

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	
District RP	
Facility ID	
Application ID	

Release Notification

DENIED

Responsible Party

Responsible Party: Hilcorp Energy Company	OGRID: 372171
Contact Name: Lindsay Dumas	Contact Telephone: 832-839-4585
Contact email: Ldumas@hilcorp.com	Incident # (assigned by OCD)
Contact mailing address: 1111 Travis St. Houston, TX 77002	

Location of Release Source

Latitude 36.5631485 _____ Longitude -107.2507401 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: San Juan 27-4 Unit 60	Site Type: Gas
Date Release Discovered: 4-16-19	API# (if applicable) 30-039-20484

Unit Letter	Section	Township	Range	County
A	21	27N	04W	Rio Arriba

Release does not meet
The reclamation requirements
of 19.15.29.13 NMAC
Please review the requirements and
resubmit C-141 no later than
February 1, 2021

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) 5	Volume Recovered (bbls) 5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

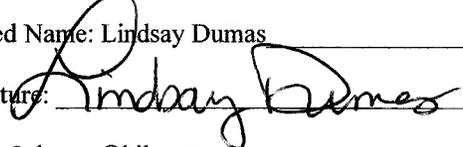
Release discovered by NMOCD inspector Jonathan Kelly. The BGT has been out of service for the last three years. Snow melt entered the pit and cribbing area, mixing with BS&W in the pit and exited via a corrosion hole in the pit.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: Lindsay Dumas _____ Title: Environmental Specialist _____ Signature:  _____ Date: 6-15-20 _____ email: Ldumas@hilcorp.com _____ Telephone: 832-839-4585 _____
<u>OCD Only</u> Received by: _____ Date: _____

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Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input 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.*

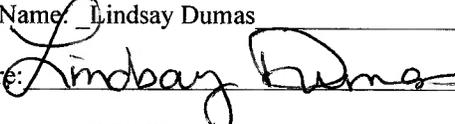
- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the 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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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: Lindsay Dumas Title: Environmental Specialist
 Signature:  Date: 6-15-20
 email: Ldumas@hilcorp.com Telephone: 832-839-4585

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

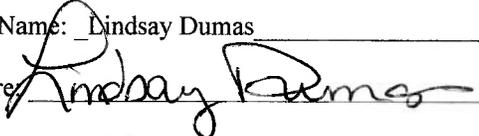
Closure

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: Lindsay Dumas Title: Environmental Specialist
 Signature:  Date: 6-15-20
 email: Ldumas@hilcorp.com Telephone: 832-839-4585

OCD Only

Received by: _____ Date: _____

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: **DENIED** Date: _____

Printed Name: _____ Title: _____

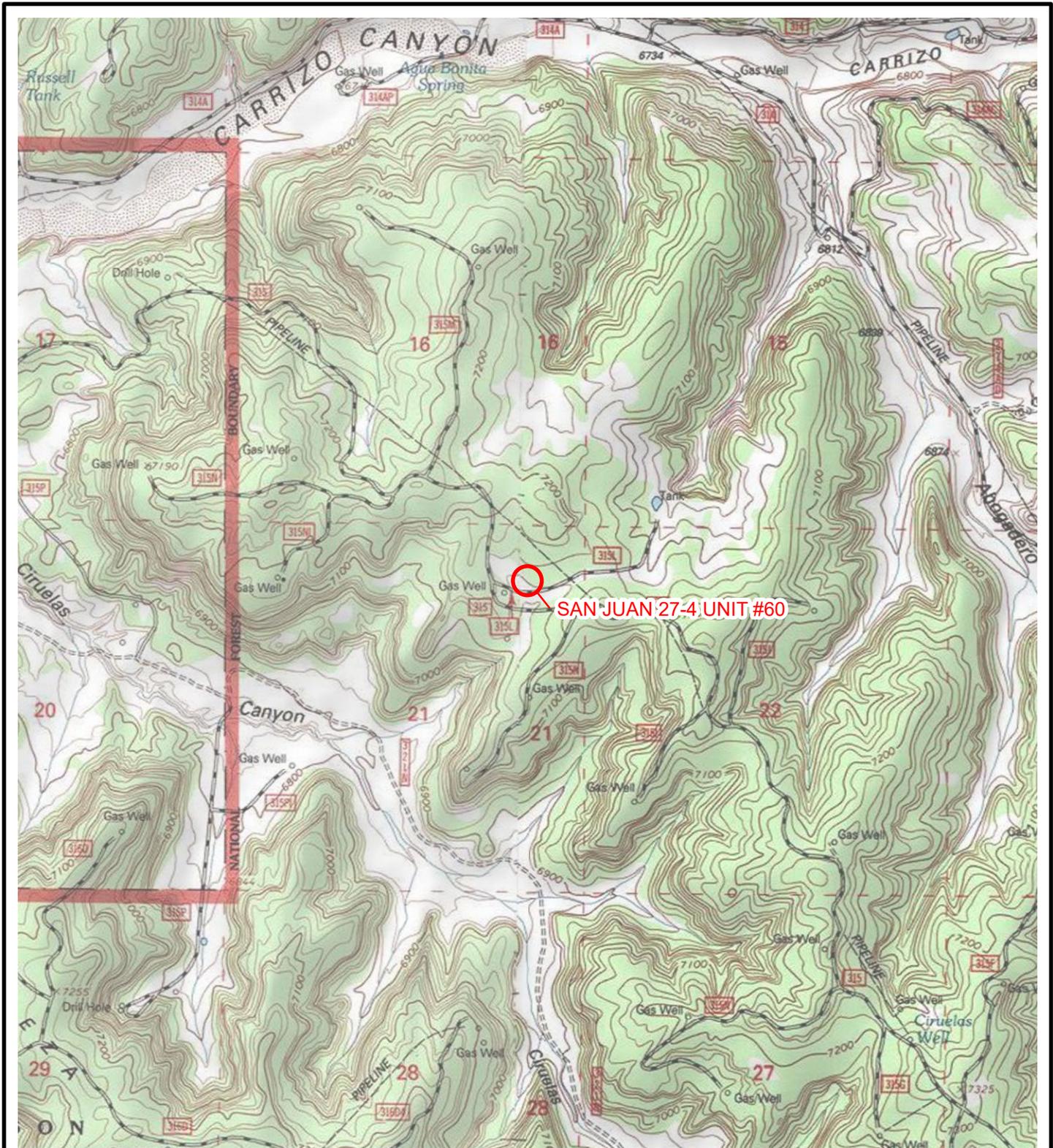


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION

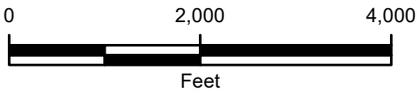


FIGURE 1
SITE LOCATION MAP
SAN JUAN 27-4 UNIT #60
NENE SEC 21-T27N-R4W
RIO ARRIBA COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY





IMAGE COURTESY OF GOOGLE EARTH 2016

LEGEND

● SOIL SAMPLE

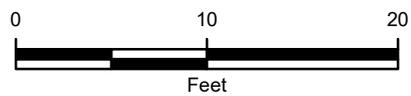


FIGURE 2
SOIL SAMPLE LOCATIONS MAP
SAN JUAN 27-4 UNIT #60
NENE SEC 21-T27N-R4W
RIO ARriba COUNTY, NEW MEXICO
HILCORP ENERGY COMPANY



Data table of soil contaminant concentration data

TABLE 1

SOIL ANALYTICAL RESULTS

SJ 27-4 #60

HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	GRO+DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
Comp A	1/27/2020	0	0	0	0	0	0.00	0	270	270	168	438
NMOCD Standards		20,000	10				50			1000		2,500

Depth to water determination

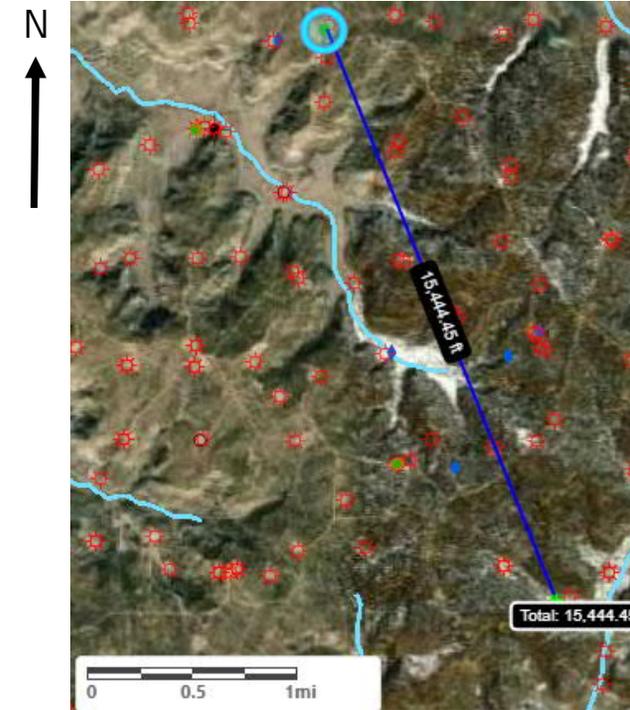


New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)		(NAD83 UTM in meters)		X	Y
SJ 01205		Q64	Q16	Q4	Sec	Tws	Rng
		4	4	4	34	27N	04W
						300255	4044335*
Driller License:	727	Driller Company:	AZTEC WELL SERVICING CO. INC.				
Driller Name:	SANDEL, JERRY						
Drill Start Date:	10/18/1980	Drill Finish Date:	10/25/1980	Plug Date:			
Log File Date:	11/20/1980	PCW Rcv Date:	12/22/1980	Source:	Artesian		
Pump Type:	SUBMER	Pipe Discharge Size:	2	Estimated Yield:			
Casing Size:	7.63	Depth Well:	3054 feet	Depth Water:	750 feet		

Water Bearing Stratifications:	Top	Bottom	Description
	892	3004	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	792	3004



Elevation of SJ 27-4 #60: 7135'

Elevation of POD 01205: 7021'
GW at POD: 750'

Estimated GW at 27-4 #60:
6271', 864' to GW

*UTM location was derived from PLSS - see Help

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.

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



PHOTOGRAPHIC LOG



Photograph 1: View of the Site from the South.



Photograph 2: View of the removed pit tank.



Photograph 3: View of the Site from the southeast.



Photograph 4: View of the former pit tank location.

Lindsay Dumas

From: Eric Carroll <ecarroll@ltenv.com>
Sent: Friday, January 24, 2020 5:31 PM
To: jonathan.kelly@state.nm.us
Cc: Lindsay Dumas; Devin Hencmann
Subject: [EXTERNAL] San Juan 27-4 #60

Jonathan,

On behalf of Hilcorp Energy, we are sending notification for closure sampling to be conducted on Monday 1/27/2020 at the San Juan 27-4 #60 API # 30-039-20484. We plan to be on site around 11:00 AM. You can contact myself, or Lindsay Dumas with Hilcorp at 281-794-9159.

Thank You,



Eric Carroll
Staff Geologist
720.908.1995 cell
970.385.1096 office
848 East 2nd Avenue, Durango, CO 81301

www.ltenv.com



Think before you print. [Click for our email disclosure.](#)

Summary of events

- Release was discovered by NMOCD Inspector Jonathan Kelly. The BGT had been out of service for the last three years. Snow melt entered the pit and cribbing area, mixing with BS&W in the pit and exited via a corroded hole in the pit.
- HEC sampled the pit area on 1/27/20
- All samples below NMOCD remediation levels, no remediation needed.
- The BGT is no longer in service.



Analytical Report

Report Summary

Client: Hilcorp Energy Co

Samples Received: 1/27/2020

Job Number: 17051-0002

Work Order: P001084

Project Name/Location: SJ 27-4 #60

Report Reviewed By:

A handwritten signature in black ink that reads 'Walter Hinchman'.

Date: 1/29/20

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted otherwise.
 Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
 Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
 Envirotech, Inc, holds the Utah TNi certification NM009792018-1 for the data reported.
 Envirotech, Inc, holds the Texas TNi certification T104704557-19-2 for the data reported.



Hilcorp Energy Co	Project Name:	SJ 27-4 #60	
PO Box 61529	Project Number:	17051-0002	Reported:
Houston TX, 77208	Project Manager:	Eric Carroll	01/29/20 14:54

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
CompA	P001084-01A	Soil	01/27/20	01/27/20	Glass Jar, 4 oz.
	P001084-01B	Soil	01/27/20	01/27/20	Glass Jar, 4 oz.

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Hilcorp Energy Co	Project Name: SJ 27-4 #60	Reported: 01/29/20 14:54
PO Box 61529	Project Number: 17051-0002	
Houston TX, 77208	Project Manager: Eric Carroll	

CompA
P001084-01 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %		70-130	2005016	01/28/20	01/28/20	EPA 8260B	
<i>Surrogate: Toluene-d8</i>		97.3 %		70-130	2005016	01/28/20	01/28/20	EPA 8260B	
<i>Surrogate: Bromofluorobenzene</i>		91.5 %		70-130	2005016	01/28/20	01/28/20	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	270	25.0	mg/kg	1	2005018	01/28/20	01/28/20	EPA 8015D	
Oil Range Organics (C28-C40)	168	50.0	mg/kg	1	2005018	01/28/20	01/28/20	EPA 8015D	
<i>Surrogate: n-Nonane</i>		109 %		50-200	2005018	01/28/20	01/28/20	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	2005016	01/28/20	01/28/20	EPA 8015D	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %		70-130	2005016	01/28/20	01/28/20	EPA 8015D	
<i>Surrogate: Toluene-d8</i>		97.3 %		70-130	2005016	01/28/20	01/28/20	EPA 8015D	
<i>Surrogate: Bromofluorobenzene</i>		91.5 %		70-130	2005016	01/28/20	01/28/20	EPA 8015D	

Anions by 300.0/9056A

Chloride	ND	20.0	mg/kg	1	2005017	01/28/20	01/28/20	EPA 300.0/9056A	
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Hilcorp Energy Co
PO Box 61529
Houston TX, 77208

Project Name: SJ 27-4 #60
Project Number: 17051-0002
Project Manager: Eric Carroll

Reported:
01/29/20 14:54

Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2005016 - Purge and Trap EPA 5030A

Blank (2005016-BLK1)

Prepared & Analyzed: 01/28/20 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 1,2-Dichloroethane-d4	0.546		"	0.500		109	70-130			
Surrogate: Toluene-d8	0.485		"	0.500		97.0	70-130			
Surrogate: Bromofluorobenzene	0.442		"	0.500		88.3	70-130			

LCS (2005016-BS1)

Prepared & Analyzed: 01/28/20 1

Benzene	2.54	0.0250	mg/kg	2.50		102	70-130			
Toluene	2.43	0.0250	"	2.50		97.4	70-130			
Ethylbenzene	2.40	0.0250	"	2.50		96.1	70-130			
p,m-Xylene	5.00	0.0500	"	5.00		100	70-130			
o-Xylene	2.38	0.0250	"	2.50		95.1	70-130			
Total Xylenes	7.38	0.0250	"	7.50		98.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.532		"	0.500		106	70-130			
Surrogate: Toluene-d8	0.507		"	0.500		101	70-130			
Surrogate: Bromofluorobenzene	0.482		"	0.500		96.4	70-130			

Matrix Spike (2005016-MS1)

Source: P001076-01

Prepared & Analyzed: 01/28/20 1

Benzene	2.30	0.0250	mg/kg	2.50	ND	92.2	48-131			
Toluene	2.17	0.0250	"	2.50	ND	86.9	48-130			
Ethylbenzene	2.15	0.0250	"	2.50	ND	86.1	45-135			
p,m-Xylene	4.48	0.0500	"	5.00	ND	89.5	43-135			
o-Xylene	2.13	0.0250	"	2.50	ND	85.1	43-135			
Total Xylenes	6.60	0.0250	"	7.50	ND	88.0	43-135			
Surrogate: 1,2-Dichloroethane-d4	0.537		"	0.500		107	70-130			
Surrogate: Toluene-d8	0.497		"	0.500		99.3	70-130			
Surrogate: Bromofluorobenzene	0.475		"	0.500		95.0	70-130			

Matrix Spike Dup (2005016-MSD1)

Source: P001076-01

Prepared & Analyzed: 01/28/20 1

Benzene	2.46	0.0250	mg/kg	2.50	ND	98.6	48-131	6.69	23	
Toluene	2.33	0.0250	"	2.50	ND	93.1	48-130	6.98	24	
Ethylbenzene	2.31	0.0250	"	2.50	ND	92.2	45-135	6.84	27	
p,m-Xylene	4.78	0.0500	"	5.00	ND	95.5	43-135	6.47	27	
o-Xylene	2.28	0.0250	"	2.50	ND	91.0	43-135	6.75	27	
Total Xylenes	7.05	0.0250	"	7.50	ND	94.0	43-135	6.56	27	
Surrogate: 1,2-Dichloroethane-d4	0.533		"	0.500		107	70-130			
Surrogate: Toluene-d8	0.498		"	0.500		99.5	70-130			
Surrogate: Bromofluorobenzene	0.486		"	0.500		97.2	70-130			

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Hilcorp Energy Co PO Box 61529 Houston TX, 77208	Project Name: SJ 27-4 #60 Project Number: 17051-0002 Project Manager: Eric Carroll	Reported: 01/29/20 14:54
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Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2005018 - DRO Extraction EPA 3570

Blank (2005018-BLK1)

Prepared: 01/28/20 1 Analyzed: 01/29/20 0

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	53.9		"	50.0		108	50-200			

LCS (2005018-BS1)

Prepared: 01/28/20 1 Analyzed: 01/29/20 0

Diesel Range Organics (C10-C28)	442	25.0	mg/kg	500		88.3	38-132			
Surrogate: n-Nonane	45.4		"	50.0		90.9	50-200			

Matrix Spike (2005018-MS1)

Source: P001084-01

Prepared: 01/28/20 1 Analyzed: 01/29/20 0

Diesel Range Organics (C10-C28)	1490	25.0	mg/kg	500	270	244	38-132			M2
Surrogate: n-Nonane	47.5		"	50.0		95.0	50-200			

Matrix Spike Dup (2005018-MSD1)

Source: P001084-01

Prepared: 01/28/20 1 Analyzed: 01/29/20 0

Diesel Range Organics (C10-C28)	1520	25.0	mg/kg	500	270	250	38-132	2.10	20	M2
Surrogate: n-Nonane	47.2		"	50.0		94.5	50-200			

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Hilcorp Energy Co	Project Name:	SJ 27-4 #60	Reported: 01/29/20 14:54
PO Box 61529	Project Number:	17051-0002	
Houston TX, 77208	Project Manager:	Eric Carroll	

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2005016 - Purge and Trap EPA 5030A

Blank (2005016-BLK1)

Prepared & Analyzed: 01/28/20 1

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	0.546		"	0.500		109	70-130			
Surrogate: Toluene-d8	0.485		"	0.500		97.0	70-130			
Surrogate: Bromofluorobenzene	0.442		"	0.500		88.3	70-130			

LCS (2005016-BS2)

Prepared & Analyzed: 01/28/20 1

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (C6-C10)	46.1	20.0	mg/kg	50.0		92.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.537		"	0.500		107	70-130			
Surrogate: Toluene-d8	0.506		"	0.500		101	70-130			
Surrogate: Bromofluorobenzene	0.465		"	0.500		92.9	70-130			

Matrix Spike (2005016-MS2)

Source: P001076-01

Prepared & Analyzed: 01/28/20 1

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (C6-C10)	43.4	20.0	mg/kg	50.0	ND	86.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.528		"	0.500		106	70-130			
Surrogate: Toluene-d8	0.497		"	0.500		99.3	70-130			
Surrogate: Bromofluorobenzene	0.466		"	0.500		93.2	70-130			

Matrix Spike Dup (2005016-MSD2)

Source: P001076-01

Prepared & Analyzed: 01/28/20 1

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (C6-C10)	44.6	20.0	mg/kg	50.0	ND	89.2	70-130	2.61	20	
Surrogate: 1,2-Dichloroethane-d4	0.501		"	0.500		100	70-130			
Surrogate: Toluene-d8	0.503		"	0.500		101	70-130			
Surrogate: Bromofluorobenzene	0.472		"	0.500		94.4	70-130			

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Hilcorp Energy Co PO Box 61529 Houston TX, 77208	Project Name: SJ 27-4 #60 Project Number: 17051-0002 Project Manager: Eric Carroll	Reported: 01/29/20 14:54
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Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2005017 - Anion Extraction EPA 300.0/9056A

Blank (2005017-BLK1)

Prepared & Analyzed: 01/28/20 1

Chloride	ND	20.0	mg/kg							
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LCS (2005017-BS1)

Prepared & Analyzed: 01/28/20 1

Chloride	247	20.0	mg/kg	250	869	98.8	90-110			
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Matrix Spike (2005017-MS1)

Source: P001075-01

Prepared & Analyzed: 01/28/20 1

Chloride	1100	20.0	mg/kg	250	869	90.7	80-120			
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Matrix Spike Dup (2005017-MSD1)

Source: P001075-01

Prepared & Analyzed: 01/28/20 1

Chloride	1150	20.0	mg/kg	250	869	112	80-120	4.77	20	
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Hilcorp Energy Co	Project Name:	SJ 27-4 #60	
PO Box 61529	Project Number:	17051-0002	Reported:
Houston TX, 77208	Project Manager:	Eric Carroll	01/29/20 14:54

Notes and Definitions

M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

** Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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Received by: QCD-6/15/2020 5:55:31 AM
6 of 6 added

Client: <u>Hillcorp</u> Project: <u>SJ 27-4 #60</u> Project Manager: <u>Eric Carroll</u> Address: <u>PO Box 61529</u> City, State, Zip: _____ Phone: <u>832-8391-4585</u> Email: <u>ecarroll@henvi.com</u> <u>mrdjenovich@henvi.com</u>	Report Attention Report due by: _____ Attention: _____ Address: _____ City, State, Zip: _____ Phone: _____ Email: _____	Lab Use Only Lab WO# <u>P 001084</u> Job Number <u>17051-0002</u>	TAT 1D <input type="checkbox"/> 3D <input type="checkbox"/>	EPA Program RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/>
Analysis and Method				
DRO/ORO by 8015 <input type="checkbox"/> GRO/DRO by 8015 <input type="checkbox"/> BTEX by 8021 <input type="checkbox"/> VOC by 8260 <input type="checkbox"/> Metals 6010 <input type="checkbox"/> Chloride 300.0 <input type="checkbox"/>				

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TAT	RCRA	CWA	SDWA	Remarks	
14:20	1/27/20	S	2,402	Comp A	1	X	X	X			X						

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Mary Mrdjenovich

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <u>Max Muff</u>	Date <u>1/27/20</u>	Time <u>16:45</u>	Received by: (Signature) <u>Rain Lopez</u>	Date <u>1/27/20</u>	Time <u>16:45</u>	Lab Use Only Received on ice: Y / (N) <u>RL</u> T1 <u>7.6</u> ^{RL} 5.8 T2 <u>7.8</u> ^{RL} 4.9 T3 _____ AVG Temp °C <u>5.4</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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