Dog

Collection Date: 10/22/2019 1:13:00 PM

Lab ID: 1910C21-008

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 10/24/2019 7:15:02 PM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 10/24/2019 7:15:02 PM |
| Surr: DNOP | 105 | 70-130 | | %Rec | 1 | 10/24/2019 7:15:02 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/25/2019 1:33:37 AM |
| Surr: BFB | 90.5 | 77.4-118 | | %Rec | 1 | 10/25/2019 1:33:37 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/25/2019 1:33:37 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/25/2019 1:33:37 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/25/2019 1:33:37 AM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 10/25/2019 1:33:37 AM |
| Surr: 4-Bromofluorobenzene | 89.2 | 80-120 | | %Rec | 1 | 10/25/2019 1:33:37 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/24/2019 9:27:49 PM |

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

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW14@ 30-32.5'

Project: Salty Dog

Collection Date: 10/22/2019 1:14:00 PM

Lab ID: 1910C21-009

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.1 | | mg/Kg | 1 | 10/24/2019 7:39:05 PM |
| Motor Oil Range Organics (MRO) | ND | 46 | | mg/Kg | 1 | 10/24/2019 7:39:05 PM |
| Surr: DNOP | 99.4 | 70-130 | | %Rec | 1 | 10/24/2019 7:39:05 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/25/2019 1:56:21 AM |
| Surr: BFB | 90.8 | 77.4-118 | | %Rec | 1 | 10/25/2019 1:56:21 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/25/2019 1:56:21 AM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/25/2019 1:56:21 AM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/25/2019 1:56:21 AM |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 10/25/2019 1:56:21 AM |
| Surr: 4-Bromofluorobenzene | 89.5 | 80-120 | | %Rec | 1 | 10/25/2019 1:56:21 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 230 | 60 | | mg/Kg | 20 | 10/25/2019 10:32:01 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15@ 2.5-5'

Project: Salty Dog

Collection Date: 10/22/2019 4:10:00 PM

Lab ID: 1910C21-010

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 10/24/2019 8:03:17 PM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 10/24/2019 8:03:17 PM |
| Surr: DNOP | 92.1 | 70-130 | | %Rec | 1 | 10/24/2019 8:03:17 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/25/2019 2:19:09 AM |
| Surr: BFB | 89.7 | 77.4-118 | | %Rec | 1 | 10/25/2019 2:19:09 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/25/2019 2:19:09 AM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/25/2019 2:19:09 AM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/25/2019 2:19:09 AM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 10/25/2019 2:19:09 AM |
| Surr: 4-Bromofluorobenzene | 88.2 | 80-120 | | %Rec | 1 | 10/25/2019 2:19:09 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/24/2019 9:52:38 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15@ 22.5-25'

Project: Salty Dog

Collection Date: 10/22/2019 4:12:00 PM

Lab ID: 1910C21-011

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.9 | | mg/Kg | 1 | 10/24/2019 8:27:20 PM |
| Motor Oil Range Organics (MRO) | ND | 44 | | mg/Kg | 1 | 10/24/2019 8:27:20 PM |
| Surr: DNOP | 99.5 | 70-130 | | %Rec | 1 | 10/24/2019 8:27:20 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 10/24/2019 5:04:41 PM |
| Surr: BFB | 85.8 | 77.4-118 | | %Rec | 1 | 10/24/2019 5:04:41 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 5:04:41 PM |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 10/24/2019 5:04:41 PM |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 10/24/2019 5:04:41 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/24/2019 5:04:41 PM |
| Surr: 4-Bromofluorobenzene | 90.0 | 80-120 | | %Rec | 1 | 10/24/2019 5:04:41 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 1200 | 60 | | mg/Kg | 20 | 10/25/2019 10:44:26 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15@ 27.5-30'

Project: Salty Dog

Collection Date: 10/22/2019 4:14:00 PM

Lab ID: 1910C21-012

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 10/24/2019 8:51:33 PM |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 10/24/2019 8:51:33 PM |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 10/24/2019 8:51:33 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/24/2019 6:14:34 PM |
| Surr: BFB | 87.8 | 77.4-118 | | %Rec | 1 | 10/24/2019 6:14:34 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 10/24/2019 6:14:34 PM |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/24/2019 6:14:34 PM |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/24/2019 6:14:34 PM |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 10/24/2019 6:14:34 PM |
| Surr: 4-Bromofluorobenzene | 92.7 | 80-120 | | %Rec | 1 | 10/24/2019 6:14:34 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 2000 | 60 | | mg/Kg | 20 | 10/24/2019 10:42:16 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15@ 32.5-35'

Project: Salty Dog

Collection Date: 10/22/2019 4:16:00 PM

Lab ID: 1910C21-013

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.5 | | mg/Kg | 1 | 10/24/2019 9:15:36 PM |
| Motor Oil Range Organics (MRO) | ND | 42 | | mg/Kg | 1 | 10/24/2019 9:15:36 PM |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 10/24/2019 9:15:36 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/24/2019 7:24:45 PM |
| Surr: BFB | 90.2 | 77.4-118 | | %Rec | 1 | 10/24/2019 7:24:45 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/24/2019 7:24:45 PM |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 7:24:45 PM |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/24/2019 7:24:45 PM |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 10/24/2019 7:24:45 PM |
| Surr: 4-Bromofluorobenzene | 96.2 | 80-120 | | %Rec | 1 | 10/24/2019 7:24:45 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 2300 | 59 | | mg/Kg | 20 | 10/24/2019 10:54:40 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 1910C21

Date Reported: 10/28/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: MW15@ 37.5-40'

Project: Salty Dog

Collection Date: 10/22/2019 4:18:00 PM

Lab ID: 1910C21-014

Matrix: SOIL

Received Date: 10/23/2019 8:20:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 8.7 | | mg/Kg | 1 | 10/24/2019 9:39:46 PM |
| Motor Oil Range Organics (MRO) | ND | 43 | | mg/Kg | 1 | 10/24/2019 9:39:46 PM |
| Surr: DNOP | 93.4 | 70-130 | | %Rec | 1 | 10/24/2019 9:39:46 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 10/24/2019 7:48:11 PM |
| Surr: BFB | 88.8 | 77.4-118 | | %Rec | 1 | 10/24/2019 7:48:11 PM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/24/2019 7:48:11 PM |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 7:48:11 PM |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/24/2019 7:48:11 PM |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/24/2019 7:48:11 PM |
| Surr: 4-Bromofluorobenzene | 94.6 | 80-120 | | %Rec | 1 | 10/24/2019 7:48:11 PM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 96 | 60 | | mg/Kg | 20 | 10/24/2019 11:07:04 PM |

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

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | 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#: **1910C21****28-Oct-19****Client:** HILCORP ENERGY**Project:** Salty Dog

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-48355 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 48355 | RunNo: 63938 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187674 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-48355 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 48355 | RunNo: 63938 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187675 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 16 | 1.5 | 15.00 | 0 | 109 | 90 | 110 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-48364 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBS | Batch ID: 48364 | RunNo: 63938 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187704 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-48364 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSS | Batch ID: 48364 | RunNo: 63938 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187705 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 16 | 1.5 | 15.00 | 0 | 106 | 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#: 1910C21

28-Oct-19

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

| Sample ID: LCS-48342 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48342 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2186013 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 97.4 | 63.9 | 124 | | | |
| Surr: DNOP | 3.7 | | 5.000 | | 74.5 | 70 | 130 | | | |

| Sample ID: MB-48342 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48342 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2186015 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 | 9.1 | | 10.00 | | 91.5 | 70 | 130 | | | |

| Sample ID: LCS-48344 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48344 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187663 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 102 | 63.9 | 124 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 95.0 | 70 | 130 | | | |

| Sample ID: MB-48344 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48344 | RunNo: 63924 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187664 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 | 11 | | 10.00 | | 109 | 70 | 130 | | | |

| Sample ID: LCS-48372 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48372 | RunNo: 63970 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/25/2019 | SeqNo: 2189206 Units: %Rec | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.4 | | 5.000 | | 87.7 | 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

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#: 1910C21

28-Oct-19

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

| Sample ID: MB-48372 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48372 | RunNo: 63970 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/25/2019 | SeqNo: 2189207 | | Units: %Rec | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 9.4 | | 10.00 | | 93.6 | 70 | 130 | | | |

| Sample ID: LCS-48373 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48373 | RunNo: 63969 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/25/2019 | SeqNo: 2189241 | | Units: %Rec | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 4.5 | | 5.000 | | 90.2 | 70 | 130 | | | |

| Sample ID: MB-48373 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48373 | RunNo: 63969 | | | | | | | | |
| Prep Date: 10/24/2019 | Analysis Date: 10/25/2019 | SeqNo: 2189242 | | Units: %Rec | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 10 | | 10.00 | | 102 | 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

Page 17 of 21

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

WO#: 1910C21

28-Oct-19

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

| Sample ID: MB-48339 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2186999 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 | 910 | | 1000 | | 91.5 | 77.4 | 118 | | | |

| Sample ID: LCS-48339 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187000 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 97.8 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 110 | 77.4 | 118 | | | |

| Sample ID: MB-48341 | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187070 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 | 930 | | 1000 | | 92.9 | 77.4 | 118 | | | |

| Sample ID: LCS-48341 | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187071 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 95.8 | 80 | 120 | | | |
| Surr: BFB | 1000 | | 1000 | | 102 | 77.4 | 118 | | | |

| Sample ID: 1910C21-011AMS | SampType: MS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW15@ 22.5-25' | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187073 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26 | 5.0 | 24.88 | 0 | 103 | 69.1 | 142 | | | |
| Surr: BFB | 1000 | | 995.0 | | 104 | 77.4 | 118 | | | |

| Sample ID: 1910C21-011AMSD | SampType: MSD | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW15@ 22.5-25' | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187074 Units: mg/Kg | | | | | | | | |
| 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#: 1910C21

28-Oct-19

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

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------|-----------|--|------|--------------|-----------|------|----------|------|
| Sample ID: 1910C21-011AMSD | | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: MW15@ 22.5-25' | | Batch ID: 48341 | | RunNo: 63934 | | | | | | |
| Prep Date: 10/23/2019 | | Analysis Date: 10/24/2019 | | SeqNo: 2187074 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 28 | 4.8 | 23.92 | 0 | 119 | 69.1 | 142 | 10.0 | 20 | |
| Surr: BFB | 1000 | | 956.9 | | 106 | 77.4 | 118 | 0 | 0 | |

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#: 1910C21

28-Oct-19

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

| Sample ID: MB-48339 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187037 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 | 0.92 | | 1.000 | | 91.8 | 80 | 120 | | | |

| Sample ID: LCS-48339 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48339 | RunNo: 63935 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187038 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|----------------------------|------|-------|-------|---|------|----|-----|--|--|--|
| Benzene | 0.89 | 0.025 | 1.000 | 0 | 89.0 | 80 | 120 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 92.9 | 80 | 120 | | | |
| Ethylbenzene | 0.93 | 0.050 | 1.000 | 0 | 92.9 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 91.8 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 98.5 | 80 | 120 | | | |

| Sample ID: MB-48341 | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187091 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 | 0.99 | | 1.000 | | 98.8 | 80 | 120 | | | |

| Sample ID: LCS-48341 | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187092 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|----------------------------|------|-------|-------|---|------|----|-----|--|--|--|
| Benzene | 0.95 | 0.025 | 1.000 | 0 | 94.8 | 80 | 120 | | | |
| Toluene | 0.99 | 0.050 | 1.000 | 0 | 98.8 | 80 | 120 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.3 | 80 | 120 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 100 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 0.96 | | 1.000 | | 95.8 | 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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1910C21**

28-Oct-19

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

| Sample ID: 1910C21-012AMS | SampType: MS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW15@ 27.5-30' | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187095 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.94 | 0.024 | 0.9443 | 0 | 99.9 | 76 | 123 | | | |
| Toluene | 0.99 | 0.047 | 0.9443 | 0.01039 | 104 | 80.3 | 127 | | | |
| Ethylbenzene | 1.0 | 0.047 | 0.9443 | 0 | 107 | 80.2 | 131 | | | |
| Xylenes, Total | 3.1 | 0.094 | 2.833 | 0.01622 | 107 | 78 | 133 | | | |
| Surr: 4-Bromofluorobenzene | 0.89 | | 0.9443 | | 93.9 | 80 | 120 | | | |

| Sample ID: 1910C21-012AMSD | SampType: MSD | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|-----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: MW15@ 27.5-30' | Batch ID: 48341 | RunNo: 63934 | | | | | | | | |
| Prep Date: 10/23/2019 | Analysis Date: 10/24/2019 | SeqNo: 2187096 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.93 | 0.023 | 0.9276 | 0 | 100 | 76 | 123 | 1.20 | 20 | |
| Toluene | 0.99 | 0.046 | 0.9276 | 0.01039 | 105 | 80.3 | 127 | 0.415 | 20 | |
| Ethylbenzene | 1.0 | 0.046 | 0.9276 | 0 | 108 | 80.2 | 131 | 1.13 | 20 | |
| Xylenes, Total | 3.0 | 0.093 | 2.783 | 0.01622 | 109 | 78 | 133 | 0.507 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.88 | | 0.9276 | | 94.7 | 80 | 120 | 0 | 0 | |

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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY FAR

Work Order Number: 1910C21

RcptNo: 1

Received By: Juan Rojas 10/23/2019 8:20:00 AMCompleted By: Yazmine Garduno 10/23/2019 8:37:08 AMReviewed By: DM 10/22/19

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: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: DAD 10/23/19

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:

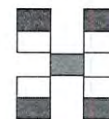
17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.8 | Good | | | | |

Chain-of-Custody Record

Client: Hilcorp
Jennifer Deal
 Mailing Address:
 Phone #:
 email or Fax#: jdeal@Hilcorp.com
 QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
 Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☒ EDD (Type) PDF

Turn-Around Time: Friday 10-24
☐ Standard ☒ Rush 3-day
 Project Name: Salty Dog
 Project #: 017819014
 Project Manager: Josh Adams
 Sampler: Josh Adams
 On Ice: ☒ Yes ☐ No
 # of Coolers: 1
 Cooler Temp (including CF): 1.6 + 0.2 = 1.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. | BTEX / MTBE / EMPs (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, NO ₃ , NO ₂ , PO ₄ , SO ₄ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|----------|------|--------|-------------------------------------|----------------------|-------------------|-----------------|---------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|---|------------|-----------------|---------------------------------|
| 10-21-19 | 1438 | Soil | MW13 @ 10-12.5' | (1) 4oz | cool | 1910C21
-001 | X | X | | | | | X | | | |
| | 1440 | | MW13 @ 25-27.5' | | | -002 | | | | | | | | | | |
| | 1442 | | MW13 @ 32.5-35' | | | -003 | | | | | | | | | | |
| | 1444 | | MW13 @ 37.5-40' | | | -004 | | | | | | | | | | |
| 10-22-19 | 1310 | | MW14 @ 20-22.5' 25-27.5' | | | -005 | | | | | | | | | | |
| | 1311 | | MW14 @ 20-22.5' | | | -006 | | | | | | | | | | |
| | 1312 | | MW14 @ 25-27.5' | | | -007 | | | | | | | | | | |
| | 1313 | | MW14 @ 27.5-30' | | | -008 | | | | | | | | | | |
| | 1314 | | MW14 @ 30-32.5' | | | -009 | | | | | | | | | | |
| | 1610 | | MW15 @ 25-5' | | | -010 | | | | | | | | | | |
| | 1612 | | MW15 @ 22.5-25' | | | -011 | | | | | | | | | | |
| | 1614 | | MW15 @ 27.5-30' | | | -012 | | | | | | | | | | |

Date: 10-22-19 Time: 1715 Relinquished by: Josh Adams Received by: Christa Waelte Via: 1st/2nd/3rd Date: 10/22/19 Time: 1715

Remarks:

Date: 10/22/19 Time: 1811 Relinquished by: Christa Waelte Received by: Smf carrier Via: 10/23/19 Date: 10/23/19 Time: 8:20

cc: jadams@henv.com

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.

Analysis Request

| Chain-of-Custody Record | | Turn-Around Time: 10/24 | |
|---|--|---|--|
| Client: Hilcorp | | ☐ Standard | ☒ Rush 3-day |
| Jennifer Deal | | Project Name: Salty Dog | |
| Mailing Address: | | Project #: 017819014 | |
| Phone #: | | Project Manager: Josh Adams | |
| email or Fax#: jdeal@hilcorp.com | | Sampler: Josh Adams | |
| QA/QC Package: | | On Ice: ☒ Yes ☐ No | |
| ☒ Standard ☐ Level 4 (Full Validation) | | # of Coolers: 1 | |
| Accreditation: ☐ Az Compliance | | | |
| ☐ NELAC ☐ Other _____ | | | |
| ☒ EDD (Type) PPE | | | |

[illegible]

| | | | | | | | |
|-------------------|---------------|--|------------------------------------|----------------------------|------------------|--------------|-------------------------------------|
| Date:
10-22-19 | Time:
1715 | Relinquished by:
<i>[Signature]</i> | Received by:
<i>[Signature]</i> | Via:
<i>[Signature]</i> | Date
10/22/19 | Time
1715 | Remarks:

cc: jadams@kenv.com |
| Date:
10/22/19 | Time:
1841 | Relinquished by:
<i>[Signature]</i> | Received by:
<i>[Signature]</i> | Via:
<i>[Signature]</i> | Date
10/23/19 | Time
8:20 | |

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

October 31, 2019

Jennifer Deal

Hilcorp San Juan LP/Hilcorp Energy Corp
PO Box PO Box 4700
Farmington, NM 84701
TEL:
FAX

RE: Salty Dog

OrderNo.: 1910D52

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/25/2019 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 1910D52

Date Reported: 10/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW09@20-22.5'

Project: Salty Dog

Collection Date: 10/23/2019 2:05:00 PM

Lab ID: 1910D52-001

Matrix: MEOH (SOIL)

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 10/25/2019 12:09:19 PM |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 10/25/2019 12:09:19 PM |
| Surr: DNOP | 97.2 | 70-130 | | %Rec | 1 | 10/25/2019 12:09:19 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.2 | | mg/Kg | 1 | 10/25/2019 10:18:57 AM |
| Surr: BFB | 90.8 | 77.4-118 | | %Rec | 1 | 10/25/2019 10:18:57 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.064 | | mg/Kg | 1 | 10/25/2019 10:18:57 AM |
| Benzene | ND | 0.016 | | mg/Kg | 1 | 10/25/2019 10:18:57 AM |
| Toluene | ND | 0.032 | | mg/Kg | 1 | 10/25/2019 10:18:57 AM |
| Ethylbenzene | ND | 0.032 | | mg/Kg | 1 | 10/25/2019 10:18:57 AM |
| Xylenes, Total | ND | 0.064 | | mg/Kg | 1 | 10/25/2019 10:18:57 AM |
| Surr: 4-Bromofluorobenzene | 91.2 | 80-120 | | %Rec | 1 | 10/25/2019 10:18:57 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | ND | 60 | | mg/Kg | 20 | 10/25/2019 11:27:39 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 | | |
| | | | | |

Page 1 of 7

Analytical Report

Lab Order 1910D52

Date Reported: 10/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp San Juan LP/Hilcorp Energy Cor

Client Sample ID: MW15@30-32.5'

Project: Salty Dog

Collection Date: 10/23/2019 2:07:00 PM

Lab ID: 1910D52-002

Matrix: MEOH (SOIL)

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|--|--------|----------|------|-------|----|------------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | Analyst: BRM |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 10/25/2019 12:31:26 PM |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 10/25/2019 12:31:26 PM |
| Surr: DNOP | 95.9 | 70-130 | | %Rec | 1 | 10/25/2019 12:31:26 PM |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.2 | | mg/Kg | 1 | 10/25/2019 10:41:49 AM |
| Surr: BFB | 90.4 | 77.4-118 | | %Rec | 1 | 10/25/2019 10:41:49 AM |
| EPA METHOD 8021B: VOLATILES | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.065 | | mg/Kg | 1 | 10/25/2019 10:41:49 AM |
| Benzene | ND | 0.016 | | mg/Kg | 1 | 10/25/2019 10:41:49 AM |
| Toluene | ND | 0.032 | | mg/Kg | 1 | 10/25/2019 10:41:49 AM |
| Ethylbenzene | ND | 0.032 | | mg/Kg | 1 | 10/25/2019 10:41:49 AM |
| Xylenes, Total | ND | 0.065 | | mg/Kg | 1 | 10/25/2019 10:41:49 AM |
| Surr: 4-Bromofluorobenzene | 89.5 | 80-120 | | %Rec | 1 | 10/25/2019 10:41:49 AM |
| EPA METHOD 300.0: ANIONS | | | | | | Analyst: MRA |
| Chloride | 160 | 60 | | mg/Kg | 20 | 10/25/2019 11:39:59 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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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1910D52

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: MB-48381 | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|---|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48381 | RunNo: 63975 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/25/2019 | SeqNo: 2189535 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID: LCS-48381 | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------------|----------------------------------|---|---------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48381 | RunNo: 63975 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/25/2019 | SeqNo: 2189536 | Units: mg/Kg | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 15 | 1.5 | 15.00 | 0 | 100 | 90 | 110 | | | |

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#: 1910D52

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: LCS-48380 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: 48380 | RunNo: 63970 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/25/2019 | SeqNo: 2188298 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 98.7 | 63.9 | 124 | | | |
| Surr: DNOP | 4.6 | | 5.000 | | 91.9 | 70 | 130 | | | |

| Sample ID: MB-48380 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: 48380 | RunNo: 63970 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/25/2019 | SeqNo: 2188299 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 | 9.5 | | 10.00 | | 95.4 | 70 | 130 | | | |

| Sample ID: 1910D52-001AMS | SampType: MS | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW09@20-22.5' | Batch ID: 48380 | RunNo: 63970 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/26/2019 | SeqNo: 2189204 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 47 | 9.6 | 47.85 | 0 | 99.1 | 57 | 142 | | | |
| Surr: DNOP | 3.8 | | 4.785 | | 79.6 | 70 | 130 | | | |

| Sample ID: 1910D52-001AMSD | SampType: MSD | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | | | | |
|-----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW09@20-22.5' | Batch ID: 48380 | RunNo: 63970 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/26/2019 | SeqNo: 2189205 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 9.7 | 48.40 | 0 | 95.7 | 57 | 142 | 2.30 | 20 | |
| Surr: DNOP | 3.6 | | 4.840 | | 75.3 | 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 | 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 | | |

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

WO#: 1910D52

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: RB | SampType: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: G63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188840 | | 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 | 940 | | 1000 | | 94.4 | 77.4 | 118 | | | |

| Sample ID: 2.5UG GRO LCS | SampType: LCS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|---------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: G63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188841 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 5.0 | 25.00 | 0 | 95.5 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 113 | 77.4 | 118 | | | |

| Sample ID: 1910D52-001AMS | SampType: MS | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|----------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|------|----------|------|
| Client ID: MW09@20-22.5' | Batch ID: G63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188842 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 15 | 3.2 | 15.93 | 0 | 92.0 | 69.1 | 142 | | | |
| Surr: BFB | 650 | | 637.3 | | 103 | 77.4 | 118 | | | |

| Sample ID: 1910D52-001AMSD | SampType: MSD | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | |
|-----------------------------------|----------------------------------|---|-----------|---------------------|------|----------|-----------|-------|----------|------|
| Client ID: MW09@20-22.5' | Batch ID: G63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188843 | | Units: mg/Kg | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 15 | 3.2 | 15.93 | 0 | 92.2 | 69.1 | 142 | 0.261 | 20 | |
| Surr: BFB | 670 | | 637.3 | | 105 | 77.4 | 118 | 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

Page 5 of 7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910D52

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp

Project: Salty Dog

| Sample ID: RB | SampType: MBLK | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBS | Batch ID: B63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188870 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | ND | 0.10 | | | | | | | | |
| 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 | | | |

| Sample ID: 100NG BTEX LCS | SampType: LCS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS | Batch ID: B63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188871 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 0.70 | 0.10 | 1.000 | 0 | 70.4 | 65.3 | 124 | | | |
| Benzene | 0.98 | 0.025 | 1.000 | 0 | 97.7 | 80 | 120 | | | |
| Toluene | 0.96 | 0.050 | 1.000 | 0 | 96.1 | 80 | 120 | | | |
| Ethylbenzene | 0.95 | 0.050 | 1.000 | 0 | 95.1 | 80 | 120 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 94.4 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

| Sample ID: 1910D52-002AMS | SampType: MS | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MW15@30-32.5' | Batch ID: B63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188872 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 0.55 | 0.065 | 0.6472 | 0 | 85.4 | 61.1 | 124 | | | |
| Benzene | 0.58 | 0.016 | 0.6472 | 0.006809 | 87.8 | 76 | 123 | | | |
| Toluene | 0.59 | 0.032 | 0.6472 | 0.005249 | 91.1 | 80.3 | 127 | | | |
| Ethylbenzene | 0.59 | 0.032 | 0.6472 | 0.007035 | 90.2 | 80.2 | 131 | | | |
| Xylenes, Total | 1.7 | 0.065 | 1.942 | 0.01019 | 89.6 | 78 | 133 | | | |
| Surr: 4-Bromofluorobenzene | 0.62 | | 0.6472 | | 96.3 | 80 | 120 | | | |

| Sample ID: 1910D52-002AMSD | SampType: MSD | TestCode: EPA Method 8021B: Volatiles | | | | | | | | |
|-----------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: MW15@30-32.5' | Batch ID: B63981 | RunNo: 63981 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188873 Units: mg/Kg | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 0.60 | 0.065 | 0.6472 | 0 | 92.1 | 61.1 | 124 | 7.56 | 20 | |
| Benzene | 0.57 | 0.016 | 0.6472 | 0.006809 | 86.6 | 76 | 123 | 1.38 | 20 | |
| Toluene | 0.58 | 0.032 | 0.6472 | 0.005249 | 88.6 | 80.3 | 127 | 2.77 | 20 | |
| Ethylbenzene | 0.59 | 0.032 | 0.6472 | 0.007035 | 89.4 | 80.2 | 131 | 0.912 | 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

Page 6 of 7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910D52

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp

Project: Salty Dog

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|---------------------------------------|------|--------------|-----------|-------|----------|------|
| Sample ID: 1910D52-002AMSD | | SampType: MSD | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
| Client ID: MW15@30-32.5' | | Batch ID: B63981 | | RunNo: 63981 | | | | | | |
| Prep Date: | | Analysis Date: 10/25/2019 | | SeqNo: 2188873 | | Units: mg/Kg | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Xylenes, Total | 1.7 | 0.065 | 1.942 | 0.01019 | 88.8 | 78 | 133 | 0.848 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.65 | | 0.6472 | | 100 | 80 | 120 | 0 | 0 | |

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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **HILCORP ENERGY**Work Order Number: **1910D52**RcptNo: **1**

Received By:

*Tuan Rojas***10/25/2019 8:00:00 AM**

Completed By:

Leah Baca**10/25/2019 9:00:24 AM***Leah Baca*

Reviewed By:

DAD 10/25/19

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:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: **EWM 10/25/19**

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 | 0.3 | Good | Yes | | | |
| 2 | 0.6 | Good | Yes | | | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

[illegible]

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

October 31, 2019

Jennifer Deal

Hilcorp San Juan LP/Hilcorp Energy Corp
PO Box PO Box 4700
Farmington, NM 84701
TEL:
FAX

RE: Salty Dog

OrderNo.: 1910D50

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/25/2019 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | ND | 0.50 | | mg/L | 5 | 10/25/2019 11:58:52 AM |
| Chloride | 1600 | 100 | * | mg/L | 200 | 10/28/2019 2:01:37 PM |
| Nitrogen, Nitrite (As N) | ND | 0.50 | | mg/L | 5 | 10/25/2019 11:58:52 AM |
| Bromide | 2.7 | 2.0 | | mg/L | 20 | 10/25/2019 12:11:17 PM |
| Nitrogen, Nitrate (As N) | 2.1 | 2.0 | | mg/L | 20 | 10/25/2019 12:11:17 PM |
| Phosphorus, Orthophosphate (As P) | ND | 2.5 | | mg/L | 5 | 10/25/2019 11:58:52 AM |
| Sulfate | 1700 | 100 | * | mg/L | 200 | 10/28/2019 2:01:37 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 720 | 10 | | mg/L | 10 | 10/25/2019 2:02:09 PM |
| Magnesium | 130 | 5.0 | | mg/L | 5 | 10/25/2019 2:46:01 PM |
| Potassium | 9.5 | 5.0 | | mg/L | 5 | 10/25/2019 2:46:01 PM |
| Sodium | 1400 | 20 | | mg/L | 20 | 10/25/2019 2:48:18 PM |
| 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 |

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 1910D50

Date Reported: 10/31/2019

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 |
| 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 |
| 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 |

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: 10/31/2019

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 |
| 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 |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.45 | | H | pH units | 1 | 10/28/2019 10:38:47 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 6370 | 200 | *D | mg/L | 1 | 10/28/2019 4:18:00 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | 2.8 | 2.0 | | mg/L | 20 | 10/25/2019 12:36:05 PM |
| Chloride | 1500 | 100 | * | mg/L | 200 | 10/28/2019 2:13:58 PM |
| Nitrogen, Nitrite (As N) | ND | 0.50 | | mg/L | 5 | 10/25/2019 12:23:41 PM |
| Bromide | 2.4 | 2.0 | | mg/L | 20 | 10/25/2019 12:36:05 PM |
| Nitrogen, Nitrate (As N) | 3.0 | 2.0 | | mg/L | 20 | 10/25/2019 12:36:05 PM |
| Phosphorus, Orthophosphate (As P) | ND | 10 | | mg/L | 20 | 10/25/2019 12:36:05 PM |
| Sulfate | 3100 | 100 | * | mg/L | 200 | 10/28/2019 2:13:58 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 580 | 10 | | mg/L | 10 | 10/25/2019 2:04:25 PM |
| Magnesium | 200 | 5.0 | | mg/L | 5 | 10/25/2019 2:57:05 PM |
| Potassium | 9.0 | 5.0 | | mg/L | 5 | 10/25/2019 2:57:05 PM |
| Sodium | 1800 | 20 | | mg/L | 20 | 10/25/2019 2:59:12 PM |
| 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 |

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 1910D50

Date Reported: 10/31/2019

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 |
| 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 |
| 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 |

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: 10/31/2019

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 |
| 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 |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.76 | | H | pH units | 1 | 10/28/2019 10:43:18 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 7700 | 200 | *D | mg/L | 1 | 10/28/2019 4:18:00 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | ND | 0.50 | | mg/L | 5 | 10/25/2019 12:48:30 PM |
| Chloride | 3300 | 100 | * | mg/L | 200 | 10/28/2019 2:26:18 PM |
| Nitrogen, Nitrite (As N) | ND | 2.0 | | mg/L | 20 | 10/25/2019 1:00:55 PM |
| Bromide | 3.9 | 0.50 | | mg/L | 5 | 10/25/2019 12:48:30 PM |
| Nitrogen, Nitrate (As N) | 3.1 | 0.50 | | mg/L | 5 | 10/25/2019 12:48:30 PM |
| Phosphorus, Orthophosphate (As P) | ND | 2.5 | | mg/L | 5 | 10/25/2019 12:48:30 PM |
| Sulfate | 1900 | 100 | * | mg/L | 200 | 10/28/2019 2:26:18 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 1100 | 20 | | mg/L | 20 | 10/25/2019 3:01:22 PM |
| Magnesium | 190 | 10 | | mg/L | 10 | 10/25/2019 2:06:41 PM |
| Potassium | 14 | 10 | | mg/L | 10 | 10/25/2019 2:06:41 PM |
| Sodium | 1600 | 20 | | mg/L | 20 | 10/25/2019 3:01:22 PM |
| 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 |

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 1910D50

Date Reported: 10/31/2019

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 |
| 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 |
| 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 |

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: 10/31/2019

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 |
| 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 |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.35 | | H | pH units | 1 | 10/28/2019 10:47:42 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 8410 | 200 | *D | mg/L | 1 | 10/28/2019 4:18:00 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | ND | 0.50 | | mg/L | 5 | 10/25/2019 1:38:08 PM |
| Chloride | 2700 | 100 | * | mg/L | 200 | 10/28/2019 2:38:39 PM |
| Nitrogen, Nitrite (As N) | ND | 2.0 | | mg/L | 20 | 10/25/2019 1:50:33 PM |
| Bromide | 3.4 | 2.0 | | mg/L | 20 | 10/25/2019 1:50:33 PM |
| Nitrogen, Nitrate (As N) | 3.5 | 2.0 | | mg/L | 20 | 10/25/2019 1:50:33 PM |
| Phosphorus, Orthophosphate (As P) | ND | 10 | | mg/L | 20 | 10/25/2019 1:50:33 PM |
| Sulfate | 2200 | 100 | * | mg/L | 200 | 10/28/2019 2:38:39 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 600 | 10 | | mg/L | 10 | 10/25/2019 2:09:00 PM |
| Magnesium | 82 | 5.0 | | mg/L | 5 | 10/25/2019 3:03:38 PM |
| Potassium | 9.1 | 5.0 | | mg/L | 5 | 10/25/2019 3:03:38 PM |
| Sodium | 2300 | 50 | | mg/L | 50 | 10/25/2019 3:05:54 PM |
| 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 |

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: 10/31/2019

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 |
| 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 |
| 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 |

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: 10/31/2019

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 |
| 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 |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.24 | | H | pH units | 1 | 10/28/2019 10:52:12 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 8040 | 100 | *D | mg/L | 1 | 10/28/2019 4:18:00 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | ND | 0.50 | | mg/L | 5 | 10/25/2019 2:02:57 PM |
| Chloride | 2900 | 250 | * | mg/L | 500 | 10/28/2019 3:15:40 PM |
| Nitrogen, Nitrite (As N) | ND | 2.0 | | mg/L | 20 | 10/25/2019 2:15:22 PM |
| Bromide | 3.9 | 0.50 | | mg/L | 5 | 10/25/2019 2:02:57 PM |
| Nitrogen, Nitrate (As N) | 5.8 | 0.50 | | mg/L | 5 | 10/25/2019 2:02:57 PM |
| Phosphorus, Orthophosphate (As P) | ND | 2.5 | | mg/L | 5 | 10/25/2019 2:02:57 PM |
| Sulfate | 1900 | 250 | * | mg/L | 500 | 10/28/2019 3:15:40 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 960 | 10 | | mg/L | 10 | 10/25/2019 2:11:17 PM |
| Magnesium | 160 | 10 | | mg/L | 10 | 10/25/2019 2:11:17 PM |
| Potassium | 12 | 10 | | mg/L | 10 | 10/25/2019 2:11:17 PM |
| Sodium | 1900 | 50 | | mg/L | 50 | 10/25/2019 3:08:02 PM |
| 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 |

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 1910D50

Date Reported: 10/31/2019

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 |
| 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 |
| 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 |

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: 10/31/2019

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 |
| 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 |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.29 | | H | pH units | 1 | 10/28/2019 10:56:41 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 8860 | 200 | *D | mg/L | 1 | 10/28/2019 4:18:00 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | 4.4 | 0.50 | * | mg/L | 5 | 10/25/2019 2:27:47 PM |
| Chloride | 19000 | 1000 | * | mg/L | 2000 | 10/28/2019 3:28:01 PM |
| Bromide | 24 | 2.0 | | mg/L | 20 | 10/25/2019 2:40:11 PM |
| Phosphorus, Orthophosphate (As P) | ND | 2.5 | | mg/L | 5 | 10/25/2019 2:27:47 PM |
| Sulfate | 1600 | 1000 | * | mg/L | 2000 | 10/28/2019 3:28:01 PM |
| Nitrate+Nitrite as N | ND | 20 | | mg/L | 100 | 10/28/2019 3:52:42 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 3400 | 100 | | mg/L | 100 | 10/25/2019 3:10:13 PM |
| Magnesium | 440 | 10 | | mg/L | 10 | 10/25/2019 2:13:33 PM |
| Potassium | 37 | 10 | | mg/L | 10 | 10/25/2019 2:13:33 PM |
| Sodium | 11000 | 500 | | mg/L | 500 | 10/25/2019 3:12:26 PM |
| 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 |

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: 10/31/2019

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 |
| 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 |
| 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 |

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: 10/31/2019

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 |
| 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 |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.17 | | H | pH units | 1 | 10/28/2019 11:01:10 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 40400 | 40.0 | *D | mg/L | 1 | 10/28/2019 4:18:00 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 1910D50

Date Reported: 10/31/2019

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 300.0: ANIONS | | | | | | Analyst: MRA |
| Fluoride | ND | 0.50 | | mg/L | 5 | 10/25/2019 2:52:35 PM |
| Chloride | 27000 | 2500 | * | mg/L | 5000 | 10/28/2019 3:40:21 PM |
| Bromide | 35 | 2.0 | | mg/L | 20 | 10/25/2019 3:04:59 PM |
| Phosphorus, Orthophosphate (As P) | ND | 2.5 | | mg/L | 5 | 10/25/2019 2:52:35 PM |
| Sulfate | 2400 | 50 | * | mg/L | 100 | 10/29/2019 11:51:46 AM |
| Nitrate+Nitrite as N | ND | 20 | | mg/L | 100 | 10/28/2019 4:05:03 PM |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | Analyst: bcv |
| Calcium | 2800 | 100 | | mg/L | 100 | 10/25/2019 3:14:46 PM |
| Magnesium | 400 | 10 | | mg/L | 10 | 10/25/2019 2:15:52 PM |
| Potassium | 75 | 10 | | mg/L | 10 | 10/25/2019 2:15:52 PM |
| Sodium | 18000 | 500 | | mg/L | 500 | 10/25/2019 3:17:02 PM |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: CCM |
| Benzene | 26 | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Toluene | 12 | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Ethylbenzene | 2.6 | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Methyl tert-butyl ether (MTBE) | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2,4-Trimethylbenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,3,5-Trimethylbenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2-Dichloroethane (EDC) | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Naphthalene | ND | 4.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1-Methylnaphthalene | ND | 8.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 2-Methylnaphthalene | ND | 8.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Acetone | ND | 20 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Bromobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Bromodichloromethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Bromoform | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Bromomethane | ND | 6.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 2-Butanone | ND | 20 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Carbon disulfide | ND | 20 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Carbon Tetrachloride | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Chlorobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Chloroethane | ND | 4.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Chloroform | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Chloromethane | ND | 6.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 2-Chlorotoluene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 4-Chlorotoluene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| cis-1,2-DCE | ND | 2.0 | | µg/L | 2 | 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: 10/31/2019

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 |
| cis-1,3-Dichloropropene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2-Dibromo-3-chloropropane | ND | 4.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Dibromochloromethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Dibromomethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2-Dichlorobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,3-Dichlorobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,4-Dichlorobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Dichlorodifluoromethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1-Dichloroethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1-Dichloroethene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2-Dichloropropane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,3-Dichloropropane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 2,2-Dichloropropane | ND | 4.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1-Dichloropropene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Hexachlorobutadiene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 2-Hexanone | ND | 20 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Isopropylbenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 4-Isopropyltoluene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 4-Methyl-2-pentanone | ND | 20 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Methylene Chloride | ND | 6.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| n-Butylbenzene | ND | 6.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| n-Propylbenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| sec-Butylbenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Styrene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| tert-Butylbenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1,1,2-Tetrachloroethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1,2,2-Tetrachloroethane | ND | 4.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Tetrachloroethene (PCE) | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| trans-1,2-DCE | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| trans-1,3-Dichloropropene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2,3-Trichlorobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2,4-Trichlorobenzene | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1,1-Trichloroethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,1,2-Trichloroethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Trichloroethene (TCE) | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Trichlorofluoromethane | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| 1,2,3-Trichloropropane | ND | 4.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Vinyl chloride | ND | 2.0 | | µg/L | 2 | 10/25/2019 1:06:00 PM |
| Xylenes, Total | 22 | 3.0 | | µg/L | 2 | 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: 10/31/2019

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 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 70-130 | | %Rec | 2 | 10/25/2019 1:06:00 PM |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | | %Rec | 2 | 10/25/2019 1:06:00 PM |
| Surr: Dibromofluoromethane | 98.9 | 70-130 | | %Rec | 2 | 10/25/2019 1:06:00 PM |
| Surr: Toluene-d8 | 96.2 | 70-130 | | %Rec | 2 | 10/25/2019 1:06:00 PM |
| SM4500-H+B / 9040C: PH | | | | | | Analyst: JRR |
| pH | 7.34 | | H | pH units | 1 | 10/28/2019 11:05:39 AM |
| SM2540C MOD: TOTAL DISSOLVED SOLIDS | | | | | | Analyst: KS |
| Total Dissolved Solids | 57000 | 200 | *D | mg/L | 1 | 10/28/2019 4:18:00 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#: 1910D50

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B63986 | RunNo: 63986 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188698 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: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B63986 | RunNo: 63986 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188700 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Calcium | 51 | 1.0 | 50.00 | 0 | 102 | 85 | 115 | | | |
| Magnesium | 51 | 1.0 | 50.00 | 0 | 102 | 85 | 115 | | | |
| Potassium | 50 | 1.0 | 50.00 | 0 | 100 | 85 | 115 | | | |
| Sodium | 51 | 1.0 | 50.00 | 0 | 103 | 85 | 115 | | | |

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#: 1910D50

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp

Project: Salty Dog

| Sample ID: MB | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|-----------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R63973 | RunNo: 63973 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2189737 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 |

| Sample ID: LCS | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R63973 | RunNo: 63973 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2189738 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | |
|-----------------------------------|------|------|--------|---|------|----|-----|
| Fluoride | 0.54 | 0.10 | 0.5000 | 0 | 107 | 90 | 110 |
| Nitrogen, Nitrite (As N) | 0.97 | 0.10 | 1.000 | 0 | 97.0 | 90 | 110 |
| Bromide | 2.5 | 0.10 | 2.500 | 0 | 98.7 | 90 | 110 |
| Nitrogen, Nitrate (As N) | 2.5 | 0.10 | 2.500 | 0 | 101 | 90 | 110 |
| Phosphorus, Orthophosphate (As P) | 4.8 | 0.50 | 5.000 | 0 | 96.7 | 90 | 110 |

| Sample ID: MB | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|-----------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R64032 | RunNo: 64032 | | | | | | | | |
| Prep Date: | Analysis Date: 10/28/2019 | SeqNo: 2190505 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 |

| Sample ID: LCS | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R64032 | RunNo: 64032 | | | | | | | | |
| Prep Date: | Analysis Date: 10/28/2019 | SeqNo: 2190506 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | |
|----------------------|-----|------|-------|---|------|----|-----|
| Chloride | 4.9 | 0.50 | 5.000 | 0 | 98.6 | 90 | 110 |
| Sulfate | 10 | 0.50 | 10.00 | 0 | 100 | 90 | 110 |
| Nitrate+Nitrite as N | 3.6 | 0.20 | 3.500 | 0 | 103 | 90 | 110 |

| Sample ID: MB | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|-----------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R64044 | RunNo: 64044 | | | | | | | | |
| Prep Date: | Analysis Date: 10/29/2019 | SeqNo: 2192065 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

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#: **1910D50****31-Oct-19****Client:** Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: MB | SampType: mblk | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|-----------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R64044 | RunNo: 64044 | | | | | | | | |
| Prep Date: | Analysis Date: 10/29/2019 | SeqNo: 2192065 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID: LCS | SampType: lcs | TestCode: EPA Method 300.0: Anions | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R64044 | RunNo: 64044 | | | | | | | | |
| Prep Date: | Analysis Date: 10/29/2019 | SeqNo: 2192066 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Sulfate | 9.8 | 0.50 | 10.00 | 0 | 97.8 | 90 | 110 | | | |

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#: 1910D50

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R63964 | RunNo: 63964 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188165 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 88.7 | 70 | 130 | | | |
| Toluene | 17 | 1.0 | 20.00 | 0 | 87.2 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 90.0 | 70 | 130 | | | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 0 | 77.8 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.4 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 97.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.5 | 70 | 130 | | | |

| Sample ID: rb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|--------------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R63964 | RunNo: 63964 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188167 | 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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910D50

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp

Project: Salty Dog

| Sample ID: rb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R63964 | RunNo: 63964 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188167 | 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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910D50

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp

Project: Salty Dog

| Sample ID: rb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R63964 | RunNo: 63964 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188167 | | 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 | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 99.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.3 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.0 | 70 | 130 | | | |

| Sample ID: 1910D50-001ams | SampType: MS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: MW15 | Batch ID: R63964 | RunNo: 63964 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188416 | | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 90.2 | 70 | 130 | | | |
| Toluene | 17 | 1.0 | 20.00 | 0 | 86.9 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 90.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 0 | 77.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 88.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.2 | 70 | 130 | | | |

| Sample ID: 1910D50-001amsd | SampType: MSD | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------------|----------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: MW15 | Batch ID: R63964 | RunNo: 63964 | | | | | | | | |
| Prep Date: | Analysis Date: 10/25/2019 | SeqNo: 2188417 | | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 17 | 1.0 | 20.00 | 0 | 84.6 | 70 | 130 | 6.42 | 20 | |
| Toluene | 16 | 1.0 | 20.00 | 0 | 80.2 | 70 | 130 | 7.99 | 20 | |
| Chlorobenzene | 17 | 1.0 | 20.00 | 0 | 84.5 | 70 | 130 | 7.29 | 20 | |
| 1,1-Dichloroethene | 14 | 1.0 | 20.00 | 0 | 71.2 | 70 | 130 | 8.99 | 20 | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 81.8 | 70 | 130 | 7.46 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 99.8 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.7 | 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

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

WO#: 1910D50

31-Oct-19

Client: Hilcorp San Juan LP/Hilcorp Energy Corp**Project:** Salty Dog

| Sample ID: MB-48398 | SampType: MBLK | TestCode: SM2540C MOD: Total Dissolved Solids | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 48398 | RunNo: 64018 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/28/2019 | SeqNo: 2190055 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-48398 | SampType: LCS | TestCode: SM2540C MOD: Total Dissolved Solids | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 48398 | RunNo: 64018 | | | | | | | | |
| Prep Date: 10/25/2019 | Analysis Date: 10/28/2019 | SeqNo: 2190056 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. | 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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: HILCORP ENERGY

Work Order Number: 1910D50

RcptNo: 1

Received By: Juan Rojas

10/25/2019 8:00:00 AM

Completed By: Leah Baca

10/25/2019 8:45:28 AM

Reviewed By: DAD 10/25/19

Leah Baca

Chain of Custody

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

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:

14
(≤ 2 or >12 unless noted)

Adjusted?

NO

Checked by:

ENM 10/25/19

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 | 0.3 | Good | Yes | | | |
| 2 | 0.6 | Good | Yes | | | |

Chain-of-Custody Record

Turn-Around Time:

☐ Standard☒ Rush

Same day

Project Name:

Salty Dog

Project #:

017819014

Project Manager:

Josh Adams

Sampler: Josh Adams / Stuart Hyde

On Ice: ☒ Yes ☐ No

of Coolers: 2

Cooler Temp (including CF):

0.3-0.2-0.1-0.3

Container Type and #

Preservative Type

HEAL No. 0.6
1910 DSO(3) Vials
(1) VariationHVO₂ HSO₄
HLS

-001

-002

-003

-004

-005

-006

-007

Date:

Time:

Relinquished by:

Via:

Date:

Time:

Received by:

Via:

Date:

Time:

Remarks:

cc: jadams@itenv.com
shyde@itenv.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

BTX / MTBE / TMB (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) full list

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Cations

Anions

TDS

PH

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. | BTX / MTBE / TMB (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, NO ₃ , NO ₂ , PO ₄ , SO ₄ | 8260 (VOA) full list | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | Cations | Anions | TDS | PH |
|----------|------|--------|-------------|----------------------|-----------------------------------|----------|-------------------------|------------------------------|------------------------------|--------------------|--------------------------|---------------|--|----------------------|-----------------|---------------------------------|---------|--------|-----|----|
| 10-24-19 | 0935 | GW | MW15 | (3) Vials | HVO ₂ HSO ₄ | 1910 DSO | | | | | | | | X | | | X | X | X | X |
| | 1005 | | MW08 | | | | | | | | | | | X | | | X | X | X | X |
| | 1050 | | MW09 | | | | | | | | | | | X | | | X | X | X | X |
| | 1040 | | MW10 | | | | | | | | | | | X | | | X | X | X | X |
| | 0940 | | MW14 | | | | | | | | | | | X | | | X | X | X | X |
| | 1140 | | MW13 | | | | | | | | | | | X | | | X | X | X | X |
| | 1150 | | MW12 | | | | | | | | | | | X | | | X | X | X | X |

Date: 10-24-19
Time: 1257

Relinquished by:

Via:

Date:

Time:

Received by:

Via:

Date:

Time:

Remarks:

cc: jadams@itenv.com
shyde@itenv.com

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.

APPENDIX E: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: Excavation looking southwest.



Photograph 2: MW05 completed well, 35 feet.

PHOTOGRAPHIC LOG



Photograph 3: MW06 completed well, 35 feet.



Photograph 4: Excavation looking northwest.

PHOTOGRAPHIC LOG



Photograph 5: MW07, 24 feet, (right) and MW02, 24 feet, (far left).



Photograph 6: Excavation looking southeast.

PHOTOGRAPHIC LOG



Photograph 7: MW02 (under cones), 24 feet.



Photograph 8: MW03 completed well, 35 feet.

PHOTOGRAPHIC LOG



Photograph 8: Soil berm and diversion channel looking northeast



LT Environmental, Inc.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096

December 20, 2019

Ms. Cory Smith
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

**RE: Proposed Public Notice and Participation for Stage 1 Abatement Plan
Hilcorp Energy Company – Lower 48
Salty Dog Water Gathering System
NCS1916853082
San Juan County, New Mexico**

Dear Mr. Smith:

LT Environmental, Inc. (LTE), on behalf of Hilcorp Energy Company - Lower 48. (Hilcorp), proposes the following 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 to address groundwater impacts identified at the Salty Dog Water Gathering System pipeline release.

DISTRIBUTION

Hilcorp will provide written notice of the Stage 1 Abatement Plan by Certified 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.
- The City of Farmington
- The Navajo Nation

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.





Smith, C.
Page 2

PUBLICATION

Hilcorp will publish the NMOCD approved notice in the *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 the NMOCD determines the Stage 1 Abatement Plan is administratively complete. This includes public notice to the newspapers and certified mailings to the appropriate local governments and surface owners identified for distribution. The newspaper publication will run for 1 business day.

PROPOSED NOTICE

Hilcorp proposes the following language for public notice:

Hilcorp Energy Company – Lower 48. (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 Lower 48 (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 and small concentrations benzene exceeding the NMOCD standards 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.





Smith, C.
Page 3

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.us/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. Cory Smith
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:

Jennifer Deal
Hilcorp Energy Company – Lower 48
382 Road 3100.
Aztec, New Mexico 87410
505-599-3400

LTE appreciates your review and comment on this proposed public notice and participation plan.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads "Ashley L. Ager".

Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Jennifer Deal, Hilcorp





Smith, C.
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Attachment

Table 1: Property Owners Within A One Mile Radius



TABLE 1: PROPERTY OWNERS WITHIN A ONE MILE RADIUS



TABLE 1
PROPERTY OWNERS WITHIN 1 MILE RADIUS
SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|---|---|---|----------------------------|-----------------------------|
| 2077171365366 | 1661 W MURRY DRIVE LLC | 1661 W MURRAY DR | 1603 W MAIN ST | FARMINGTON, NM 87401 |
| 2077171502454 | 2303 WEST MAIN LLC | 2303 W MAIN ST | P O BOX 36 | BLOOMFIELD, NM 87413 |
| 2078171171476 | 2716 PARQUE DE OESTE LLC | 2716 PARQUE DE OESTE DR | 1300 BRYNIE LN | FARMINGTON, NM 87401 |
| 2078171255290 | JULIO LOPEZ ACERO | 307 LA CROSSE AVE | 307 LA CROSSE | FARMINGTON, NM 87401 |
| 2078171031500 | JAY AND SHIRLEY ANDERSON | 2402 W MAIN ST | 2402 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171139356 | LEON ANDERSON | 348 VALLE VISTA DR | 348 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171021402 | PEGGY ANDERSON | 2407 RIVERVIEW LN | 2407 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171008432 | GIL M AND ROSA R ANDUJO | 133 GOODING LN | 133 GOODING LANE | FARMINGTON, NM 87401 |
| 2078171021422 | GILBERT AND SOCORRO ANDUJO | 2406 RIVERVIEW LN | 2406 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171228341 | MARIA D AND JUAN A ARROYO | 2811 LA NAPA ST | 2811 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171278305 | ERNEST C AND ELIZABETH A ASMUS | 311 LA CUESTA AVE | 311 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171041420 | STEVE D AND MARIA ATENCIO | 2416 RIVERVIEW LN | 2416 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171255250 | SIERRA FONTANA AUTREY | 2817 LA PUENTE ST | 2817 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2077171470493 | B AND B MERRITT REAL ESTATE LLC ATTN MIK | 2112 W MAIN ST | 750 N 17TH ST | LAS CRUCES, NM 88005 |
| 2078171138373 | CLIFTON BARNETT | 336 VALLE VISTA DR | 1400 LA PLATA HWY | FARMINGTON, NM 87401 |
| 2078171215337 | GENEVIEVE J BAYALE | 2807 LA NAPA ST | 2807 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171031422 | DENNIS C AND FRANCES R BEASLEY | 2410 RIVERVIEW LN | 2410 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171155473 | DARLENE BECENTI | 2704 PARQUE DE OESTE DR | 2704 PARQUE DE OESTE DRIVE | FARMINGTON, NM 87401 |
| 2078171164380 | NARVEL P BECENTI | 334 VALLE BONITA DR | PO BOX 1603 | KIRTLAND, NM 87417 |
| 2078172396059 | BEERS C DAVID TRUSTEES | 3151 W MAIN ST | 3151 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171164347 | BERTHA S BEGAY | 360 VALLE BONITA DR | 360 VALLE BONITA DRIVE | FARMINGTON, NM 87401 |
| 2078171164391 | ALEXANDER BENALLY | 326 VALLE BONITA DR | 308 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171138368 | GAILYN BENALLY | 340 VALLE VISTA DR | 340 VALLE VISTA DRIVE | FARMINGTON, NM 87401 |
| 2078171195350 | KENNETH AND STELLA M BENALLY | 220 LA GRANGE AVE | 220 LA GRANGE | FARMINGTON, NM 87401 |
| 2078171099301 | ROBERT T AND ANGELA BENTLEY | 2551 RIVERSIDE DR | 2551 RIVERSIDE DR | FARMINGTON, NM 87401 |
| 2078171138379 | JASON HOYT BETZ | 332 VALLE VISTA DR | 332 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171139340 | TERRENCE AND LYNETTE BILLIE | 360 VALLE VISTA DR | 360 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171254386 | RONNIE E AND TAMMY D BINGHAM | 2904 LA SIERRA PL | 2904 LA SIERRA PL | FARMINGTON, NM 87401 |
| 2078171035422 | PETER H SR AND BERNICE A BLACKHORSE | 2412 RIVERVIEW LN | P O BOX 1556 | FARMINGTON, NM 87499 |
| 2078171015402 | JIMMY LEE AND LENA L BLACKWELL; JOEY AND SUE BECKER | 2405 RIVERVIEW LN | PO BOX 463 | FLORA VISTA, NM 87415 |
| 2078171213475 | MICHAEL J BLOUNT ET AL | 2806 PARQUE DE OESTE DR | 2408 N WAGNER AVE | FARMINGTON, NM 87401 |
| 2078171175254 | KEITH A AND JACKMAN JOAN A BOCKHOLD | 2713 LA PUENTE ST | 2713 LA PUENTE STREET | FARMINGTON, NM 87401 |
| 2078171246250 | JON PAUL BORGSTAHN | 2815 LA PUENTE ST | 2815 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171139351 | JOSHUA R AND LANA L BOWEN | 352 VALLE VISTA DR | 352 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171195357 | DAVID BRIDGEWATER | 218 LA GRANGE AVE | 218 LA GRANGE AVENUE | FARMINGTON, NM 87401 |
| 2078171200330 | HARRIS AND CECILE BROGAN | 2801 LA NAPA ST | 2801 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171182290 | JAMES R BROWN | 2713 LA SALLE ST | 9802 SWANSBORO | BAKERSFIELD, CA 93314 |
| 2078171154350 | JEREMY L AND CHRISTIE M BROWN | 353 VALLE VISTA DR | 9 ROAD 3523 | FLORA VISTA, NM 87415 |
| 2078171286297 | TROY R AND CATHY L BROWN | 313 LA CUESTA AVE | 313 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171120275 | BS ENTERPRISES LLP | 2505 RIVERSIDE DR | 101 E MAIN ST | FARMINGTON, NM 87401 |
| 2078171269399 | HERMAN AND JENNIFER A BUCK | 2907 LA PALMA PL | 2907 LA PALMA PL | FARMINGTON, NM 87401 |
| 2078171183251 | MICHAEL D AND PAMELA J BURCH | 2715 LA PUENTE ST | 43 KELLER AVE | SINKING SPRING, PA 19608 |
| 2078171270251 | WILLIAM B BUSTAMANTE | 2901 LA PUENTE ST | 2901 LA PUENTE | FARMINGTON, NM 87401 |
| 2078171292267, 2078171303269 | DAVE BUTCHKO ET AL | 2909 LA PUENTE PL | PO BOX 79 | CORTEZ, CO 81321-0079 |
| 2077171434446 | C ANN C REAL ESTATE LLC | 1917 W MAIN ST | 1237 N CHACO AVE | FARMINGTON, NM 87401 |
| 2078171250362 | ANDREW WILLIAM AND SHEA MEGHAN CALDWELL | 2902 LA NAPA ST | 2902 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171154337 | CAN INVESTMENTS LLC; CESAR ARRELLANES AND LEANDRA M NICKS | 361 VALLE VISTA DR | 361 VALLE VISTA DRIVE | FARMINGTON, NM 87401 |
| 2078171164340 | EVA M CANNEY ET AL | 364 VALLE BONITA DR | 96 BLACKFORD AVE FL 1 | STATEN ISLAND, NY 10302 |
| 2078172106064 | JAVIER L CANO | 541 NORTHGATE LN | 541 NORTHGATE LN | FARMINGTON, NM 87401 |
| 2078171163267, 2078171219444, 2078171212489 | MELANIE E CANODE | 2709 LA PUENTE ST, 2808 LA HABRA ST, 2805 PARQUE DEL NORTE DR | 12196 COUNTY ROAD 240 | DURANGO, CO 81301 |
| 2077171350307 | CARAVAN STAR LLC | 1621 W MURRAY DR #C | 1621 W MURRAY DR | FARMINGTON, NM 87401 |
| 2078171195393 | FRANK B AND VICKIE E CASIAS | 208 LA GRANGE AVE | 208 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171235459, 2078171274489 | JOHN R AND JEAN V CHAFFEE | 2811 PARQUE DE OESTE DR, 77 PARQUE DE OESTE DR | 5324 BRIDGET AVE SE | AUBURN, WA 98092 |
| 2078171211355 | JESUS AND JULIA CHAVEZ | 221 LA GRANGE AVE | 6025 STEMILT LOOP | WENATCHEE, WA 98801 |
| 2078171050459 | OCTAVIO AND BERTHA CHAVEZ | 2418 FARMVIEW LN | 2418 FARMVIEW LN NO 10 | FARMINGTON, NM 87401 |
| 2078171238249 | CURTIS ARTHUR CHYNOWETH | 2813 LA PUENTE ST | 2813 LA PUENTE ST | FARMINGTON, NM 87401 |

TABLE 1
PROPERTY OWNERS WITHIN 1 MILE RADIUS

SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|---|--|---|----------------------------|-----------------------------|
| 2077172263298 | CIVIL AIR PATROL ATTN: GENERAL COUNSEL | 1509 W NAVAJO ST #HANGER L2 | 105 S HANSELL ST BLDG 714 | MAXWELL AFB, AL 36112 |
| 2078172183013, 2078172191022 | CLAYTON INVESTMENT COMPANY | W MAIN ST | 501 AIRPORT DR, STE 100 | FARMINGTON, NM 87401 |
| 2078171227299 | GARY D AND DEBBIE R CLICHEE | 302 LA CROSSE AVE | 302 LA CROSSE | FARMINGTON, NM 87401 |
| 2078171094329 | RICK G AND KANDICE M COCHRANE | 2500 RIVERSIDE DR | 2500 RIVERSIDE DR | FARMINGTON, NM 87401 |
| 2078171246329 | MICHAEL C AND ROBERTA L COLE | 301 LA CUESTA AVE | 301 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171120311 | CHRISTOPHER I AND AMY B CONLEY | 2601 RIVERSIDE DR | 2601 RIVERSIDE DR | FARMINGTON, NM 87401 |
| 2078171215248 | TYLER R COOK AND APRIL R MCCARTY | 2807 LA PUENTE ST | 2807 LAPUENTE ST | FARMINGTON, NM 87401 |
| 2078171211383 | EMMA ANNE COOKE | 213 LA GRANGE AVE | 213 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171263305 | SCOTT M COOPER | 308 LA CUESTA AVE | 308 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171041376 | MACHADO ALVARO CORDOVA | 2350 RIDGEVIEW DR | 4 ROAD 4908 | BLOOMFIELD, NM 87413 |
| 2078171208244 | PATRICK A AND JENNIFER D CORTEZ | 2805 LA PUENTE ST | 2805 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171154361 | STEPHANIE L CRAWFORD ET AL | 345 VALLE VISTA DR | 345 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171005420 | NICOLE R DAVID ESTATE ATTN: RON D BECKER | 2400 RIVERVIEW LN | 108 W QUINCE DR | FARMINGTON, NM 87401 |
| 2078171035459 | JOHN T DAVIS III; CHRIS P ORTEGA | 2412 FARMVIEW LN | 3903 N BUENO VISTA AVE | FARMINGTON, NM 87401 |
| 2078172058016 | MATTHEW PAUL AND STACY Y DAVIS | 508 NORTHGATE LN | 10200 SIX PINES DR APT 520 | SHENANDOAH, TX 77380 |
| 2078171077507 | DBL SYSTEMS 7 LLC | 2502 W MAIN ST | 3801 W CLARENDON | PHOENIX, AZ 85019-3717 |
| 2078172393058 | NICK G DEVILBISS | W MAIN ST | 1328 W MURRAY DR | FARMINGTON, NM 87401 |
| 2078172369043 | NICK G AND SHANNON DEVILBISS | W MAIN ST | 1328 W MURRAY DR | FARMINGTON, NM 87401 |
| 2078171223366 | RICKY R AND KRISTI R DEVILBISS | 220 WESTLAND PARK DR | 220 WESTLAND PARK DR | FARMINGTON, NM 87401 |
| 2078171234270 | LARRY M AND SONDRRA K DEWEESE | 2812 LA PUENTE ST | 2812 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171274481 | LESLIE DIMMICK | 87 PARQUE DE OESTE DR | 15 ROAD 3649 | AZTEC, NM 87410 |
| 2078171005459 | CYNTHIA S DOBBS | 2400 FARMVIEW LN | 2400 FARMVIEW RD | FARMINGTON, NM 87401 |
| 2077171408349, 2077171416446, 2077171416294, 2077171431349, 2077171417429 | WILLIAM A AND JEAN L DONOHUE TRUST | 206 S GOWER RD, W MAIN ST, 200 GOWER RD | 1916 N WAGNER | FARMINGTON, NM 87401 |
| 2078171153416 | CHARLOTTE DOSJUMU | 305 VALLE VISTA DR | 305 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2077172263298 | DUGAN PRODUCTION CORP; THOMAS DUGAN | 1300 W NAVAJO ST #HANGER 9.5 | PO BOX 420 | FARMINGTON, NM 87499 |
| 2078171255308 | APRIL R DUNCAN | 306 LA CUESTA AVE | 306 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171251514, 2078171246521 | DOLORES A DURBIN; ROBERT H AND MICHELLE A DURBIN TRUST | WESTLAND PARK DR, 2851 W APACHE ST | PO BOX 358 | FARMINGTON, NM 87499 |
| 2078171223381 | LOIS J DUWENHOEGGER | 216 WESTLAND PARK DR | 7550 HILLSIDE RD APT 2002 | AMARILLO, TX 79119 |
| 2078171139335 | DAVID J AND BRENDA L DYKSTRA | 364 VALLE VISTA DR | 1084 E NAVAJO ST | FARMINGTON, NM 87401 |
| 2078171198066 | EATON T JAMES TRUST | BISTI HWY 371 | 5640 E CIRCULO TERRA | TUCSON, AZ 85750-1004 |
| 2078171062414 | RANDY J AND DENISE L EITEL | 137 WESTVIEW LN | 5302 HILL AND DALE DR | FARMINGTON, NM 87402 |
| 2078171195399 | KAREN K ELLSBURY | 206 LA GRANGE AVE | 206 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171195422 | CHRIS AND STACY E ENGLE | 200 LA GRANGE AVE | 617 FRENCH | AZTEC, NM 87410 |
| 2077170367404, 2077171494061 | EPISCOPAL CHURCH IN NAVAJO LAND | BISTI HWY, 1851 BISTI HWY | P O BOX 720 | FARMINGTON, NM 87499 |
| 2077171484337 | ANDREW J ERBES | 2205 W MAIN ST | PO BOX 6095 | SCOTTSDALE, AZ 85261 |
| 2077171467441 | ERICKSON AND ERICKSON PARTNERSHIP | 2105 W MAIN ST | 3110 PONTIAC DR | FARMINGTON, NM 87401 |
| 2078171199270 | ANTHONY D ESPINOSA | 2802 LA PUENTE ST | 2802 LA PUENTA | FARMINGTON, NM 87401 |
| 2078171242363 | RAY AND MARY R ESPINOZA | 2900 LA NAPA ST | 2900 LA NAPA | FARMINGTON, NM 87401 |
| 2078171232426 | SAUL G ESTRADA JR | 2807 LA HABRA ST | PO BOX 1777 | FARMINGTON, NM 87499 |
| 2078171197474 | BYRON D EVANS REVOCABLE TRUST; KURT AND TERRI WILL | 2802 PARQUE DE OESTE DR | P O BOX 438 | BAYFIELD, CO 81122 |
| 2077171422272, 2077171428259 | FARMERS MUTUAL DITCH COMPANY | | P O BOX 467 | KIRTLAND, NM 87417 |
| 2077171347016, 2077171378019, 2078172401049, 2077171348139, 2078171215511, 2078171391460, 2078171304396, 2078172322085, 2078172326061, 2078171066199, 2077172263298 | CITY OF FARMINGTON | 1611 OJO CT, OJO CT, 3010 LA HABRA ST, 3100 W MAIN ST, 1300 W NAVAJO ST | 800 MUNICIPAL DR | FARMINGTON, NM 87401 |
| 2078171304497 | FARMINGTON INVESTMENT CO | W MAIN ST | P O BOX 229 | FARMINGTON, NM 87499 |
| 2078171099368 | ROBERT J AND ROBERTA K FATE TRUST | 2504 RIDGEVIEW DR | 2504 RIDGEVIEW DR | FARMINGTON, NM 87401 |
| 2078171171498 | NORMAN H AND MARTHA K FAVER TRUST | W MAIN ST | PO BOX 417 | AZTEC, NM 87410 |
| 2099199900900 | BUREAU OF LAND MANAGEMENT | 70 ROAD 3536 | 6251 COLLEGE BLVD | FARMINGTON, NM 87402 |
| 2078171189455 | GUIDO A AND ROXELE L FERRARI | 2801 PARQUE DE OESTE DR | 3201 N SULLIVAN | FARMINGTON, NM 87401 |
| 2078171154344 | JIMMIE D AND DIANA S FISHER TRUST | 357 VALLE VISTA DR | 19 ROAD 3112 | AZTEC, NM 87410 |
| 2078171262324 | ROBERT AND LESLIE FITZ | 305 LA CUESTA AVE | 305 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171260460, 2078171260465, 2078171260464, 2078171260462 | JEANETTE FORTNEY | 2901 PARQUE DE OESTE DR #D, #A, #B, #C | 2418 E HWY 66 #252 | GALLUP, NM 87301 |
| 2077171444468 | FOUR CORNERS TACOS INC | 2100 W MAIN ST | 2226 E MAIN | FARMINGTON, NM 87401 |
| 2078171273461 | CHRISTOPHER J FOY | 2903 PARQUE DE OESTE DR | 2110 W APACHE ST | FARMINGTON, NM 87401 |
| 2078171223373 | ALFRED AND ALTHEA J FRANCIS | 218 WESTLAND PARK DR | 218 WESTLAND PARK DR | FARMINGTON, NM 87401 |

TABLE 1
PROPERTY OWNERS WITHIN 1 MILE RADIUS
SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|--|---|--|-----------------------------------|-----------------------------|
| 2078171195379 | JIMMY H AND EULA A FRANKS | 212 LA GRANGE AVE | 212 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171021467 | FRAZER RENTALS LLC | 201 GOODING LN | 900 SCHOFIELD LN | FARMINGTON, NM 87401 |
| 2078171193486, 2078171203488 | MICHAEL R AND JULIANNE E FREEMAN | 2801 PARQUE DEL NORTE DR, 2803 PARQUE DEL NORTE DR | 3775 NW WISTERIA WAY | CORVALLIS, OR 97337 |
| 2077170233474 | FREIGHTLINK OF NEW MEXICO LLC | 1205 MISSION AVE | 241 W 56 AVE | DENVER, CO 80216 |
| 2078171271282 | HUMBERTO FRIAS | 2904 LA PUENTE ST | 2904 LA PUENTA | FARMINGTON, NM 87401 |
| 2078171095275, 2078171061321 | RAYMOND A AND DONNA FRYE | 2503 RIVERSIDE DR, 102 HIDDEN ACRES DR | 102 B HIDDEN ACRES | FARMINGTON, NM 87401 |
| 2078171098385 | FUTUREVEST INC | 2504 1/2 RIDGEVIEW DR | 5013 E MAIN ST | FARMINGTON, NM 87402 |
| 2078171166441, 2078171180405, 2078171181377, 2078171181383, 2078171180421, 2078171184331, 2078171163413, 2078171180394, 2078171180399, 2078171181372, 2078171180428, 2078171171442, 2078171177444, 2078171180410, 2078171181366, 2078171164407, 2078171180416 2078171183445 2078171172326, 2078171181361, 2078171163425, 2078171182355, 2078171166324, 2078171181388, 2078171163418, 2078171177328, 2078171221323, 2078171192314, 2078171200247, 2078171214321, 2078171164385, 2078171229325 | STEVEN J GABALDON, STEVEN J AND MARIE S GABALDON TRUST, STEVEN J GABALDON TRUST | 2712 LA HABRA ST, 317 VALLE BONITA DR, 337 VALLE BONITA DR, 333 VALLE BONITA DR, 305 VALLE BONITA DR, 2733 LA NAPA ST, 310 VALLE BONITA DR, 325 VALLE BONITA DR, 321 VALLE BONITA DR, 341 VALLE BONITA DR, 301 VALLE BONITA DR, 2716 LA HABRA ST, 2720 LA HABRA ST, 313 VALLE BONITA DR, 343 VALLE BONITA DR, 314 VALLE BONITA DR, 2725 LA NAPA ST, 2724 LA HABRA ST, 309 VALLE BONITA DR, 349 VALLE BONITA DR, 302 VALLE BONITA DR, 353 VALLE BONITA DR, 2721 LA NAPA ST, 329 VALLE BONITA DR, 306 VALLE BONITA DR, 2729 LA NAPA ST, 2806 LA SALLE ST, 2718 LA SALLE ST, 2803 LA PUENTE ST, 2804 LA SALLE ST, 330 VALLE BONITA DR, 2808 LA SALLE ST | 2014 SAN JUAN BLVD SUITE H | FARMINGTON, NM 87401 |
| 2078171183479 | JEFF A GABEL | 2724 PARQUE DE OESTE DR | 2724 PARQUE DE OESTE DR | FARMINGTON, NM 87401 |
| 2078171016352 | ANTHONY D AND KARLENE GARCIA; MICHAEL AND JO ANNE HOPPER | 211 GOODING LN | 5502 BUDDING LN | FARMINGTON, NM 87402 |
| 2078171056375 | ANTHONY D AND KARLENE GARCIA; TY AND LASHAY CONSTANT | 2400 RIDGEVIEW DR | 2400 RIDGEVIEW DR | FARMINGTON, NM 87401 |
| 2078171203335 | CHRIS GARCIA ET AL | 2805 LA NAPA ST | 2805 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171244279 | JOSEPH G GARCIA | 308 LA CROSSE AVE | 308 LA CROSSE AVE | FARMINGTON, NM 87401 |
| 2078171136313 | ROBERTO AND ANGELINA GARCIA | 2701 LA NAPA ST | 2701 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171195365 | SHIRLEY J GARCIA ET AL | 216 LA GRANGE AVE | 216 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2077171485447, 2077171485422 | GARDEN SPOT PRODUCE INC ATTN: ERICKSON L | W MAIN ST, 2203 W MAIN ST | P O BOX 109 | FARMINGTON, NM 87499 |
| 2078171143292 | STEVE C AND WENDY L GARDENHIRE | 2704 LA SALLE ST | 2704 LA SALLE ST | FARMINGTON, NM 87401 |
| 2078171137401 | NICO M GARNENEZ ET AL | 316 VALLE VISTA DR | 316 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171211377 | PENNYE A GARNENEZ | 215 LA GRANGE AVE | PO BOX 1697 | FARMINGTON, NM 87499 |
| 2078171149471 | MELISSA A GILLIS | 2700 PARQUE DE OESTE DR | PO BOX 2796 | KIRTLAND, NM 87417 |
| 2077170384492 | JIMMIE D GOBER TRUST | BISTI HWY | 620 DIAMOND | FARMINGTON, NM 87401 |
| 2077171507325, 2077171512359 | LARRY GOFF ET AL | 230 GOODING LN | 230 S GOODING LANE | FARMINGTON, NM 87401 |
| 2077171509380 | LINDA M GOFF | 210 GOODING LN | 210 S GOODING LANE | FARMINGTON, NM 87401 |
| 2077171507374, 2077171522394, 2077171509396 | MAXINE GOFF TRUSTEE | 220 GOODING LN, 206 GOODING LN, 200 GOODING LN | 220 S GOODING LANE | FARMINGTON, NM 87401 |
| 2078171164363 | ELIAZAR AND MARGARITA GOMEZ | 346 VALLE BONITA DR | 346 VALLE BONITA DR | FARMINGTON, NM 87401 |
| 2078171189438 | GARRY D GOMEZ | 2800 LA HABRA ST | 2437 COUNTY ROAD 141 | DURANGO, CO 81303 |
| 2078171274471 | ALBERT M GONZALES | 99 PARQUE DE OESTE DR | 6471/2 NO A WEST SAN FRANCISCO ST | SANTA FE, NM 87501 |
| 2078171011442 | EDGAR IVAN GONZALEZ AND GLORIA E SINALOA | 2403 FARMVIEW LN | 2403 FARMVIEW LN | FARMINGTON, NM 87401 |
| 2078171183459 | DONYA AND STEPHEN GOOD | 2721 PARQUE DE OESTE DR | 2721 PARQUE DE OESTE | FARMINGTON, NM 87401 |
| 2077171244014 | GRAVES FAMILY INVEST LTD PARTNERSHIP | BISTI HWY | 5561 E MILES CIR | TUCSON, AZ 85712 |
| 2078171230249 | BELINDA L GREEN | 2811 LA PUENTE ST | 323 1/2 2ND AVE | PAGOSA SPRINGS, CO 81147 |
| 2078171153317 | ALONZO SEDRICK GURULE | 2709 LA NAPA ST | 2709 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171090513, 2078171090501, 2078171107509, 2078171095510 | GVM TRUST; ROCKY DUMAS | W APACHE ST, 2506 W MAIN ST, 2600 W MAIN ST, W MAIN ST | 620 VENADA CT | FARMINGTON, NM 87401 |
| 2078171139346 | ERIK T HAANES | 356 VALLE VISTA DR | 1741 VISTA DE COLINAS DR | RIO RANCHO, NM 87124 |
| 2078171246388 | WILLIAM K HALFORD | 2902 LA SIERRA PL | 2902 LA SIERRA PLACE | FARMINGTON, NM 87401 |
| 2078172058021 | JONATHAN L HARDY | 512 NORTHGATE LN | 3 ROAD 2579 | AZTEC, NM 87410 |
| 2078171270440 | GARY HARRELL TRUSTEES | 2902 LA HABRA ST | 14101 CORSO STRADA | OKLAHOMA CITY, OK 73170 |
| 2078171211417 | ROBERT AND KATHLEEN HARRIS | 203 LA GRANGE AVE | 203 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171258397 | RAYMOND T HARTMAN TRUST | 2905 LA PALMA PL | 4010 N BUENA VISTA AVE | FARMINGTON, NM 87401 |
| 2078171154372 | NORMAN LEROY AND BETHANY M HARTSFIELD | 337 VALLE VISTA DR | 423 HWY 173 | AZTEC, NM 87401 |
| 2078171083299 | TOMMY L HARWOOD | 2501 RIVERSIDE DR | 2501 RIVERSIDE DR | FARMINGTON, NM 87401 |
| 2078171135444 | DANIEL AND KAYLA HAWKINS | 208 VALLE VISTA DR | 208 VALLE VISTA DR | FARMINGTON, NM 87401 |

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PROPERTY OWNERS WITHIN 1 MILE RADIUS

SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|------------------------------|--|---|---------------------------|-----------------------------|
| 2078171164358 | KIMBERLY A HAYNIE | 350 VALLE BONITA DR | 350 VALLE BONITA DR | FARMINGTON, NM 87401 |
| 2078171164369 | LARA LE HAYNIE | 342 VALLE BONITA DR | 342 VALLE BONITA DR | FARMINGTON, NM 87401 |
| 2078171211398 | JOHN R AND SUSAN M HAZEN | 209 LA GRANGE AVE | 181 HAVASU HTS | LAKE HAVASU CITY, AZ 86404 |
| 2077171385423 | WALLACE E AND BECKY S HEIZER | 1705 W MAIN ST | 1705 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171264425 | BRUCE HELLER ET AL | 2903 LA HABRA ST | P O BOX 1507 | DURANGO, CO 81302 |
| 2078171195385 | STEVEN T AND ALLISON E HENDRICKS | 210 LA GRANGE AVE | 210 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171149452 | WELDON HENDRICKS JR | 2701 PARQUE DE OESTE DR | 2701 PARQUE DE OESTE | FARMINGTON, NM 87401 |
| 2078171244303 | TIM A AND CHERYL L HENSON | 303 LA CROSSE AVE | 303 LA CROSSE AVE | FARMINGTON, NM 87401 |
| 2078171137422 | MARCELINO AND CONSUELO HEREDIA | 300 VALLE VISTA DR | 300 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171057459 | CARMEN AND JUAN CARLOS HERNANDEZ | 2420 FARMVIEW LN | 2420 FARMVIEW LN | FARMINGTON, NM 87401 |
| 2078171223393 | MICHELLE HERRERA | 212 WESTLAND PARK DR | 212 WESTLAND PARK DR | FARMINGTON, NM 87401 |
| 2078171177477 | KEVIN AND LISETTE HERZOG | 2720 PARQUE DE OESTE DR | 2720 W PARQUE DE OESTE DR | FARMINGTON, NM 87401 |
| 2078171152273 | JONES C HEWEY ET AL | 2705 LA SALLE ST | 2705 LA SALLE | FARMINGTON, NM 87401 |
| 2078171156277 | GEORGIA L HEWITT | 2707 LA SALLE ST | 2707 LA SALLE ST | FARMINGTON, NM 87401 |
| 2078171279510, 2078171268513 | RICHARD L HODGES TRUSTEES | 65 CASA LINDA CT, W APACHE ST | 65 CASA LINDA CT | FARMINGTON, NM 87401 |
| 2078171158300 | F J CLARK HOFFER | 2708 LA SALLE ST | 2708 LA SALLE | FARMINGTON, NM 87401 |
| 2078171016459 | GEORGE A AND RENNIE A HOLLAND | 2404 FARMVIEW LN | 32 ROAD 1800 | FARMINGTON, NM 87401 |
| 2078171134472 | CAMERON HOLLINGSWORTH | 110 VALLE VISTA DR | 110 S VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171249272 | GARY WAYNE AND TERESA A HORST | 310 LA CROSSE AVE | 310 LA CROSSE AVE | FARMINGTON, NM 87401 |
| 2078171112460 | JABEZ 99 LLC | 2603 W MAIN ST | 1122 CENTRAL AVE SW | ALBUQUERQUE, NM 87102 |
| 2078171230278 | DANIEL J JACK | 309 LA BELLE AVE | 309 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2078171267276 | JON M JACOBSON | 2900 LA PUENTE ST | 2900 LA PUENTE | FARMINGTON, NM 87401 |
| 2078172025030 | JAKS ENTERPRISES LLC ATTN: ANNETTE SOBEK | 2310 W APACHE ST | 33-01 210TH ST | BAYSIDE, NY 11361 |
| 2078171138390 | CORY R AND KAILEE M JAMES | 324 VALLE VISTA DR | 324 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171134466 | RAMONA JAMES | 120 VALLE VISTA DR | 120 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171158320 | BRIAN AND ROSS JEREMY JARAMILLO | 2713 LA NAPA ST | 2713 LA NAPA | FARMINGTON, NM 87401 |
| 2078171204283 | PERRY C JENSEN | 304 LA BELLE AVE | 304 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2078171040459 | BRADY AND LORI JOHNSON | 2414 FARMVIEW LN | PO BOX 1297 | FLORA VISTA, NM 87415 |
| 2078171062426 | ERWIN AND VERLA JOHNSON | 133 WESTVIEW LN | 133 WESTVIEW LN | FARMINGTON, NM 87401 |
| 2078171025344, 2078171027303 | JOY NAOMI JOHNSON LIVING TRUST | RIDGEVIEW DR, 2425 RIDGEVIEW DR | PO BOX 1889 | FARMINGTON, NM 87499 |
| 2078171080080, 2078171225460 | CAROLYN JOHNSTON TRUST ATTN: LINDA JOHSTO | 2690 UPPER FRUITLAND HWY, 2809 PARQUE DE OESTE DR | 121 E ASHTON BLVD | FLORESVILLE, TX 78114 |
| 2078171223359 | ROCKY JORDAN | 222 WESTLAND PARK DR | 222 WESTLAND PARK DR | FARMINGTON, NM 87401 |
| 2078171225284 | PETER J KAKOS | 307 LA BELLE AVE | 307 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2077172518060 | THOMAS CHARLES KEITH ET AL | 2304 W APACHE ST | PO BOX 96 | FARMINGTON, NM 87499 |
| 2078171041402 | STEVEN KELEWOOD | 2415 RIVERVIEW LN | 2415 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171219289 | SCOTT D KELLY ET AL | 305 LA BELLE AVE | 305 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2078171268291 | NITA M KENNEDY | 312 LA CUESTA AVE | 312 LA CUESTA | FARMINGTON, NM 87401 |
| 2078172057036 | MARSHA KENNETT ET AL | 524 NORTHGATE LN | 524 NORTHGATE LN | FARMINGTON, NM 87401 |
| 2078171036402 | JAMES K KIRBY | 2413 RIVERVIEW LN | 2413 RIVERVIEWLN | FARMINGTON, NM 87401 |
| 2077170304498, 2078172239020 | BOSKO AND ANNIE JO KRIVOKAPICH TRUST ET AL | BISTI HWY, W MAIN ST | PO BOX 1393 | FARMINGTON, NM 87499 |
| 2078172207032 | RONALD A KRONIG | W MAIN ST | 401 CERRILLOS DRIVE | FARMINGTON, NM 87401 |
| 2078171235444 | MILES A KUCHERA ET AL | 2812 LA HABRA ST | 6125 CARL ST | FARMINGTON, NM 87401 |
| 2078171120509 | TERRY LADWIG | 2608 W MAIN ST | PO BOX 926 | KAMUELA, HI 96743 |
| 2078171139362 | TONY AND DELRENA LAKE | 344 VALLE VISTA DR | 344 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171172306 | RICHARD A LANZI | 2712 LA SALLE ST | 1196 DEER TRAIL RD | DURANGO, CO 81303 |
| 2078171222408 | ALVIN AND WILMA DEE LAPAHIE | 208 WESTLAND PARK DR | 208 WESTLAND PARK DR | FARMINGTON, NM 87401 |
| 2078171256427 | MICHAEL J AND ELIZABETH A LAPER | 2901 LA HABRA ST | 2901 LA HABRA ST | FARMINGTON, NM 87401 |
| 2078171120375 | MAX L AND JOANN LARE | 2600 RIDGEVIEW DR | 2600 RIDGEVIEW DR | FARMINGTON, NM 87401 |
| 2078171267415 | GUY L AND SHIRLEY E LARSON | 2904 LA PALMA PL | 2904 LA PALMA PLACE | FARMINGTON, NM 87401 |
| 2078171120329 | ELDEN R AND CHARLOTTE L LATHAM | 2602 RIVERSIDE DR | 2602 RIVERSIDE DR | FARMINGTON, NM 87401 |
| 2078171209301 | WESLEY L LATTIN | 301 LA BELLE AVE | 301 LABELLE | FARMINGTON, NM 87401 |
| 2078171047420 | VIRGINIA R LAURENS | 2418 RIVERVIEW LN | 2418 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171245458 | LAURMAR LLC | 2813 PARQUE DE OESTE DR | 12 ARTISAN CT | DURANGO, CO 81301 |
| 2078171041468 | LECHUGA TRANSPORT INC | 2501 W MAIN ST | 2501 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171255332 | RUBY M LECLAIRE TRUST ET AL | 303 LA CUESTA AVE | 303 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171138384 | KEVIN AND ROCHELLE DENISE LEE | 328 VALLE VISTA DR | 328 VALLE VISTA DRIVE | FARMINGTON, NM 87401 |
| 2078171198289 | LIZABETH LEE | 302 LA BELLE AVE | 302 LA BELLE AVE | FARMINGTON, NM 87401 |

TABLE 1
PROPERTY OWNERS WITHIN 1 MILE RADIUS

SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|--|--|--|--------------------------------------|-----------------------------|
| 2078171155453 | ROSITA M LEE | 2703 PARQUE DE OESTE DR | PO BOX 985 | KIRTLAND, NM 87417 |
| 2078171062407 | JOHN J LLOYD ET AL | 139 WESTVIEW LN | 6945 SKYLAR DR NE | RIO RANCHO, NM 87144 |
| 2078171160440 | KEVIN LOFTEN | 2708 LA HABRA ST | 1301 E NAVAJO ST #1106 | FARMINGTON, NM 87401 |
| 2078171137406 | PHILLIP LOGAN | 312 VALLE VISTA DR | 312 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171005402 | GENEVIEVE LOPEZ | 2401 RIVERVIEW LN | 2401 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171008519, 2078171042516, 2078171014498 | LOS HERMANITOS PROPERTIES LLC | 2311 W APACHE ST, 2410 W MAIN ST, 2400 W MAIN ST | 2400 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171299230 | LOWER VALLEY WATER USERS | LA PUENTE PL | P O BOX 193 | KIRTLAND, NM 87417 |
| 2078171056469 | LUBRICAR PROPERTIES II LC | 2507 W MAIN ST | 3520 CALLE CUERVO NW | ALBUQUERQUE, NM 87114 |
| 2078171011402 | JOSE D AND MARGARET A LUCERO | 2403 RIVERVIEW LN | 550 COUNTY ROAD 329 | IGNACIO, CO 81137 |
| 2078171035439 | JOSE D LUCERO ET AL | 2413 FARMVIEW LN | 550 COUNTY ROAD 329 | IGNACIO, CO 81137 |
| 2078171005442 | JOSE D OR MARGARET A LUCERO; RENEE ADELINA LUCERO | 2401 FARMVIEW LN | 105 BROOKSIDE CT | FARMINGTON, NM 87401 |
| 2078172268012, 2078172281013, 2078172275037 | LUCY'S LUCK LLC | W MAIN ST | PO BOX 537 | BLANCO, NM 87412 |
| 2078171161454 | DAVID M AND HEIDI M LUKINAC | 2707 PARQUE DE OESTE DR | 58 BENTHAVEN PL | BOULDER, CO 80305 |
| 2078171210425 | M AND H HOLDINGS LLC; DANIEL AND CAROL A BURNHAM | 2801 LA HABRA ST | 1417 CAMINA ENTRADA | FARMINGTON, NM 87401 |
| 2078171213295 | ROCKY C MACE II | 303 LA BELLE AVE | 303 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2077171394425 | JOHNNY D AND ERLINDA M MAESTAS TRUST | 1701 W MAIN ST | 310 N SCHWARTZ AVE | FARMINGTON, NM 87401 |
| 2078171153394 | MAHON REVOCABLE TRUST ATTN: SCOTT MAHON | 321 VALLE VISTA DR | 12 ROAD 5151 | FARMINGTON, NM 87401 |
| 2078171203442, 2078171197441, 2078171259477 | MOISES A MAJLUF | 2804 LA HABRA ST, 2802 LA HABRA ST, 88 PARQUE DE OESTE DR | PO BOX 388 | FARMINGTON, NM 87499 |
| 2078171240429, 2078171216458 | MAK INVESTMENTS LLC | 200 WESTLAND PARK DR, 2807 PARQUE DE OESTE DR | 5011 TAMPICO WAY | FARMINGTON, NM 87401 |
| 2078171213511 | JAMES E AND DEBORAH ANN MALONE ET AL | 100 WESTLAND PARK DR | 301 MC DONALD RD | FARMINGTON, NM 87401 |
| 2078171211389 | EMMA ROSE MANZANARES | 211 LA GRANGE AVE | 211 LA GRANGE | FARMINGTON, NM 87401 |
| 2078171262356 | FRANCES MAREZ | 2906 LA NAPA ST | 110 SIESTA KEY COURT | WINDSOR, CO 80550 |
| 2078171150437 | GERALDO AND DELIDA MARIA | 2700 LA HABRA ST | 2700 LA HABRA ST | FARMINGTON, NM 87401 |
| 2078171256505, 2078171270452, 2078171258498, 2078171240489 | MARIPOSA PROPERTIES LLC | 2940 PARQUE DE OESTE DR, 135 WESTLAND PARK DR, 2930 PARQUE DE OESTE DR, 2811 PARQUE DEL NORTE DR #1-4, 2809 PARQUE DEL NORTE DR #1-4 | 3209 N MOUNTAIN VIEW DR, PO BOX 3086 | FARMINGTON, NM 87401 |
| 2077171400426 | FRANCIS BERT AND MARY ELLEN MARLER | W MAIN ST | 1709 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171205474 | M. JO ANN MARSHALL TRUST ET AL | 2804 PARQUE DE OESTE DR | 2030 CORONA DEL SIRE | NORTH FORT MYERS, FL 33917 |
| 2078171244444 | MELANIE G MARSHALL TRUST | 136 WESTLAND PARK DR | 800 E 30TH ST STE A | FARMINGTON, NM 87410 |
| 2078171229294 | PAUL MARTINEZ | 304 LA CROSSE AVE | 304 LA CROSSE AVE | FARMINGTON, NM 87401 |
| 2078171101419 | PAUL V AND LOUISA L MARTINEZ | 2607 W MAIN ST | 2607 W MAIN ST | FARMINGTON, NM 87401 |
| 2078171137434 | RYAN K MARTINEZ | 216 VALLE VISTA DR | 216 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171192296 | FLOYD EDWARD III AND SUSAN ELLEN MATHENY | 300 LA BELLE AVE | 300 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2078171227444 | BRYAN F AND TESIA K MCCARTY | 2810 LA HABRA ST | 7631 TUSCANY WAY | FARMINGTON, NM 87402 |
| 2078171211363 | THOMAS IV AND TANDA L MCCOMBE | 219 LA GRANGE AVE | 219 LAGRANGE AVE | FARMINGTON, NM 87401 |
| 2077171516441, 2077171508425 | JUNE E MCCRARY TRUST B ATTN: JOVANNA AYE | 120 GOODING LN | 608 RIDGE LEA CT | FARMINGTON, NM 87401 |
| 2078171134455 | JERRY MCKEEN | 200 VALLE VISTA DR | 5355 OAK LN APT 171 | OAK PARK, CA 91377 |
| 2078171212443 | JOHN S MCKEEVER AND LAVANNA J JOHNSTON | 2806 LA HABRA ST | 3103 N MESA DR | FARMINGTON, NM 87401 |
| 2078172245059 | FREDERICK G AND MARIA C MEDINA | W MAIN ST | 24 ROAD 6070 | FARMINGTON, NM 87401 |
| 2078171195407 | JASON AND MELISSA MEECHAN | 204 LA GRANGE AVE | 204 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078172058011 | RAFAEL A AND FRANCISCA MENDOZA | 504 NORTHGATE LN | 504 NORTHGATE LN | FARMINGTON, NM 87401 |
| 2078171062439 | MARIA MERAZ ET AL | 129 WESTVIEW LN | 129 WESTVIEW LN | FARMINGTON, NM 87401 |
| 2078171011420 | JOEL AND JANELLE SENA MERCADO | 2402 RIVERVIEW LN | 2402 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171026402 | JOSE LUIS ETUX MERCADO | 2409 RIVERVIEW LN #202 | 2409 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171016422 | RAFAEL AND REBECCA MERCADO | 2404 RIVERVIEW LANE | 2404 RIVERVIEW LANE | FARMINGTON, NM 87401 |
| 2078172058031 | STEVEN AND WENDELYN MERRELL; DAVID ANGLIN | 520 NORTHGATE LN | 520 NORTHGATE LN | FARMINGTON, NM 87401 |
| 2078171137417 | VERNETTA MICKEY | 304 VALLE VISTA DR | 6704 E LONG AVE | ENGLEWOOD, CO 80112 |
| 2077171511505, 2078171044427 | GLORIA R MIHELICH | 2300 W MAIN ST, 132 WESTVIEW LN | PO BOX 1993, 4201 SKYLINE DR | FARMINGTON, NM 87499 |
| 2078171153410 | LLOYD AND NANCY MINSHALL | 309 VALLE VISTA DR | 309 VALLE VISTA DRIVE | FARMINGTON, NM 87401 |
| 2078171261284 | CARL L MITCHELL | 309 LA CROSSE AVE | 309 LA CROSSE | FARMINGTON, NM 87401 |
| 2078171138395 | LARRY Y MIX | 320 VALLE VISTA DR | 320 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171243478 | MIKI RENAY MOFFITT | 2814 PARQUE DE OESTE DR | 5108 LEE LANE | FARMINGTON, NM 87401 |
| 2078171008427 | THELMA RUTH MONROE TRUST; CLEMENTE ESCARSEGA-MENDOZA | 135 GOODING LN | 135 S GOODING LN | FARMINGTON, NM 87401 |
| 2078171153383 | RAFAEL MONTOYA | 329 VALLE VISTA DR | 3337 SANTA FE COURT | FARMINGTON, NM 87401 |
| 2078171016439, 2078171011459 | RICHARD M AND CAROL MONTOYA | 2405 FARMVIEW LN, 2402 FARMVIEW LN | 2402 FARMVIEW LN, 2405 FARMVIEW LN | FARMINGTON, NM 87401 |

TABLE 1
PROPERTY OWNERS WITHIN 1 MILE RADIUS

SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|---|--|--|--------------------------------|-----------------------------|
| 2078171119419 | SALLY MONTOYA TRUST | 2605 W MAIN ST | 2605 W MAIN ST SP 7 | FARMINGTON, NM 87401 |
| 2078171262388 | MAX D MORELAND | 2906 LA SIERRA PL | 5768 PINEHURST DRIVE | FARMINGTON, NM 87402 |
| 2078171243399 | SHIRLEY J MORRIS | 2901 LA PALMA PL | 2901 LA PALMA PL | FARMINGTON, NM 87401 |
| 2078171177457 | PATRICK AND DENA MORRISSEY | 2719 PARQUE DE OESTE DR | 12 ARTISAN CT | DURANGO, CO 81301 |
| 2078171164396 | SHAWN VINCENT AND RYLEIGH SKYE MORROW | 322 VALLE BONITA DR | 322 VALLE BONITA DR | FARMINGTON, NM 87401 |
| 2078171137439 | WALTER MUNETA | 212 VALLE VISTA DR | 212 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171041442 | MURRAY TRUST | 2417 FARMVIEW LN | 1004 S LAKE ST | FARMINGTON, NM 87401 |
| 2078171041500 | NAM REAL ESTATE LLC | 2404 W MAIN ST | 1230 PEACH TREE ST NE STE 3100 | ATLANTA, GA 30309 |
| 2077170410516, 2077171404066 | NAVAJO ENGINEERING AND CONST AUTHORITY A | 1790 BISTI HWY | PO BOX 1558 | FARMINGTON, NM 87499 |
| 2999999999999 | NAVAJO INDIAN RESERVATION: DIVISION OF NATURAL RESOURCES | | INDIAN RTE 100 | WINDOW ROCK, AZ 86515 |
| 2077171449375, 2077171434415, 2077171434438, 2077171467342 | NAVAJO MISSIONS INC. | 2103 W MAIN ST, 2103 W MAIN ST #Q | PO BOX 1230 | FARMINGTON, NM 87499 |
| 2078170062439 | NAVAJO NATION ATTN: NAVAJO LAND DEPARTMENT | BISTI HWY | PO BOX 2249 | WINDOW ROCK, AZ 86515 |
| 2078171301290 | MARY M NEUENSCHWANDER TRUST | 2910 LA PUENTE PL | 2910 LA PUENTA PL | FARMINGTON, NM 87401 |
| 2078172157030 | MARY A NEWLON TRUST | 2700 W APACHE ST | 1300 BASIN RD | FARMINGTON, NM 87401 |
| 2077171479477 | NIZHONI PROPERTIES TRUST | 2210 W MAIN ST | PO BOX 2766 | FARMINGTON, NM 87499 |
| 2078171138515 | NORTHERN PROPERTIES I LLC ATTN: WENDY'S | 2610 W MAIN ST | 1515 N ACADEMY BLVD | COLORADO SPRINGS, CO 80909 |
| 2078171202332 | WILLIAM J AND SANDRA K NUTT | 2803 LA NAPA ST | 2803 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078170063315 | OLDCASTLE SW GROUP INC DBA FOUR CORNERS | 2100 BISTI HWY | PO BOX 16 | FARMINGTON, NM 87499 |
| 2077171228131 | OLDCASTLE SW GROUP, INC | 1370 NM 371 #B | 2273 RIVER ROAD | GRAND JUNCTION, CO 81515 |
| 2078171247373 | SCOTT M AND KATHLEEN S OLSSON | 2903 LA SIERRA PL | 2903 LA SIERRA PLACE | FARMINGTON, NM 87401 |
| 2078171154355 | BRANDON D PADILLA | 349 VALLE VISTA DR | 126 E MAIN | FARMINGTON, NM 87401 |
| 2078171253344, 2078171242343 | DAVID H PARK | 2903 LA NAPA ST | 2903 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078172199027, 2078172207044, 2078172217087, 2078172171030, 2078172184040 | MARY ANN PARKER ET AL | 2700 W APACHE ST, 2702 W APACHE ST, 2706 W APACHE ST | 2704 W APACHE ST | FARMINGTON, NM 87401 |
| 2078171283272 | MICHAEL PARKER REVOCABLE TRUST | 2907 LA PUENTE PL | 5725 N DETROIT AVE | PORTLAND, OR 97217 |
| 2078171192249 | GEORGE D PAZUCHANICS | 2801 LA PUENTE ST | 3008 MOUNTAIN SKY DR | CASTLE ROCK, CO 80104 |
| 2078171239374 | JOHN P AND BETTY S PETITT | 217 WESTLAND PARK DR | 217 WESTLAND PARK AVE | FARMINGTON, NM 87401 |
| 2078171262251 | JASON L PHILLIPS ET AL | 2819 LA PUENTE ST | 2819 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171235474 | DOUG PILLING | 2812 PARQUE DE OESTE DR | 802 E 20TH ST | FARMINGTON, NM 87401 |
| 2078171025439 | HERBERT AND JENNIE PLATERO | 2409 FARMVIEW LN | 2409 FARMVIEW LN | FARMINGTON, NM 87401 |
| 2078171261487 | JULIA POLA ATTN: SUNWEST PROPERTIES | 76 PARQUE DE OESTE DR | 800 E 30TH ST BLDG 4 STE A | FARMINGTON, NM 87401 |
| 2078171209276 | PAULINE G POTTER ET AL | 306 LA BELLE AVE | 306 LA BELLE AVE | FARMINGTON, NM 87401 |
| 2078171259361 | PROPIEDADES DEL NORTE LLC | 2904 LA NAPA ST | PO BOX 389 | FARMINGTON, NM 87499 |
| 2078172222044 | MARGERLY PRUITT ET AL | | 2501 GLADE RD | FARMINGTON, NM 87401 |
| 2078171250399 | DANIEL J AND RENEE A QUESADA | 2903 LA PALMA PL | 2903 LA PALMA PL | FARMINGTON, NM 87401 |
| 2078171180277 | RICHARD C RAMOS TRUST | 2712 LA PUENTE ST | 2712 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171207458 | RANDALL INVESTMENTS GROUP LLC | PARQUE DE OESTE DR | 322 NM 170 | FARMINGTON, NM 87401 |
| 2078171198456 | RANDALL INVESTMENTS GROUP LLC | PARQUE DE OESTE DR | 322 NM 170 | FARMINGTON, NM 87401 |
| 2078171062456 | JAMES AND CHARLE RAYMOND; CHARLES BLANCHE | 127 WESTVIEW LN | 127 WESTVIEW LN | FARMINGTON, NM 87401 |
| 2078171304280 | SCOTTY AND ALEATA RAYMOND | 2912 LA PUENTE PL | 2912 LA PUENTA PLACE | FARMINGTON, NM 87401 |
| 2078171221489 | GERALD E AND SHERRYL L REEVES TRUST | 2807 PARQUE DEL NORTE DR #A | PO BOX 2751 | BLOOMFIELD, NM 87413 |
| 2078171269408, 2078171259417, 2078171235420, 2078171223418 | RESIDENTIAL RENTALS LLC | 2906 LA PALMA PL, 2902 LA PALMA PL, 204 WESTLAND PARK DR, 206 WESTLAND PARK DR | 3340 BURSON LN | FARMINGTON, NM 87401 |
| 2078172085030 | RHAC NORTHGATE LLC | 2500 W APACHE ST | 2500 W APACHE ST | FARMINGTON, NM 87401 |
| 2078171047442 | CARL AND DONNA RHAMES | 2419 FARMVIEW LN | P O BOX 331 | FARMINGTON, NM 87499 |
| 2078171044432 | CARL AND DONNA RHAMES; EZEQUIEL ALAMOS RAMIREZ | 130 WESTVIEW LN | 130 WESTVIEW LANE | FARMINGTON, NM 87401 |
| 2078171268388 | ROGER D AND PEGGY A RICKS | 2908 LA SIERRA PL | 2908 LA SIERRA | FARMINGTON, NM 87401 |
| 2078171065294 | LEROY RILEY | 2403 RIVERSIDE DR | 2403 RIVERSIDE | FARMINGTON, NM 87401 |
| 2078171222305, 2078171238285 | LEROY JR AND ANN M RILEY | 2805 LA SALLE ST, 306 LA CROSSE AVE | 2403 RIVERSIDE DR | FARMINGTON, NM 87401 |
| 2078171165475 | NOLAN RHEN RILEY | 2712 PARQUE DE OESTE DR | 2712 PARQUE DE OESTE DR | FARMINGTON, NM 87401 |
| 2078171031402 | TIM T AND ESTHER D RIVERA | 2411 RIVERVIEW LN | 2411 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171195372 | MARILYN ROBERTS | 214 LA GRANGE AVE | 214 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171182348 | ROBERT L AND CARENDA F ROBINSON | 357 VALLE BONITA DR | 357 VALLE BONITA | FARMINGTON, NM 87401 |
| 2078171163322 | RHANNON ROCK ET AL | 2717 LA NAPA ST | 2717 LA NAPA ST | FARMINGTON, NM 87401 |
| 2078171165303 | LUIS CARLOS ALMANZA RODRIGUEZ ET AL | 2710 LA SALLE ST | 2710 LA SALLE ST | FARMINGTON, NM 87401 |
| 2078171062433 | ROGER COX AND ASSOCIATES INC; SHADIE LELAND GOULD II | 131 WESTVIEW LN | 131 WESTVIEW LN | FARMINGTON, NM 87401 |
| 2078171062453 | ROGER COX WESTERN DEVELOPERS; JESUS J AND GLADYS F MERAZ | 125 WESTVIEW LN | 125 WESTVIEW LN | FARMINGTON, NM 87401 |

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PROPERTY OWNERS WITHIN 1 MILE RADIUS

SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|--|---|---|--------------------------------|-----------------------------|
| 2078171045459 | ROGER COX WESTERN DEVELOPERS; RICHARD AND CAROL MONTOYA | 2416 FARMVIEW LN | 2405 FARMVIEW | FARMINGTON, NM 87401 |
| 2078171046402 | ROGER COX WESTERN DEVELOPERS; MARINA AND ALMAROSA ANDUJO | 2417 RIVERVIEW LN | 133 GOODING LN | FARMINGTON, NM 87401 |
| 2078171025459, 2078171051402, 2078171031459, 2078171021459 | OSCAR AND GUADALUPE ROJAS ET AL | 2408 FARMVIEW LN, 2419 RIVERVIEW LN, 2410 FARMVIEW LN, 2406 FARMVIEW LN | 2408 FARMVIEW LN | FARMINGTON, NM 87401 |
| 2077170422308, 2077170488430 | ROLLING WATER LLC | BISTI HWY | PO BOX 28 | FARMINGTON, NM 87499 |
| 2078171240391 | BILL AND STACY ROOP | 2900 LA SIERRA PL | 2900 LA SIERRA PL | FARMINGTON, NM 87401 |
| 2078170411330 | ROSE GARDEN CEMETERY | UPPER FRUITLAND HWY | P O BOX 1257 | FRUITLAND, NM 87416 |
| 2078171223386 | EW RUSSELL | 214 WESTLAND PARK DR | 214 WESTLAND PARK DR | FARMINGTON, NM 87401 |
| 2078171265298 | NAZARIO E SALAZAR AND LUCINDA M YAZZIE | 310 LA CUESTA AVE | 310 LA CUESTA | FARMINGTON, NM 87401 |
| 2077171376048 | SAN JUAN COUNTY | 1620 OJO CT | 100 S OLIVER DR | AZTEC, NM 87410-2400 |
| 2077171461198 | SCHMITT TRUST ATTN: CARL GREGORY SCHMITT | UPPER FRUITLAND HWY | PO BOX 267 | KIRTLAND, NM 87417 |
| 2078171215269 | CARROLL A SCHNABEL | 308 LA BELLE AVE | 308 LA BELLE | FARMINGTON, NM 87401 |
| 2078171250417 | JEFFRY D AND REBEKAH L SCHOFIELD | 2900 LA PALMA PL | 2900 LA PALMA PL | FARMINGTON, NM 87401 |
| 2078171269317 | CHRISTOPHER D AND ERICA R SCHRAMM | 307 LA CUESTA AVE | 307 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171025422 | RAY W SCOTT: FRANK A AND DEBBIE A MORALES | 2408 RIVERVIEW LN | 6049 C US 64 | FARMINGTON, NM 87401 |
| 2078172058026 | REYNOLD AND EVELYN R SESCHILLIE | 516 NORTHGATE LN | PO BOX 1966 | FARMINGTON, NM 87499 |
| 2078171047321 | T C AND SHARON SHAFFER | | 3429 YOSEMITE DR NE | ALBUQUERQUE, NM 87111 |
| 2078171211403 | JEREMY SHELLEY; PEREZ SEGOVIA JOSE LUIS AND VELASQUEZ MA | 207 LA GRANGE AVE | 207 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171221339 | PATRICIA B SINGLETON AND JOE G SINGLETON JR | 2809 LA NAPA ST | 2809 LA NAPA | FARMINGTON, NM 87401 |
| 2078171153377 | DEBBRA J SIRMANS | 333 VALLE VISTA DR | PO BOX 3154 | RANCHOS DE TAOS, NM 87557 |
| 2078171250313 | DAVID M SMITH | 300 LA CUESTA AVE | 300 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078172129030 | LEONA FAYE SMITH ESTATE; PERRY WOOD | 2600 W APACHE ST | P O BOX 1123 | FARMINGTON, NM 87499 |
| 2078171261370 | ELVA F STAFFORD | 2907 LA SIERRA PL | 2907 LA SIERRA PL | FARMINGTON, NM 87401 |
| 2077170462462, 2078171149255, 2077170429495 | STAKER PAVING AND CONSTRUCTION ATTN: S VAL STAKER; DBA FOUR CORNERS | | P O BOX 16 | FARMINGTON, NM 87499 |
| 2077171290307 | STEWART AND STEVENSON POWER INC ATTN: CPC | 1515 W MURRAY DR | PO BOX 2968 | HOUSTON, TX 77252 |
| 2078171220474, 2078171261442 | BOB R STEWART TRUSTEES | 2808 PARQUE DE OESTE DR, 139 WESTLAND PARK DR | 800 E 30TH STE A | FARMINGTON, NM 87401 |
| 2078171179309 | SCOTT R AND TAMMI G STIMSON | 2714 LA SALLE ST | 2714 LA SALLE ST | FARMINGTON, NM 87401 |
| 2078171153399 | DERRICK AND CAROL STOCK | 317 VALLE VISTA DR | 317 VALLE VISTA DRIVE | FARMINGTON, NM 87401 |
| 2078171167259 | JACK F STOLTZ | 2711 LA PUENTE ST | 2844 E MAIN ST STE 106 | FARMINGTON, NM 87402 |
| 2078171238310 | THOMAS H AND LAURA J STRANGE | 301 LA CROSSE AVE | 301 LA CROSSE AVE | FARMINGTON, NM 87401 |
| 2078171080435 | TROY AND BARBARA STRICKLAND ET AL | 2575 W MAIN ST | 598 ROAD 6100 | KIRTLAND, NM 87417 |
| 2078171049344 | JOSHUA E AND AMANDA E STRONG | 2401 RIDGEVIEW DR | 2401 RIDGEVIEW DR | FARMINGTON, NM 87401 |
| 2078171164374 | CHARLES C SUTHERLIN ET AL | 338 VALLE BONITA DR | 338 VALLE BONITA DR | FARMINGTON, NM 87401 |
| 2078171153422 | JOHN D TAFOYA | 301 VALLE VISTA DR | 617 W CEDAR ST | FARMINGTON, NM 87401 |
| 2078171031439 | TESSCUR INVESTMENTS LLC; CANO MANUEL G LOZANO ET UX | 2411 FARMVIEW LN | 2411 FARMVIEW LANE | FARMINGTON, NM 87401 |
| 2078171190471, 2078171227474 | DONALD C AND CONNIE M THELEN | 2800 PARQUE DE OESTE DR, 2810 PARQUE DE OESTE DR | 6320 CALLY LILY CIR NE | ALBUQUERQUE, NM 87111 |
| 2078171138328 | JACQUELINE TODACHEENE | 368 VALLE VISTA DR | 368 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171137428 | PRESTON B TOEHE ET AL | 220 VALLE VISTA DR | 8000 W CRESTLINE PLACE APT 535 | LITTLETON, CO 80123 |
| 2078171153405 | JEFFREY M TOLBERT | 313 VALLE VISTA DR | 313 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171337070, 2078171340066 | TRES TSE ROCKS LLC ET AL ATTN: BARNARD MA | UPPER FRUITLAND HWY | 221 SILVERWOOD WAY | EL PASO, TX 79922 |
| 2078171164352 | GERALD TRUJILLO | 354 VALLE BONITA DR | 354 VALLE BONITA DR | FARMINGTON, NM 87401 |
| 2078171160474 | ERIC AND ERIN D TSOSIE | 2708 PARQUE DE OESTE DR | 2708 W PARQUE DE OESTE DR | FARMINGTON, NM 87401 |
| 2077172263298 | SCOTT TUBB | 1090 W NAVAJO ST #HANGER H11.7 | 3700 E MAIN ST | FARMINGTON, NM 87401 |
| 2077171518454 | TUDAFM PROPERTIES LLC ATTN: NINA P SASAK | 2311 W MAIN ST | 4005 SKYLINE CT | FARMINGTON, NM 87401 |
| 2078171195412 | RONALD AND GRETCHEN TUPA | 202 LA GRANGE AVE | 202 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171137412 | MAGDA L TWIDT | 308 VALLE VISTA DR | 308 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2077170367516 | UNITED FOOD STORE NO 3 INC | BISTI HWY | 900 SCHOFIELD LN | FARMINGTON, NM 87401 |
| 2078171218425 | DWAYNE VALDEZ | 2803 LA HABRA ST | 3074 W CENTER ST EXT | LEXINGTON, NC 27295 |
| 2078171135450 | SHAUN D VALENTINE | 204 VALLE VISTA DR | 204 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171155439 | RAMOS DIANA VALENZUELA | 2704 LA HABRA ST | 1616 FAIRVIEW #27 | FARMINGTON, NM 87401 |
| 2078171134461 | NATHAN I VELASQUEZ | 130 VALLE VISTA DR | 4721 SUNDANCE ROAD | FARMINGTON, NM 87401 |
| 2078171211411 | JANETH VILLALOBOS | 205 LA GRANGE AVE | 205 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171021439 | JOSE A AND MARQUITA E VILLARREAL | 2407 FARMVIEW LN | 900 N WATSON AVE | FARMINGTON, NM 87401 |
| 2078171173287 | ACHILLE G AND THERESA VITALI | 2708 LA PUENTE ST | 2708 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171255370 | DOUGLAS J AND DARCY J WALTERS | 2905 LA SIERRA PL | 2905 LA SIERRA | FARMINGTON, NM 87401 |
| 2078171062420 | JODY WARNER | 135 WESTVIEW LN | 2 ROAD 3962 | FARMINGTON, NM 87401 |

TABLE 1
PROPERTY OWNERS WITHIN 1 MILE RADIUS
SALTY DOG WATER GATHERING SYSTEM PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HILCORP LOWER 48

| Parcel Numbers | Owner Name | Physical Address | Owner Address | Owner City, State, Zip Code |
|------------------------------|---|--------------------------------------|----------------------------------|-----------------------------|
| 2078171289290 | MARK E AND FRANCES F WARNER | 315 LA CUESTA AVE | 315 LA CUESTA AVE | FARMINGTON, NM 87401 |
| 2078171153388 | MANUEL WATCHMAN | 325 VALLE VISTA DR | 325 VALLE VISTA DR | FARMINGTON, NM 87401 |
| 2078171065344 | TIM L AND NANCY J WATKINS | 2403 RIDGEVIEW DR | PO BOX 354068 | PALM COAST, FL 32135 |
| 2078171223249 | T K WEBSTER AND DAVE BUTCHKO | 2809 LA PUENTE ST | PO BOX 79 | CORTEZ, CO 81321 |
| 2078171186311 | TK WEBSTER ET AL | 2716 LA SALLE ST | P O BOX 79 | CORTEZ, CO 81321 |
| 2078171249297 | DEBORAH G WEGLEY | 305 LA CROSSE AVE | 305 LA CROSSE AVE | FARMINGTON, NM 87401 |
| 2078171107345 | LEWIS F JR AND KIMBERLI A WELLS | 2503 RIDGEVIEW DR | 3331 BEAR CANYON LN | PLEASANT GRV, UT 84062 |
| 2078171190279 | JESSE WENTZ | 2714 LA PUENTE ST | 2714 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2077170502519 | JOHN F AND LUCILLE E WERNER TRUST | 1851 BISTI HWY | 1112 ALPINE ST | FARMINGTON, NM 87401 |
| 2078172144030 | WEST APACHE MINI STORAGE LLC | 2650 W APACHE ST | PO BOX 197 | BOKEELIA, FL 33922 |
| 2078171158520 | WESTERN REFINING RETAIL LLC | 2700 W MAIN ST | 1250 W WASHINGTON ST STE 101 | TEMPE, AZ 85281 |
| 2078171260463 | WESTLAND PARK CONDOMINIUM COMMON AREA | | 2901 PARQUE DE OESTE DR | FARMINGTON, NM 87401 |
| 2078171224428 | RANDALL D AND JOSEPHINE WESTON | 2805 LA HABRA ST | 2010 PINON FRONTAGE RD | FARMINGTON, NM 87401 |
| 2078171147314 | WESTWARD HO LLC | 2705 LA NAPA ST | 1416 LEEWARD CIR | KEMAH, TX 77565 |
| 2078171223402 | ANTHONY L AND MEGANN WHEELER | 210 WESTLAND PARK DR | 210 WESTLAND PARK DRIVE | FARMINGTON, NM 87401 |
| 2078171164402 | ROSELINDA WHITE | 318 VALLE BONITA DR | PO BOX 1214 | FORT DEFIANCE, AZ 86504 |
| 2078171057402 | CHARLES E AND SANDI L WHITEN | 2421 RIVERVIEW LN | 2421 RIVERVIEW LN | FARMINGTON, NM 87401 |
| 2078171269420 | WILL PROPERTIES LLC | 2905 LA HABRA ST | PO BOX 438 | BAYFIELD, CO 81122-0438 |
| 2077171301070 | JAMES AND LISA WILLEMS TRUST | 1616 BISTI HWY | 5750 RAIL ROAD | FARMINGTON, NM 87402 |
| 2078171279251 | TOMMY JOYCE II AND JESSICA KAY WILLIAMS | 2903 LA PUENTE ST | 2903 LA PUENTE ST | FARMINGTON, NM 87401 |
| 2078171207319, 2078171154366 | DELORES A WILSON TRUST | 2802 LA SALLE ST, 341 VALLE VISTA DR | 2802 LA SALLE ST, 707 ASHURST DR | FARMINGTON, NM 87401 |
| 2078171202313 | RICHARD A WILSON | 2800 LA SALLE ST | 2800 LA SALLE | FARMINGTON, NM 87401 |
| 2078171166455 | CHARLES WOOD | 2711 PARQUE DE OESTE DR | 2711 PARQUE DE OESTE | FARMINGTON, NM 87401 |
| 2078171144280 | WILLIAM E WOODALL JR | 2703 LA SALLE ST | 2703 LA SALLE | FARMINGTON, NM 87401 |
| 2078172058006 | DONNA K WOODS | 500 NORTHGATE LN | 500 NORTHGATE LN | FARMINGTON, NM 87401 |
| 2078171076376 | KRISTOFFER W WOODWARD | 2500 RIDGEVIEW DR | 2500 RIDGEVIEW DR | FARMINGTON, NM 87401 |
| 2078171063331 | CHRISTINE N WRIGHT | 100 HIDDEN ACRES DR | 100 S HIDDEN ACRES | FARMINGTON, NM 87401 |
| 2078171151297 | JEANNIE M WRIGHT | 2706 LA SALLE ST | 2706 LA SALLE ST | FARMINGTON, NM 87401 |
| 2078171211369 | LUCILLE M YAZZIE | 217 LA GRANGE AVE | 217 LA GRANGE AVE | FARMINGTON, NM 87401 |
| 2078171172456 | MICHAEL A AND KAITLYN YUELL | 2715 PARQUE DE OESTE DR | 2715 PARQUE DE OESTE DR | FARMINGTON, NM 87401 |

State of New Mexico
Energy, Minerals and Natural Resources Department

Michele Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Adrienne Sandoval
Director, Oil Conservation Division



Mitch Killough
Hilcorp Energy Company
1111 Travis Street
Houston, TX 77002

RE: Determination of Administratively Complete Stage 1 Abatement Plan & Public Notice and Participation for the Salty Dog Water Gathering System Site (Incident #: NCS1916853082) AP-139

Mr. Killough,

The Oil Conservation Division (OCD) received a Stage 1 Abatement Plan as well as a Proposed Public Notice and Participation submittal prepared on Hilcorp Energy Company's behalf by LT Environmental.

OCD has reviewed the plan and determined it to be administratively complete.

In addition, OCD approves the proposed draft of the Public Notice and Participation Proposal. The required public notice and participation should now proceed under the provisions of Subsections A and B of 19.15.30.15 NMAC. Proof of Public Notice must be provided to the OCD.

The division shall distribute notice of an abatement plan's filing with the next division and commission hearing docket following the plan's receipt.

As a condition of approval Hilcorp must furnish within 30 days of this approval date, the following;

- An up-to-date executive summary of data from quarterly sampling events or any other activity associated with this specific incident
- A current and up-to-date site map showing monitor wells and any pertinent remedial data
- Any quarterly monitoring collected to the present (summary table only is sufficient).

OCD's approval of the Stage 1 Abatement Plan does not relieve Hilcorp of any other requirements imposed by any other regulatory agencies.

If you have any questions, please contact Nelson Velez of the Environmental Incident Group at (505) 469-6146 or by email at nelson.velez@emnrd.nm.gov.

Respectfully,

Adrienne Sandoval
Division Director
AES/njv

Date: 10/20/2022

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 3057

CONDITIONS

| | |
|--|---|
| Operator:
HILCORP ENERGY COMPANY
1111 Travis Street
Houston, TX 77002 | OGRID:
372171 |
| | Action Number:
3057 |
| | Action Type:
[C-141] Release Corrective Action (C-141) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|--|----------------|
| nvelez | As a condition of approval Hilcorp must furnish within 30 days of this approval date, the following; - An up-to-date executive summary of data from quarterly sampling events or any other activity associated with this specific incident - A current and up-to-date site map showing monitor wells and any pertinent remedial data - Any quarterly monitoring collected to the present (summary table only is sufficient). Hilcorp shall adhere to its scheduling as described in section 5.2 of the abatement plan. | 10/21/2022 |