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	nAPP2212552070
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 36.8459015 Longitude -108.188446

(NAD 83 in decimal degrees to 5 decimal places)

Site Name J F Bell No. 2	Site Type Well
Date Release Discovered: 4/21/2022	API# 30-045-11809

Unit Letter	Section	Township	Range	County
B	03	30N	13W	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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) Unknown	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Historical release discovered during the permanent removal of a below-grade tank (BGT).

All further work on this project will be carried out in accordance with 19.15.29 NMAC.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2212552070
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Mitch Killough Title: Environmental Specialist

Signature: _____ Date: 05/05/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 05/05/2022

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 104692
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141	5/5/2022

State of New Mexico
Oil Conservation Division

Incident ID	
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?	~80 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☒ Yes ☐ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ 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

Incident ID	NAPP2212552070
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 Specialist_____

Signature:____ _____ Date: ____9/6/2022_____

email: ____mkillough@hilcorp.com _____ Telephone: _____713-757-5247_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: __09/06/2022____

Incident ID	NAPP2212552070
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: ____Mitch Killough_____ Title: _____Environmental Specialist_____

Signature:____ _____ Date: ____9/6/2022_____

email: ____mkillough@hilcorp.com_ _____ Telephone: _____713-757-5247_____

OCD Only

Received by: Jocelyn Harimon Date: 09/06/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 09/16/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

September 6, 2022

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Remediation Report and Closure Request
JF Bell #2
San Juan County, New Mexico
Hilcorp Energy Company
NMOCD Incident No: nAPP2212552070

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Hilcorp Energy Company (Hilcorp), presents this *Remediation Report and Closure Request* for a historical release at the JF Bell #2 (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). The work described in this document was performed in order to remediate petroleum hydrocarbon impacted soil originating from a historical release discovered during the removal of the on-site below grade tank (BGT). The Site is located in Unit B, Section 3, Township 30 North, Range 13 West, in San Juan County, New Mexico. Based on the performed remediation activities and laboratory analytical results, Hilcorp is requesting closure and no further action for Incident Number nAPP2212552070.

SITE BACKGROUND

On February 17, 2022, Hilcorp submitted a 72-hour notice prior to the permanent closure of a BGT at the Site. Once the BGT was removed, Hilcorp personnel collected a 5-point composite soil sample on February 22, 2022 to assess if any contaminant concentrations exceeded the following BGT closure criteria thresholds, per the BGT permit and closure plan approved by the NMOCD on January 20, 2009: 0.2 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 250 mg/kg chloride. Based on analytical results, Hilcorp determined that chloride and TPH concentrations exceeded the BGT closure criteria thresholds indicating that a potential release occurred. Additionally, TPH exceeded the *Closure Criteria for Soils Beneath Below-Grade Tanks* listed in Table I of 19.15.17.13 of the New Mexico Administrative Code (NMAC) for sites where groundwater depths are less than 50 feet below ground surface (bgs).

After discussions with the New Mexico Oil Conservation Division (NMOCD), Hilcorp began delineation activities using a backhoe to assess the magnitude of TPH and chloride concentrations and estimate the volume of impacted soils at the Site. Based on analytical results during additional sampling activities conducted in March and April 2022, Hilcorp determined that the volume of impacted soil was greater than 12 cubic yards, a threshold that NMOCD interprets as being the result of a reportable release. Hilcorp submitted a Form C-141 to the NMOCD on May 5, 2022. A summary of delineation activities and results were also included in the initial C-141 submission to the NMOCD. The release was assigned Incident Number nAPP2212552070.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site is located on BLM surface approximately 8 miles north of Farmington, New Mexico. As part of the site investigation, local geology/hydrogeology and nearby sensitive receptors 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). Potential nearby receptors were assessed through desktop reviews of United States Geological Survey (USGS) topographic maps, Federal Emergency Management Administration (FEMA) Geographic Information System (GIS) maps, New Mexico Office of the State Engineer (NMOSE) database, aerial photographs, and site-specific observations. This information is further discussed below.

The Site is located within the Nacimiento Geologic Formation. In the report titled “Hydrogeology and Water Resources of San Juan Basin, New Mexico” (Stone, et. al., 1983). The Nacimiento Formation is characterized by interbedded black carbonaceous mudstones and white, coarse-grained sandstones and ranges in thickness from 418 feet to 2,232 feet. The hydrologic properties of the Nacimiento Formation display variable hydrologic properties dependent on location. Where sufficient yield is present, the primary use of water from this formation is for domestic and/or livestock supply. The Nacimiento Formation in underlain by the Ojo Alamo sandstone (Stone et. al., 1983).

The nearest significant watercourse is Pickering Arroyo located 200 feet to the west of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake, and greater than 300 feet from any wetland (Figure 2). The nearest fresh-water well is NMOSE permitted well SJ-03751 (Appendix A), located approximately 3,700 feet west of the Site. The recorded depth to water on the NMOSE database is 80 feet below ground surface (bgs). No wellhead protection areas, springs, or domestic/stock wells are located within a ½-mile from the Site. The Site is not within a 100-year floodplain, overlying a subsurface mine, or located within an area underlain by unstable geology (area designated as low potential karst by the BLM). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site.

Based on the proximity to a significant watercourse, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply to the Site:

- Benzene: 10 milligrams per kilogram (mg/kg)
- BTEX: 50 mg/kg
- TPH as gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO): 100 mg/kg
- Chloride: 600 mg/kg

EXCAVATION SOIL SAMPLING ACTIVITIES

In May 2022, Hilcorp excavated impacted soil from the former BGT area to depths of approximately 8 feet bgs. In total, approximately 60 cubic yards of soil were removed from the excavation and transported off-site to a permitted disposal facility. Following removal of impacted soil, Hilcorp notified the NMOCD on May 31, 2022 (Appendix B) and collected 5-point composite confirmation soil samples representing approximately 200 square feet from the sidewalls and floor of the excavation on June 2, 2022. 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 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-ORO following EPA Method 8015M/D; and chloride following EPA Method 300.0. In total, two floor samples and four sidewall samples were collected on June 2, 2022, as presented on Figure 3.

Based on the analytical results, all confirmation samples were in compliance with NMOCD Table I Closure Criteria, with the exception of "W Bottom Comp" collected from the floor on the west half of the excavation. The TPH result from this sample was 160 mg/kg, slightly exceeding the Closure Criteria of 100 mg/kg. Analytical results are summarized in Table 1 with complete laboratory reports included as Appendix C. Photographs from the excavation work taken by Hilcorp are included in Appendix D.

ADDITIONAL REMEDIATION AND SOIL SAMPLING ACTIVITIES

Based on the single exceedance of TPH in the excavation floor sample, Hilcorp requested approval from the NMOCD of an alternative remediation approach. Specifically, Hilcorp requested the application of Micro-Blaze Emergency Liquid Spill Control (Micro-Blaze™) amendment (see Appendix E) to the "W Bottom Comp" sampling area (approved by the NMOCD on June 21, 2022, Appendix B). Micro-Blaze™ is a liquid amendment designed to enhance bioremediation of residual hydrocarbons in soil and groundwater. Micro-Blaze™ can be used as an *in-situ* treatment method and was applied per the manufacturers specification directly to the "W Bottom Comp" sampling area within the excavation on June 30, 2022. Due to weather conditions and delays in re-sampling at the Site, Hilcorp requested an extension of the original report deadline to September 6, 2022 (NMOCD approval attached in Appendix E).

After allowing the Micro-Blaze™ to degrade the residual TPH concentrations in the soil, Hilcorp notified the NMOCD on August 8, 2022 (Appendix B) and re-collected one 5-point composite soil sample from the "W Bottom Comp" sampling area on August 10, 2022. Based on the analytical results from the June 2, 2022 sampling, Hilcorp requested that the analyte list for final confirmation sampling be reduced to include only TPH analysis by EPA Method 8015 M/D. This request was subsequently approved by the NMOCD on July 13, 2022 (Appendix B). Results from the resampling event indicated that TPH concentrations had been reduced from 160 mg/kg on June 2, 2022 to 128 mg/kg on August 10, 2022. Although decreasing, TPH concentrations in floor area "W Bottom Comp" remain slightly above the NMOCD Table I Closure Criteria of 100 mg/kg. Analytical results are also included in Table 1 with complete laboratory reports in Appendix C.

VARIANCE AND CLOSURE REQUEST

Approximately60 cubic yards of impacted soil were excavated from the Site. During confirmation soil sampling of the excavation, only one area contained TPH concentrations exceeding NMOCD Table I Closure Criteria. Based on discussion with the NMOCD, Micro-Blaze™ was applied to remediate the low-level concentrations of residual TPH remaining in one floor area of the excavation. Follow-up confirmation sampling on August 10, 2022 indicated that TPH concentrations had been reduced, but remained slightly above the NMOCD standard. At this time, Hilcorp is requesting to leave the soil in place, where natural attenuation will occur.

The impacted soil remaining in place is vertically delineated by the results from the March and April 2022 investigation and laterally by excavation sidewall soil samples. An estimated 3 cubic yards of impacted soil remains in place, conservatively assuming the entire 200 square foot area and a depth of 0.5 feet remains impacted.

With the exception of the significant watercourse located 200 feet west of the Site, there are no other sensitive receptors within 1,000 feet of the Site and groundwater is estimated to be over 50 feet bgs in this area. Based on the depth (greater than 8 feet bgs), limited aerial extent (less than 200 square feet), and concentrations of residual TPH remaining at the Site, there is little risk to the environment and Hilcorp believes that leaving the limited residual impacts in place is equally protective of public health and environment. Additionally, the application of Micro-Blaze™ to the impacted soil will continue to enhance the biodegradation of the residual TPH to further reduce concentrations over time.

Hilcorp requests to backfill the existing excavation and close Incident Number nAPP2212552070 with no further action required. Upon approval of this Closure Request, Hilcorp will backfill the excavation with material purchased locally, recontour, and reseed the Site to match pre-existing site conditions.

Ensolum, LLC

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

Ashley Ager, MS, PG
Program Director, Geologist
(970) 946-1093
aager@ensolum.com

Attachments:

Figure 1: Site Location Map
Figure 2: Site Receptor Map
Figure 3: Excavation Site Map

Table 1: Soil Sample Analytical Results

Appendix A: NMOSE Well Summary
Appendix B: NMOCD Correspondence
Appendix C: Analytical Laboratory Report and Chain-of-Custody Documentation
Appendix D: Project Photographs
Appendix E: Micro-Blaze Amendment Brochure

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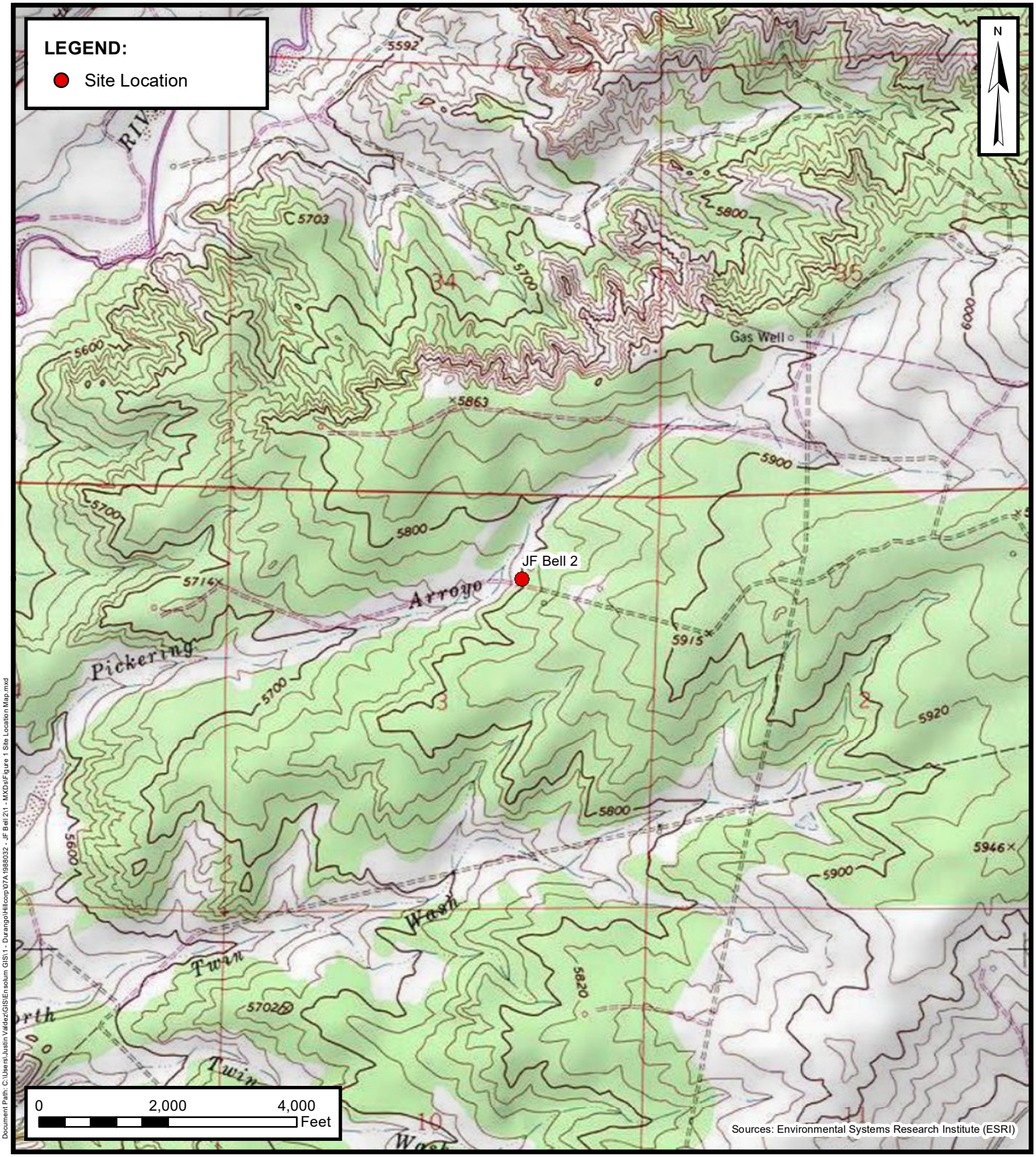
FIGURES



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Hilcorp\07A1988032 - JF Bell 2\1 - MXDs\Figure 1 Site Location Map.mxd

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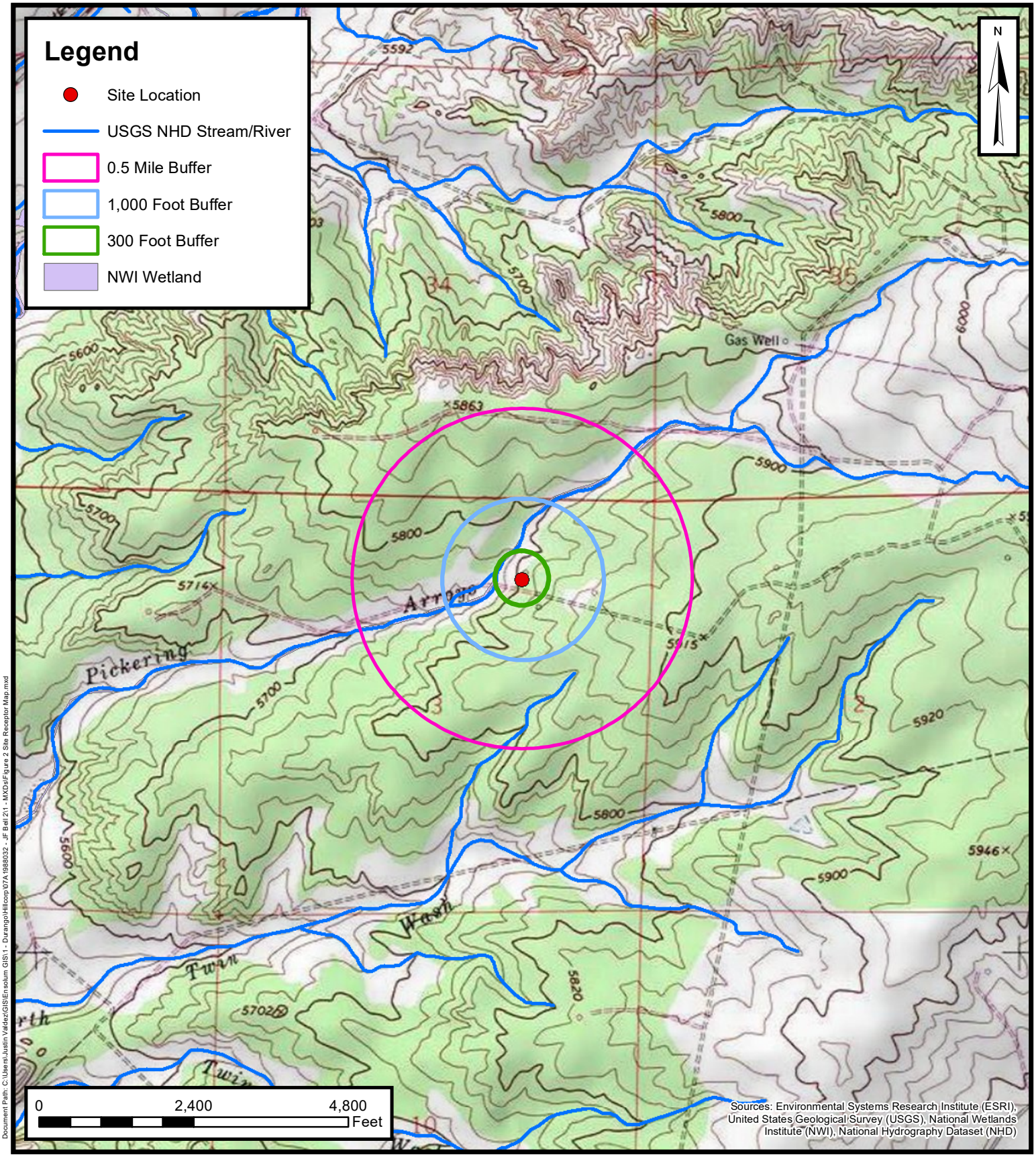
Environmental, Engineering and Hydrogeologic Consultants

Site Location Map

JF Bell #2
Hilcorp Energy Company
36.8459015, -108.188446
San Juan County, NM

PROJECT NUMBER: 07A1988032

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Hilcorp\07A1988032 - JF Bell 2\1 - MXDs\Figure 2 Site Receptor Map.mxd

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Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

JF Bell #2
Hilcorp Energy Company
36.8459015, -108.188446
San Juan County, NM

PROJECT NUMBER: 07A1988032

FIGURE
2

Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\Hilcorp\07A1988032 - JF Bell 2\1 - MXDs\Figure 3 Excavation Site Map.mxd

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Excavation Site Map

JF Bell #2
Hilcorp Energy Company
36.8459015, -108.188446
San Juan County, NM

PROJECT NUMBER: 07A1988032

FIGURE
3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JF Bell #2
Hilcorp Energy Company
San Juan County, New Mexico

Sample Designation	Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (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**
Excavation Sidewall Confirmation Soil Samples												
N SW Comp 8'	6/2/2022	8	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<14	<47	<47	<60
S SW Comp 8'	6/2/2022	8	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<15	96	96	330
E SW Comp 8'	6/2/2022	8	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<14	<48	<48	<60
W SW Comp 8'	6/2/2022	8	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	<15	<50	<50	250
Excavation Floor Confirmation Soil Samples												
E Bottom Comp 8'	6/2/2022	8	<0.025	<0.050	<0.050	<0.099	<0.224	<5	<14	<46	<46	<60
~~W Bottom Comp 8'~~	~~6/2/2022~~	~~8~~	~~*<0.023*~~	~~*<0.046*~~	~~*<0.046*~~	~~*<0.092*~~	~~*<0.207*~~	~~*<4.6*~~	~~*<15*~~	~~*160*~~	~~***160***~~	~~*110*~~
W Bottom Comp 8' (1)	8/10/2022	8	---	---	---	---	---	<4.9	18	110	**128**	---

Notes:

(1): Additional floor sample collected after treatment using Microblaze Emergency Liquid Spill Control amendment
---: not sampled and/or analyzed
bgs: below ground surface
mg/kg: milligrams per kilogram
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
MRO: Motor Oil/Lube Oil Range Organics
TPH: Total Petroleum Hydrocarbon
<0.037: indicates result less than the stated laboratory reporting limit (RL)
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.
~~*Text*~~*: indicates that soil was excavated and/or treated with Microblaze Emergency Liquid Spill Control amendment*

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APPENDIX A

NMOSE Well Summary

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64 Q16 Q4	Sec	Twn	Rng	X	Y
	SJ 03751 POD1					214666	4083043

Driller License:	717	**Driller Company:**	WESTERN WATER WELLS		
Driller Name:	HOOD, TERRY				
Drill Start Date:	08/27/2006	**Drill Finish Date:**	08/29/2006	**Plug Date:**	
Log File Date:	09/06/2006	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	3 GPM
Casing Size:	4.50	**Depth Well:**	205 feet	**Depth Water:**	80 feet

Water Bearing Stratifications:	Top	Bottom	Description
	80	200	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	105	205

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APPENDIX B

NMOCD Correspondence

From: Mitch Killough
To: Velez, Nelson, EMNRD
Cc: Adeloye, Abiodun A; Chad Perkins; Brandon Sinclair
Subject: NAPP2212552070 - JF Bell 2 Sampling Notification

Nelson,

Hilcorp Energy Company is providing 48-hour notice of soil sampling to take place at the JF Bell 2 site in San Juan County, NM (36.845863, -108.187772). This work will begin on Thursday, June 2nd at 9:00 AM MT. Please call or email with any questions.

Thanks.

Mitch Killough
Environmental Specialist
Hilcorp Energy Company
1111 Travis Street
Houston, TX 77002
713-757-5247 (office)
281-851-2338 (cell)
mkillough@hilcorp.com

Mitch Killough

From: Mitch Killough
Sent: Monday, August 8, 2022 9:41 AM
To: Velez, Nelson, EMNRD; Adeloye, Abiodun A
Cc: ocd.enviro@state.nm.us; Brandon Sinclair; Chad Perkins
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification
Attachments: J F BELL 2 - WO 22AAA0028W Response - BLM Approved Sundry.pdf; Sampling Variance Approval - 07132022.pdf

Nelson/Emmanuel,

Now that we have BLM approval to conduct confirmation soil sampling (refer to attachment), Hilcorp is submitting this 48-hour notification for confirmation soil sampling at the J F Bell 2 site, to be conducted on Wednesday, August 10, 2022 at 9 am MT. Similar to discussions below, we will be resampling composite-sampling area "W Bottom Comp 8" that had previously indicated elevated concentrations of TPH (160 mg/kg) during the confirmation sampling conducted on June 2, 2022. Since that time, Microblaze was applied to this area of the excavation and allowed to remediate the residual TPH concentrations remaining in the soil.

In accordance with both agency approvals attached, Hilcorp plans to reduce the analyte list for the upcoming composite sampling on August 10 to be submitted for TPH analysis only by EPA Method 8015. BTEX and chloride concentrations were all below Table 1 Closure Criteria during the initial June 2, 2022 sampling event and we do not believe it is necessary to analyze for these constituents. If there are any questions or concerns, please let me know!

Thanks.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Stuart Hyde <shyde@ensolum.com>
Sent: Wednesday, July 13, 2022 1:25 PM
To: Mitch Killough <mkillough@hilcorp.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

Nelson,

We will be postponing the JF Bell 2 sampling for Thursday July 14th. We have not yet received Sundry approval for this work from the BLM. Once we receive approval, we will send out the 48-hour notification to the NMOCD and BLM. Sorry for the confusion and please reach out with any questions. Thanks.

Stuart Hyde, LG
Senior Geologist
970-903-1607
Ensolum, LLC

From: Mitch Killough <mkillough@hilcorp.com>
Sent: Wednesday, July 13, 2022 9:43 AM
To: Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

[**EXTERNAL EMAIL**]

Replying all to copy in Emmanuel at BLM-FFO. My apologies Emmanuel.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Stuart Hyde <shyde@ensolum.com>
Sent: Tuesday, July 12, 2022 4:49 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Mitch Killough <mkillough@hilcorp.com>; Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

On behalf of Hilcorp Energy Company, Ensolum is submitting this 48-hour notification for confirmation sampling at the J F Bell 2 site, to be conducted on Thursday July 14, 2022. Specifically, Ensolum will be resampling composite-sampling area “W Bottom Comp 8” that had previously indicated elevated concentrations of TPH (160 mg/kg) during the confirmation sampling conducted on June 2, 2022. Since that time, Microblaze was applied to this area of the excavation and allowed to remediate the residual TPH concentrations remaining in the soil.

Based on previous sampling results, Hilcorp is requesting approval of a variance to reduce the analyte list for the upcoming composite sampling on July 14 to be submitted for TPH analysis only by EPA Method 8015. BTEX and chloride concentrations were all below Table 1 Closure Criteria during the initial June 2, 2022 sampling event and we do not believe it is necessary to analyze for these constituents. Please reach out with any questions regarding this request. Thanks and talk to you soon.

Well Name: J F Bell 2
API#: 30-045-11809
Location: 36.845863, -108.187772
Operator: Hilcorp Energy Company
Surface Owner: Federal
Scheduled Date & Time of Start: Thursday 7/14/2022 @ 3 PM

Stuart Hyde, LG
Senior Geologist
970-903-1607
Ensolum, LLC

From: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Sent: Tuesday, June 21, 2022 1:07 PM
To: Mitch Killough <mkillough@hilcorp.com>
Subject: Re: [EXTERNAL] FW: J F Bell 2 - 3004511809 - Release Notification

Mitch,

Sorry for the delay, still having network issues with my laptop. Your request is approved. Please call if you have any further inquiries.

Sent from my iPhone

On Jun 21, 2022, at 10:12 AM, Mitch Killough <mkillough@hilcorp.com> wrote:

Hi Nelson.

I wanted to loop back in regards to the JF Bell 2 BGT (refer to convo below for more info). As you recall, we pulled the BGT and discovered a historical release that required us to flip this project from NMOCD's BGT program to 19.15.29.12 NMAC. Fast forward to present, I am presenting the lab data (in table below and attached) from our 6/2/2022 confirmation sampling event (original notification attached). We dug out to a depth of 8 ft bgs and had one composite ('W Bottom Comp 8') come up elevated for TPH (160 mg/kg). We are almost there. In light of this, would you be ok with Hilcorp incorporating Micro-Blaze into this area prior to re-sampling? Let me know if this is acceptable.

Our deadline is 7/22/2022, so we will get on this ASAP if approved.

Thanks.

SOIL ANALYTICAL RESULTS
JF BELL 2
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	GRO+DRO (mg/kg)	TPH (mg/kg)
N SW Comp 8'	6/2/2022	<0.025	<0.049	<0.049	<0.099	<0.222	<60	<4.9	<14	<47	<14	<47
S SW Comp 8'	6/2/2022	<0.025	<0.050	<0.050	<0.099	<0.224	330	<5.0	<15	96	<15	96
E SW Comp 8'	6/2/2022	<0.024	<0.047	<0.047	<0.095	<0.213	<60	<4.7	<14	<48	<14	<48
W SW Comp 8'	6/2/2022	<0.025	<0.050	<0.050	<0.10	<0.225	250	<5.0	<15	<50	<15	<50
E Bottom Comp 8'	6/2/2022	<0.025	<0.050	<0.050	<0.099	<0.224	<60	<5.0	<14	<46	<14	<46
W Bottom Comp 8'	6/2/2022	<0.023	<0.046	<0.046	<0.092	<0.207	110	<4.6	<15	160	<15	160
NMOCD Table 1 Closure Criteria		**10**	**NE**	**NE**	**NE**	**50**	**600**	**NE**	**NE**	**NE**	**NE**	**100**

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Mitch Killough
To: Velez, Nelson, EMNRD; Stuart Hyde; Enviro, OCD, EMNRD
Cc: Reece Hanson; Devin Hencmann; Josh Adams; Adeloye, Abiodun A; Bratcher, Mike, EMNRD
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification
Date: Wednesday, July 20, 2022 6:50:03 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Thanks Nelson.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Sent: Tuesday, July 19, 2022 5:26 PM
To: Mitch Killough <mkillough@hilcorp.com>; Stuart Hyde <shyde@ensolum.com>; Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

Hi Mitch,

Since this incident originated from an attempted closure of a BGT and the permit contained site assessment/characterization data that is deemed acceptable by OCD, your request to extend the remediation due date to September 6, 2022 is approved (Sept. 5th - Labor Day). This change will be reflected within the incident page and noted within the incident event details. Please be aware that OCD will require the incident closure report to include its own site assessment/characterization data per 19.15.29 NMAC.

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@state.nm.us

Hrs.: 7:00-11:00 am & 12:00-3:30 pm Mon.-Thur.
7:00-11:00 am & 12:00-4:00 pm Fri.

From: Mitch Killough <mkillough@hilcorp.com>
Sent: Tuesday, July 19, 2022 10:22 AM
To: Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

With attachment.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Mitch Killough
Sent: Tuesday, July 19, 2022 11:21 AM
To: Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

Hi Nelson.

I wanted to follow-up on the email chain below. With your permission, can Hilcorp get a 45-day extension on the closure date? This would move our requested closure date from 7/22/2022 to 9/5/2022 (original deadline date is shown in the attachment). This will enable Hilcorp additional time to work with BLM on the remaining sundry approval.

Thanks.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Stuart Hyde <shyde@ensolum.com>

Sent: Wednesday, July 13, 2022 1:25 PM
To: Mitch Killough <mkillough@hilcorp.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

Nelson,

We will be postponing the JF Bell 2 sampling for Thursday July 14th. We have not yet received Sundry approval for this work from the BLM. Once we receive approval, we will send out the 48-hour notification to the NMOCD and BLM. Sorry for the confusion and please reach out with any questions. Thanks.

Stuart Hyde, LG
Senior Geologist
970-903-1607
Ensolum, LLC

From: Mitch Killough <mkillough@hilcorp.com>
Sent: Wednesday, July 13, 2022 9:43 AM
To: Stuart Hyde <shyde@ensolum.com>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Josh Adams <jadams@ensolum.com>; Adeloye, Abiodun A <aadeloye@blm.gov>
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

[**EXTERNAL EMAIL**]

Replying all to copy in Emmanuel at BLM-FFO. My apologies Emmanuel.

Mitch Killough
Hilcorp Energy Company
713-757-5247 (Office)
281-851-2338 (Mobile)

From: Stuart Hyde <shyde@ensolum.com>
Sent: Tuesday, July 12, 2022 4:49 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; ocd.enviro@state.nm.us
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Mitch Killough <mkillough@hilcorp.com>; Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

On behalf of Hilcorp Energy Company, Ensolum is submitting this 48-hour notification for confirmation sampling at the J F Bell 2 site, to be conducted on Thursday July 14, 2022. Specifically, Ensolum will be resampling composite-sampling area “W Bottom Comp 8” that had previously indicated elevated concentrations of TPH (160 mg/kg) during the confirmation sampling conducted on June 2, 2022. Since that time, Microblaze was applied to this area of the excavation and allowed to remediate the residual TPH concentrations remaining in the soil.

Based on previous sampling results, Hilcorp is requesting approval of a variance to reduce the analyte list for the upcoming composite sampling on July 14 to be submitted for TPH analysis only by EPA Method 8015. BTEX and chloride concentrations were all below Table 1 Closure Criteria during the initial June 2, 2022 sampling event and we do not believe it is necessary to analyze for these constituents. Please reach out with any questions regarding this request. Thanks and talk to you soon.

Well Name: J F Bell 2
API#: 30-045-11809
Location: 36.845863, -108.187772
Operator: Hilcorp Energy Company
Surface Owner: Federal
Scheduled Date & Time of Start: **Thursday 7/14/2022 @ 3 PM**

Stuart Hyde, LG
Senior Geologist
970-903-1607
Ensolum, LLC

The information contained in this email message is confidential and may be legally privileged and is intended only for the use of the individual or entity named above. If you are not an intended recipient or if you have received this message in error, you are hereby notified that any dissemination, distribution, or copy of this email is strictly prohibited. If you have received this email in error, please immediately notify us by return email or telephone if the sender's phone number is listed above, then promptly and permanently delete this message.

While all reasonable care has been taken to avoid the transmission of viruses, it is the responsibility of the recipient to ensure that the onward transmission, opening, or use of this message and any attachments will not adversely affect its systems or data. No responsibility is accepted by the company in this regard and the recipient should carry out such virus and other checks as it considers appropriate.

From: Velez, Nelson, EMNRD
To: Stuart Hyde; Enviro, OCD, EMNRD
Cc: Reece Hanson; Devin Hencmann; Mitch Killough; Josh Adams; Bratcher, Mike, EMNRD
Subject: RE: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification
Date: Wednesday, July 13, 2022 9:49:05 AM
Attachments: image001.png
image002.png
image003.png
image004.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.

The variance request to omit chloride and BTEX analyses from this sampling event is approved.

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@state.nm.us

Hrs.: 7:00-11:00 am & 12:00-3:30 pm Mon.-Thur.
7:00-11:00 am & 12:00-4:00 pm Fri.

From: Stuart Hyde <shyde@ensolum.com>
Sent: Tuesday, July 12, 2022 3:49 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>; Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Reece Hanson <rhanson@ensolum.com>; Devin Hencmann <dhencmann@ensolum.com>; Mitch Killough <mkillough@hilcorp.com>; Josh Adams <jadams@ensolum.com>
Subject: [EXTERNAL] nAPP2212552070 - JF Bell 2 Confirmation Sampling Notification

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

On behalf of Hilcorp Energy Company, Ensolum is submitting this 48-hour notification for

confirmation sampling at the J F Bell 2 site, to be conducted on Thursday July 14, 2022. Specifically, Ensolum will be resampling composite-sampling area “W Bottom Comp 8” that had previously indicated elevated concentrations of TPH (160 mg/kg) during the confirmation sampling conducted on June 2, 2022. Since that time, Microblaze was applied to this area of the excavation and allowed to remediate the residual TPH concentrations remaining in the soil.

Based on previous sampling results, Hilcorp is requesting approval of a variance to reduce the analyte list for the upcoming composite sampling on July 14 to be submitted for TPH analysis only by EPA Method 8015. BTEX and chloride concentrations were all below Table 1 Closure Criteria during the initial June 2, 2022 sampling event and we do not believe it is necessary to analyze for these constituents. Please reach out with any questions regarding this request. Thanks and talk to you soon.

Well Name: J F Bell 2
API#: 30-045-11809
Location: 36.845863, -108.187772
Operator: Hilcorp Energy Company
Surface Owner: Federal
Scheduled Date & Time of Start: **Thursday 7/14/2022 @ 3 PM**

Stuart Hyde, LG
Senior Geologist
970-903-1607
Ensolum, LLC

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain-of-Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 13, 2022

Mitch Killough

Hilcorp Energy
PO Box 61529
Houston, TX 77208-1529
TEL: (337) 276-7676
FAX:

RE: J F Bell 2 OrderNo.: 2206161

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/3/2022 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2206161**
Date Reported: **6/13/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: N SW Comp 8'
Project: J F Bell 2
Collection Date: 6/2/2022 1:40:00 PM
Lab ID: 2206161-001 **Matrix:** SOIL **Received Date:** 6/3/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	ND	60		mg/Kg	20	6/8/2022 7:04:04 PM	67985
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	6/7/2022 7:12:25 PM	67929
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/7/2022 7:12:25 PM	67929
Surr: DNOP	243	51.1-141	S	%Rec	1	6/7/2022 7:12:25 PM	67929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/7/2022 11:54:50 PM	67919
Surr: BFB	105	37.7-212		%Rec	1	6/7/2022 11:54:50 PM	67919
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/7/2022 11:54:50 PM	67919
Toluene	ND	0.049		mg/Kg	1	6/7/2022 11:54:50 PM	67919
Ethylbenzene	ND	0.049		mg/Kg	1	6/7/2022 11:54:50 PM	67919
Xylenes, Total	ND	0.099		mg/Kg	1	6/7/2022 11:54:50 PM	67919
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/7/2022 11:54:50 PM	67919

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

Qualifiers:

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

Analytical Report
Lab Order **2206161**
Date Reported: **6/13/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: S SW Comp 8'
Project: J F Bell 2
Collection Date: 6/2/2022 1:48:00 PM
Lab ID: 2206161-002 **Matrix:** SOIL **Received Date:** 6/3/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	330	60		mg/Kg	20	6/8/2022 7:16:25 PM	67985
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	6/9/2022 2:41:08 PM	68001
Motor Oil Range Organics (MRO)	96	49		mg/Kg	1	6/9/2022 2:41:08 PM	68001
Surr: DNOP	95.1	51.1-141		%Rec	1	6/9/2022 2:41:08 PM	68001
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/8/2022 12:18:19 AM	67919
Surr: BFB	103	37.7-212		%Rec	1	6/8/2022 12:18:19 AM	67919
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/8/2022 12:18:19 AM	67919
Toluene	ND	0.050		mg/Kg	1	6/8/2022 12:18:19 AM	67919
Ethylbenzene	ND	0.050		mg/Kg	1	6/8/2022 12:18:19 AM	67919
Xylenes, Total	ND	0.099		mg/Kg	1	6/8/2022 12:18:19 AM	67919
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/8/2022 12:18:19 AM	67919

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

Qualifiers:

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

Analytical Report
Lab Order **2206161**
Date Reported: **6/13/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: E SW Comp 8'
Project: J F Bell 2
Collection Date: 6/2/2022 11:25:00 AM
Lab ID: 2206161-003 **Matrix:** SOIL **Received Date:** 6/3/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	ND	60		mg/Kg	20	6/8/2022 7:28:46 PM	67985
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**	
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	6/7/2022 7:59:56 PM	67929
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/7/2022 7:59:56 PM	67929
Surr: DNOP	200	51.1-141	S	%Rec	1	6/7/2022 7:59:56 PM	67929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/8/2022 12:41:44 AM	67919
Surr: BFB	104	37.7-212		%Rec	1	6/8/2022 12:41:44 AM	67919
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/8/2022 12:41:44 AM	67919
Toluene	ND	0.047		mg/Kg	1	6/8/2022 12:41:44 AM	67919
Ethylbenzene	ND	0.047		mg/Kg	1	6/8/2022 12:41:44 AM	67919
Xylenes, Total	ND	0.095		mg/Kg	1	6/8/2022 12:41:44 AM	67919
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/8/2022 12:41:44 AM	67919

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

Qualifiers:

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

Analytical Report
Lab Order **2206161**
Date Reported: **6/13/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: W SW Comp 8'
Project: J F Bell 2
Collection Date: 6/2/2022 1:43:00 PM
Lab ID: 2206161-004 **Matrix:** SOIL **Received Date:** 6/3/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	250	60		mg/Kg	20	6/8/2022 7:41:07 PM	67985
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	6/7/2022 8:23:37 PM	67929
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/7/2022 8:23:37 PM	67929
Surr: DNOP	114	51.1-141		%Rec	1	6/7/2022 8:23:37 PM	67929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/8/2022 1:05:09 AM	67919
Surr: BFB	103	37.7-212		%Rec	1	6/8/2022 1:05:09 AM	67919
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/8/2022 1:05:09 AM	67919
Toluene	ND	0.050		mg/Kg	1	6/8/2022 1:05:09 AM	67919
Ethylbenzene	ND	0.050		mg/Kg	1	6/8/2022 1:05:09 AM	67919
Xylenes, Total	ND	0.10		mg/Kg	1	6/8/2022 1:05:09 AM	67919
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/8/2022 1:05:09 AM	67919

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

Qualifiers:

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

Analytical Report
Lab Order **2206161**
Date Reported: **6/13/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Client Sample ID: E Bottom Comp 8'
Project: J F Bell 2
Collection Date: 6/2/2022 11:15:00 AM
Lab ID: 2206161-005 **Matrix:** SOIL **Received Date:** 6/3/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**NAI**
Chloride	ND	60		mg/Kg	20	6/8/2022 7:53:27 PM	67985
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**ED**
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	6/7/2022 8:47:28 PM	67929
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/7/2022 8:47:28 PM	67929
Surr: DNOP	208	51.1-141	S	%Rec	1	6/7/2022 8:47:28 PM	67929
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/8/2022 1:28:47 AM	67919
Surr: BFB	104	37.7-212		%Rec	1	6/8/2022 1:28:47 AM	67919
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	6/8/2022 1:28:47 AM	67919
Toluene	ND	0.050		mg/Kg	1	6/8/2022 1:28:47 AM	67919
Ethylbenzene	ND	0.050		mg/Kg	1	6/8/2022 1:28:47 AM	67919
Xylenes, Total	ND	0.099		mg/Kg	1	6/8/2022 1:28:47 AM	67919
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	6/8/2022 1:28:47 AM	67919

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

Qualifiers:

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

Analytical Report
Lab Order **2206161**
Date Reported: **6/13/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Hilcorp Energy
Project: J F Bell 2
Lab ID: 2206161-006 **Matrix:** SOIL

Client Sample ID: W Bottom Comp 8'
Collection Date: 6/2/2022 11:10:00 AM
Received Date: 6/3/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Chloride	110	60		mg/Kg	20	6/8/2022 8:30:31 PM	67985
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **ED**	
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	6/9/2022 2:52:08 PM	68001
Motor Oil Range Organics (MRO)	160	48		mg/Kg	1	6/9/2022 2:52:08 PM	68001
Surr: DNOP	93.0	51.1-141		%Rec	1	6/9/2022 2:52:08 PM	68001
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/8/2022 1:52:13 AM	67919
Surr: BFB	102	37.7-212		%Rec	1	6/8/2022 1:52:13 AM	67919
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/8/2022 1:52:13 AM	67919
Toluene	ND	0.046		mg/Kg	1	6/8/2022 1:52:13 AM	67919
Ethylbenzene	ND	0.046		mg/Kg	1	6/8/2022 1:52:13 AM	67919
Xylenes, Total	ND	0.092		mg/Kg	1	6/8/2022 1:52:13 AM	67919
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	6/8/2022 1:52:13 AM	67919

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2206161**
13-Jun-22

Client: Hilcorp Energy
Project: J F Bell 2

Sample ID: **MB-67985** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **67985** RunNo: **88598**
Prep Date: **6/8/2022** Analysis Date: **6/8/2022** SeqNo: **3144499** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-67985** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **67985** RunNo: **88598**
Prep Date: **6/8/2022** Analysis Date: **6/8/2022** SeqNo: **3144500** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.1	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2206161**
13-Jun-22

Client: Hilcorp Energy
Project: J F Bell 2

Sample ID: **MB-67929** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **67929** RunNo: **88541**
Prep Date: **6/6/2022** Analysis Date: **6/7/2022** SeqNo: **3141981** 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	24		10.00		238	51.1	141			S

Sample ID: **LCS-67929** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **67929** RunNo: **88541**
Prep Date: **6/6/2022** Analysis Date: **6/7/2022** SeqNo: **3141982** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	15	50.00	0	117	64.4	127			
Surr: DNOP	5.8		5.000		116	51.1	141			

Sample ID: **LCS-68001** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **68001** RunNo: **88603**
Prep Date: **6/8/2022** Analysis Date: **6/9/2022** SeqNo: **3144812** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	15	50.00	0	110	64.4	127			
Surr: DNOP	5.1		5.000		103	51.1	141			

Sample ID: **MB-68001** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **68001** RunNo: **88603**
Prep Date: **6/8/2022** Analysis Date: **6/9/2022** SeqNo: **3144813** 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	10		10.00		103	51.1	141			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2206161**
13-Jun-22

Client: Hilcorp Energy
Project: J F Bell 2

Sample ID: **mb-67919**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **67919**	RunNo: **88526**							
Prep Date: **6/6/2022**	Analysis Date: **6/7/2022**	SeqNo: **3142100**	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	1100		1000		108	37.7	212			

Sample ID: **lcs-67919**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **67919**	RunNo: **88526**							
Prep Date: **6/6/2022**	Analysis Date: **6/7/2022**	SeqNo: **3142101**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	72.3	137			
Surr: BFB	2300		1000		233	37.7	212			S

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2206161**
13-Jun-22

Client: Hilcorp Energy
Project: J F Bell 2

Sample ID: **mb-67919**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **67919**	RunNo: **88526**
Prep Date: **6/6/2022**	Analysis Date: **6/7/2022**	SeqNo: **3142148** 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		107	70	130			

Sample ID: **LCS-67919**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **67919**	RunNo: **88526**
Prep Date: **6/6/2022**	Analysis Date: **6/7/2022**	SeqNo: **3142149** 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	92.3	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **2206161** RcptNo: **1**

Received By: **Cheyenne Cason** **6/3/2022 7:00:00 AM**

Completed By: **Cheyenne Cason** **6/3/2022 7:34:44 AM**

Reviewed By: CMC 6/3/22

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° 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 ☑	IO 6.3.22
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	Checked by:

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclair@hilcorp.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush 5day Turn

Project Name: J F Bell 2

Project #:

Project Manager: Mitch Killough

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.9-0.1=2.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2206161	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6-2	1340	soil	N SW Comp 8'	4oz jar	cool	001	✓	✓					✓			
	1348		S SW Comp 8'			002										
	1125		E SW Comp 8'			003										
	1343		W SW Comp 8'			004										
	1115		E Bottom Comp 8'			005										
	1110		W Bottom Comp 8'			006										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6-2	1449			Courier	6/2/22	1449
6/2/22		Christian Wade	Emc courier		6/3/22	0700

Remarks: cc: mkillough@hilcorp.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 17, 2022

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

RE: JF Bell 2 OrderNo.: 2208696

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/11/2022 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2208696**
Date Reported: **8/17/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Client Sample ID: West Bottom Comp 8'
Project: JF Bell 2
Collection Date: 8/10/2022 9:40:00 AM
Lab ID: 2208696-001 **Matrix:** SOIL **Received Date:** 8/11/2022 6:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	18	14		mg/Kg	1	8/13/2022 5:22:38 AM
Motor Oil Range Organics (MRO)	110	47		mg/Kg	1	8/13/2022 5:22:38 AM
Surr: DNOP	126	21-129		%Rec	1	8/13/2022 5:22:38 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **BRM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 12:28:18 PM
Surr: BFB	105	70-130		%Rec	1	8/15/2022 12:28:18 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208696**

17-Aug-22

Client: HILCORP ENERGY

Project: JF Bell 2

Sample ID: **MB-69457**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **69457**	RunNo: **90218**
Prep Date: **8/12/2022**	Analysis Date: **8/12/2022**	SeqNo: **3218061** 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	9.7		10.00		97.3	21	129			

Sample ID: **LCS-69457**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **69457**	RunNo: **90218**
Prep Date: **8/12/2022**	Analysis Date: **8/12/2022**	SeqNo: **3218062** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	96.7	64.4	127			
Surr: DNOP	4.7		5.000		94.3	21	129			

Sample ID: **LCS-69422**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **69422**	RunNo: **90247**
Prep Date: **8/11/2022**	Analysis Date: **8/12/2022**	SeqNo: **3218543** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.5		5.000		69.9	21	129			

Sample ID: **LCS-69454**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **69454**	RunNo: **90247**
Prep Date: **8/11/2022**	Analysis Date: **8/13/2022**	SeqNo: **3218544** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		78.7	21	129			

Sample ID: **MB-69422**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **69422**	RunNo: **90247**
Prep Date: **8/11/2022**	Analysis Date: **8/12/2022**	SeqNo: **3218545** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.9		10.00		78.5	21	129			

Sample ID: **MB-69454**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **69454**	RunNo: **90247**
Prep Date: **8/11/2022**	Analysis Date: **8/13/2022**	SeqNo: **3218546** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.2		10.00		92.3	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208696**

17-Aug-22

Client: HILCORP ENERGY

Project: JF Bell 2

Sample ID: **lcs-69433**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **69433**	RunNo: **90308**
Prep Date: **8/11/2022**	Analysis Date: **8/15/2022**	SeqNo: **3221422** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	114	70	130			
Surr: BFB	530		500.0		106	70	130			

Sample ID: **mb-69433**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **69433**	RunNo: **90308**
Prep Date: **8/11/2022**	Analysis Date: **8/15/2022**	SeqNo: **3221423** 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	520		500.0		104	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **2208696** RcptNo: 1

Received By: **Juan Rojas** **8/11/2022 6:35:00 AM**

Completed By: **Cheyenne Cason** **8/11/2022 8:25:10 AM**

Reviewed By: JR 8/11/22

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° 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: SGR 8/11/22

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: brandon.sinclair@hilcorp.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: due: 8-15-22
☐ Standard ☑ Rush 3-day

Project Name: JF Bell 2

Project #:

Project Manager: Mitch Killough

Sampler: Brandon Sinclair

On Ice: ~~☑~~ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.9-0=0.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2208696	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)					
Analysis Request																					
8-10	0940	Soil	West Bottom Comp 8'	4oz jar	cool	001		✓													

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8-10	1317		Christa Waeks		8/10/22	1317
8/10/22	1810	Christian Waeks		Courier	8/11/22	635

Remarks:

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

ENSOLUM

APPENDIX D

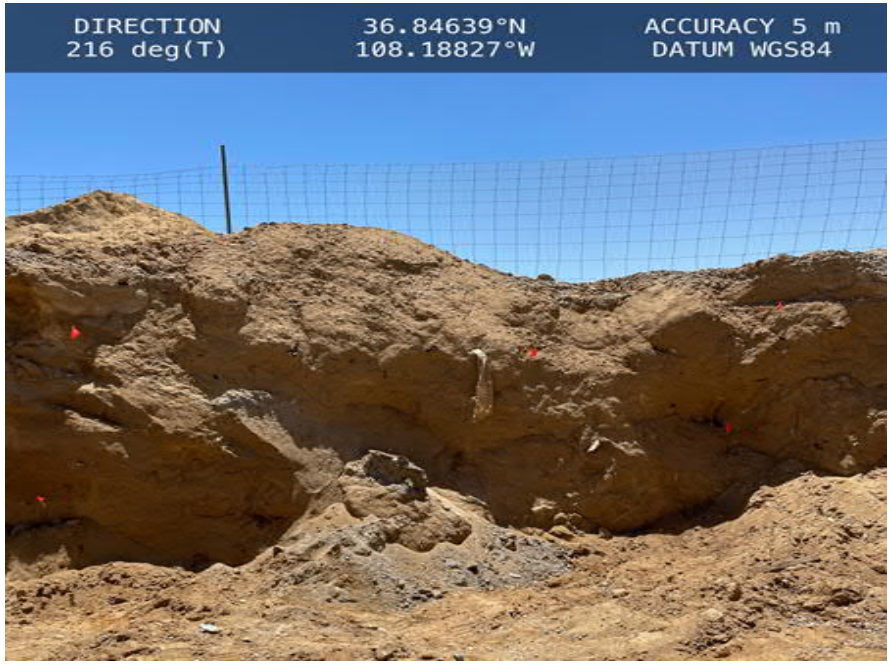
Project Photographs

Project Photographs – 6/2/2022 Sampling Event

Photograph 1 (dated 6/2/2022) – View of Soil Sample Identification N SW Comp 8'.

Photograph 2 (dated 6/2/2022) – View of Soil Sample Identification W SW Comp 8'.

Photo Log – Closure Soil Samples



Photograph 3 (dated 6/2/22) – View of Soil Sample Identification S SW Comp 8'.

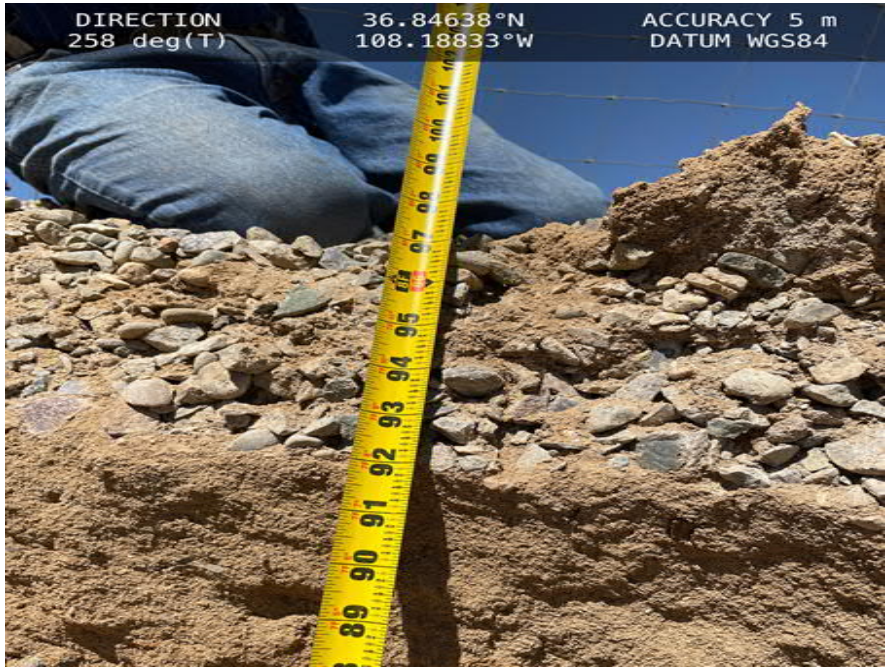
Photograph 4 (dated 6/2/2022) – View of Soil Sample Identification E SW Comp 8'.

Photo Log – Closure Soil Samples

Photograph 5 (dated 6/2/2022) – View of Soil Sample Identification W Bottom Comp 8'.

Photograph 6 (dated 6/2/2022) – View of Soil Sample Identification E Bottom Comp 8'.

Photo Log – Closure Soil Samples



Photograph 7 (dated 6/2/2022) – Close-up view of measuring tape indicating depth of excavation.

Photograph 8 (dated 6/2/2022) – Aerial view of JF Bell 2 excavation.

ENSOLUM

APPENDIX E

Micro-Blaze Amendment Brochure

Micro-Blaze®
MICROBIAL PRODUCTS

Micro-Blaze®

Emergency Liquid Spill Control

PRODUCT INFORMATION

EMERGENCY LIQUID SPILL CONTROL (ELSC)

REMEDIATES (LIST NOT EXHAUSTIVE)

- Acetone
- Acrylonitrite
- AFFF Waste
- Anti-Freeze
- Aviation Fuels
- Benzene & Benzene Compounds
- Crude Oil
- Diesel Fuel
- Dimethylformanide
- Fats
- Gasoline
- Grease
- Glycols
- Hydrocarbon Waste
- Kerosene
- Methanol
- Methyl Tertiary Butyl Ether (MTBE)
- Motor Oil
- Odor
- Organic Chemical Waste
- Organic Waste
- Paint Sludge
- Pipeline Condensation
- Polyurethane Resin Waste
- Sludge
- Toluene

Micro-Blaze®

Emergency Liquid Spill Control

Micro-Blaze® Emergency Liquid Spill Control is a safe, non-toxic, microbial formulation used for the bioremediation of hydrocarbons and other organic compounds. It breaks down, degrades, and digests organic waste while also suppressing vapors and eliminating flammability. The proprietary combination of wetting agents, nutrients, and microbes makes it an ideal formulation for use on many pollutants found in spills and contaminated sites.

Our microbes are naturally occurring, not genetically engineered, and found in soils and waters all over the earth. These microbes have been carefully researched, tested, and chosen for their affinity to degrade hydrocarbons and other organic waste.

USES

- Clean up hydrocarbon spills/leaks
- Soil bioremediation
- Vapor suppression
- Equipment, tank, and pipeline cleaning

BENEFITS

- Safe and cost-effective method for in-situ bioremediation of contaminated soils and water
- Elimination of vapors and LELs, creating a safe working environment
- Residue and runoff can be safely sent to industrial and municipal WWTPs
- 10-year shelf life and easy to use concentrate make it convenient to maintain on hand for future emergencies or everyday usage
- Listed on EPA NCP List as a bioremediation agent for 30 years*

** This listing does not mean the EPA approves, recommends, licenses, certifies or authorizes the use of Micro-Blaze® Emergency Liquid Spill Control or any other product on an oil discharge. This listing only means that data has been submitted to EPA as required by subpart J of the NCP §300.915.*

Product Details

Appearance:
Cream to tan, opaque liquid, perfumed

pH:
7.0 - 8.0

Shelf Life:
10 Years

Storage:
Avoid temperatures over 48°C for long periods of time. Avoid prolonged freezing.

CAUTION: KEEP OUT OF REACH OF CHILDREN. Do not take internally. Avoid contact with eyes. Wash thoroughly after handling. Avoid breathing mist. Contains surfactants (soaps) which may irritate eyes or respiratory system. Use with adequate ventilation.

APPLICATION

Micro-Blaze® is a liquid concentrate and must be diluted before application.

DILUTION
Dilute with water between a 3% solution (3 parts Micro-Blaze®, 97 parts water) and a 10% solution (10 parts Micro-Blaze®, 90 parts water). Shake well before dilution and before application.

APPLICATION
Spray the diluted Micro-Blaze® directly onto the contamination with as much agitation as possible until the area is completely saturated. You can use any delivery system/sprayer, such as hand-held sprayers, fire extinguishers, power washers, CAFS systems, and water trucks.
For soil remediation, tilling the soil after application will help in achieving optimal results, though it is not required where not feasible.

HOW MUCH MICRO-BLAZE® DO I NEED?
1 gallon of Micro-Blaze® concentrate, after diluted, will treat either of the following:

- 10 gallons of spilled contamination
- 500 – 700 square feet of contaminated surface
- 5 – 7 cubic yards of contaminated soil

Contact a Micro-Blaze® sales representative for any additional application questions:
technical@micro-blaze.com

PRODUCT SIZES & SPECS

1 Gallon Pail

SKU	MBELSC-1
Dimensions	8"x8"x12"
Weight	9 lbs

5 Gallon Pail

SKU	MBELSC-5
Dimensions	12"x12"x15"
Weight	47 lbs
	36 pails /pallet

55 Gallon Drum

SKU	MBELSC-55
Dimensions	24"x 24"x35"
Weight	500 lbs
	4 drums/pallet

275 Gallon Tote

SKU	MBELSC-275
Dimensions	40"x48"x45"
Weight	2,500 lbs

330 Gallon Tote

SKU	MBELSC-330
Dimensions	40"x48"x54"
Weight	3,000 lbs

RELATED PRODUCTS:

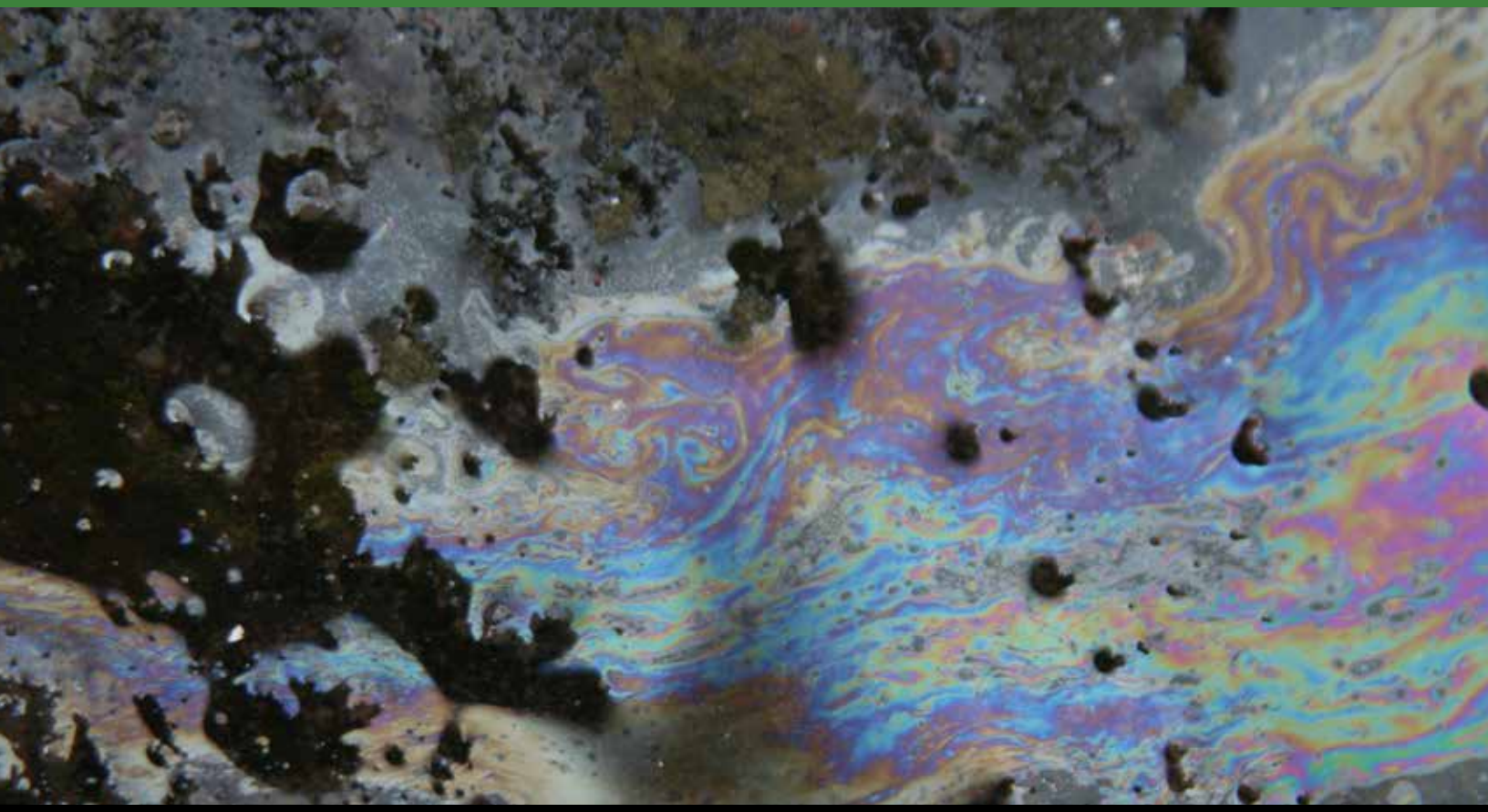
CONCRETE STAIN REMOVER (CSR)

NON-FORMULATED

SCAN FOR MSDS FOR ALL PRODUCTS

PARTNERING WITH NATURE

FOR A CLEANER TOMORROW



Verde Environmental, Inc.
9223 Eastex Freeway
Houston, TX 77093

Office: 713.691.6468
Toll Free: 800.626.6598

www.micro-blaze.com

Version 0522

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 140905

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 140905
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	9/16/2022