

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	nAPP2035137305
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 # nAPP2035137305
Contact mailing address 1111 Travis St, Houston, Texas 77002	

Location of Release Source

Latitude 36.8899651 _____ Longitude -108.132103 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Southern Union 2	Site Type Well
Date Release Discovered 12/4/2020 @ 3:30pm	API# 30-045-10638

Unit Letter	Section	Township	Range	County
A	19	31N	12W	San Juan

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 44	Volume Recovered (bbls) 7 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls) 67	Volume Recovered (bbls) 8 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

A release of approximately 67 bbls of condensate and 44 bbls of produced water was released due to a frozen tank valve on a storage tank. Release remained on location and inside the berm. 15 bbls was recovered.

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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?	>100 (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 type="checkbox"/> Yes <input checked="" 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 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 type="checkbox"/> Yes <input checked="" 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 1/2-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

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Incident ID	nAPP2035137305
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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: 4/15/2021

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

OCD Only

Received by: Ramona Marcus Date: 5/7/2021

Incident ID	nAPP2035137305
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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: 04/15/2021

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

OCD Only

Received by: Ramona Marcus Date: 5/7/2021

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: 05/02/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

NAPP2035137305

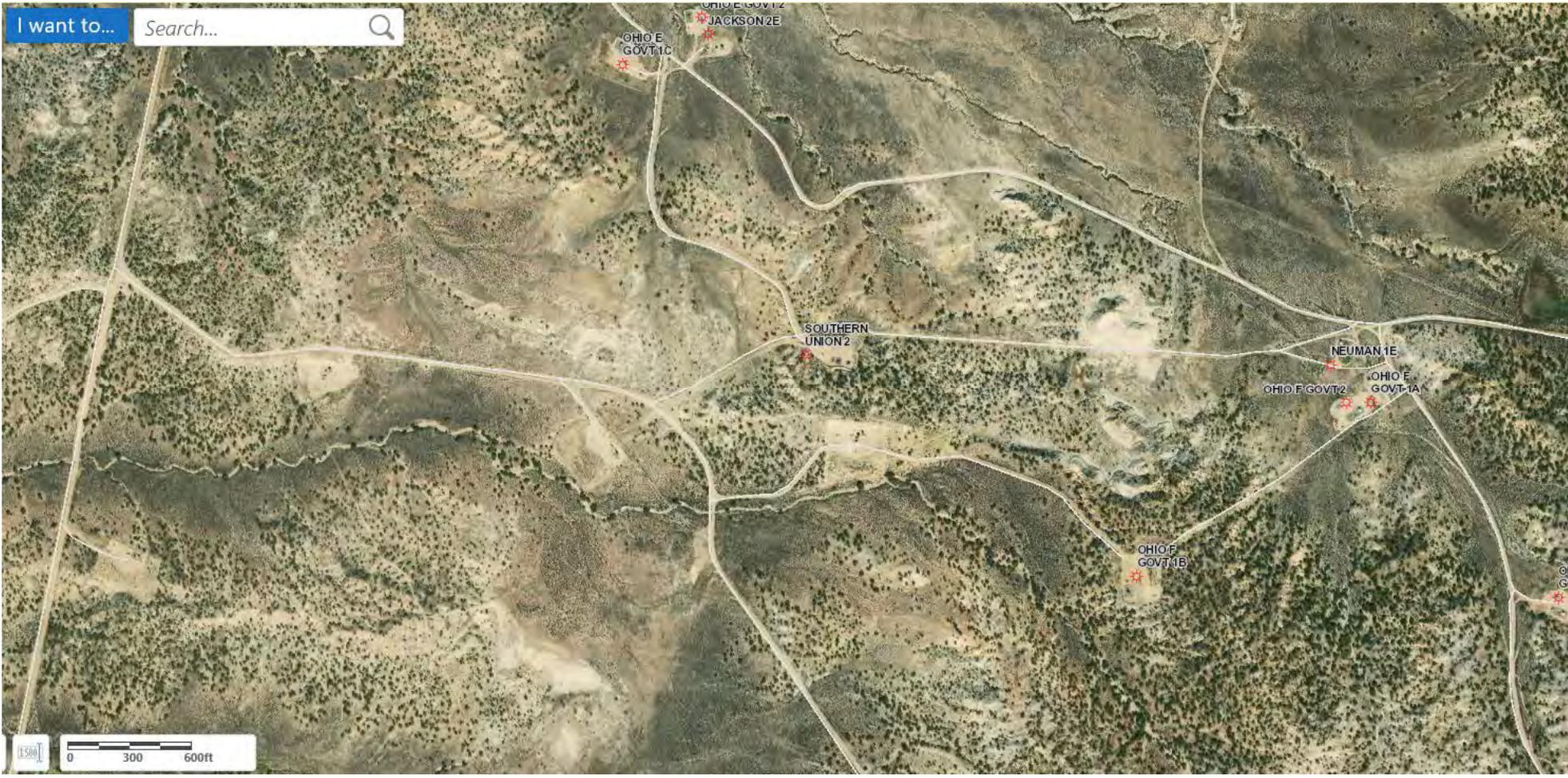
Summary of Events

- Release of approximately 44 bbls produced water and 67 bbls condensate from a bulk storage tank. Spilled fluids remained in berm.
- Total of 15 bbls fluid was recovered following the spill event
 - ~620 yds of excavated soil was disposed of at Industrial Ecosystems
 - 120 yds of clean soil was hauled in from Mesa Sand and Gravel
 - An additional 500 yds of clean soil was hauled in from C&E Concrete
 - Surface area of excavation measured 45' x 34'
- Confirmation sampling was scheduled for 4/7/2021 at 9:00 am
 - Notice of the confirmation sampling was submitted to NMOCD/BLM on 4/5/2021 at 10:16 am
 - Kurt Hoekstra (Hilcorp) and Chad Perkins (Hilcorp) were the only individuals that attended the sampling.

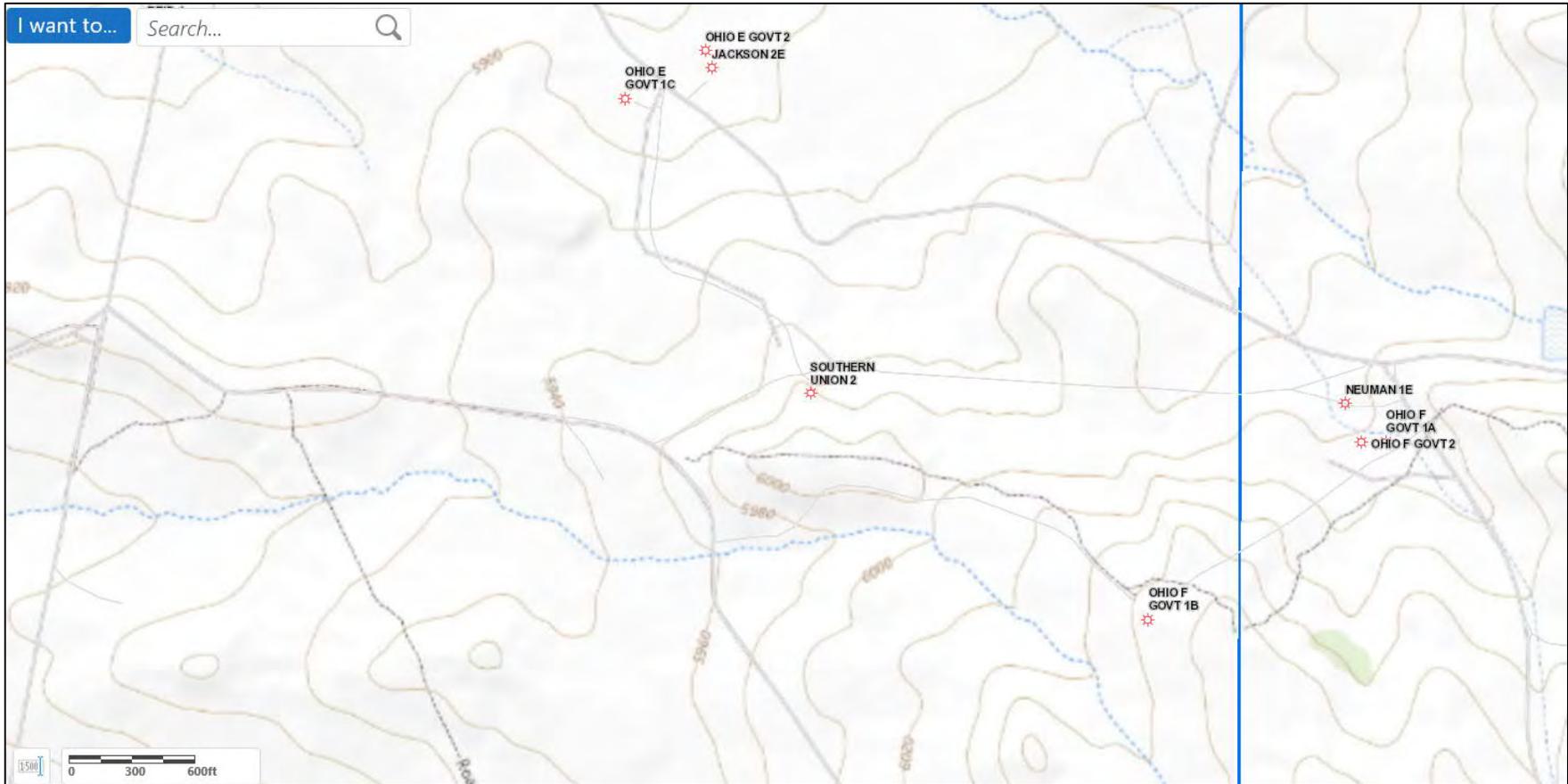
Scaled Aerial Image 1



Scaled Aerial Image 2



Scaled Topographic Overlay



Photograph 1 – Initial Release 12/4/20



Depth to Groundwater Determination



New Mexico Office of the State Engineer Water Column/Average Depth to Water

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

No records found.

PLSS Search:

Section(s): 19 **Township:** 31N **Range:** 12W

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/15/21 2:09 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Depth to Groundwater Determination

Note: Groundwater information from approved pit closure at Southern Union 2. Groundwater at the site was determined to be greater than 100 ft bgs.

Source: Page extracted from Pit Closure approval (Form C-144) for the Southern Union 2 (approved on 9/25/2017). Found on OCD's website under Southern Union #002 (30-045-10638) - Associated Images – Well Files.

Upon removal of the below-grade tank, EV will take, at a minimum, a five point composite sample from where the tank was sitting. EV shall collect individual grab samples will be taken from any area that is wet, discolored or showing other evidence of a release. All samples will be analyzed for the following:

Constituent	Method	Groundwater >100 FT	Test Results
Chloride	EPA 300.0	20,000 mg/kg	510 mg/kg
TTH	EPA SW-846 Method 418.1	2,000 mg/kg	356 mg/kg
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg	Non-Detect
Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg	Non-Detect
GRO/DRO	EPA SW-846 Method 8015B	1,000 mg/kg	131 mg/kg

The sample was analyzed by Envirotech Analytical Laboratory in Aztec NM. See attached laboratory report.

EV will insure that the results of all sampling shall be reported to the division on approved form C-141. EV understands that the division may require additional delimitation upon review of the results.

If sampling demonstrates that concentrations specified above have NOT been exceeded, or that a release has NOT occurred, EV will backfill the excavation with compacted, non-waste containing, carbon material, construct a division prescribed soil cover, and recontour and revegetate the site. The division prescribed soil cover, recontouring, and re-vegetation shall comply with 19.15.17.13.

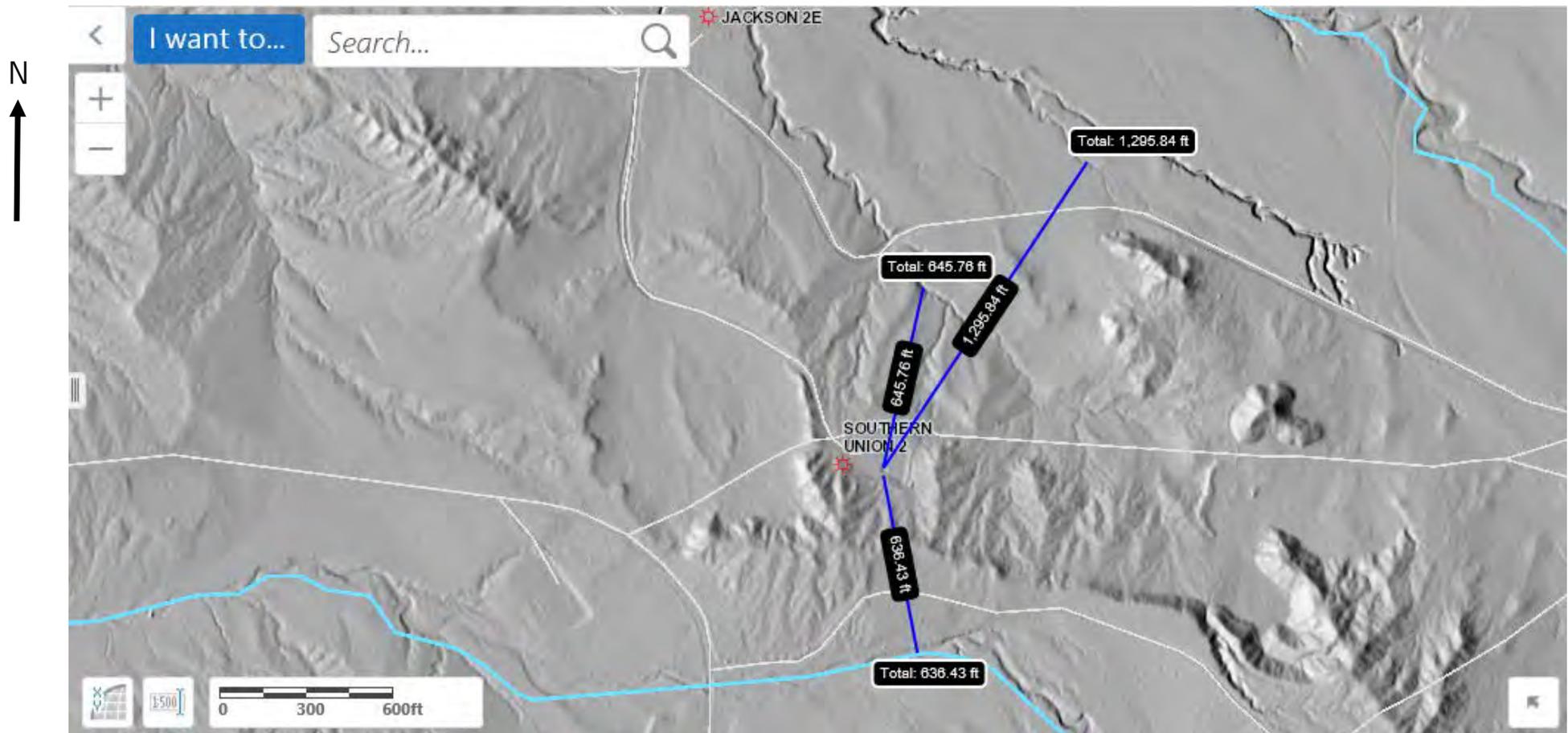
The excavation was back filled by Sierra Oilfield Services on September 14, 2017 utilizing soil that was already on location. The location was contoured to match the existing terrain. See attached photographs.

If EV or the division determines that a release has occurred, EV shall fully comply with 19.15.29 NMAC and 19.15.30 NMAC as appropriate.

No release was observed. See the attached C-141 for details.

- E. Once EV has closed a below-grade tank, we shall reclaim the site to a safe and stable condition that blends with the surrounding undisturbed area. When possible, EV will restore the impacted surface area to the condition that existed prior to oil and gas operations by the placement of soil cover.

Determination of water sources and significant watercourses within ½ mile of the lateral extent of the release



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

Base 1



Base 2



Base 3



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

Base 4



Base 5



Base 6



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

Base 7



Base 8



Base 9



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

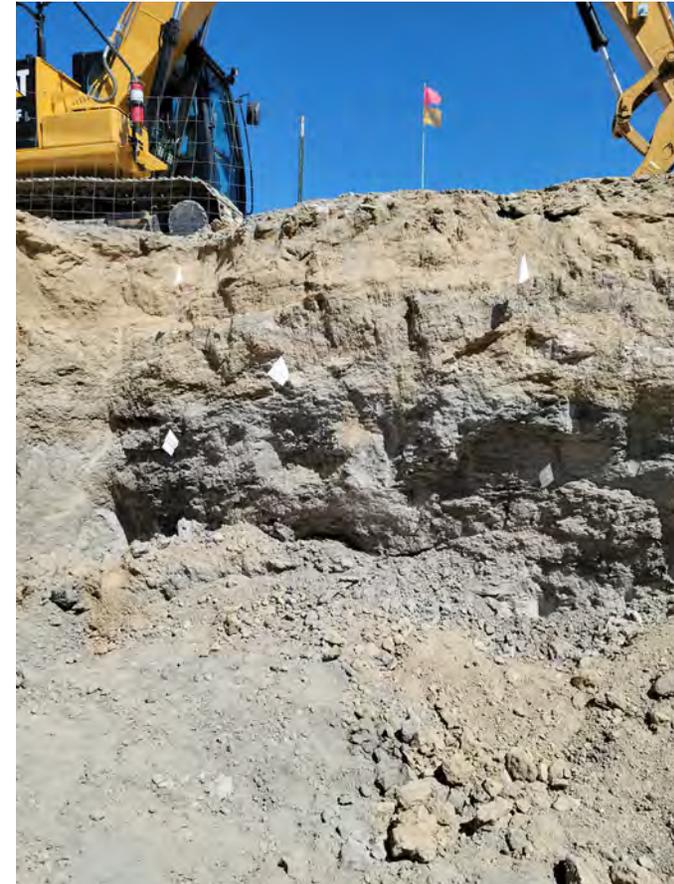
West Wall 1



West Wall 2



North Wall 1



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

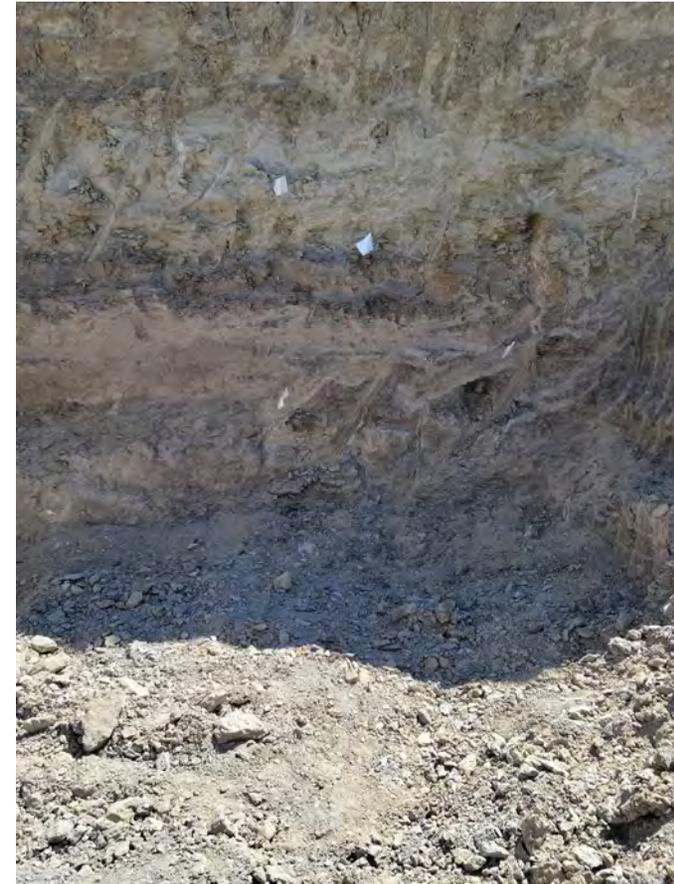
North Wall 2



North Wall 3



East Wall 1



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

East Wall 2



S Middle Wall 1



S Middle Wall 2



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

S Middle Wall 3



SE Wall



South Wall



Photographs – 4/7/21 Sampling Event

Provided captions for each photograph are the closure sample IDs.

SW Wall



Mitch Killough

From: Jennifer Deal
Sent: Monday, April 05, 2021 10:16 AM
To: cory.smith@state.nm.us; Joyner, Ryan N
Cc: Kurt Hoekstra; Chad Perkins; Mitch Killough; Joey Becker
Subject: Confirmation Sampling - Southern Union 2

Good morning,

Hilcorp is providing 48 hr notification of confirmation sampling to occur on Wednesday, April 7 at 9:00am at the Southern Union 2 (Incident #nAPP2035137305). Please let me know if you have any questions.

Thank you,

Jennifer Deal
Environmental Specialist
Hilcorp Energy – L48 West
jdeal@hilcorp.com
382 Road 3100
Aztec, NM 87410
Office: (505) 324-5128
Cell: (505) 801-6517

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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.

Mitch Killough

From: Jennifer Deal
Sent: Thursday, April 15, 2021 12:33 PM
To: Mitch Killough
Subject: FW: Southern Union 2 - Extension Request

I'd include this as well.

Jennifer Deal
Environmental Specialist
Office (505) 324-5128
Cell (505) 801-6517

From: Jennifer Deal
Sent: Friday, February 19, 2021 3:53 PM
To: cory.smith@state.nm.us
Subject: Southern Union 2 - Extension Request

Good afternoon,

Hilcorp Energy Company is requesting an extension to the 90-day deadline for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for the Southern Union 2 site (Incident # nAPP2035137305). The original 90-day deadline is March 4, 2021 but due to Extensive Winter weather, Hilcorp would like to request a new deadline of April 15, 2021 to allow the ground to dry up and prevent road damage. Please contact me if you have any questions.

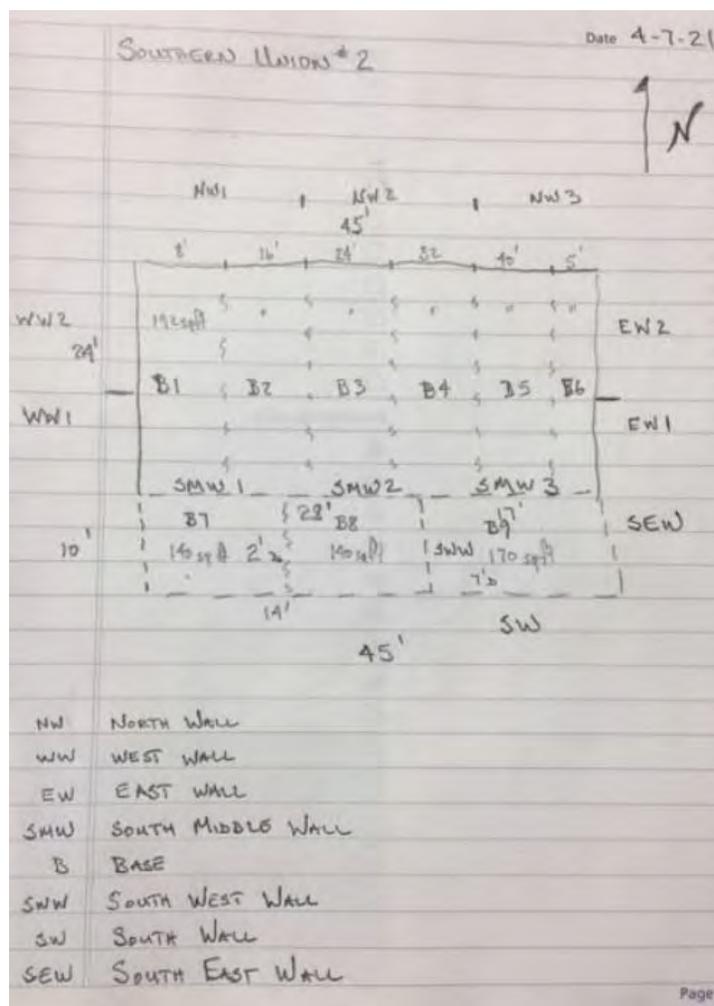
Thank you,

Jennifer Deal
Environmental Specialist
Hilcorp Energy – L48 West
jdeal@hilcorp.com
Office: (505) 324-5128
Cell: (505) 801-6517

Data table of soil contaminant concentration data

SOIL ANALYTICAL RESULTS												
SOUTHERN UNION 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)
Base 1	4/7/2021	<0.12	<0.24	<0.24	<0.49	<1.09	<60	<24	76	<50	<100	<150
Base 2	4/7/2021	<0.12	<0.24	<0.24	0.56	<1.16	<60	<24	120	<49	<144	<193
Base 3	4/7/2021	<0.12	<0.25	0.61	6.8	<7.78	<59	110	300	<48	410	<458
Base 4	4/7/2021	<0.025	<0.050	0.17	1.6	<1.845	<60	41	240	<46	281	<327
Base 5	4/7/2021	<0.12	<0.25	<0.25	0.52	<1.14	99	<25	140	<49	<165	<214
Base 6	4/7/2021	<0.024	<0.048	<0.048	<0.096	<0.216	120	<4.8	44	<46	<48.8	<94.8
Base 7	4/7/2021	<0.024	<0.049	<0.049	<0.098	<0.22	<60	<4.9	23	<47	<27.9	<74.9
Base 8	4/7/2021	<0.025	<0.049	<0.049	<0.099	<0.222	<60	<4.9	15	<48	<19.9	<67.9
Base 9	4/7/2021	<0.024	<0.049	<0.049	<0.098	<0.22	83	<4.9	29	<50	<33.9	<83.9
West Wall 1	4/7/2021	<0.025	<0.050	<0.050	<0.10	<0.225	<60	<5.0	10	<45	<15	<60
West Wall 2	4/7/2021	<0.025	<0.050	<0.050	<0.099	<0.224	<60	<5.0	110	<47	<115	<162
North Wall 1	4/7/2021	<0.025	<0.050	<0.050	<0.099	<0.224	69	8.5	77	<46	85.5	<131.5
North Wall 2	4/7/2021	<0.025	<0.050	<0.050	<0.10	<0.225	130	6.6	130	<49	136.6	<185.6
North Wall 3	4/7/2021	<0.025	<0.049	<0.049	<0.099	<0.222	300	<4.9	29	<47	<33.9	<80.9
East Wall 1	4/7/2021	<0.025	<0.050	<0.050	<0.10	<0.225	180	<5.0	<9.4	<47	<14.4	<61.4
East Wall 2	4/7/2021	<0.025	<0.050	<0.050	<0.099	<0.224	340	<5.0	18	<46	<23	<69
S Middle Wall 1	4/7/2021	<0.024	<0.048	<0.048	<0.096	<0.216	<59	<4.8	37	<45	<41.8	<86.8
S Middle Wall 2	4/7/2021	<0.025	<0.050	<0.050	<0.099	<0.224	<60	11	170	<47	181	<228
S Middle Wall 3	4/7/2021	<0.025	<0.050	<0.050	<0.099	<0.224	190	<5.0	54	<46	<59	<105
SE Wall	4/7/2021	<0.025	0.20	<0.049	0.40	<0.674	360	<4.9	9.6	<46	<14.5	<60.5
South Wall	4/7/2021	<0.024	0.059	0.048	0.70	<0.831	<60	13	77	<50	90	<217
SW Wall	4/7/2021	<0.024	<0.047	<0.047	<0.095	<0.213	81	<4.7	10	<50	<14.7	<74.7
NMOC Standards		10	NE	NE	NE	50	20,000	NE	NE	NE	1,000	2,500
NOTES:												
< - indicates result is less than the laboratory reporting limit												
Bold - indicates value that exceeds an applicable NMOC cleanup standard												
BTEX - benzene, toluene, ethylbenzene, total xylenes												
DRO - diesel range organics												
GRO - gasoline range organics												
mg/kg - milligrams per kilogram												
MRO - motor oil range organics												
NE - Not Established												
NMOC - New Mexico Oil Conservation Division												
ppm - parts per million												
TPH - total petroleum hydrocarbons (includes GRO+DRO+MRO)												
NA - not analyzed												

Field Data (closure sampling)





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

April 13, 2021

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

RE: Southern Union 2

OrderNo.: 2104345

Dear Mitch Killough:

Hall Environmental Analysis Laboratory received 22 sample(s) on 4/8/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 1

Project: Southern Union 2

Collection Date: 4/7/2021 9:19:00 AM

Lab ID: 2104345-001

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	76	10		mg/Kg	1	4/9/2021 9:38:29 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/9/2021 9:38:29 AM
Surr: DNOP	93.8	70-130		%Rec	1	4/9/2021 9:38:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	4/9/2021 12:40:00 PM
Surr: BFB	97.7	70-130		%Rec	5	4/9/2021 12:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	4/9/2021 12:40:00 PM
Toluene	ND	0.24		mg/Kg	5	4/9/2021 12:40:00 PM
Ethylbenzene	ND	0.24		mg/Kg	5	4/9/2021 12:40:00 PM
Xylenes, Total	ND	0.49		mg/Kg	5	4/9/2021 12:40:00 PM
Surr: 4-Bromofluorobenzene	88.3	70-130		%Rec	5	4/9/2021 12:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 12:15:06 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 2

Project: Southern Union 2

Collection Date: 4/7/2021 9:25:00 AM

Lab ID: 2104345-002

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	120	9.8		mg/Kg	1	4/9/2021 10:07:10 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2021 10:07:10 AM
Surr: DNOP	93.5	70-130		%Rec	1	4/9/2021 10:07:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	4/9/2021 1:40:00 PM
Surr: BFB	114	70-130		%Rec	5	4/9/2021 1:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	4/9/2021 1:40:00 PM
Toluene	ND	0.24		mg/Kg	5	4/9/2021 1:40:00 PM
Ethylbenzene	ND	0.24		mg/Kg	5	4/9/2021 1:40:00 PM
Xylenes, Total	0.56	0.49		mg/Kg	5	4/9/2021 1:40:00 PM
Surr: 4-Bromofluorobenzene	90.5	70-130		%Rec	5	4/9/2021 1:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 12:52:21 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 3

Project: Southern Union 2

Collection Date: 4/7/2021 9:30:00 AM

Lab ID: 2104345-003

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	300	9.6		mg/Kg	1	4/9/2021 11:08:52 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2021 11:08:52 AM
Surr: DNOP	96.4	70-130		%Rec	1	4/9/2021 11:08:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	110	25		mg/Kg	5	4/9/2021 2:39:00 PM
Surr: BFB	244	70-130	S	%Rec	5	4/9/2021 2:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	4/9/2021 2:39:00 PM
Toluene	ND	0.25		mg/Kg	5	4/9/2021 2:39:00 PM
Ethylbenzene	0.61	0.25		mg/Kg	5	4/9/2021 2:39:00 PM
Xylenes, Total	6.8	0.50		mg/Kg	5	4/9/2021 2:39:00 PM
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	5	4/9/2021 2:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	59		mg/Kg	20	4/9/2021 1:04:46 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 4

Project: Southern Union 2

Collection Date: 4/7/2021 9:37:00 AM

Lab ID: 2104345-004

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	240	9.3		mg/Kg	1	4/9/2021 11:18:25 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2021 11:18:25 AM
Surr: DNOP	101	70-130		%Rec	1	4/9/2021 11:18:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	41	5.0		mg/Kg	1	4/9/2021 2:59:00 PM
Surr: BFB	219	70-130	S	%Rec	1	4/9/2021 2:59:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 2:59:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 2:59:00 PM
Ethylbenzene	0.17	0.050		mg/Kg	1	4/9/2021 2:59:00 PM
Xylenes, Total	1.6	0.10		mg/Kg	1	4/9/2021 2:59:00 PM
Surr: 4-Bromofluorobenzene	138	70-130	S	%Rec	1	4/9/2021 2:59:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 1:17:11 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 5

Project: Southern Union 2

Collection Date: 4/7/2021 9:43:00 AM

Lab ID: 2104345-005

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	140	9.8		mg/Kg	1	4/9/2021 11:27:58 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2021 11:27:58 AM
Surr: DNOP	110	70-130		%Rec	1	4/9/2021 11:27:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	4/9/2021 3:19:00 PM
Surr: BFB	132	70-130	S	%Rec	5	4/9/2021 3:19:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.12		mg/Kg	5	4/9/2021 3:19:00 PM
Toluene	ND	0.25		mg/Kg	5	4/9/2021 3:19:00 PM
Ethylbenzene	ND	0.25		mg/Kg	5	4/9/2021 3:19:00 PM
Xylenes, Total	0.52	0.49		mg/Kg	5	4/9/2021 3:19:00 PM
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	5	4/9/2021 3:19:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	99	60		mg/Kg	20	4/9/2021 1:29:36 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 6

Project: Southern Union 2

Collection Date: 4/7/2021 9:49:00 AM

Lab ID: 2104345-006

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	44	9.3		mg/Kg	1	4/9/2021 11:37:37 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2021 11:37:37 AM
Surr: DNOP	102	70-130		%Rec	1	4/9/2021 11:37:37 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/9/2021 3:38:00 PM
Surr: BFB	129	70-130		%Rec	1	4/9/2021 3:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/9/2021 3:38:00 PM
Toluene	ND	0.048		mg/Kg	1	4/9/2021 3:38:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/9/2021 3:38:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/9/2021 3:38:00 PM
Surr: 4-Bromofluorobenzene	91.9	70-130		%Rec	1	4/9/2021 3:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	120	59		mg/Kg	20	4/9/2021 1:42:01 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 7

Project: Southern Union 2

Collection Date: 4/7/2021 9:57:00 AM

Lab ID: 2104345-007

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	23	9.3		mg/Kg	1	4/9/2021 11:47:12 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2021 11:47:12 AM
Surr: DNOP	105	70-130		%Rec	1	4/9/2021 11:47:12 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2021 3:58:00 PM
Surr: BFB	125	70-130		%Rec	1	4/9/2021 3:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/9/2021 3:58:00 PM
Toluene	ND	0.049		mg/Kg	1	4/9/2021 3:58:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2021 3:58:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/9/2021 3:58:00 PM
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	1	4/9/2021 3:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 2:19:14 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 8

Project: Southern Union 2

Collection Date: 4/7/2021 10:03:00 AM

Lab ID: 2104345-008

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	15	9.5		mg/Kg	1	4/9/2021 11:56:53 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2021 11:56:53 AM
Surr: DNOP	107	70-130		%Rec	1	4/9/2021 11:56:53 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2021 4:18:00 PM
Surr: BFB	103	70-130		%Rec	1	4/9/2021 4:18:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 4:18:00 PM
Toluene	ND	0.049		mg/Kg	1	4/9/2021 4:18:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2021 4:18:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2021 4:18:00 PM
Surr: 4-Bromofluorobenzene	87.6	70-130		%Rec	1	4/9/2021 4:18:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 2:31:39 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 Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: Base 9

Project: Southern Union 2

Collection Date: 4/7/2021 10:11:00 AM

Lab ID: 2104345-009

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	29	9.9		mg/Kg	1	4/9/2021 12:06:31 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/9/2021 12:06:31 PM
Surr: DNOP	104	70-130		%Rec	1	4/9/2021 12:06:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2021 4:38:00 PM
Surr: BFB	106	70-130		%Rec	1	4/9/2021 4:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/9/2021 4:38:00 PM
Toluene	ND	0.049		mg/Kg	1	4/9/2021 4:38:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2021 4:38:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/9/2021 4:38:00 PM
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	4/9/2021 4:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	83	60		mg/Kg	20	4/9/2021 2:44:04 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 Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: West Wall 1

Project: Southern Union 2

Collection Date: 4/7/2021 11:14:00 AM

Lab ID: 2104345-010

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	10	9.0		mg/Kg	1	4/9/2021 12:16:14 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/9/2021 12:16:14 PM
Surr: DNOP	106	70-130		%Rec	1	4/9/2021 12:16:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/9/2021 4:58:00 PM
Surr: BFB	105	70-130		%Rec	1	4/9/2021 4:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 4:58:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 4:58:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 4:58:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/9/2021 4:58:00 PM
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	4/9/2021 4:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 2:56:29 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: West Wall 2

Project: Southern Union 2

Collection Date: 4/7/2021 11:18:00 AM

Lab ID: 2104345-011

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	110	9.4		mg/Kg	1	4/9/2021 12:25:54 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2021 12:25:54 PM
Surr: DNOP	90.5	70-130		%Rec	1	4/9/2021 12:25:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/9/2021 6:17:00 PM
Surr: BFB	146	70-130	S	%Rec	1	4/9/2021 6:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 6:17:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 6:17:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 6:17:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2021 6:17:00 PM
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	4/9/2021 6:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 3:08:53 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: North Wall 1

Project: Southern Union 2

Collection Date: 4/7/2021 11:26:00 AM

Lab ID: 2104345-012

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	77	9.2		mg/Kg	1	4/9/2021 12:35:37 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2021 12:35:37 PM
Surr: DNOP	92.7	70-130		%Rec	1	4/9/2021 12:35:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	8.5	5.0		mg/Kg	1	4/9/2021 6:37:00 PM
Surr: BFB	170	70-130	S	%Rec	1	4/9/2021 6:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 6:37:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 6:37:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 6:37:00 PM
Xylenes, Total	0.35	0.099		mg/Kg	1	4/9/2021 6:37:00 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/9/2021 6:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	69	60		mg/Kg	20	4/9/2021 3:21:18 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: North Wall 2

Project: Southern Union 2

Collection Date: 4/7/2021 11:30:00 AM

Lab ID: 2104345-013

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	130	9.8		mg/Kg	1	4/9/2021 12:45:19 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2021 12:45:19 PM
Surr: DNOP	102	70-130		%Rec	1	4/9/2021 12:45:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	6.6	5.0		mg/Kg	1	4/9/2021 6:57:00 PM
Surr: BFB	163	70-130	S	%Rec	1	4/9/2021 6:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 6:57:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 6:57:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 6:57:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/9/2021 6:57:00 PM
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	1	4/9/2021 6:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	130	60		mg/Kg	20	4/9/2021 3:33:43 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: North Wall 3

Project: Southern Union 2

Collection Date: 4/7/2021 11:36:00 AM

Lab ID: 2104345-014

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	29	9.3		mg/Kg	1	4/9/2021 12:55:03 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2021 12:55:03 PM
Surr: DNOP	108	70-130		%Rec	1	4/9/2021 12:55:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2021 7:17:00 PM
Surr: BFB	95.4	70-130		%Rec	1	4/9/2021 7:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 7:17:00 PM
Toluene	ND	0.049		mg/Kg	1	4/9/2021 7:17:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2021 7:17:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2021 7:17:00 PM
Surr: 4-Bromofluorobenzene	86.5	70-130		%Rec	1	4/9/2021 7:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	300	60		mg/Kg	20	4/9/2021 5:37:50 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: East Wall 1

Project: Southern Union 2

Collection Date: 4/7/2021 11:42:00 AM

Lab ID: 2104345-015

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/9/2021 1:04:47 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2021 1:04:47 PM
Surr: DNOP	109	70-130		%Rec	1	4/9/2021 1:04:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/9/2021 7:37:00 PM
Surr: BFB	97.6	70-130		%Rec	1	4/9/2021 7:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 7:37:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 7:37:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 7:37:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/9/2021 7:37:00 PM
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	4/9/2021 7:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	180	59		mg/Kg	20	4/9/2021 5:50:14 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: East Wall 2

Project: Southern Union 2

Collection Date: 4/7/2021 11:47:00 AM

Lab ID: 2104345-016

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	18	9.3		mg/Kg	1	4/9/2021 1:14:32 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2021 1:14:32 PM
Surr: DNOP	111	70-130		%Rec	1	4/9/2021 1:14:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/9/2021 7:57:00 PM
Surr: BFB	92.9	70-130		%Rec	1	4/9/2021 7:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 7:57:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 7:57:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 7:57:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2021 7:57:00 PM
Surr: 4-Bromofluorobenzene	83.8	70-130		%Rec	1	4/9/2021 7:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	340	60		mg/Kg	20	4/9/2021 6:02:39 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 Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: S Middle Wall 1

Project: Southern Union 2

Collection Date: 4/7/2021 11:54:00 AM

Lab ID: 2104345-017

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	37	9.1		mg/Kg	1	4/9/2021 1:24:26 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/9/2021 1:24:26 PM
Surr: DNOP	98.9	70-130		%Rec	1	4/9/2021 1:24:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/9/2021 8:17:00 PM
Surr: BFB	109	70-130		%Rec	1	4/9/2021 8:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/9/2021 8:17:00 PM
Toluene	ND	0.048		mg/Kg	1	4/9/2021 8:17:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/9/2021 8:17:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/9/2021 8:17:00 PM
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	4/9/2021 8:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	59		mg/Kg	20	4/9/2021 6:15:03 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 Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: S Middle Wall 2

Project: Southern Union 2

Collection Date: 4/7/2021 12:00:00 PM

Lab ID: 2104345-018

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	170	9.5		mg/Kg	1	4/9/2021 1:34:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2021 1:34:23 PM
Surr: DNOP	93.5	70-130		%Rec	1	4/9/2021 1:34:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	11	5.0		mg/Kg	1	4/9/2021 8:36:00 PM
Surr: BFB	212	70-130	S	%Rec	1	4/9/2021 8:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 8:36:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 8:36:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 8:36:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2021 8:36:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	4/9/2021 8:36:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 6:27:28 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 Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: S Middle Wall 3

Project: Southern Union 2

Collection Date: 4/7/2021 12:06:00 PM

Lab ID: 2104345-019

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	54	9.2		mg/Kg	1	4/9/2021 1:44:13 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2021 1:44:13 PM
Surr: DNOP	96.2	70-130		%Rec	1	4/9/2021 1:44:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/9/2021 8:56:00 PM
Surr: BFB	112	70-130		%Rec	1	4/9/2021 8:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 8:56:00 PM
Toluene	ND	0.050		mg/Kg	1	4/9/2021 8:56:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/9/2021 8:56:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2021 8:56:00 PM
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	1	4/9/2021 8:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	190	60		mg/Kg	20	4/9/2021 6:39:53 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: S E Wall

Project: Southern Union 2

Collection Date: 4/7/2021 12:13:00 PM

Lab ID: 2104345-020

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: CLP
Diesel Range Organics (DRO)	9.6	9.3		mg/Kg	1	4/9/2021 1:54:05 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2021 1:54:05 PM
Surr: DNOP	102	70-130		%Rec	1	4/9/2021 1:54:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2021 9:16:00 PM
Surr: BFB	101	70-130		%Rec	1	4/9/2021 9:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/9/2021 9:16:00 PM
Toluene	0.20	0.049		mg/Kg	1	4/9/2021 9:16:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2021 9:16:00 PM
Xylenes, Total	0.40	0.098		mg/Kg	1	4/9/2021 9:16:00 PM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	4/9/2021 9:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	360	60		mg/Kg	20	4/9/2021 7:17:08 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: South Wall

Project: Southern Union 2

Collection Date: 4/7/2021 12:20:00 PM

Lab ID: 2104345-021

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	77	10		mg/Kg	1	4/10/2021 10:52:00 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/10/2021 10:52:00 AM
Surr: DNOP	105	70-130		%Rec	1	4/10/2021 10:52:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	13	4.7		mg/Kg	1	4/9/2021 8:22:21 PM
Surr: BFB	157	70-130	S	%Rec	1	4/9/2021 8:22:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	4/9/2021 8:22:21 PM
Toluene	0.059	0.047		mg/Kg	1	4/9/2021 8:22:21 PM
Ethylbenzene	0.048	0.047		mg/Kg	1	4/9/2021 8:22:21 PM
Xylenes, Total	0.70	0.094		mg/Kg	1	4/9/2021 8:22:21 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/9/2021 8:22:21 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	ND	60		mg/Kg	20	4/9/2021 7:29:33 PM

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

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

Analytical Report

Lab Order **2104345**

Date Reported: **4/13/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY

Client Sample ID: S W Wall

Project: Southern Union 2

Collection Date: 4/7/2021 12:23:00 PM

Lab ID: 2104345-022

Matrix: SOIL

Received Date: 4/8/2021 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	10	10		mg/Kg	1	4/10/2021 11:24:05 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/10/2021 11:24:05 AM
Surr: DNOP	104	70-130		%Rec	1	4/10/2021 11:24:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/9/2021 10:43:46 PM
Surr: BFB	96.8	70-130		%Rec	1	4/9/2021 10:43:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	4/9/2021 10:43:46 PM
Toluene	ND	0.047		mg/Kg	1	4/9/2021 10:43:46 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/9/2021 10:43:46 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/9/2021 10:43:46 PM
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	4/9/2021 10:43:46 PM
EPA METHOD 300.0: ANIONS						Analyst: VP
Chloride	81	60		mg/Kg	20	4/9/2021 7:41:58 PM

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: MB-59322	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 59322	RunNo: 76570								
Prep Date: 4/9/2021	Analysis Date: 4/9/2021	SeqNo: 2713637	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-59322	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 59322	RunNo: 76570								
Prep Date: 4/9/2021	Analysis Date: 4/9/2021	SeqNo: 2713638	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

Sample ID: MB-59326	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 59326	RunNo: 76570								
Prep Date: 4/9/2021	Analysis Date: 4/9/2021	SeqNo: 2713673	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-59326	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 59326	RunNo: 76570								
Prep Date: 4/9/2021	Analysis Date: 4/9/2021	SeqNo: 2713674	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: MB-59304	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 59304	RunNo: 76586								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713307	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		103	70	130			

Sample ID: LCS-59304	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 59304	RunNo: 76586								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713309	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	68.9	141			
Surr: DNOP	5.0		5.000		100	70	130			

Sample ID: 2104345-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: Base 1	Batch ID: 59304	RunNo: 76586								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713311	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	9.3	46.69	76.34	78.9	15	184			
Surr: DNOP	4.6		4.669		99.0	70	130			

Sample ID: 2104345-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: Base 1	Batch ID: 59304	RunNo: 76586								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713312	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	8.9	44.40	76.34	68.4	15	184	5.91	23.9	
Surr: DNOP	4.5		4.440		101	70	130	0	0	

Sample ID: 2104345-021AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: South Wall	Batch ID: 59308	RunNo: 76589								
Prep Date: 4/9/2021	Analysis Date: 4/10/2021	SeqNo: 2713879	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	130	10	49.75	76.64	104	15	184			
Surr: DNOP	5.5		4.975		111	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: 2104345-021AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: South Wall	Batch ID: 59308	RunNo: 76589								
Prep Date: 4/9/2021	Analysis Date: 4/10/2021	SeqNo: 2713880	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	130	9.9	49.41	76.64	100	15	184	1.57	23.9	
Surr: DNOP	5.4		4.941		109	70	130	0	0	

Sample ID: MB-59308	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 59308	RunNo: 76589								
Prep Date: 4/9/2021	Analysis Date: 4/10/2021	SeqNo: 2713881	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		102	70	130			

Sample ID: LCS-59308	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 59308	RunNo: 76589								
Prep Date: 4/9/2021	Analysis Date: 4/10/2021	SeqNo: 2713884	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.00	0	123	68.9	141			
Surr: DNOP	6.5		5.000		129	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: ics-59294	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713360	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	78.6	131			
Surr: BFB	1000		1000		104	70	130			

Sample ID: mb-59294	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713361	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	960		1000		95.6	70	130			

Sample ID: 2104345-001ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: Base 1	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713363	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	24	24.44	0	101	61.3	114			
Surr: BFB	5200		4888		106	70	130			

Sample ID: 2104345-001amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: Base 1	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713364	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	24	24.49	0	114	61.3	114	12.1	20	S
Surr: BFB	5000		4897		103	70	130	0	0	

Sample ID: ics-59307	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 59307	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713384	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		111	70	130			

Sample ID: mb-59307	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 59307	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713385	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: mb-59300	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713496	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	960		1000		95.5	70	130			

Sample ID: ics-59300	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713497	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.9	78.6	131			
Surr: BFB	1100		1000		106	70	130			

Sample ID: 2104345-021ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: South Wall	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713499	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	39	4.7	23.67	13.21	110	61.3	114			
Surr: BFB	1600		947.0		166	70	130			S

Sample ID: 2104345-021amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: South Wall	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713500	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41	4.9	24.37	13.21	115	61.3	114	4.96	20	S
Surr: BFB	1700		974.7		174	70	130	0	0	S

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: ics-59294	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713410	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.0	80	120			
Toluene	0.94	0.050	1.000	0	94.3	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.3	80	120			
Surr: 4-Bromofluorobenzene	0.88		1.000		87.6	70	130			

Sample ID: mb-59294	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713411	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	0.87		1.000		87.3	70	130			

Sample ID: 2104345-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: Base 2	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713414	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.12	0.9990	0	94.7	76.3	120			
Toluene	0.94	0.25	0.9990	0	93.7	78.5	120			
Ethylbenzene	1.0	0.25	0.9990	0	102	78.1	124			
Xylenes, Total	3.4	0.50	2.997	0.5559	93.2	79.3	125			
Surr: 4-Bromofluorobenzene	4.4		4.995		88.8	70	130			

Sample ID: 2104345-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: Base 2	Batch ID: 59294	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713415	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.12	0.9911	0	109	80	120	13.3	20	
Toluene	1.1	0.25	0.9911	0	109	80	120	14.4	20	
Ethylbenzene	1.2	0.25	0.9911	0	121	80	120	16.1	20	S
Xylenes, Total	4.0	0.50	2.973	0.5559	114	80	120	16.5	20	
Surr: 4-Bromofluorobenzene	4.5		4.955		91.4	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

Project: Southern Union 2

Sample ID: ics-59307	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 59307	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713434	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.86		1.000		85.7	70	130			

Sample ID: mb-59307	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 59307	RunNo: 76587								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713435	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.87		1.000		87.4	70	130			

Sample ID: mb-59300	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713540	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	70	130			

Sample ID: LCS-59300	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713541	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	91.7	80	120			
Toluene	0.93	0.050	1.000	0	92.6	80	120			
Ethylbenzene	0.92	0.050	1.000	0	91.7	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.5	70	130			

Sample ID: 2104345-022ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S W Wall	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713544	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9852	0	94.7	76.3	120			
Toluene	0.97	0.049	0.9852	0.01281	96.7	78.5	120			
Ethylbenzene	0.96	0.049	0.9852	0	97.5	78.1	124			
Xylenes, Total	2.9	0.099	2.956	0.03937	96.4	79.3	125			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2104345

13-Apr-21

Client: HILCORP ENERGY

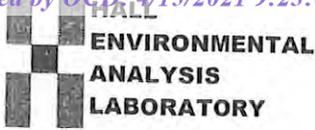
Project: Southern Union 2

Sample ID: 2104345-022ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S W Wall	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713544	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		0.9852		97.8	70	130			

Sample ID: 2104345-022amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S W Wall	Batch ID: 59300	RunNo: 76573								
Prep Date: 4/8/2021	Analysis Date: 4/9/2021	SeqNo: 2713545	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9766	0	103	80	120	7.93	20	
Toluene	1.0	0.049	0.9766	0.01281	106	80	120	7.84	20	
Ethylbenzene	1.0	0.049	0.9766	0	107	80	120	8.43	20	
Xylenes, Total	3.2	0.098	2.930	0.03937	106	80	120	8.88	20	
Surr: 4-Bromofluorobenzene	0.95		0.9766		97.1	70	130	0	0	

Qualifiers:

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



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

Sample Log-In Check List

Client Name: **HILCORP ENERGY**

Work Order Number: **2104345**

RcptNo: 1

Received By: **Juan Rojas**

4/8/2021 7:45:00 AM

Juan Rojas

Completed By: **Desiree Dominguez**

4/8/2021 8:15:24 AM

DD

Reviewed By: **JR 4/8/21**

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes No NA
- 4. Were all samples received at a temperature of >0° 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? Yes No
(Note discrepancies on chain of custody)
- 12. Are matrices correctly identified on Chain of Custody? Yes No
- 13. Is it clear what analyses were requested? Yes No
- 14. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: 10
 (<2 or >12 unless noted)
 Adjusted? 4/8/21
 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	0.4	Good	Yes			
2	0.6	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #: 505-486-9543

email or Fax#: mkillough@hilcorp.com

QA/QC Package: khoeckstra@hilcorp.com

Standard Level 4 (Full Validation)

Accreditation: Az Compliance
 NELAC Other
 EDD (Type)

Turn-Around Time: NEED RESULTS MON. 4-12-21

Standard Rush

Project Name: Southern Union #2

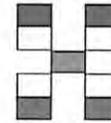
Project #:

Project Manager: Mitch Killough

Sampler: KuET

On Ice: Yes No

of Coolers: 2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MIBE / 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)	Chloride 300.0
4-7	9:19	SS	BASE # 1	(1) 4oz JAR	ON ICE	-001	X	X								X	
"	9:25	"	BASE # 2	"	"	-002	X	X								X	
"	9:30	"	BASE # 3	"	"	-003	X	X								X	
"	9:37	"	BASE # 4	"	"	-004	X	X								X	
"	9:43	"	BASE # 5	"	"	-005	X	X								X	
"	9:49	"	BASE # 6	"	"	-006	X	X								X	
"	9:57	"	BASE # 7	"	"	-007	X	X								X	
"	10:03	"	BASE # 8	"	"	-008	X	X								X	
"	10:11	"	BASE # 9	"	"	-009	X	X								X	
"	11:14	"	WEST WALL #1	"	"	-010	X	X								X	
"	11:18	"	WEST WALL #2	"	"	-011	X	X								X	

Date: <u>4-7</u>	Time: <u>1719</u>	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Via:	Date: <u>4/7/21</u>	Time: <u>1719</u>
Date: <u>4/1/21</u>	Time: <u>1847</u>	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Via:	Date: <u>4/18/21</u>	Time: <u>7:45</u>

Remarks:

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 24279

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 24279
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/2/2022