

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2224144740
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Hilcorp Energy Company (Hilcorp)	OGRID 372171
Contact Name Mitch Killough	Contact Telephone 713-757-5247
Contact email mkillough@hilcorp.com	Incident # nAPP2224144740
Contact mailing address 1111 Travis Street, Houston, Texas 77002	

Location of Release Source

Latitude 36.8929138 Longitude -107.7552261
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Seymour 6	Site Type Well
Date Release Discovered: 8/18/2022 @ 08:30am (MT)	API# 30-045-10684

Unit Letter	Section	Township	Range	County
M	14	31N	09W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 20 bbls	Volume Recovered (bbls) 2 bbls
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

On 8/18/2022 at approximately 08:30 am (MT), Hilcorp discovered a 20-bbl release of oil at the Seymour 6. Due to the excessive rainfall in the area, the open-top BGT tank on location overflowed causing the oil in the storage vessel to float up and spill into secondary containment, breach a section of the surrounding berm wall, and eventually enter a dry watercourse located immediately adjacent to the site. Refer to attached initial notification. Upon discovery, Hilcorp began recovery efforts immediately on pad by emptying the remaining fluids in the BGT storage vessel and recovering any possible free product on the pad location with a 3rd party vacuum truck operator. On 8/19/2022, approximately 60 yards of visibly-impacted soils were removed from the site and hauled to a disposal.


The spill amount was determined by operator's monthly tank gauging data.

Incident ID	nAPP2224144740
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Per 19.15.29.7.A, a major release includes an unauthorized release of a volume that may with reasonable probability reach a watercourse. During this event, a portion of the spilled fluids migrated off the pad and entered a dry watercourse located immediately adjacent to the site.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Mitch Killough notified the NMOCD and BLM – FFO via 24-hour email notification on 08/18/2022 at 09:00 am CT.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Mitch Killough</u> Title: <u>Environmental Specialist</u>	
Signature: <u></u> Date: <u>08/31/2022</u>	
email: <u>mkillough@hilcorp.com</u> Telephone: <u>713-757-5247</u>	
<u>OCD Only</u> Received by: _____ Date: _____	

Mitch Killough

From: Mitch Killough
Sent: Friday, August 19, 2022 9:00 AM
To: Velez, Nelson, EMNRD; Adeloye, Abiodun A
Cc: OCD.Enviro@state.nm.us; Matt Henderson
Subject: Hilcorp Energy Company - 24-Hour Release Notification - Seymour 6

Hi Nelson/Emmanuel.

On 8/18/2022 at approximately 08:30 am (MT), Hilcorp Energy Company (Hilcorp) discovered a 20-bbl release of oil at the Seymour 6 (API: 30-045-10684) in San Juan County, NM (36.89313, -107.75461). Due to the excessive rainfall in the area, the open-top BGT tank on location overflowed causing the oil in the storage vessel to float up and spill into secondary containment, breach a section of the surrounding berm wall, and eventually enter a dry watercourse located immediately adjacent to the site. The unnamed, dry watercourse is considered a wash located within Minix Canyon. Refer to the images below. Upon discovery, Hilcorp began recovery efforts immediately on pad by emptying the remaining fluids in the BGT storage vessel and recovering any possible free product on the pad location with a 3rd party vacuum truck operator. At this time, the site remains shut-in while cleanup efforts commence on pad. Hilcorp will discuss with the BLM-FFO first before proceeding with off pad cleanup efforts.

Based on initial assessments conducted by Hilcorp personnel, visual impacts to the unnamed watercourse were observed along approximately 950 linear ft with a width of 4 ft. These impacts are characterized as visual soil staining and discoloration on vegetation along the water feature. This is still being assessed at the moment.

An initial C-141 will be submitted to the NMOCD no later than 9/2/2022.

Please contact me if you have any questions. Thanks.

Incident ID	NAPP2224144740
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>390</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody


If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NAPP2224144740
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Mitch Killough Title: Environmental SpecialistSignature:  Date: 1/13/2023email: mkillough@hilcorp.com Telephone: 713-757-5247**OCD Only**Received by: Jocelyn Harimon Date: 01/13/2023

Incident ID	NAPP2224144740
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: Each of the following items must be included in the plan.

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Mitch Killough Title: Environmental Specialist


Signature:  Date: 1/13/2023

email: mkillough@hilcorp.com Telephone: 713-757-5247

OCD Only

Received by: Jocelyn Harimon Date: 01/13/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 03/22/2023

OCD approves the updated remediation work plan within the report which includes future samples to be analyzed for TPH & chloride only. Remediation due date is updated to June 23, 2023.



January 13, 2023

New Mexico Oil Conservation Division

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

Re: Updated Remediation Work Plan

Seymour 6
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nAPP2224144740

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Updated Remediation Work Plan* for a release at the Seymour 6 natural gas production well (Site). The Site is located on Federal land managed by the Bureau of Land Management (BLM) in rural San Juan County, New Mexico (Figure 1). This proposed Work Plan includes additional remediation of impacted soil and vegetation originating from the overtopping of oil from a below grade tank (BGT). The Site is located in Unit M, Section 14, Township 31 North, Range 9 West, in rural San Juan County, New Mexico.

SITE BACKGROUND

On August 18, 2022, Hilcorp discovered a 20-barrel (bbl) release of oil at the Site. Significant precipitation at the Site caused a BGT to overflow into the secondary containment berm. A section of the earthen berm subsequently failed and released fluids outside of the containment and ultimately migrated off the facility pad into an adjacent dry wash. The volume released was determined by the operator's monthly tank gauging data. Upon discovery, Hilcorp immediately emptied the remaining fluids from the BGT and retained a vacuum truck to recover any possible standing fluids at the Site (approximately 2 bbls). On August 19, 2022, Hilcorp excavated approximately 55 yards of visibly impacted soils from the original footprint of the well pad at the Site for disposal at a permitted facility.

Hilcorp reported the release to the New Mexico Oil Conservation Division (NMOCD) and the BLM within 24 hours of discovery of the release. Hilcorp submitted a *Major Undesirable Event Report* to the BLM on August 19, 2022 and submitted a Form C-141 to the NMOCD on August 29, 2022 and a revised Form C-141 on August 31, 2022 (an error was discovered in the initial Form C-141 submitted on August 29, 2022). The NMOCD has assigned the Site Incident Number nAPP2224144740.

Due to the nature of the release migrating over a large portion of the well pad and into an adjacent dry wash, as well as the need for a Cultural Resources Inventory and Threatened and Endangered Species Evaluation to be conducted for off-pad areas per the BLM, Hilcorp submitted a *Remediation Work Plan* (prepared by Ensolum and dated September 29, 2022) to the NMOCD and BLM for review and approval. Specifically, the *Remediation Work Plan* described the

proposed remediation and sampling activities and requested a variance for the frequency of excavation confirmation samples to be collected at the Site. The NMOCD and BLM approved the *Remediation Work Plan* and the NMOCD approved a variance for the frequency of excavation sampling on the well pad to be decreased from every 200 square feet to every 500 square feet for floor samples and from every 200 square feet to every 400 square feet for sidewall samples. Additionally, the NMOCD approved a sampling frequency of one sample per 100 linear feet for the collection of soil samples within the adjacent wash. BLM and NMOCD approvals are included in Appendices A and B, respectively.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As part of the Site investigation, local geology/hydrogeology and nearby sensitive receptors (shown on Figure 2) were assessed in accordance with Title 19, Chapter 15, Part 29, Sections 11 and 12 (19.15.29.11 and 12) of the New Mexico Administrative Code (NMAC). Based on the information presented in Ensolum's *Remediation Work Plan* and in accordance with the *Table I, Closure Criteria for Soils Impacted by a Release* (19.15.29.12 of the NMAC), the following "Closure Criteria" are applied to the Site based on the proximity to a significant watercourse:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH) as a combination of gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 100 mg/kg
- Chloride: 600 mg/kg

2022 SOIL SAMPLING ACTIVITIES

At the request of the BLM, Hilcorp conducted a *Cultural Resources Inventory* prior to conducting sampling work at the Site. Additionally, the BLM conducted an internal *Threatened and Endangered Species Evaluation* prior to the start of work to assess the presence of sensitive ecological receptors in the release pathway. No cultural resources or threatened and endangered species were discovered in the project area and the BLM approved the proposed work to be conducted within a 20-foot buffer area on either side of the dry wash. The cultural and ecological surveys, as well as the BLM's approval of the *Remediation Work Plan*, are attached as Appendix A.

After removing obviously impacted soil from the well pad (conducted in August 2022 and based on petroleum hydrocarbon staining and odors), and once BLM approval was received for off-pad activities, Ensolum and Hilcorp personnel collected soil samples on December 8, 2022 to assess soil conditions both on the well pad and in the dry wash. Prior to sampling, the NMOCD and the BLM were notified of the upcoming Site activities (Appendix B). Five-point composite soil samples were collected from the floor of the well pad excavation at a frequency of one sample per 500 square feet (samples SS01 through SS20). Due to the shallow nature of the excavation (less than 1 foot in depth), shallow sidewall areas were incorporated into the composite floor samples. Additionally, 5-point composite samples were collected from the dry wash at a frequency of one sample for every 100 linear feet (samples WS01 through WS17). The entire release extent is shown on Figure 3, with specific sampling locations for the wash and well pad presented on Figures 4 and 5, respectively.

The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 6 degrees Celsius (°C) under strict chain-of-custody procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. All samples were

submitted for analyses of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Analytical results indicated two samples collected within the wash (WS01 and WS10) exceeded the applicable Closure Criteria for TPH. Concentrations of TPH also exceeded the Closure Criteria in all on-pad soil samples with the exception of samples SS02 and SS17. Additionally, concentrations of chloride exceeded the Closure Criteria in only one on-pad sample, SS08. All other COCs analyzed during the December 8, 2022 sampling event were in compliance with the applicable NMOCD Table I Closure Criteria. Analytical results collected during this event are summarized in Table 1, with complete laboratory analytical reports attached as Appendix C. Photographs taken during the sampling event are presented in Appendix D.

UPDATED REMEDIATION WORK PLAN

Based on the soil sampling results described above, Hilcorp proposes to further delineate on-pad areas using a hand auger and/or backhoe (if shallow refusal is encountered with a hand auger) to assess the vertical extent of soil impacts at the Site. Once delineated, Hilcorp will continue excavating TPH impacted soil in on-pad areas of the Site. Hilcorp will also remove TPH-impacted soil in the vicinity of samples WS01 and WS10 (located within the adjacent wash) using hand equipment (i.e., shovel). Additionally, Hilcorp will remove by hand any vegetation impacted by the release, as indicated by the presence of an oily film on the vegetation and/or vegetation exhibiting stress caused by the release (e.g., browning or staining). Once impacted soil is removed, Hilcorp will collect additional 5-point composite samples from the excavation floors and sidewalls at the frequency approved by the NMOCD. The samples will be collected in the manner described above and submitted to Hall for laboratory analysis. Based on the results from the December 2022 sampling event, Hilcorp is requesting that future samples only be analyzed for TPH and chloride.

Once impacted soil and vegetation have been removed, excavated areas will be backfilled and recontoured to match the original land surface grade. Any vegetated area disturbed during Site activities will also be backfilled with topsoil (where required) and reseeded with a BLM-approved seed mix. The proposed remediation activities will be completed within 90 days of BLM and NMOCD approval of this Work Plan. Hilcorp will immediately inform the NMOCD of any alterations to this schedule due to third-party availability, equipment shortages, and/or weather delays.

We appreciate the opportunity to provide this work plan to the BLM and NMOCD. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

Ensolum, LLC



Stuart Hyde, LG
Senior Geologist
(970) 903-1607
shyde@ensolum.com



Dan Moir, PG
Senior Managing Geologist
(303) 887-2946
dmoir@ensolum.com

Attachments:

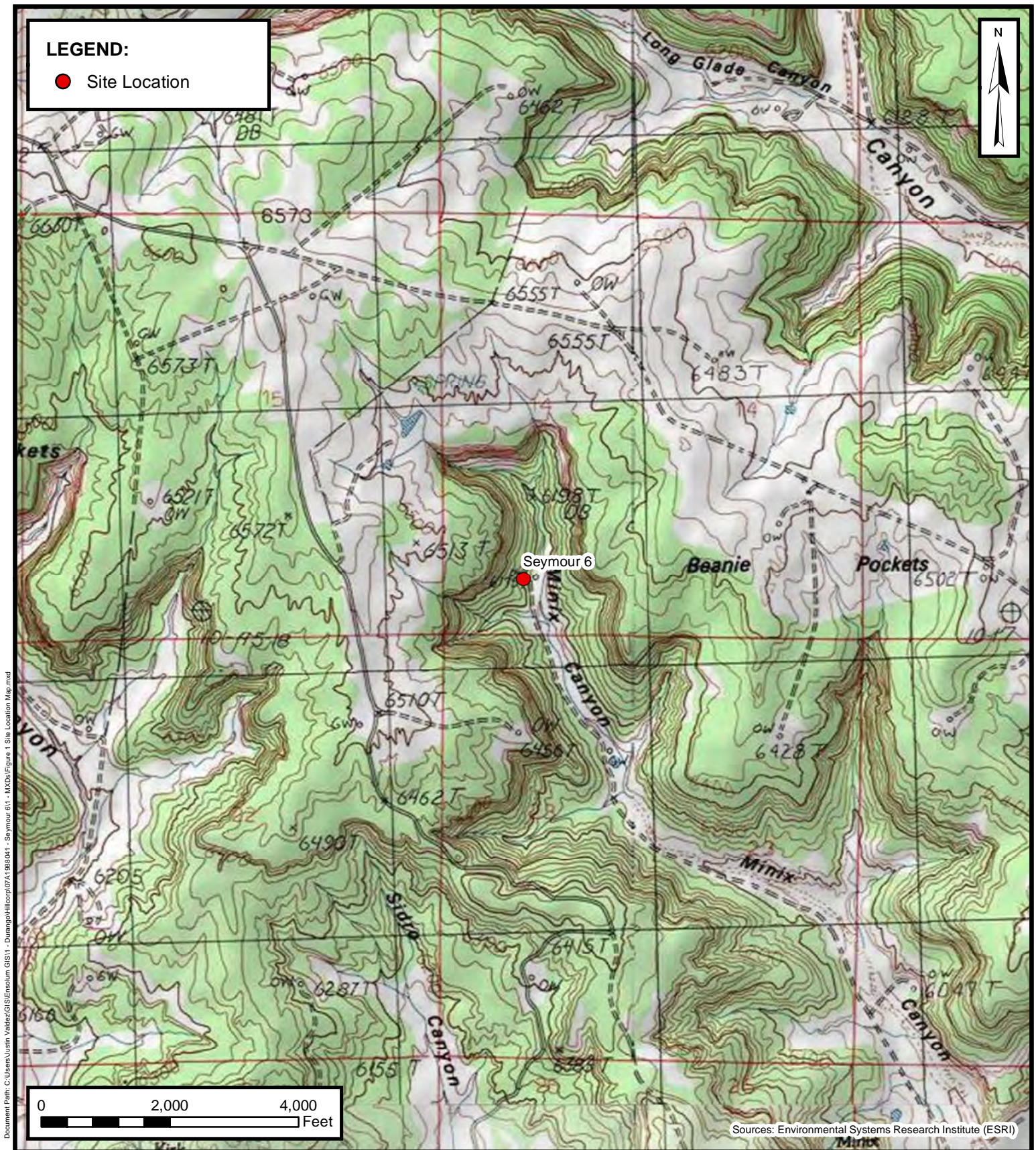
Figure 1: Site Location Map
Figure 2: Site Receptor Map
Figure 3: Initial Release Extent
Figure 4: Composite Sample Location – Wash
Figure 5: Soil Sample Locations – Well Pad

Table 1: Composite Soil Sample Analytical Results

Appendix A: BLM Cultural Resources Inventory, Threatened and Endangered Species Evaluation, and Correspondence
Appendix B: NMOCD Correspondence
Appendix C: Laboratory Analytical Reports
Appendix D: Site Photographs



FIGURES



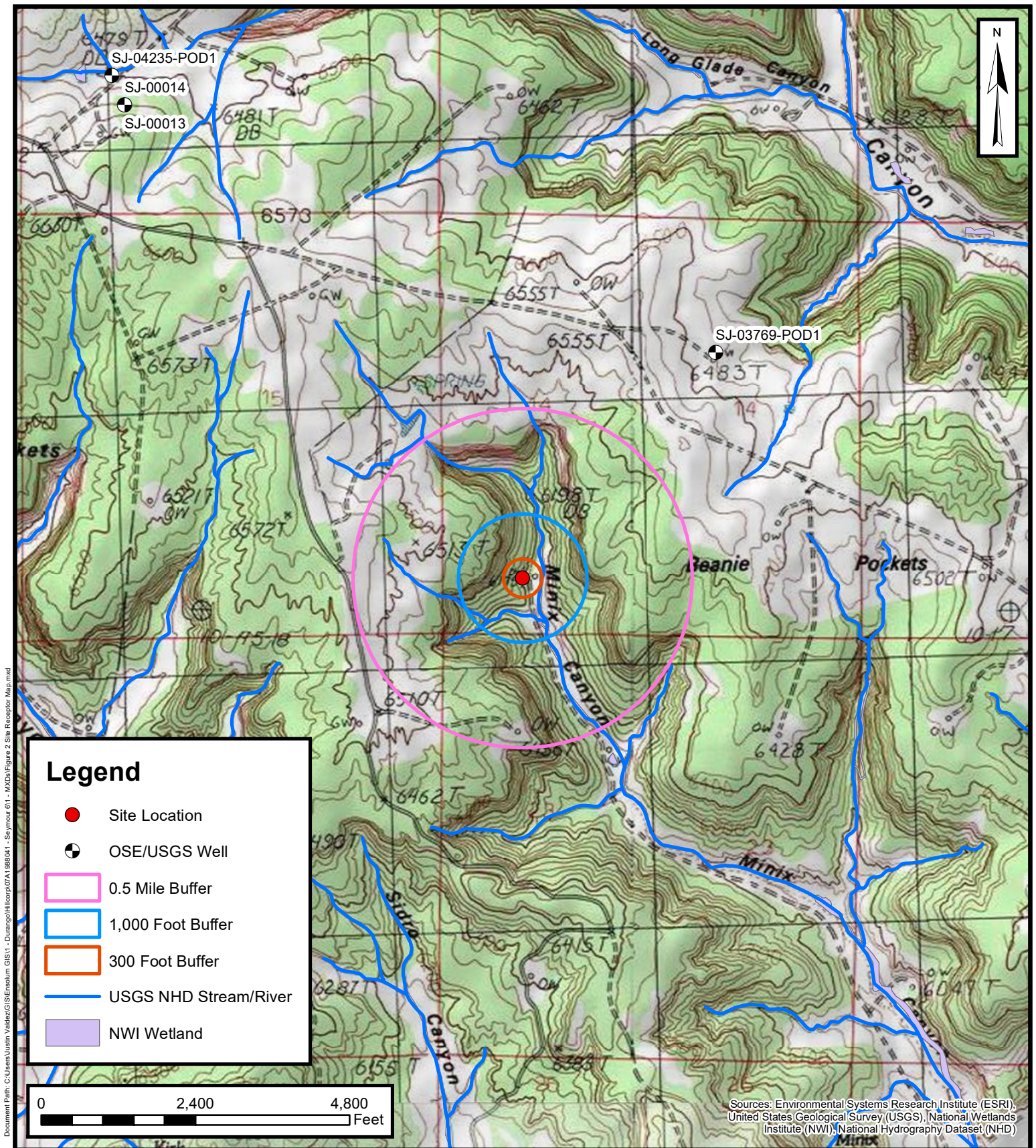
Site Location Map

Seymour 6
Hilcorp Energy Company
36.8929138, -107.7552261
San Juan County, NM

FIGURE

1

ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants

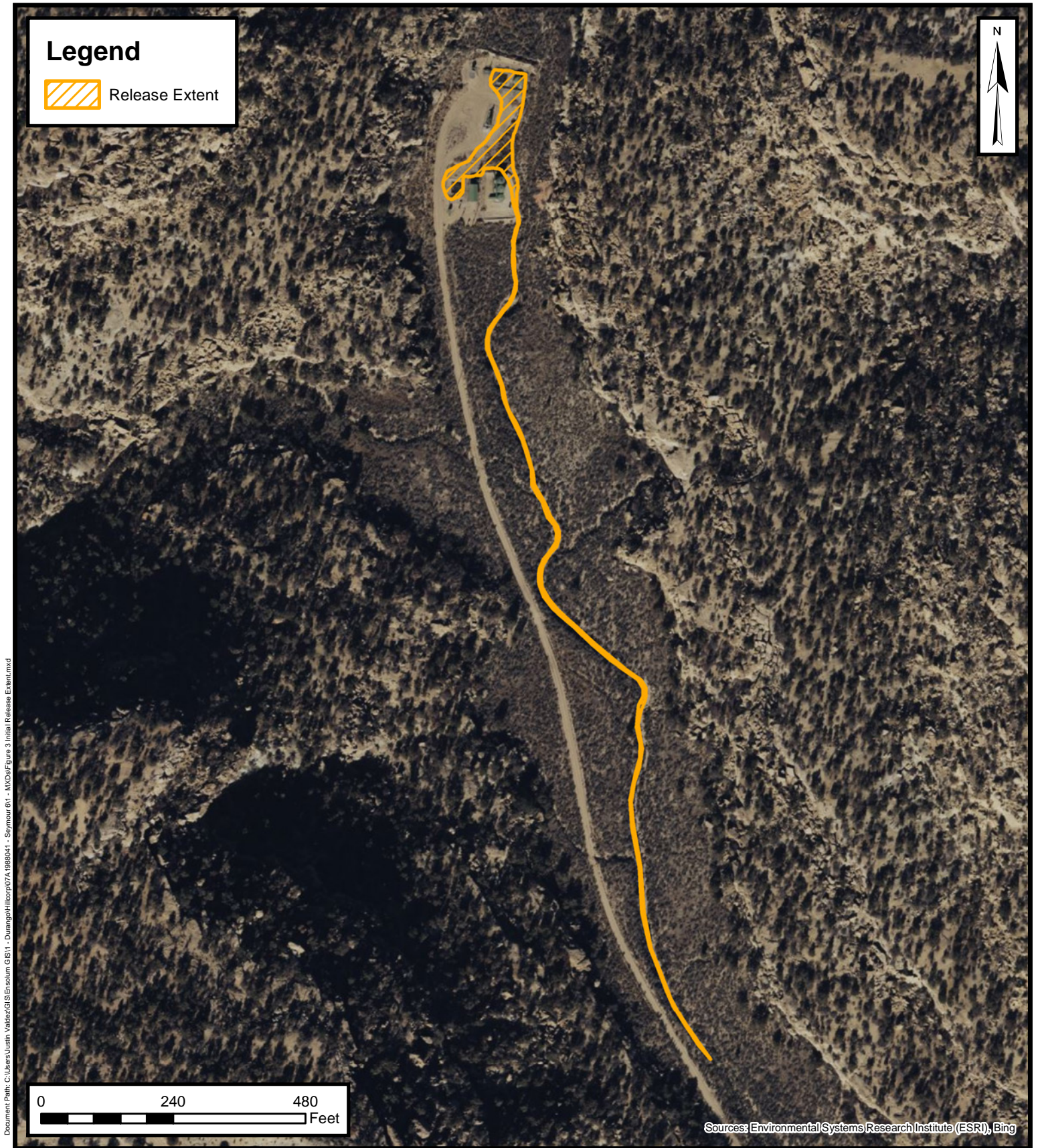


Site Receptor Map

Seymour 6
Hilcorp Energy Company
36.8929138, -107.7552261
San Juan County, NM

FIGURE
2





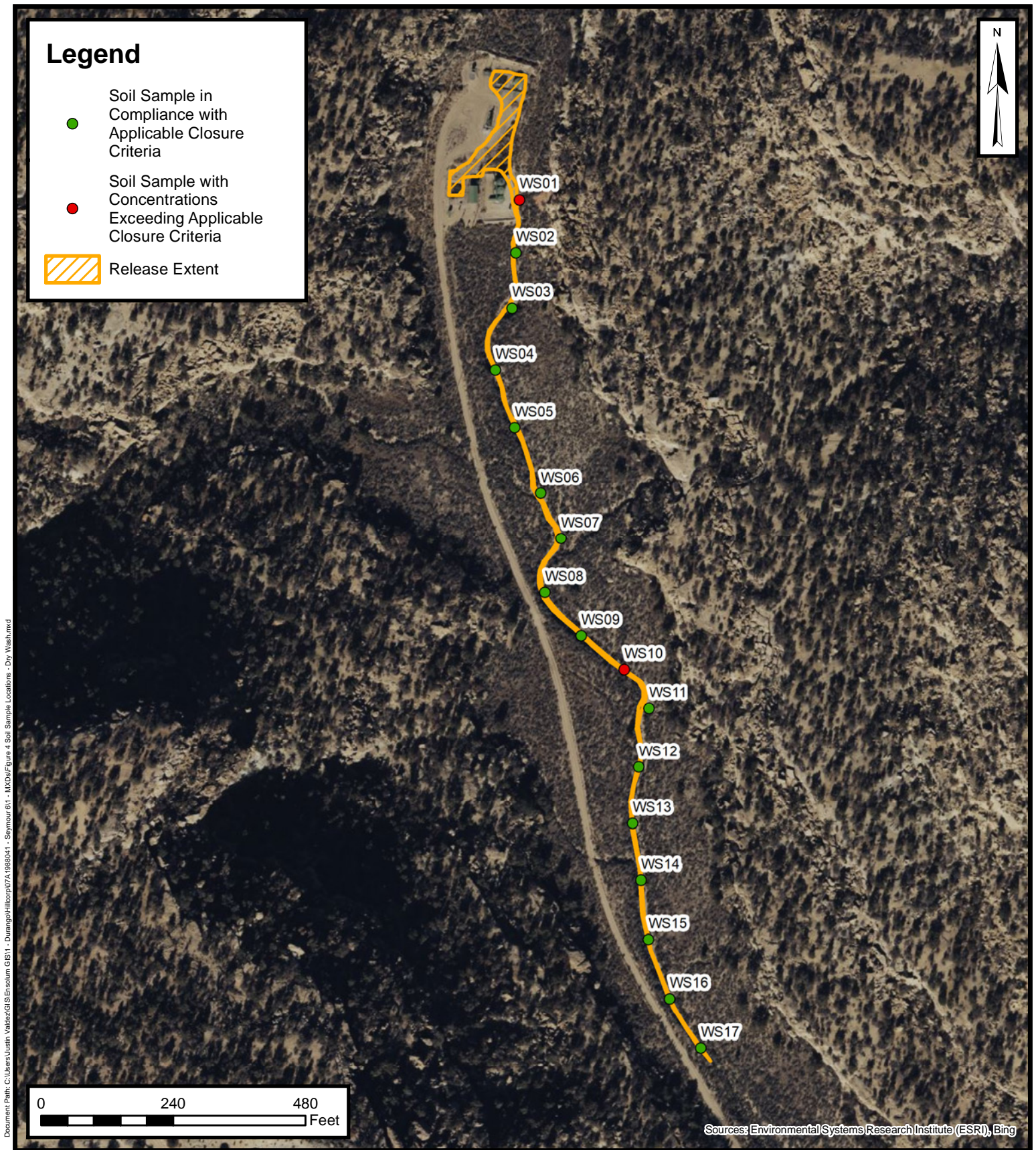
Initial Release Extent

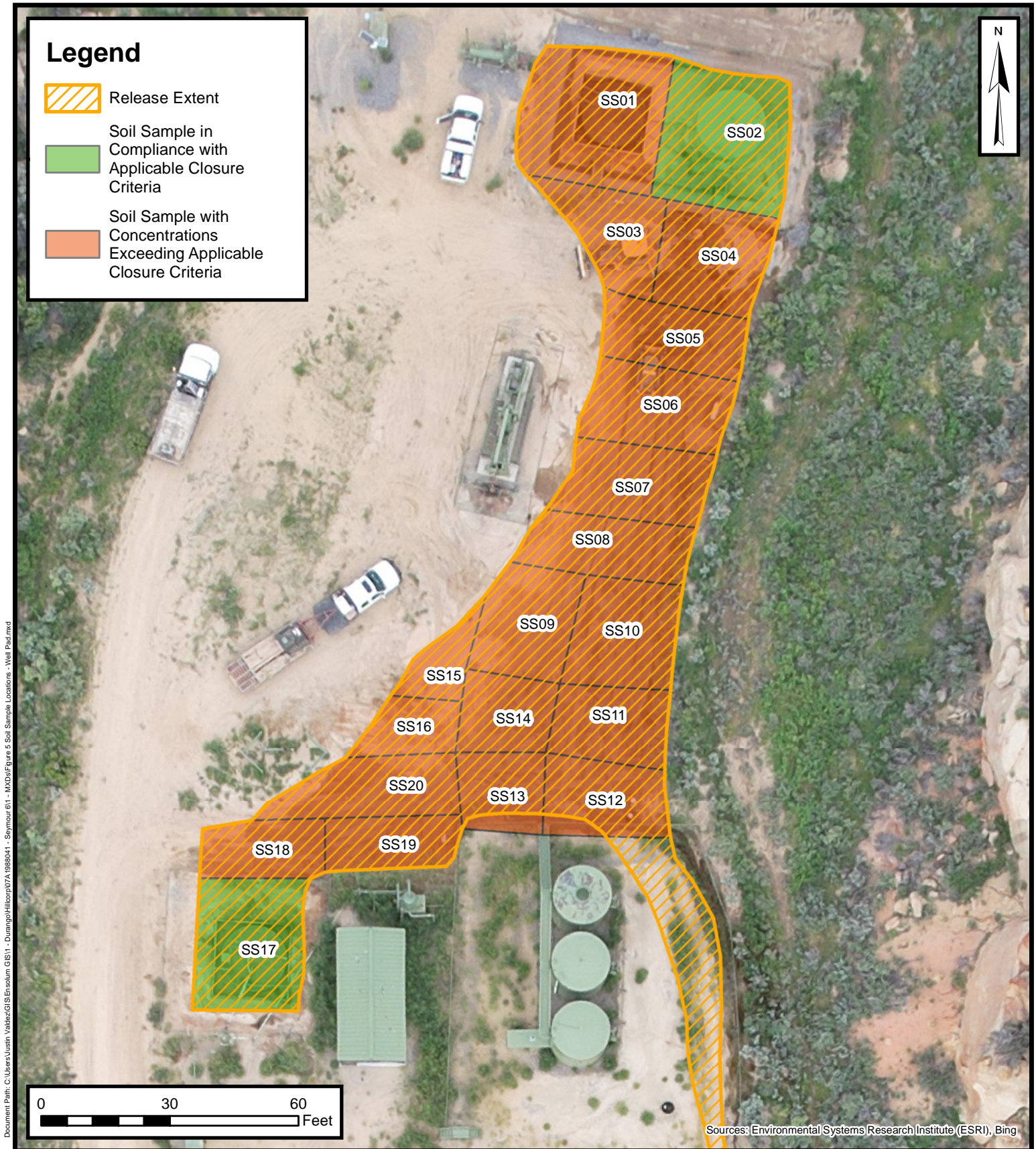
Seymour 6
Hilcorp Energy Company
36.8929138, -107.7552261
San Juan County, NM

FIGURE

3

 **ENSOLUM**
Environmental, Engineering and
Hydrogeologic Consultants





Composite Sample Locations – Well Pad

Seymour 6
Hilcorp Energy Company
36.8929138, -107.7552261
San Juan County, NM

FIGURE
5



TABLES



TABLE 1 COMPOSITE SOIL SAMPLE ANALYTICAL RESULTS Seymour 6 Hilcorp Energy Company San Juan County, New Mexico												
Sample Designation	Date	Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release (Groundwater <50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
Wash Composite Soil Samples												
WS01	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	1,000	590	1,590	<60
WS02	12/8/2022	0 - 0.25	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<14	<46	<46	<60
WS03	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<13	<44	<44	<59
WS04	12/8/2022	0 - 0.25	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<47	<47	<59
WS05	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<14	<47	<47	<60
WS06	12/8/2022	0 - 0.25	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<14	<48	<48	<60
WS07	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<14	<48	<48	<60
WS08	12/8/2022	0 - 0.25	<0.024	<0.049	<<0.049	<0.098	<0.098	<4.9	<14	<48	<48	<61
WS09	12/8/2022	0 - 0.25	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<13	<45	<45	<59
WS10	12/8/2022	0 - 0.25	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	41	79	120	<60
WS11	12/8/2022	0 - 0.25	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<15	<48	<48	<60
WS12	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<15	<50	<50	<60
WS13	12/8/2022	0 - 0.25	<0.024	<0.049	<0.049	<0.098	<0.098	>4.9	<14	<47	<47	<60
WS14	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<14	<47	<47	<60
WS15	12/8/2022	0 - 0.25	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<13	<43	<43	<60
WS16	12/8/2022	0 - 0.25	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<46	<46	<60
WS17	12/8/2022	0 - 0.25	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<46	<46	<60
Well Pad Composite Soil Samples												
SS01	12/8/2022	0.5	<0.024	<0.048	<0.048	<0.097	<0.097	<4.8	360	380	740	<60
SS02	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	29	<49	29	<60
SS03	12/8/2022	0.5	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	390	330	720	<60
SS04	12/8/2022	0.5	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<71	<240	<240	<60
SS05	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	210	210	420	<60
SS06	12/8/2022	0.5	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	2,600	2,400	5,000	76
SS07	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	400	390	790	230
SS08	12/8/2022	0.5	<0.025	0.049	<0.049	<0.098	<0.098	<4.9	1,000	1,200	2,200	1,700
SS09	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	86	150	236	62
SS10	12/8/2022	0.5	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	540	740	1,280	<60
SS11	12/8/2022	0.5	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	520	580	1,100	<60
SS12	12/8/2022	0.5	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	210	240	450	<59
SS13	12/8/2022	0.5	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	2,800	2,300	5,100	<60
SS14	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	2,400	2,300	4,700	<60
SS15	12/8/2022	0.5	<0.025	<0.050	<0.50	<0.10	<0.10	<5.0	55	93	148	<60



TABLE 1 COMPOSITE SOIL SAMPLE ANALYTICAL RESULTS Seymour 6 Hilcorp Energy Company San Juan County, New Mexico												
Sample Designation	Date	Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Closure Criteria for Soils Impacted by a Release (Groundwater <50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
SS16	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	290	310	600	<60
SS17	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	17	<50	17	<59
SS18	12/8/2022	0.5	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	290	310	600	<60
SS19	12/8/2022	0.5	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	64	83	147	<60
SS20	12/8/2022	0.5	<0.024	<0.049	<0.049	<0.098	<0.098	<4.9	280	290	570	<60

Notes:
bgs: below ground surface
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
mg/kg: milligrams per kilogram
NA: Not Analyzed
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
' : feet

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil/Lube Oil Range Organics
TPH: Total Petroleum Hydrocarbon
<: indicates result less than the stated laboratory reporting limit (RL)
Concentrations in **bold** exceed the New Mexico Oil Conservation Division Table 1 Closure Criteria for Soils Impacted by a Release



APPENDIX A

Cultural Resources Inventory, Threatened and Endangered Species Evaluation, and BLM Correspondence

IN-HOUSE ARCHEOLOGICAL SURVEY DETERMINATION
FARMINGTON FIELD OFFICE

NM-210-2023-001

Case No./Name: Seymour #6/T31N, R9W Sec 14, Qrt: SWSW

Date: 10/03/2022

Company: Hilcorp Energy Company

Type of Case: Spill Remediation

IS A CULTURAL RESOURCE INVENTORY REQUIRED?

- ☐ Proposal involves non-Federal lands.
- ☐ Proposal is within an existing right-of-way.
- ☐ Proposal is along an existing road.
- ☐ Proposal is within an existing disturbed area.
- ☐ The well pad is to be expanded feet to the .
- ☒ Other: Hilcorp Energy proposed to remediate the oil spill that occurred at Seymour #6 on the 08/18/2022. The spill entered the dry wash adjacent to the well pad and traveled approximately 1000 ft in the wash. Hilcorp proposed to remove vegetation and impacted soil from the well and the dry wash by hand/or mechanical excavation if needed.
Please see the location map.

NOTE: Attach map (e.g., USGS map, survey plat, GIS) and other supporting information as needed. If you are proposing to use a previously culturally surveyed area, identify by BLM cultural case number if known.

Submitted by: Emanuel Adeloye

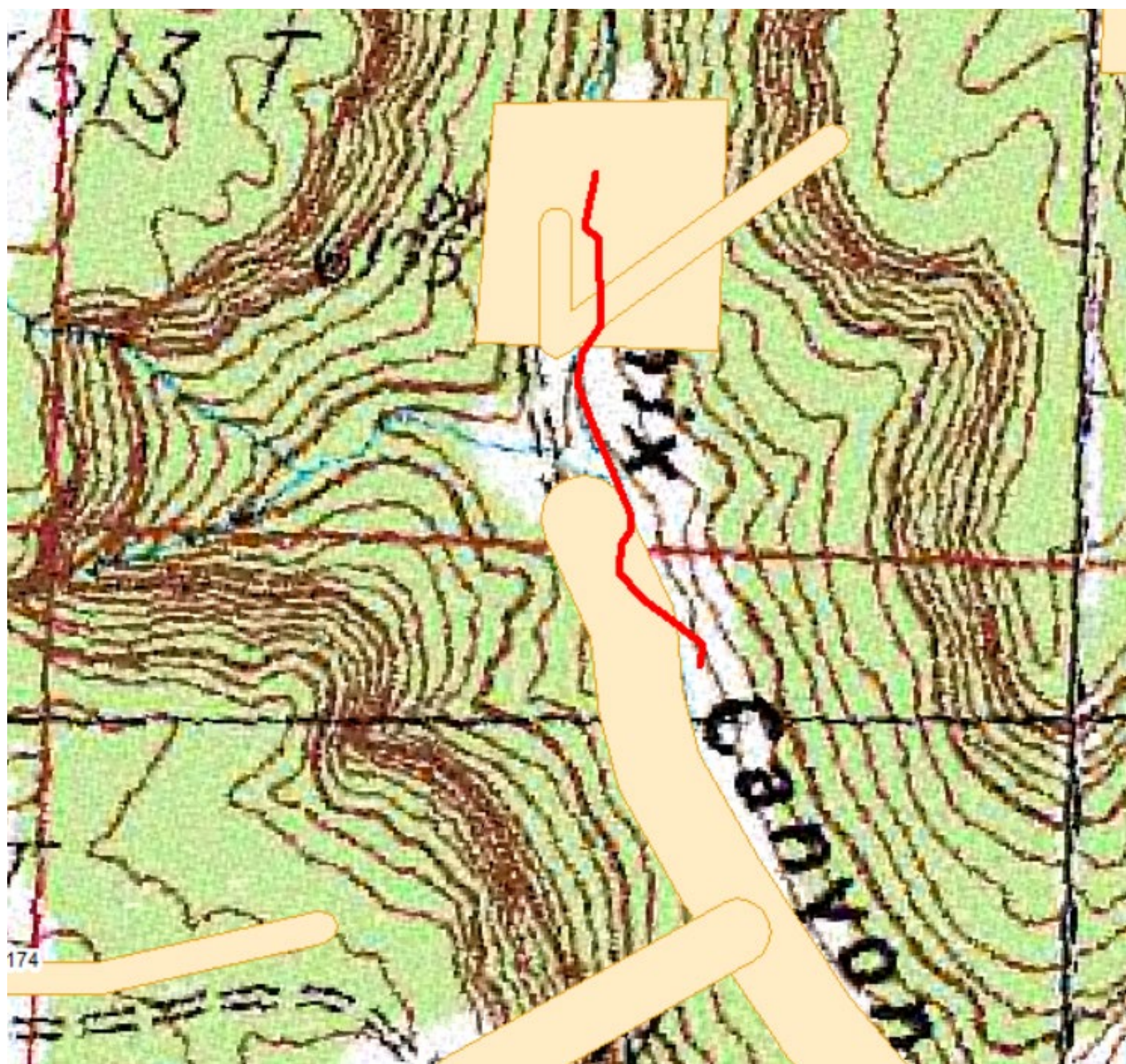
CULTURAL RESOURCE SPECIALIST RECOMMENDATIONS

- ☒ Inventory for cultural resources **is** required.
- ☐ Inventory for cultural resources **is not** required for the reason(s) indicated below.
 - ☐ Previous natural ground disturbance has modified the surface so extensively that the likelihood of finding cultural properties is negligible (e.g., within a floodplain), or
 - ☐ Human activity has created a new land surface to such an extent as to eradicate traces of cultural properties, or
 - ☐ Existing Class II or equivalent inventory or environmental data are sufficient to indicate that there is no likelihood of finding a National Register or eligible property, or
 - ☐ Inventory at the Class III level of intensity has previously been performed and records adequately documenting the location, methods, and results of the inventory are available in report no. NMCRIS 33436, 36019, and 34589, or
 - ☐ Natural environmental characteristics are unfavorable to the presence of cultural properties (such as recent landslide or rock falls), or
 - ☐ The nature of the proposed action is such that no impact can be expected on significant cultural resources (e.g. land use will not require any surface disturbing action, e.g., aerial spraying, hand application of chemicals, travel on existing roads, etc.), or
 - ☐ Other:

Recommended by: Archaeologist: Erik Simpson

Date: 10-3-2022

Cultural Notes (if any, e.g., conditions, stipulations, etc.): If any cultural resources are encountered on BLM lands a BLM archaeologist must be notified immediately. Surveyed is only needed in the mid and southern sections that have not been previously surveyed as shown on the attached map.





SAN JUAN COUNTY MUSEUM ASSOCIATION

Salmon Ruins Museum
Research Library
Division of Conservation Archaeology
Heritage Park

November 4, 2022

Archaeologist
Bureau of Land Management
Farmington Field Office
6251 College Blvd, Suite A
Farmington, NM 87402
NMCRIS No. 151295

RE: The Cultural Resources Inventory for a Release Remediation Plan at the Hilcorp Seymour No. 6 Well, for Ensolum, LLC, San Juan County, New Mexico.

Dear BLM Archaeologist:

Enclosed please find two copies of DCA Technical Report No. 22-DCA-050, *The Cultural Resources Inventory for a Release Remediation Plan at the Hilcorp Seymour No. 6 Well, for Ensolum, LLC, San Juan County, New Mexico*. This report details the cultural resources survey and inventory of the area required to cleanup an inadvertent hydrocarbon release. The project area is located in San Juan County, New Mexico on land administered by the Bureau of Land Management, Farmington Field Offices. No cultural resources were identified during the survey. It is recommended that the Remediation Work Plan and Variance Request for the Seymour 6 as proposed by Ensolum, LLC be allowed to proceed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sarah M. Morgan". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Sarah M. Morgan
DCA Supervisory Archaeologist

cc: Stuart Hyde, Ensolum, LLC (1 electronic client copy)

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.: 151295	2a. Lead (Sponsoring) Agency: Bureau of Land Management, Farmington Field Office	2b. Other Permitting Agency(ies):	3. Lead Agency Report No.:
4. Title of Report: The Cultural Resources Inventory for a Release Remediation Plan at the Hilcorp Seymour No. 6 Well, for Ensolum, LLC, San Juan County, New Mexico. Author(s) Sarah M. Morgan			5. Type of Report <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Positive
6. Investigation Type <input type="checkbox"/> Research Design <input checked="" type="checkbox"/> Survey/Inventory <input type="checkbox"/> Test Excavation <input type="checkbox"/> Excavation <input type="checkbox"/> Collections/Non-Field Study <input type="checkbox"/> Overview/Lit Review <input type="checkbox"/> Monitoring <input type="checkbox"/> Ethnographic study <input type="checkbox"/> Site specific visit <input type="checkbox"/> Other			
7. Description of Undertaking (what does the project entail?): The Division of Conservation Archaeology was contacted by Ensolum LLC on October 20, 2022 to perform a cultural resource inventory for a release which occurred at the Hilcorp Energy Company Seymour 6 well. The release had occurred in August and the BLM-FFO requested that a cultural resource inventory occur in the area prior to remediation. The project area includes the area of the release and area required to access it and clean it up. The release itself occurred from a below ground tank during a flash flood event; the tank overflowed with the addition of the rainwater and approximately 20 barrels of oil were released from the tank. The combined water and released oil flowed across part of the well pad and south down an arroyo for approximately 1700 ft (518 m). The APE includes the area of the existing Seymour No. 6 well pad (co-located with the LOGOS Operating LLC Seymour #719 well), and a 20 ft swathe centered on the drainage which the release flow followed. The APE is 1.84 acres. A total of 12.07 acres was surveyed including the cultural buffer zone.		8. Date(s) of Investigation: November 1, 2022	
		9. Report Date: November 4, 2022	
10. Performing Agency/Consultant: Division of Conservation Archaeology Principal Investigator: Jason Meininger Field Supervisor: Sarah M. Morgan Field Personnel Names: Sarah M. Morgan and Leonard Yazzie		11. Performing Agency/Consultant Report No.: 22-DCA-050	
		12. Applicable Cultural Resource Permit No(s): 7-2920-20-ZZZ	
13. Client/Customer (project proponent): Ensolum, LLC Contact: Stuart Hyde Address: 2351 W. Northwest Hwy Ste. 1203, Dallas TX 75220 Phone: (972) 364-7643		14. Client/Customer Project No.: 07A1988052	
15. Land Ownership Status (<u>Must</u> be indicated on project map):			
Land Owner		Acres Surveyed	Acres in APE
Bureau of Land Management-Farmington Field Office		12.07	1.84
TOTALS		12.07	1.84
16. Records Search(es): An online search of NMCRIS/ARMS indicated that three sites (LA 74831, LA 79523, and LA 79524) are located within 0.25 mi of the project area. No sites listed on the National or State Registers are located within the project vicinity. The BLM-FFO archaeologist was consulted and no additional concerns regarding the project area were indicated (TCPs or sites not in the ARMS database). The nearest TCP is Mesa Mountains (59) which is approximately 4 miles northwest of the project area (Van Valkenberg 1974).			
Date(s) of ARMS File Review 10/31/2022	Name of Reviewer(s) Sarah M. Morgan		
Date(s) of NR/SR File Review 10/31/2022	Name of Reviewer(s) Sarah M. Morgan		
Date(s) of Other Agency File Review 10/24/22	Name of Reviewer(s) Lyn Wharton w/Erik Simpson (BLM)		Agency BLM-FFO

17. Survey Data:

a. Source Graphics ☐ NAD 27 ☒ NAD 83
☒ USGS 7.5' (1:24,000) topo map ☐ Other topo map, Scale:
☒ GPS Unit Accuracy ☐ <1.0m ☒ 1-10m ☐ 10-100m ☐ >100m

b. USGS 7.5' Topographic Map Name USGS Quad Code

Mount Nebo, NM 1985 (provisional
edition)

36107-H7

c. County(ies): San Juan

17. Survey Data (continued):

d. Nearest City or Town: Navajo Dam, NM

e. Legal Description:

Township (N/S)	Range (E/W)	Section	1/4	1/4	1/4
31N	9W	14	SW, SW		
		23	NE, NW		

Projected legal description? Yes ☐ , No ☒ Unplatted ☐

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.): Footages of Seymour 6 well: 790' FSL, 1035' FWL

18. Survey Field Methods:

Intensity: ☒ 100% coverage ☐ <100% coverage

Configuration: ☒ block survey units ☐ linear survey units (l x w): ☐ other survey units (specify):

Scope: ☒ non-selective (all sites recorded) ☐ selective/thematic (selected sites recorded)

Coverage Method: ☒ systematic pedestrian coverage ☐ other method (describe)


Survey Interval (m): 10-12 Crew Size: 2 Fieldwork Date: November 1, 2022

Additional Narrative: The acres surveyed includes an irregularly shaped cultural buffer zone around the area of the release. The buffer zone is irregular; DCA surveyed the extent of the width of the canyon to the sides of where the sandstone walls meet the canyon bottom and extend up towards the mesa top. This was done because the vegetative ground cover in the immediate vicinity of the release was close to 95% in most areas. In order to ascertain if there was any evidence of cultural resources which may be buried/covered in the project area, archaeologists examined the boulders and sandstone escarpment for signs of rock art/rock features and for any evidence of sites which may have been situated on the canyon floor but not visible due to ground cover. The embankments of the arroyos and drainages, including the primary drainage through which the release flowed, were also inspected for any evidence of cultural resources which may have been buried. None were identified. Evidence of a previous wildfire was noted on the western cutbank of the main drainage as a 10-30 cm thick lens of charcoal and ash laden sediments with pieces of charcoal and burned rock fragments extending for a length of approximately 80-100 ft. This lens was inspected carefully and no indication of cultural activities appeared within it.

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): The project area is at the head of Minux Canyon on the canyon bottom and within the main drainage of the canyon. The project is located 1.75 mi east of Pump Canyon and immediately south of Beanie Pockets. The sediment in the area consists of tan sand to tan sandy loam with sandstone bedrock on the sides of the canyon. Vegetation in the project area consists of an overstory of juniper and pinyon with an understory of Russian thistle, big sagebrush, four-wing saltbush, Gambel oak, mountain mahogany, various now-dormant wildflowers, forbs, cholla, prickly pear cactus, and broadleaf yucca.

20. a. Percent Ground Visibility: 10-15% (averaged) **b. Condition of Survey Area (grazed, bladed, undisturbed, etc.):** The well pad, pipeline, and associated access road appear to be the only disturbances in the project area. Grazing and recreation take place in the project area.

21. CULTURAL RESOURCE FINDINGS ☐ Yes, See Page 3 ☒ No, Discuss Why: No cultural resources were located during the survey.

22. Required Attachments (check all appropriate boxes): <input checked="" type="checkbox"/> USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn <input checked="" type="checkbox"/> Copy of NMCRIIS Mapserver Map Check <input type="checkbox"/> LA Site Forms - new sites (<i>with sketch map & topographic map</i>) <input type="checkbox"/> LA Site Forms (update) - previously recorded & un-relocated sites (<i>first 2 pages minimum</i>) <input type="checkbox"/> Historic Cultural Property Inventory Forms <input type="checkbox"/> List and Description of isolates, if applicable <input type="checkbox"/> List and Description of Collections, if applicable	23. Other Attachments: <input type="checkbox"/> Photographs and Log <input type="checkbox"/> Other Attachments (Describe):
24. I certify the information provided above is correct and accurate and meets all applicable agency standards. Principal Investigator/Responsible Archaeologist: Sarah M. Morgan Signature <u></u> Date <u>11/4/22</u> Title (if not PI): Supervisory Archaeologist	
25. Reviewing Agency: Reviewer's Name/Date Accepted () Rejected () Tribal Consultation (if applicable): <input type="checkbox"/> Yes <input type="checkbox"/> No	26. SHPO Reviewer's Name/Date: HPD Log #: SHPO File Location: Date sent to ARMS:

CULTURAL RESOURCE FINDINGS*[fill in appropriate section(s)]*

1. NMCRIS Activity No.: 151295	2. Lead (Sponsoring) Agency: Bureau of Land Management, Farmington Field Office	3. Lead Agency Report No.:
--	---	-----------------------------------

SURVEY RESULTS:

Sites discovered and registered: 0

Sites discovered and NOT registered: 0

Previously recorded sites revisited *(site update form required)*: 0Previously recorded sites not relocated *(site update form required)*: 0

TOTAL SITES VISITED: 0

Total isolates recorded: 0 Non-selective isolate recording? ☐Total structures recorded *(new and previously recorded, including acequias)*: 0**MANAGEMENT SUMMARY:****IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.****SURVEY LA NUMBER LOG****Sites Discovered:**

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

MONITORING LA NUMBER LOG *(site form required)***Sites Discovered** *(site form required)* :**Previously recorded sites** *(Site update form required)*:

LA No.	Field/Agency No.	LA No.	Field/Agency No.

Areas outside known nearby site boundaries monitored? Yes ☐, No ☐ If no explain why:**TESTING & EXCAVATION LA NUMBER LOG** *(site form required)*

Tested LA number(s)	Excavated LA number(s)

Reference cited:

Van Valkenburg, Richard P.

1974 Navajo Sacred Places, edited by Clyde Kluckhohn. In *Navajo Indians III*, pp. 9-199.

Garland

Publishers, New York.

GENERAL LOCATION MAP

Seymour No. 6 Release Remediation Survey

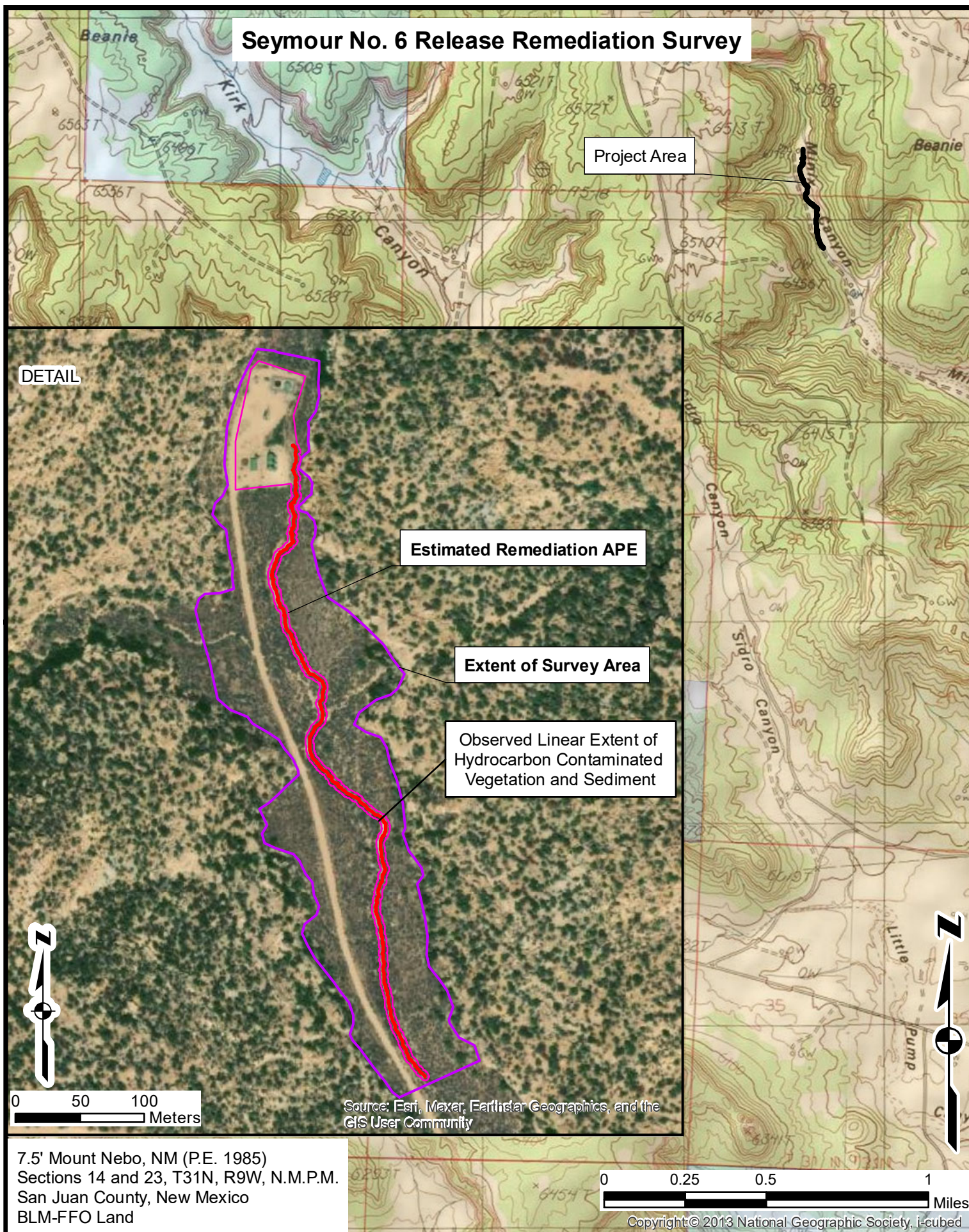
PROJECT LOCATION

7.5' Mount Nebo, NM (P.E. 1985)
Sections 14 and 23, T31N, R9W, N.M.P.M.
San Juan County, New Mexico
BLM-FFO Land

0 1 2 4 Miles

Copyright © 2013 National Geographic Society, i-cubed

VICINITY MAP





BLM Report Number: 2023(I)007F

USGS Map: Mount Nebo, NM

Activity Code: 1310

NMCRIS No: 151295

CULTURAL RESOURCE RECORD OF REVIEW

BUREAU OF LAND MANAGEMENT

FARMINGTON FIELD OFFICE

1. Description of Report/Project:

Project Name: Release Remediation Plan at the Hilcorp Seymour No 6 Well.

Project Sponsor: Hilcorp Energy Company (Ensolum, LLC).

Arch. Firm & Report No.: Division of Conservation Archaeology, DCA Report No. 22-DCA-050.

Location: T31N R9W Sections 14, & 23.

Split Estate: no.

Project Dimensions: 1,700 ft x 20 ft – oil spill cleanup area.

Sites Located: None.

Determination: No Effect to Historic Properties.

2. Field Check: No.

3. Cultural ACEC: No.

4. Sensitive Cultural Area: No.

5. Recommendation: *PROCEED WITH ACTION:* X *STIPULATIONS ATTACHED:*

6. Reviewer /Archaeologist: Kim Adams **Date:** 11/15/2022

Report Summary	BLM	Other	Total
Acres Inventoried	12.07	0.88	12.07
Sites Recorded	0	0	0
Prev. Recorded Sites	0	0	0
Sites Avoided	0	0	0
Sites Treated	0	0	0

Discovery of Cultural Resources in the Presence or Absence of Monitoring: If any previously unidentified historic or prehistoric cultural resources are discovered during construction or project operations, work in the vicinity of the discovery will be suspended and the discovery will promptly be reported to the BLM Field Manager.

Note: If there are questions about these stipulations, contact Kim Adams (BLM) at 505.564.7683 or kadams@blm.gov.

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Farmington Field Office

**REQUEST FOR THREATENED AND ENDANGERED (T&E) / SPECIAL STATUS SPECIES
SPECIES PROPOSAL EVALUATION**

Accomplishment Number

Instructions: Double Form: 1) the upper portion - a request for and 2) the lower portion – evaluation of need for Formal Consultation

TO: Resource Area Special Status Species, T&E Species, Migratory Birds

Please evaluate this proposed action relative to possible effects on any Federally listed T&E, proposed Federal T&E, State listed T&E, or Special Status Species which may occur in the proposed location.

Description of the proposed Action and Case Reference Number: Seymour #6

Hilcorp Energy proposed to remediate the oil spill that occurred at Seymour #6 on the 08/18/2022. The spill entered the unknown dry wash adjacent to the well pad and traveled approximately 1000 ft in the wash. Hilcorp proposed to remove by hand and vegetation and impacted soil from the well and the dry wash by hand/or mechanical excavation if needed.

Please see the location map.

LOCATION

T31N, R9W, Sec 14 Qrt: SWSW

PROPOSEE

Abiodun Adedoye (NRS)
Signature of Initiating Official & Title

10/03/2022
Date

This proposal and relative data have been analyzed concerning the following species: BLM sensitive spp

The analysis indicates that there would be a ☒ No- ☐ May- affect situation as a result of approving this described proposed action and Formal Consultation ☐ is ☐ is not necessary.

This proposal is a ☒ minor construction ☐ major construction.

Method of Analysis: ☐ Field Examination ☒ Data bank/GIS ☐ Other (explain)

COMMENTS No known habitat for any SSS within the proposed spill area

Level 1 Biologist

s/s John Kendall
(Signature)

Evaluated by

10/3/22

(Date)

Level 2 Biologist

(Signature)

(Date)

070-6843-01
(Sept. 2000)

Reviewed by

(Signature and Title)

070-6843-01
(Sept. 2000)

Well Name: SEYMOUR	Well Location: T31N / R9W / SEC 14 / SWSW / 36.893127 / -107.754608	County or Parish/State: SAN JUAN / NM
Well Number: 6	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF078505	Unit or CA Name:	Unit or CA Number:
US Well Number: 3004510684	Well Status: Producing Gas Well	Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2695897

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 10/03/2022	Time Sundry Submitted: 06:36
Date proposed operation will begin: 10/03/2022	

Procedure Description: ATTN: Emmanuel. Summary: Hilcorp is seeking approval from the BLM-FFO to implement the attached Remediation Work Plan (RWP) at the Seymour 6. In addition, the RWP requests a variance for the frequency of excavation confirmation samples (refer to attachment for further details). Upon BLM-FFO and NMOCD approval, Hilcorp will move forward with the RWP.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Hilcorp_Energy_Company___Seymour_6_Remediation_Work_Plan_BLM_ALL_20221003063559.pdf

Received by OCD: 1/13/2023 9:59:20 AMPage 34 of 98

Well Name: SEYMOUR	Well Location: T31N / R9W / SEC 14 / SWSW / 36.893127 / -107.754608	County or Parish/State: SAN JUAN / NM
Well Number: 6	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF078505	Unit or CA Name:	Unit or CA Number:
US Well Number: 3004510684	Well Status: Producing Gas Well	Operator: HILCORP ENERGY COMPANY

Conditions of Approval

Additional

TE_Evaluation_Seymore_6_spill_Final_20221130081651.pdf

Hilcorps_Release_Remediation_Plan_at_the_Hilcorp_Seymour_No_6_Well_no_stips_106_arc_review_Adams_20221130081448.pdf

Conditions_of_Approval_20221130081437.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: AMANDA WALKER	Signed on: OCT 03, 2022 06:36 AM
Name: HILCORP ENERGY COMPANY	
Title: Operations/Regulatory Technician	
Street Address: 1111 TRAVIS ST.	
City: HOUSTON	State: TX
Phone: (346) 237-2177	
Email address: mwalker@hilcorp.com	

Field

Representative Name: Mitch Killough	
Street Address: 1111 TRAVIS ST.	
City: HOUSTON	State: TX
Phone: (713)757-5247	Zip: 77002
Email address: mkillough@hilcorp.com	

BLM Point of Contact

BLM POC Name: DAVE J MANKIEWICZ	BLM POC Title: AFM-Minerals
BLM POC Phone: 5055647761	BLM POC Email Address: DMANKIEW@BLM.GOV
Disposition: Approved	Disposition Date: 11/30/2022
Signature: Dave Mankiewicz	

Operator: Hilcorp Energy Company

Well Name: Seymour #6

Legal Description: T31N, R9W, Sec 14

Conditions of Approval

Disclaimers: BLM's approval of this remediation plan does not relieve the lessee an operator from obtaining any other authorizations that may be required by other jurisdictional entities. These COA's may reiterate COAs attached to original permit though they do not negate any COA's attached to the original permit.

1. This location has a ranking of 20 due to being <50 feet depth to groundwater, >300 horizontal feet from surface water body and not within a wellhead protection area in accordance with NMOCD's Guidelines for Remediation of Leaks, Spills and Releases and BLM-FFO NTL 94-1. This release will need to be cleaned to this regulatory standards: therefore, TPH needs to be <100 ppm, BTEX <50 ppm, benzene <100 ppm and chloride <600 ppm.
2. Hilcorp Energy Company will notify the BLM at least 24 hours prior to any confirmation soil sampling event. Contact Abiodun (Emmanuel) Adeloye at aadeloye@blm.gov or 505-564-7665 (office) or 505 635-0984 (cell).
3. Any disturbance of the interim reclaimed area will be appropriately reclaimed back to pre-project interim reclamation conditions. This approval does not permit surface disturbance beyond area requested. If it is determined that additional surface disturbance is required for sufficient remediation, a new request shall be submitted via Sundry (form 3160-005).
4. All cultural resources stipulations would be followed as indicated in the BLM Cultural Resource Records of Review and the Conditions of Approvals. These stipulations may include, but are not limited to, temporary or permanent fencing or other physical barriers, monitoring of earth-disturbing construction, project area reduction and/or specific construction avoidance zones, and employee education.
5. All employees of the project, including the Operator and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. This includes all personnel associated with construction, use, maintenance and abandonment of the well pad, well facilities, access and pipelines. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16U.S.C. 470aa-mm) when on federal land and the New Mexico cultural Properties Act NMSA 1978 when on State land.

6. If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery in accordance with 36 CFR Section 800.13, in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property, or in accordance with an approved program alternative. Minor recordation, stabilization, or data recovery may be performed by BLM or a third party acting on its behalf, such as a permitted cultural resources consultant. If warranted, more extensive archaeological or alternative mitigation, likely implemented by a permitted cultural resources consultant, may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any mitigations determined appropriate through the agency's Section 106 consultation are completed. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act (ARPA) of 1979, as amended, the Native American Graves Protection and Repatriation Act (NAGRPA) of 1990, as amended, and other applicable laws.
7. If monitoring confirms the presence of previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery in accordance with 36 CFR Section 800.13, in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property, or in accordance with an approved program alternative. Minor recordation, stabilization, or data recovery may be performed by BLM or a third party acting on its behalf, such as a permitted cultural resources consultant. If warranted, more extensive archaeological or alternative mitigation, likely implemented by a permitted cultural resources consultant, may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any mitigations determined appropriate through the agency's Section 106 consultation are completed.
8. If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare a BLM approved damage assessment and/or data recovery plan. The operator/holder agrees at his/her expense to implement a mitigation that the agency finds appropriate given the significance of the site, which the agency determines in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property. This mitigation may entail execution of the data recovery plan by a permitted cultural resources consultant and/or alternative mitigations. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act (ARPA) of 1979, as amended, the Native American Graves Protection and Repatriation Act (NAGRPA) of 1990, as amended, and other applicable laws.
9. All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed and educated that cultural sites are to be avoided by all personnel,

personal vehicles and company equipment. This includes personnel associated with construction, use, maintenance and abandonment of the well pad, well facilities, access and pipeline. They will also be notified that it is illegal to collect, damage, or disturb historic or prehistoric cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the ARPA (16 U.S.C. 470aa-mm), NAGPRA (25 U.S.C. 3001-3013), and other laws, as applicable (for example, NM Stat. § 18-6-9 through § 18-6-11.2, as amended, and NM Stat. § 30-12-12, as amended).



APPENDIX B

NMOCD Correspondence

From: OCDOnline@state.nm.us
To: [Stuart Hyde](#)
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 146472
Date: Friday, September 30, 2022 9:55:04 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Stuart Hyde for HILCORP ENERGY COMPANY),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2224144740, with the following conditions:

- **Conditions of Approval are as follows; 1. Excavation base sampling: one (1) - five (5) point composite sample [5pcs] per 500 square feet [sq. ft.]. 2. Sidewall sampling: one (1) 5pcs per 400 sq. ft. 3. Off pad sampling: one (1) 5pcs per 100 lateral ft. 4. Provide supporting documentation for applicable siting criteria within any potential interim or final closure report. 5. Required to adhere to Paragraph 2 and 3 of Subsection C of 19.15.29.12 NMAC. 6. Required to adhere to Paragraph 1 of Subsection D of 19.15.29.13 NMAC. 7. Deadline for final closure report is Friday, January 13, 2023.**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov

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

From: [Velez, Nelson, EMNRD](#)
To: [Stuart Hyde](#); [Adeloye, Abiodun A](#)
Cc: [Devin Hencmann](#); [Mitch Killough](#); [Greg Palese](#); [Brandon Sinclair](#)
Subject: RE: [EXTERNAL] nAPP22241444740 - Hilcorp Energy Company - Seymour 6 Sampling Notification
Date: Monday, December 5, 2022 3:17:29 PM
Attachments: [image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Stuart,

Thank you for the notice. If an OCD representative is not on-site on the date &/or time given, please sample per 19.15.29 NMAC. For whatever reason, if the sampling timeframe is altered, please notify the OCD as soon as possible so we may adjust our schedule(s). Failure to notify the OCD of this change may result in the closure sample(s) not being accepted.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov *NOTE NEW EMAIL ADDRESS*
<http://www.emnrd.state.nm.us/OCD/>



From: Stuart Hyde <shyde@ensolum.com>
Sent: Monday, December 5, 2022 11:51 AM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Adeloye, Abiodun A <aadeloye@blm.gov>
Cc: Devin Hencmann <dhencmann@ensolum.com>; Mitch Killough <mkillough@hilcorp.com>; Greg Palese <gpalese@ensolum.com>; Brandon Sinclair <Brandon.Sinclair@hilcorp.com>
Subject: [EXTERNAL] nAPP22241444740 - Hilcorp Energy Company - Seymour 6 Sampling Notification

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on

links or opening attachments.

All,

On behalf of Hilcorp Energy Company, Ensolum is submitting this sampling notification for the Seymour 6 to be performed on Thursday December 8, 2022 at 9 AM. The site is located at coordinates 36.89313, -107.75461. Please call or email with any questions. Thanks.



Stuart Hyde, LG

Senior Geologist

970-903-1607

Ensolum, LLC

in f 



APPENDIX C

Laboratory Analytical Reports



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

January 04, 2023

Stuart Hyde

HILCORP ENERGY

PO Box 4700

Farmington, NM 87499

TEL: (505) 564-0733

FAX:

RE: Seymour 6

OrderNo.: 2212586

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 37 sample(s) on 12/9/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS01

Project: Seymor 6

Collection Date: 12/8/2022 10:20:00 AM

Lab ID: 2212586-001

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	1000	140		mg/Kg	10	12/16/2022 6:31:15 PM
Motor Oil Range Organics (MRO)	590	470		mg/Kg	10	12/16/2022 6:31:15 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/16/2022 6:31:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 12:03:12 AM
Surr: BFB	86.5	37.7-212		%Rec	1	12/16/2022 12:03:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	12/16/2022 12:03:12 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 12:03:12 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 12:03:12 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 12:03:12 AM
Surr: 4-Bromofluorobenzene	83.6	70-130		%Rec	1	12/16/2022 12:03:12 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	12/20/2022 4:08:33 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 1 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS02

Project: Seymor 6

Collection Date: 12/8/2022 10:25:00 AM

Lab ID: 2212586-002

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 6:54:53 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/16/2022 6:54:53 PM
Surr: DNOP	138	21-129	S	%Rec	1	12/16/2022 6:54:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 12:26:30 AM
Surr: BFB	83.3	37.7-212		%Rec	1	12/16/2022 12:26:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	12/16/2022 12:26:30 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 12:26:30 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 12:26:30 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/16/2022 12:26:30 AM
Surr: 4-Bromofluorobenzene	81.5	70-130		%Rec	1	12/16/2022 12:26:30 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	12/20/2022 4:45:35 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 2 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS03

Project: Seymor 6

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212586-003

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/22/2022 1:23:18 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	12/22/2022 1:23:18 PM
Surr: DNOP	124	21-129		%Rec	1	12/22/2022 1:23:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 12:49:46 AM
Surr: BFB	86.1	37.7-212		%Rec	1	12/16/2022 12:49:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	12/16/2022 12:49:46 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 12:49:46 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 12:49:46 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 12:49:46 AM
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	1	12/16/2022 12:49:46 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	59		mg/Kg	20	12/20/2022 5:47:19 AM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 3 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS04

Project: Seymor 6

Collection Date: 12/8/2022 10:35:00 AM

Lab ID: 2212586-004

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 7:42:12 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/16/2022 7:42:12 PM
Surr: DNOP	126	21-129		%Rec	1	12/16/2022 7:42:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/16/2022 1:12:59 AM
Surr: BFB	83.8	37.7-212		%Rec	1	12/16/2022 1:12:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	12/16/2022 1:12:59 AM
Toluene	ND	0.050		mg/Kg	1	12/16/2022 1:12:59 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/16/2022 1:12:59 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/16/2022 1:12:59 AM
Surr: 4-Bromofluorobenzene	82.6	70-130		%Rec	1	12/16/2022 1:12:59 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	59		mg/Kg	20	12/20/2022 5:59:40 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 4 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS05

Project: Seymor 6

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212586-005

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 8:05:52 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/16/2022 8:05:52 PM
Surr: DNOP	134	21-129	S	%Rec	1	12/16/2022 8:05:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 1:36:12 AM
Surr: BFB	86.5	37.7-212		%Rec	1	12/16/2022 1:36:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	12/16/2022 1:36:12 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 1:36:12 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 1:36:12 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 1:36:12 AM
Surr: 4-Bromofluorobenzene	85.6	70-130		%Rec	1	12/16/2022 1:36:12 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	12/20/2022 6:12:01 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 5 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS06

Project: Seymor 6

Collection Date: 12/8/2022 10:45:00 AM

Lab ID: 2212586-006

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 8:29:30 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/16/2022 8:29:30 PM
Surr: DNOP	129	21-129	S	%Rec	1	12/16/2022 8:29:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 3:08:53 AM
Surr: BFB	82.9	37.7-212		%Rec	1	12/16/2022 3:08:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	12/16/2022 3:08:53 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 3:08:53 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 3:08:53 AM
Xylenes, Total	ND	0.097		mg/Kg	1	12/16/2022 3:08:53 AM
Surr: 4-Bromofluorobenzene	83.4	70-130		%Rec	1	12/16/2022 3:08:53 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	12/20/2022 6:24:21 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 6 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS07

Project: Seymor 6

Collection Date: 12/8/2022 10:50:00 AM

Lab ID: 2212586-007

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 8:53:09 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/16/2022 8:53:09 PM
Surr: DNOP	132	21-129	S	%Rec	1	12/16/2022 8:53:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 4:18:24 AM
Surr: BFB	82.0	37.7-212		%Rec	1	12/16/2022 4:18:24 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	12/16/2022 4:18:24 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 4:18:24 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 4:18:24 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 4:18:24 AM
Surr: 4-Bromofluorobenzene	81.6	70-130		%Rec	1	12/16/2022 4:18:24 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	12/20/2022 6:36:41 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 7 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS08

Project: Seymor 6

Collection Date: 12/8/2022 10:55:00 AM

Lab ID: 2212586-008

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 9:16:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/16/2022 9:16:49 PM
Surr: DNOP	129	21-129		%Rec	1	12/16/2022 9:16:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 5:27:57 AM
Surr: BFB	83.3	37.7-212		%Rec	1	12/16/2022 5:27:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	12/16/2022 5:27:57 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 5:27:57 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 5:27:57 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 5:27:57 AM
Surr: 4-Bromofluorobenzene	83.3	70-130		%Rec	1	12/16/2022 5:27:57 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	61		mg/Kg	20	12/20/2022 6:49:03 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 8 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS09

Project: Seymor 6

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212586-009

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/16/2022 9:40:30 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/16/2022 9:40:30 PM
Surr: DNOP	131	21-129	S	%Rec	1	12/16/2022 9:40:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/16/2022 5:51:07 AM
Surr: BFB	83.0	37.7-212		%Rec	1	12/16/2022 5:51:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	12/16/2022 5:51:07 AM
Toluene	ND	0.050		mg/Kg	1	12/16/2022 5:51:07 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/16/2022 5:51:07 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/16/2022 5:51:07 AM
Surr: 4-Bromofluorobenzene	84.0	70-130		%Rec	1	12/16/2022 5:51:07 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	59		mg/Kg	20	12/20/2022 12:29:32 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 9 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS10

Project: Seymor 6

Collection Date: 12/8/2022 11:05:00 AM

Lab ID: 2212586-010

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	41	14		mg/Kg	1	12/22/2022 1:33:56 PM
Motor Oil Range Organics (MRO)	79	45		mg/Kg	1	12/22/2022 1:33:56 PM
Surr: DNOP	115	21-129		%Rec	1	12/22/2022 1:33:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 8:07:38 PM
Surr: BFB	85.2	37.7-212		%Rec	1	12/16/2022 8:07:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/16/2022 8:07:38 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 8:07:38 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 8:07:38 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 8:07:38 PM
Surr: 4-Bromofluorobenzene	86.7	70-130		%Rec	1	12/16/2022 8:07:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 1:31:17 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 10 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS11

Project: Seymor 6

Collection Date: 12/8/2022 11:10:00 AM

Lab ID: 2212586-011

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/16/2022 10:27:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/16/2022 10:27:49 PM
Surr: DNOP	91.2	21-129		%Rec	1	12/16/2022 10:27:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 8:30:56 PM
Surr: BFB	84.3	37.7-212		%Rec	1	12/16/2022 8:30:56 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/16/2022 8:30:56 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 8:30:56 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 8:30:56 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/16/2022 8:30:56 PM
Surr: 4-Bromofluorobenzene	85.0	70-130		%Rec	1	12/16/2022 8:30:56 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 2:08:19 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 11 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS12

Project: Seymor 6

Collection Date: 12/8/2022 11:14:00 AM

Lab ID: 2212586-012

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	12/16/2022 10:51:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/16/2022 10:51:29 PM
Surr: DNOP	96.3	21-129		%Rec	1	12/16/2022 10:51:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 8:54:14 PM
Surr: BFB	82.5	37.7-212		%Rec	1	12/16/2022 8:54:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/16/2022 8:54:14 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 8:54:14 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 8:54:14 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/16/2022 8:54:14 PM
Surr: 4-Bromofluorobenzene	83.8	70-130		%Rec	1	12/16/2022 8:54:14 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 2:20:41 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 12 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS13

Project: Seymor 6

Collection Date: 12/8/2022 11:18:00 AM

Lab ID: 2212586-013

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 11:15:05 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/16/2022 11:15:05 PM
Surr: DNOP	94.7	21-129		%Rec	1	12/16/2022 11:15:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 9:17:27 PM
Surr: BFB	82.0	37.7-212		%Rec	1	12/16/2022 9:17:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/16/2022 9:17:27 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 9:17:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 9:17:27 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 9:17:27 PM
Surr: 4-Bromofluorobenzene	85.1	70-130		%Rec	1	12/16/2022 9:17:27 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 2:33:01 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 13 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS14

Project: Seymor 6

Collection Date: 12/8/2022 11:23:00 AM

Lab ID: 2212586-014

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/16/2022 11:38:39 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/16/2022 11:38:39 PM
Surr: DNOP	92.9	21-129		%Rec	1	12/16/2022 11:38:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 9:40:38 PM
Surr: BFB	83.7	37.7-212		%Rec	1	12/16/2022 9:40:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/16/2022 9:40:38 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 9:40:38 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 9:40:38 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/16/2022 9:40:38 PM
Surr: 4-Bromofluorobenzene	85.3	70-130		%Rec	1	12/16/2022 9:40:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 2:45:23 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 14 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS15

Project: Seymor 6

Collection Date: 12/8/2022 11:26:00 AM

Lab ID: 2212586-015

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	12/17/2022 12:02:10 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	12/17/2022 12:02:10 AM
Surr: DNOP	92.9	21-129		%Rec	1	12/17/2022 12:02:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 10:03:50 PM
Surr: BFB	82.9	37.7-212		%Rec	1	12/16/2022 10:03:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/16/2022 10:03:50 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 10:03:50 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 10:03:50 PM
Xylenes, Total	ND	0.099		mg/Kg	1	12/16/2022 10:03:50 PM
Surr: 4-Bromofluorobenzene	84.0	70-130		%Rec	1	12/16/2022 10:03:50 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 2:57:43 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS16

Project: Seymor 6

Collection Date: 12/8/2022 11:30:00 AM

Lab ID: 2212586-016

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/17/2022 12:25:39 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/17/2022 12:25:39 AM
Surr: DNOP	92.8	21-129		%Rec	1	12/17/2022 12:25:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/16/2022 10:26:57 PM
Surr: BFB	83.8	37.7-212		%Rec	1	12/16/2022 10:26:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/16/2022 10:26:57 PM
Toluene	ND	0.050		mg/Kg	1	12/16/2022 10:26:57 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/16/2022 10:26:57 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/16/2022 10:26:57 PM
Surr: 4-Bromofluorobenzene	87.2	70-130		%Rec	1	12/16/2022 10:26:57 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 3:10:05 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 16 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: WS17

Project: Seymor 6

Collection Date: 12/8/2022 11:33:00 AM

Lab ID: 2212586-017

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	12/17/2022 12:49:09 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/17/2022 12:49:09 AM
Surr: DNOP	100	21-129		%Rec	1	12/17/2022 12:49:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/16/2022 10:50:10 PM
Surr: BFB	82.8	37.7-212		%Rec	1	12/16/2022 10:50:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/16/2022 10:50:10 PM
Toluene	ND	0.050		mg/Kg	1	12/16/2022 10:50:10 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/16/2022 10:50:10 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/16/2022 10:50:10 PM
Surr: 4-Bromofluorobenzene	84.3	70-130		%Rec	1	12/16/2022 10:50:10 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 3:22:26 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 17 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS01

Project: Seymor 6

Collection Date: 12/8/2022 1:10:00 PM

Lab ID: 2212586-018

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	360	14		mg/Kg	1	12/19/2022 9:58:40 PM
Motor Oil Range Organics (MRO)	380	48		mg/Kg	1	12/19/2022 9:58:40 PM
Surr: DNOP	123	21-129		%Rec	1	12/19/2022 9:58:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/16/2022 11:13:18 PM
Surr: BFB	79.6	37.7-212		%Rec	1	12/16/2022 11:13:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/16/2022 11:13:18 PM
Toluene	ND	0.048		mg/Kg	1	12/16/2022 11:13:18 PM
Ethylbenzene	ND	0.048		mg/Kg	1	12/16/2022 11:13:18 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/16/2022 11:13:18 PM
Surr: 4-Bromofluorobenzene	81.2	70-130		%Rec	1	12/16/2022 11:13:18 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 3:59:28 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 18 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS02

Project: Seymor 6

Collection Date: 12/8/2022 1:12:00 PM

Lab ID: 2212586-019

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	29	15		mg/Kg	1	12/17/2022 1:35:38 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/17/2022 1:35:38 AM
Surr: DNOP	100	21-129		%Rec	1	12/17/2022 1:35:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 11:36:23 PM
Surr: BFB	80.1	37.7-212		%Rec	1	12/16/2022 11:36:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/16/2022 11:36:23 PM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 11:36:23 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 11:36:23 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/16/2022 11:36:23 PM
Surr: 4-Bromofluorobenzene	81.4	70-130		%Rec	1	12/16/2022 11:36:23 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 4:11:49 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 19 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS03

Project: Seymor 6

Collection Date: 12/8/2022 1:15:00 PM

Lab ID: 2212586-020

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	390	14		mg/Kg	1	12/17/2022 2:21:48 AM
Motor Oil Range Organics (MRO)	330	46		mg/Kg	1	12/17/2022 2:21:48 AM
Surr: DNOP	116	21-129		%Rec	1	12/17/2022 2:21:48 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/17/2022 12:22:32 AM
Surr: BFB	81.2	37.7-212		%Rec	1	12/17/2022 12:22:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/17/2022 12:22:32 AM
Toluene	ND	0.049		mg/Kg	1	12/17/2022 12:22:32 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/17/2022 12:22:32 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/17/2022 12:22:32 AM
Surr: 4-Bromofluorobenzene	82.1	70-130		%Rec	1	12/17/2022 12:22:32 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 4:24:10 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS04

Project: Seymor 6

Collection Date: 12/8/2022 1:18:00 PM

Lab ID: 2212586-021

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	71	H	mg/Kg	5	12/29/2022 3:23:39 PM
Motor Oil Range Organics (MRO)	ND	240	H	mg/Kg	5	12/29/2022 3:23:39 PM
Surr: DNOP	141	21-129	SH	%Rec	5	12/29/2022 3:23:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/17/2022 12:45:39 AM
Surr: BFB	79.7	37.7-212		%Rec	1	12/17/2022 12:45:39 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/17/2022 12:45:39 AM
Toluene	ND	0.049		mg/Kg	1	12/17/2022 12:45:39 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/17/2022 12:45:39 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/17/2022 12:45:39 AM
Surr: 4-Bromofluorobenzene	82.0	70-130		%Rec	1	12/17/2022 12:45:39 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 4:36:31 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS05

Project: Seymor 6

Collection Date: 12/8/2022 1:20:00 PM

Lab ID: 2212586-022

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	210	15		mg/Kg	1	12/16/2022 11:45:20 AM
Motor Oil Range Organics (MRO)	210	49		mg/Kg	1	12/16/2022 11:45:20 AM
Surr: DNOP	125	21-129		%Rec	1	12/16/2022 11:45:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/17/2022 1:08:43 AM
Surr: BFB	78.7	37.7-212		%Rec	1	12/17/2022 1:08:43 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/17/2022 1:08:43 AM
Toluene	ND	0.049		mg/Kg	1	12/17/2022 1:08:43 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/17/2022 1:08:43 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/17/2022 1:08:43 AM
Surr: 4-Bromofluorobenzene	80.7	70-130		%Rec	1	12/17/2022 1:08:43 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 4:48:52 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 22 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS06

Project: Seymor 6

Collection Date: 12/8/2022 1:22:00 PM

Lab ID: 2212586-023

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	2600	140		mg/Kg	10	12/16/2022 12:58:15 PM
Motor Oil Range Organics (MRO)	2400	480		mg/Kg	10	12/16/2022 12:58:15 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/16/2022 12:58:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/17/2022 1:31:45 AM
Surr: BFB	80.4	37.7-212		%Rec	1	12/17/2022 1:31:45 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/17/2022 1:31:45 AM
Toluene	ND	0.050		mg/Kg	1	12/17/2022 1:31:45 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/17/2022 1:31:45 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/17/2022 1:31:45 AM
Surr: 4-Bromofluorobenzene	81.5	70-130		%Rec	1	12/17/2022 1:31:45 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	76	60		mg/Kg	20	12/20/2022 5:01:13 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 23 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS07

Project: Seymor 6

Collection Date: 12/8/2022 1:23:00 PM

Lab ID: 2212586-024

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	400	73		mg/Kg	5	12/18/2022 5:22:56 PM
Motor Oil Range Organics (MRO)	390	240		mg/Kg	5	12/18/2022 5:22:56 PM
Surr: DNOP	154	21-129	S	%Rec	5	12/18/2022 5:22:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/17/2022 1:54:45 AM
Surr: BFB	80.2	37.7-212		%Rec	1	12/17/2022 1:54:45 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/17/2022 1:54:45 AM
Toluene	ND	0.049		mg/Kg	1	12/17/2022 1:54:45 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/17/2022 1:54:45 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/17/2022 1:54:45 AM
Surr: 4-Bromofluorobenzene	83.3	70-130		%Rec	1	12/17/2022 1:54:45 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	230	61		mg/Kg	20	12/20/2022 5:13:34 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 24 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS08

Project: Seymor 6

Collection Date: 12/8/2022 1:24:00 PM

Lab ID: 2212586-025

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	1000	140		mg/Kg	10	12/16/2022 1:46:30 PM
Motor Oil Range Organics (MRO)	1200	470		mg/Kg	10	12/16/2022 1:46:30 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/16/2022 1:46:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/17/2022 2:17:47 AM
Surr: BFB	79.6	37.7-212		%Rec	1	12/17/2022 2:17:47 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	12/17/2022 2:17:47 AM
Toluene	ND	0.049		mg/Kg	1	12/17/2022 2:17:47 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/17/2022 2:17:47 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/17/2022 2:17:47 AM
Surr: 4-Bromofluorobenzene	81.2	70-130		%Rec	1	12/17/2022 2:17:47 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1700	60		mg/Kg	20	12/20/2022 5:25:55 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS09

Project: Seymor 6

Collection Date: 12/8/2022 1:26:00 PM

Lab ID: 2212586-026

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	86	15		mg/Kg	1	12/16/2022 2:10:37 PM
Motor Oil Range Organics (MRO)	150	50		mg/Kg	1	12/16/2022 2:10:37 PM
Surr: DNOP	108	21-129		%Rec	1	12/16/2022 2:10:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/15/2022 8:14:00 PM
Surr: BFB	93.2	37.7-212		%Rec	1	12/15/2022 8:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/15/2022 8:14:00 PM
Toluene	ND	0.049		mg/Kg	1	12/15/2022 8:14:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/15/2022 8:14:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/15/2022 8:14:00 PM
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	12/15/2022 8:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	62	59		mg/Kg	20	12/20/2022 5:38:16 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 26 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS10

Project: Seymor 6

Collection Date: 12/8/2022 1:28:00 PM

Lab ID: 2212586-027

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	540	150		mg/Kg	10	12/18/2022 6:15:19 PM
Motor Oil Range Organics (MRO)	740	490		mg/Kg	10	12/18/2022 6:15:19 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/18/2022 6:15:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/15/2022 9:13:00 PM
Surr: BFB	111	37.7-212		%Rec	1	12/15/2022 9:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/15/2022 9:13:00 PM
Toluene	ND	0.050		mg/Kg	1	12/15/2022 9:13:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/15/2022 9:13:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/15/2022 9:13:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	12/15/2022 9:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 5:50:37 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 27 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS11

Project: Seymor 6

Collection Date: 12/8/2022 1:30:00 PM

Lab ID: 2212586-028

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	520	150		mg/Kg	10	12/16/2022 2:59:42 PM
Motor Oil Range Organics (MRO)	580	490		mg/Kg	10	12/16/2022 2:59:42 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/16/2022 2:59:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/15/2022 10:12:00 PM
Surr: BFB	102	37.7-212		%Rec	1	12/15/2022 10:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/15/2022 10:12:00 PM
Toluene	ND	0.049		mg/Kg	1	12/15/2022 10:12:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/15/2022 10:12:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/15/2022 10:12:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/15/2022 10:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 6:27:38 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 28 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS12

Project: Seymor 6

Collection Date: 12/8/2022 1:32:00 PM

Lab ID: 2212586-029

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	210	14		mg/Kg	1	12/16/2022 3:23:42 PM
Motor Oil Range Organics (MRO)	240	47		mg/Kg	1	12/16/2022 3:23:42 PM
Surr: DNOP	116	21-129		%Rec	1	12/16/2022 3:23:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/15/2022 10:32:00 PM
Surr: BFB	88.5	37.7-212		%Rec	1	12/15/2022 10:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/15/2022 10:32:00 PM
Toluene	ND	0.049		mg/Kg	1	12/15/2022 10:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/15/2022 10:32:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	12/15/2022 10:32:00 PM
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	12/15/2022 10:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	59		mg/Kg	20	12/20/2022 5:40:03 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 29 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS13

Project: Seymor 6

Collection Date: 12/8/2022 1:34:00 PM

Lab ID: 2212586-030

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	2800	150		mg/Kg	10	12/16/2022 3:47:47 PM
Motor Oil Range Organics (MRO)	2300	490		mg/Kg	10	12/16/2022 3:47:47 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/16/2022 3:47:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/15/2022 10:51:00 PM
Surr: BFB	95.4	37.7-212		%Rec	1	12/15/2022 10:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/15/2022 10:51:00 PM
Toluene	ND	0.050		mg/Kg	1	12/15/2022 10:51:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/15/2022 10:51:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/15/2022 10:51:00 PM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	12/15/2022 10:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 5:52:27 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 30 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS14

Project: Seymor 6

Collection Date: 12/8/2022 1:36:00 PM

Lab ID: 2212586-031

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	2400	150		mg/Kg	10	12/16/2022 4:11:52 PM
Motor Oil Range Organics (MRO)	2300	490		mg/Kg	10	12/16/2022 4:11:52 PM
Surr: DNOP	0	21-129	S	%Rec	10	12/16/2022 4:11:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/15/2022 11:11:00 PM
Surr: BFB	92.5	37.7-212		%Rec	1	12/15/2022 11:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/15/2022 11:11:00 PM
Toluene	ND	0.049		mg/Kg	1	12/15/2022 11:11:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/15/2022 11:11:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/15/2022 11:11:00 PM
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	12/15/2022 11:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 6:29:39 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 31 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS15

Project: Seymor 6

Collection Date: 12/8/2022 1:38:00 PM

Lab ID: 2212586-032

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	55	14		mg/Kg	1	12/16/2022 4:35:54 PM
Motor Oil Range Organics (MRO)	93	47		mg/Kg	1	12/16/2022 4:35:54 PM
Surr: DNOP	103	21-129		%Rec	1	12/16/2022 4:35:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/15/2022 11:30:00 PM
Surr: BFB	95.2	37.7-212		%Rec	1	12/15/2022 11:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/15/2022 11:30:00 PM
Toluene	ND	0.050		mg/Kg	1	12/15/2022 11:30:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/15/2022 11:30:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/15/2022 11:30:00 PM
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	12/15/2022 11:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 6:42:03 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 32 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS16

Project: Seymor 6

Collection Date: 12/8/2022 1:40:00 PM

Lab ID: 2212586-033

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	290	14		mg/Kg	1	12/16/2022 4:59:56 PM
Motor Oil Range Organics (MRO)	310	47		mg/Kg	1	12/16/2022 4:59:56 PM
Surr: DNOP	115	21-129		%Rec	1	12/16/2022 4:59:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/15/2022 11:50:00 PM
Surr: BFB	94.0	37.7-212		%Rec	1	12/15/2022 11:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/15/2022 11:50:00 PM
Toluene	ND	0.049		mg/Kg	1	12/15/2022 11:50:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	12/15/2022 11:50:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	12/15/2022 11:50:00 PM
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	12/15/2022 11:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 6:54:28 PM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 33 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS17

Project: Seymor 6

Collection Date: 12/8/2022 12:30:00 PM

Lab ID: 2212586-034

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	17	15		mg/Kg	1	12/18/2022 5:43:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/18/2022 5:43:59 PM
Surr: DNOP	127	21-129		%Rec	1	12/18/2022 5:43:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 12:10:00 AM
Surr: BFB	92.5	37.7-212		%Rec	1	12/16/2022 12:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/16/2022 12:10:00 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 12:10:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 12:10:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 12:10:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/16/2022 12:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	59		mg/Kg	20	12/20/2022 7:06:52 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 34 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS18

Project: Seymor 6

Collection Date: 12/8/2022 12:45:00 PM

Lab ID: 2212586-035

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	290	14		mg/Kg	1	12/16/2022 5:48:08 PM
Motor Oil Range Organics (MRO)	310	48		mg/Kg	1	12/16/2022 5:48:08 PM
Surr: DNOP	121	21-129		%Rec	1	12/16/2022 5:48:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/16/2022 12:29:00 AM
Surr: BFB	93.8	37.7-212		%Rec	1	12/16/2022 12:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/16/2022 12:29:00 AM
Toluene	ND	0.050		mg/Kg	1	12/16/2022 12:29:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/16/2022 12:29:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/16/2022 12:29:00 AM
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	12/16/2022 12:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 7:19:16 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 35 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS19

Project: Seymor 6

Collection Date: 12/8/2022 12:55:00 PM

Lab ID: 2212586-036

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	64	15		mg/Kg	1	12/18/2022 6:04:53 PM
Motor Oil Range Organics (MRO)	83	49		mg/Kg	1	12/18/2022 6:04:53 PM
Surr: DNOP	120	21-129		%Rec	1	12/18/2022 6:04:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/16/2022 1:08:00 AM
Surr: BFB	93.2	37.7-212		%Rec	1	12/16/2022 1:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	12/16/2022 1:08:00 AM
Toluene	ND	0.050		mg/Kg	1	12/16/2022 1:08:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/16/2022 1:08:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	12/16/2022 1:08:00 AM
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	12/16/2022 1:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 7:31:40 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 36 of 46

Analytical Report

Lab Order 2212586

Date Reported: 1/4/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: SS20

Project: Seymor 6

Collection Date: 12/8/2022 12:55:00 PM

Lab ID: 2212586-037

Matrix: SOIL

Received Date: 12/9/2022 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	280	14		mg/Kg	1	12/16/2022 6:36:03 PM
Motor Oil Range Organics (MRO)	290	48		mg/Kg	1	12/16/2022 6:36:03 PM
Surr: DNOP	117	21-129		%Rec	1	12/16/2022 6:36:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/16/2022 1:28:00 AM
Surr: BFB	100	37.7-212		%Rec	1	12/16/2022 1:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	12/16/2022 1:28:00 AM
Toluene	ND	0.049		mg/Kg	1	12/16/2022 1:28:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	12/16/2022 1:28:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	12/16/2022 1:28:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/16/2022 1:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	12/20/2022 7:44:04 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	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 37 of 46

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: MB-72198	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 72198		RunNo: 93415							
Prep Date: 12/19/2022	Analysis Date: 12/20/2022		SeqNo: 3368975		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-72198	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 72198		RunNo: 93415							
Prep Date: 12/19/2022	Analysis Date: 12/20/2022		SeqNo: 3368976		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-72237	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 72237		RunNo: 93446							
Prep Date: 12/20/2022	Analysis Date: 12/20/2022		SeqNo: 3370463		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-72237	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 72237		RunNo: 93446							
Prep Date: 12/20/2022	Analysis Date: 12/20/2022		SeqNo: 3370464		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

Sample ID: MB-72216	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 72216		RunNo: 93449							
Prep Date: 12/20/2022	Analysis Date: 12/20/2022		SeqNo: 3370524		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-72216	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 72216		RunNo: 93449							
Prep Date: 12/20/2022	Analysis Date: 12/20/2022		SeqNo: 3370525		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: 2212586-022AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SS05	Batch ID: 72133	RunNo: 93356								
Prep Date: 12/15/2022	Analysis Date: 12/16/2022	SeqNo: 3366248 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	220	15	48.36	207.0	29.8	36.1	154			S
Surr: DNOP	6.1		4.836		127	21	129			

Sample ID: 2212586-022AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SS05	Batch ID: 72133	RunNo: 93356								
Prep Date: 12/15/2022	Analysis Date: 12/16/2022	SeqNo: 3366249 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	240	15	49.02	207.0	76.4	36.1	154	9.89	33.9	
Surr: DNOP	5.6		4.902		115	21	129	0	0	

Sample ID: LCS-72133	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 72133	RunNo: 93356								
Prep Date: 12/15/2022	Analysis Date: 12/16/2022	SeqNo: 3366255 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	88.0	64.4	127			
Surr: DNOP	4.6		5.000		92.7	21	129			

Sample ID: MB-72133	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 72133	RunNo: 93356								
Prep Date: 12/15/2022	Analysis Date: 12/16/2022	SeqNo: 3366256 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		133	21	129			S

Sample ID: MB-72113	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 72113	RunNo: 93339								
Prep Date: 12/15/2022	Analysis Date: 12/16/2022	SeqNo: 3367124 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.1		10.00		91.4	21	129			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: LCS-72113	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 72113			RunNo: 93339						
Prep Date: 12/15/2022	Analysis Date: 12/16/2022			SeqNo: 3367125		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	15	50.00	0	101	64.4	127			
Surr: DNOP	4.8		5.000		95.2	21	129			

Sample ID: LCS-72272	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 72272			RunNo: 93500						
Prep Date: 12/22/2022	Analysis Date: 12/22/2022			SeqNo: 3372931		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	15	50.00	0	94.9	64.4	127			
Surr: DNOP	6.7		5.000		134	21	129			S

Sample ID: MB-72256	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 72256			RunNo: 93500						
Prep Date: 12/21/2022	Analysis Date: 12/22/2022			SeqNo: 3372932		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		118	21	129			

Sample ID: MB-72272	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 72272			RunNo: 93500						
Prep Date: 12/22/2022	Analysis Date: 12/22/2022			SeqNo: 3372933		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		113	21	129			

Sample ID: LCS-72256	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 72256			RunNo: 93500						
Prep Date: 12/21/2022	Analysis Date: 12/22/2022			SeqNo: 3374250		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.8		5.000		136	21	129			S

Sample ID: LCS-72271	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 72271			RunNo: 93500						
Prep Date: 12/22/2022	Analysis Date: 12/22/2022			SeqNo: 3374252		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		117	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: MB-72271	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 72271		RunNo: 93500							
Prep Date: 12/22/2022	Analysis Date: 12/22/2022		SeqNo: 3374254		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		111	21	129			

Sample ID: LCS-72368	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 72368		RunNo: 93614							
Prep Date: 12/29/2022	Analysis Date: 12/29/2022		SeqNo: 3378145		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.00	0	89.3	64.4	127			
Surr: DNOP	5.8		5.000		115	21	129			

Sample ID: MB-72368	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 72368		RunNo: 93614							
Prep Date: 12/29/2022	Analysis Date: 12/29/2022		SeqNo: 3378147		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		110	21	129			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: lcs-72034	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 72034			RunNo: 93307						
Prep Date: 12/12/2022	Analysis Date: 12/15/2022			SeqNo: 3363273		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	98.5	72.3	137			
Surr: BFB	1800		1000		182	37.7	212			

Sample ID: mb-72034	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 72034			RunNo: 93307						
Prep Date: 12/12/2022	Analysis Date: 12/15/2022			SeqNo: 3363274		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	890		1000		89.0	37.7	212			

Sample ID: lcs-72043	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 72043			RunNo: 93340						
Prep Date: 12/13/2022	Analysis Date: 12/15/2022			SeqNo: 3365082		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	95.2	72.3	137			
Surr: BFB	2200		1000		216	37.7	212			S

Sample ID: mb-72043	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 72043			RunNo: 93340						
Prep Date: 12/13/2022	Analysis Date: 12/15/2022			SeqNo: 3365083		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	1000		1000		102	37.7	212			

Sample ID: 2212586-026AMS	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SS09	Batch ID: 72043			RunNo: 93340						
Prep Date: 12/13/2022	Analysis Date: 12/15/2022			SeqNo: 3365098		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.32	0	90.4	70	130			
Surr: BFB	2000		972.8		207	37.7	212			

Sample ID: 2212586-026AMSD	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SS09	Batch ID: 72043			RunNo: 93340						
Prep Date: 12/13/2022	Analysis Date: 12/15/2022			SeqNo: 3365099		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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: 2212586-026AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: SS09	Batch ID: 72043	RunNo: 93340								
Prep Date: 12/13/2022	Analysis Date: 12/15/2022	SeqNo: 3365099 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.34	0	93.1	70	130	2.97	20	
Surr: BFB	2000		973.7		206	37.7	212	0	0	

Sample ID: 2212586-006ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WS06	Batch ID: 72038	RunNo: 93307								
Prep Date: 12/13/2022	Analysis Date: 12/16/2022	SeqNo: 3365318 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.30	0	89.1	70	130			
Surr: BFB	1700		971.8		171	37.7	212			

Sample ID: 2212586-006amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WS06	Batch ID: 72038	RunNo: 93307								
Prep Date: 12/13/2022	Analysis Date: 12/16/2022	SeqNo: 3365319 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.32	0	86.8	70	130	2.54	20	
Surr: BFB	1600		972.8		169	37.7	212	0	0	

Sample ID: lcs-72038	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 72038	RunNo: 93307								
Prep Date: 12/13/2022	Analysis Date: 12/16/2022	SeqNo: 3365337 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	72.3	137			
Surr: BFB	1800		1000		181	37.7	212			

Sample ID: mb-72038	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 72038	RunNo: 93307								
Prep Date: 12/13/2022	Analysis Date: 12/16/2022	SeqNo: 3365338 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	830		1000		82.6	37.7	212			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 43 of 46

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: LCS-72034	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 72034		RunNo: 93307							
Prep Date: 12/12/2022	Analysis Date: 12/15/2022		SeqNo: 3363278		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.96	0.050	1.000	0	95.6	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	95.0	80	120			
Surr: 4-Bromofluorobenzene	0.89		1.000		88.6	70	130			

Sample ID: mb-72034	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 72034		RunNo: 93307							
Prep Date: 12/12/2022	Analysis Date: 12/15/2022		SeqNo: 3363279		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	0.89		1.000		89.3	70	130			

Sample ID: ics-72043	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 72043		RunNo: 93340							
Prep Date: 12/13/2022	Analysis Date: 12/15/2022		SeqNo: 3365123		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.4	80	120			
Toluene	0.94	0.050	1.000	0	94.0	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: mb-72043	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 72043		RunNo: 93340							
Prep Date: 12/13/2022	Analysis Date: 12/15/2022		SeqNo: 3365124		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	1.1		1.000		106	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 44 of 46

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: 2212586-027AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: SS10	Batch ID: 72043	RunNo: 93340								
Prep Date: 12/13/2022	Analysis Date: 12/15/2022	SeqNo: 3365140	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	0.9950	0	89.6	68.8	120			
Toluene	0.93	0.050	0.9950	0	93.3	73.6	124			
Ethylbenzene	0.93	0.050	0.9950	0	93.1	72.7	129			
Xylenes, Total	2.8	0.10	2.985	0	92.2	75.7	126			
Surr: 4-Bromofluorobenzene	1.0		0.9950		104	70	130			

Sample ID: 2212586-027AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: SS10	Batch ID: 72043	RunNo: 93340								
Prep Date: 12/13/2022	Analysis Date: 12/15/2022	SeqNo: 3365141	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.1	68.8	120	3.26	20	
Toluene	0.94	0.050	1.000	0	93.8	73.6	124	1.02	20	
Ethylbenzene	0.93	0.050	1.000	0	93.4	72.7	129	0.814	20	
Xylenes, Total	2.8	0.10	3.000	0	92.7	75.7	126	1.04	20	
Surr: 4-Bromofluorobenzene	1.2		1.000		116	70	130	0	0	

Sample ID: 2212586-007ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: WS07	Batch ID: 72038	RunNo: 93307								
Prep Date: 12/13/2022	Analysis Date: 12/16/2022	SeqNo: 3365355	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	0.9814	0	82.5	68.8	120			
Toluene	0.83	0.049	0.9814	0	84.4	73.6	124			
Ethylbenzene	0.83	0.049	0.9814	0	84.2	72.7	129			
Xylenes, Total	2.5	0.098	2.944	0.01929	83.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.85		0.9814		86.1	70	130			

Sample ID: 2212586-007amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: WS07	Batch ID: 72038	RunNo: 93307								
Prep Date: 12/13/2022	Analysis Date: 12/16/2022	SeqNo: 3365356	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	0.9911	0	85.3	68.8	120	4.26	20	
Toluene	0.86	0.050	0.9911	0	86.6	73.6	124	3.48	20	
Ethylbenzene	0.85	0.050	0.9911	0	86.0	72.7	129	3.04	20	
Xylenes, Total	2.5	0.099	2.973	0.01929	85.0	75.7	126	2.72	20	
Surr: 4-Bromofluorobenzene	0.83		0.9911		83.6	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
 E Above Quantitation Range/Estimated Value
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Page 45 of 46

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

WO#: 2212586

04-Jan-23

Client: HILCORP ENERGY**Project:** Seymor 6

Sample ID: LCS-72038	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 72038		RunNo: 93307							
Prep Date: 12/13/2022	Analysis Date: 12/16/2022		SeqNo: 3365373		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	84.0	80	120			
Toluene	0.86	0.050	1.000	0	85.9	80	120			
Ethylbenzene	0.84	0.050	1.000	0	84.3	80	120			
Xylenes, Total	2.5	0.10	3.000	0	84.2	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		86.8	70	130			

Sample ID: mb-72038	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 72038		RunNo: 93307							
Prep Date: 12/13/2022	Analysis Date: 12/16/2022		SeqNo: 3365375		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	0.82		1.000		81.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		



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: 2212586

RcptNo: 1

Received By: Tracy Casarrubias 12/9/2022 7:35:00 AM

Completed By: Tracy Casarrubias 12/9/2022 9:23:18 AM

Reviewed By: *JP 12-9-22*

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *TMC 12/9/22*

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good	Yes			



APPENDIX D

Site Photographs

SITE PHOTOGRAPHS
Seymour 6
San Juan County, New Mexico
Hilcorp Energy Company

Photograph 1



View looking north at the impacted area on the well pad. Photo taken December 8, 2022.

**Photograph 2**

View looking east at the eastern edge of the Seymour 6 well pad. Photo taken December 8, 2022.



SITE PHOTOGRAPHS
Seymour 6
San Juan County, New Mexico
Hilcorp Energy Company

<p>Photograph 3</p> <p>View looking south where release entered the dry wash. Photo taken December 8, 2022.</p>	
<p>Photograph 4</p> <p>Impacted vegetation within the wash. Photo taken December 8, 2022.</p>	

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 175854

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 175854
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	OCD approves the updated remediation work plan within the report which includes future samples to be analyzed for TPH & chloride only. Remediation due date is updated to June 23, 2023.	3/22/2023