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	NCS1903152646
District RP	
Facility ID	FES1436331540
Application ID	3RP-1021

Release Notification

Responsible Party

Responsible Party Hilcorp Energy Company	OGRID 372171
Contact Name Jennifer Deal	Contact Telephone 505-801-6517
Contact email jdeal@hilcorp.com	Incident # NCS1903152646
Contact mailing address 382 Road 3100, Aztec NM 87410	

NMOCD
FEB 08 2019
DISTRICT III

Location of Release Source

Latitude 36.928798 Longitude -107.685633

(NAD 83 in decimal degrees to 5 decimal places)

Site Name San Juan 10-2 Water line (Near SJ 32-8 242A)	Site Type Pipeline
Date Release Discovered 1/14/2019 @ 2:30pm	API#

Unit Letter	Section	Township	Range	County
E	4	31N	08W	San Juan

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Tommy Bolack Trust*)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 12	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A release of ~12bbls of produced water was released due to internal corrosion on the pipeline. Pipeline CP tech arrived on location and found leak while performing cathodic protection survey. Shut in waterline and turned in one call. Excavated and repaired leak. Water was pooled approximately 20 x 30' but was very shallow. Release remained on pipeline right of way.

State of New Mexico
Oil Conservation Division

Incident ID	NCS1903152646
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NCS1903152646
District RP	
Facility ID	
Application ID	

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

Printed Name: Jennifer Deal Title: Environmental Specialist

Signature: Jennifer Deal Date: 2/7/2019

email: jdeal@hilcorp.com Telephone: (505) 324-5128

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NCS1903152646
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: Jennifer Deal Title: Environmental Specialist

Signature: Jennifer Deal Date: 2/7/2019

email: jdeal@hilcorp.com Telephone: 505-801-6517

OCD Only

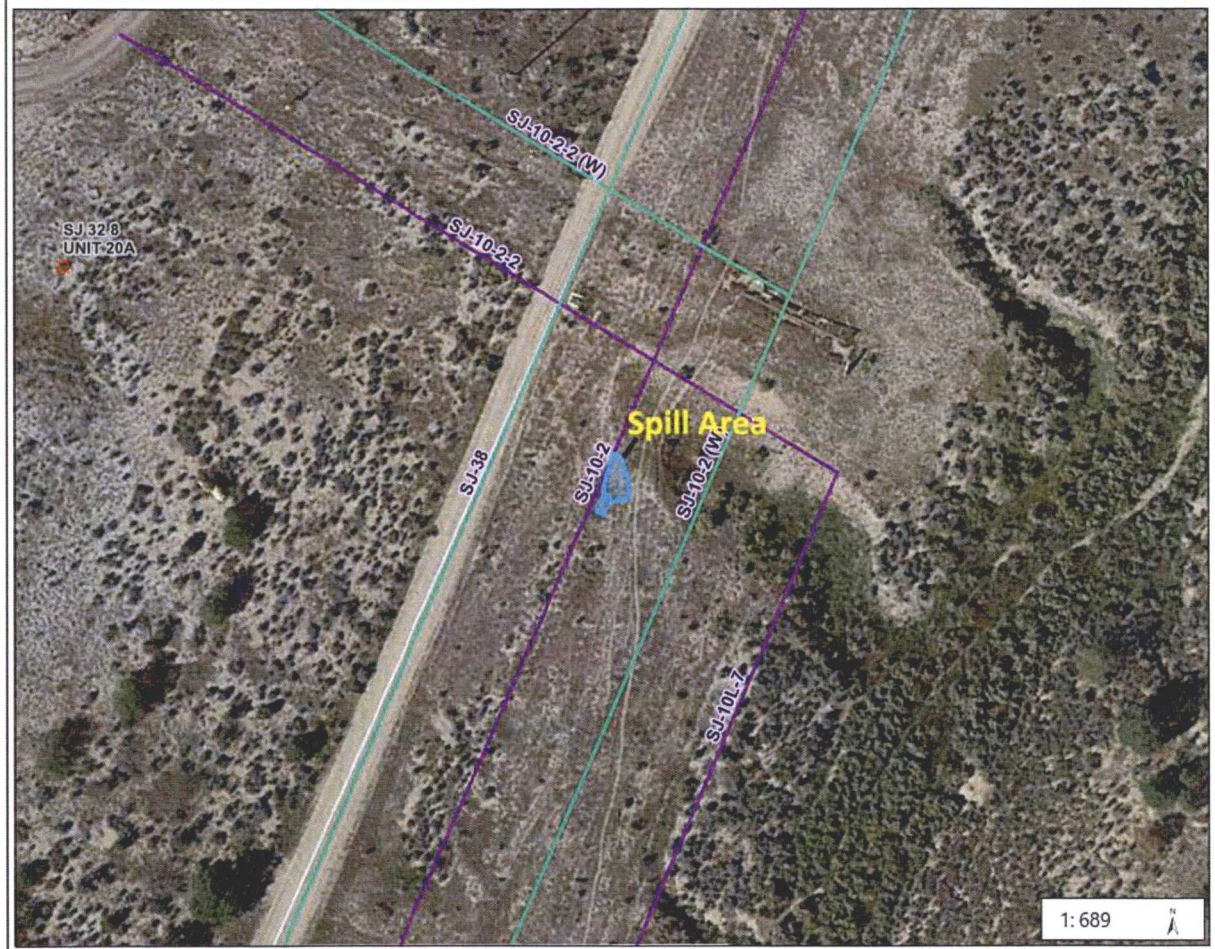
Received by: Vanessa Fields Date: 2/08/2019

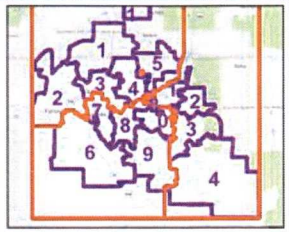
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: Date: 2/20/2019

Printed Name: Vanessa Fields Title: Environmental Specialist

Pipeline leak near 32-8 242A





Legend

- Hilcorp Wells Surface Location
  - Gas Well
  - Oil Well
  - Oil and Gas
  - SWD
  - Injection Well
  - Abandoned Loc
  - Location
  - Other Location
- Hilcorp Operated Waterline
- Hilcorp Operated Pipeline
- SJB Roads
- Asset Teams Outline
- Supervisor Areas, outline

Notes

0.0 0 0.01 0.0 Miles

This map is to be used for internal Hilcorp or Harvest purposes only.
Not survey quality.

NAD_1927_StatePlane_New_Mexico_West_FIPS_3003

Topographic/Aerial Maps

N

Photographs – Spill Event (1/14/19)

Depth to water determination

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

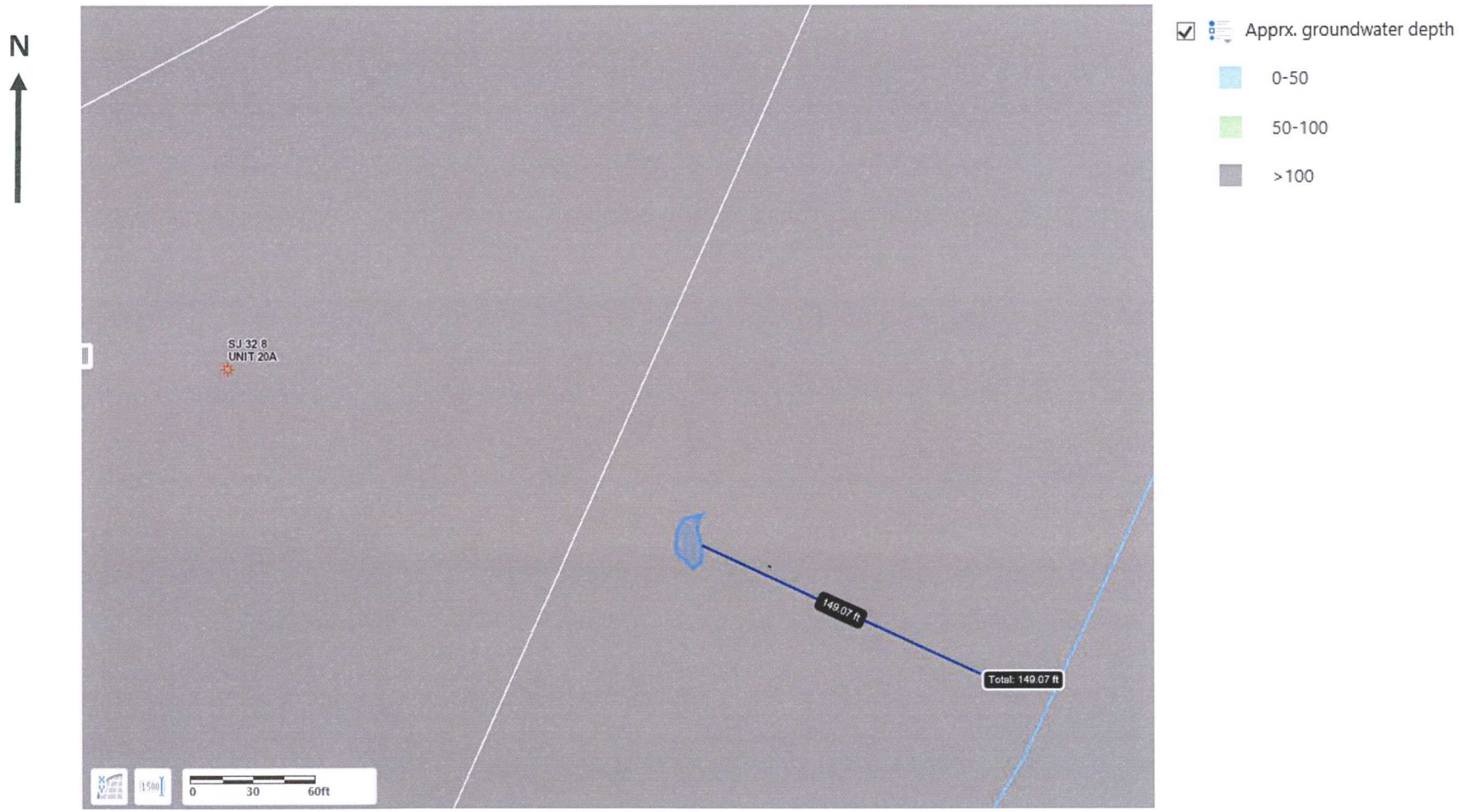
(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

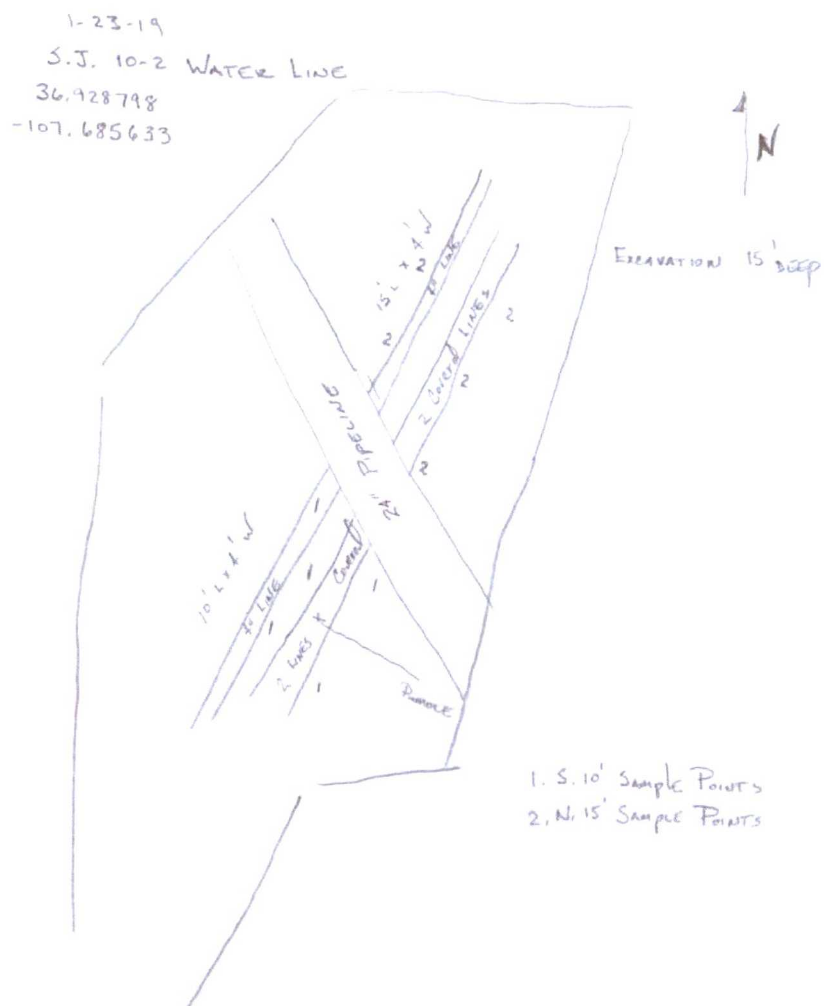
Section(s): 4 **Township:** 31N **Range:** 08W

Depth to water determination



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

Field Data

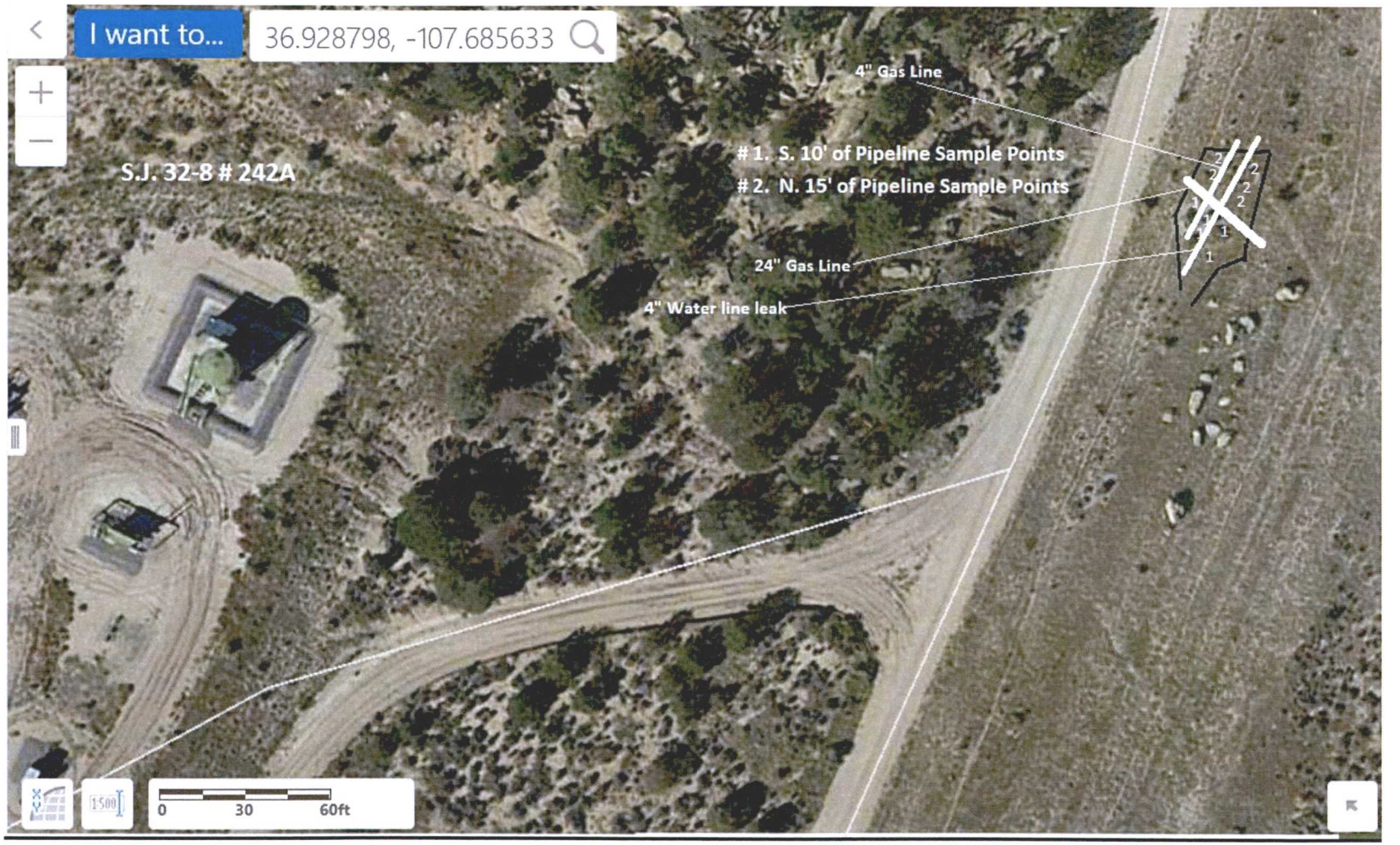

1-23-19
S.J. 10-2 WATER LINE
36.928798
-107.685633
N
EXCAVATION 15' DEEP
15' L x 4' W
24" PIPELINE
2 Covered LINES
10' L x 4' W
2 LINES
1. S. 10' Sample Points
2. N. 15' Sample Points

Data table of soil contaminant concentration data

SOIL ANALYTICAL RESULTS
SJ 10-2 Water Line (Near 32-8 242A)
HILCORP ENERGY - L48 WEST

Soil Sample Identification	Sample Date	Field Headspace	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes	Total BTEX	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
S. 10' of Pipeline	1/23/2019		<0.021	<0.043	<0.043	<0.085	<0.085	360	<4.3	<9.9	<50	<50
N. 15' of Pipeline	1/23/2019		<0.019	<0.037	<0.037	<0.075	<0.075	<30	<3.7	<9.5	<48	<48
NMOCD Standards		**NE**	**10**	**NE**	**NE**	**NE**	**50**	**600**	**NE**	**NE**	**NE**	**100**

Photographs – 1/23/19 Sampling Event



Photographs – 1/23/2019 Sampling Event

North Of Pipeline

South of Pipeline

Photographs – After cleanup

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 25, 2019

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

RE: SJ 10-2 Water Line OrderNo.: 1901929

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/24/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Project: SJ 10-2 Water Line
Lab ID: 1901929-001 **Matrix:** SOIL

Client Sample ID: S. 10' of Pipeline
Collection Date: 1/23/2019 2:02:00 PM
Received Date: 1/24/2019 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/24/2019 10:15:03 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/24/2019 10:15:03 AM
Surr: DNOP	92.8	50.6-138		%Rec	1	1/24/2019 10:15:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	1/24/2019 9:33:00 AM
Surr: BFB	93.6	73.8-119		%Rec	1	1/24/2019 9:33:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.021		mg/Kg	1	1/24/2019 9:33:00 AM
Toluene	ND	0.043		mg/Kg	1	1/24/2019 9:33:00 AM
Ethylbenzene	ND	0.043		mg/Kg	1	1/24/2019 9:33:00 AM
Xylenes, Total	ND	0.085		mg/Kg	1	1/24/2019 9:33:00 AM
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	1/24/2019 9:33:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **smb**
Chloride	360	30		mg/Kg	20	1/24/2019 11:18:59 AM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HILCORP ENERGY
Project: SJ 10-2 Water Line
Lab ID: 1901929-002 **Matrix:** SOIL

Client Sample ID: N. 15' of Pipeline
Collection Date: 1/23/2019 2:10:00 PM
Received Date: 1/24/2019 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/24/2019 10:39:22 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/24/2019 10:39:22 AM
Surr: DNOP	95.3	50.6-138		%Rec	1	1/24/2019 10:39:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	1/24/2019 9:56:25 AM
Surr: BFB	92.2	73.8-119		%Rec	1	1/24/2019 9:56:25 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.019		mg/Kg	1	1/24/2019 9:56:25 AM
Toluene	ND	0.037		mg/Kg	1	1/24/2019 9:56:25 AM
Ethylbenzene	ND	0.037		mg/Kg	1	1/24/2019 9:56:25 AM
Xylenes, Total	ND	0.075		mg/Kg	1	1/24/2019 9:56:25 AM
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	1/24/2019 9:56:25 AM
EPA METHOD 300.0: ANIONS						Analyst: **smb**
Chloride	ND	30		mg/Kg	20	1/24/2019 11:31:23 AM

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901929**

25-Jan-19

Client: HILCORP ENERGY
Project: SJ 10-2 Water Line

Sample ID	MB-42787	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	42787		RunNo:	57227				
Prep Date:	1/24/2019	Analysis Date:	1/24/2019		SeqNo:	1914764	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-42787	SampType:	LCS		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS	Batch ID:	42787		RunNo:	57227				
Prep Date:	1/24/2019	Analysis Date:	1/24/2019		SeqNo:	1914765	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901929**

25-Jan-19

Client: HILCORP ENERGY
Project: SJ 10-2 Water Line

Sample ID **LCS-42783** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **42783** RunNo: **57213**
Prep Date: **1/24/2019** Analysis Date: **1/24/2019** SeqNo: **1913802** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.1	63.9	124			
Surr: DNOP	4.5		5.000		89.1	50.6	138			

Sample ID **MB-42783** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **42783** RunNo: **57213**
Prep Date: **1/24/2019** Analysis Date: **1/24/2019** SeqNo: **1913803** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		89.9	50.6	138			

Sample ID **1901929-002AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **N. 15' of Pipeline** Batch ID: **42783** RunNo: **57213**
Prep Date: **1/24/2019** Analysis Date: **1/24/2019** SeqNo: **1914092** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.5	47.62	2.308	84.4	53.5	126			
Surr: DNOP	4.3		4.762		91.3	50.6	138			

Sample ID **1901929-002AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **N. 15' of Pipeline** Batch ID: **42783** RunNo: **57213**
Prep Date: **1/24/2019** Analysis Date: **1/24/2019** SeqNo: **1914093** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	49.75	2.308	86.3	53.5	126	6.26	21.7	
Surr: DNOP	4.6		4.975		91.9	50.6	138	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901929**

25-Jan-19

Client: HILCORP ENERGY

Project: SJ 10-2 Water Line

Sample ID	MB-42770	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	42770	RunNo:	57224					
Prep Date:	1/23/2019	Analysis Date:	1/24/2019	SeqNo:	1914524	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	970		1000		96.5	73.8	119			

Sample ID	LCS-42770	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	42770	RunNo:	57224					
Prep Date:	1/23/2019	Analysis Date:	1/24/2019	SeqNo:	1914525	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	80.1	123			
Surr: BFB	1100		1000		110	73.8	119			

Sample ID	MB-42756	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	42756	RunNo:	57224					
Prep Date:	1/23/2019	Analysis Date:	1/24/2019	SeqNo:	1914546	Units:	%Rec			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.3	73.8	119			

Sample ID	LCS-42756	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	42756	RunNo:	57224					
Prep Date:	1/23/2019	Analysis Date:	1/24/2019	SeqNo:	1914547	Units:	%Rec			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	73.8	119			

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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901929**

25-Jan-19

Client: HILCORP ENERGY

Project: SJ 10-2 Water Line

Sample ID **MB-42770**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **42770**	RunNo: **57224**
Prep Date: **1/23/2019**	Analysis Date: **1/24/2019**	SeqNo: **1914566** 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	0.96		1.000		95.6	80	120			

Sample ID **LCS-42770**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **42770**	RunNo: **57224**
Prep Date: **1/23/2019**	Analysis Date: **1/24/2019**	SeqNo: **1914567** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.8	80	120			
Toluene	0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.3	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.1	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.9	80	120			

Sample ID **MB-42756**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **42756**	RunNo: **57224**
Prep Date: **1/23/2019**	Analysis Date: **1/24/2019**	SeqNo: **1914588** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.4	80	120			

Sample ID **LCS-42756**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **42756**	RunNo: **57224**
Prep Date: **1/23/2019**	Analysis Date: **1/24/2019**	SeqNo: **1914589** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: HILCORP ENERGY FAR Work Order Number: 1901929 RcptNo: 1

Received By: Anne Thorne 1/24/2019 8:15:00 AM Anne Thorne

Completed By: Anne Thorne 1/24/2019 8:20:39 AM Anne Thorne

Reviewed By: JO 1/24/2019

Labeled by: AT 01/24/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Hilcorp

Mailing Address:

Phone #:

email or Fax#: jdeal@hilcorp.com

QA/QC Package: khoekstra@hilcorp.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush SAME DAY

Project Name: S.J. 10-2 WATER LINE

Project #:

Project Manager: JENNIFER DEAL

Sampler: KURT

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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 Request ID	Container Type and #	Preservative Type	HEAL No. 1901829	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
1-23	2:02	Soil	S. 10' OF PIPELINE	(1) 4oz. JAR	ON ICE	001	X		X									X				
1-23	2:10	Soil	N. 15' OF PIPELINE	(1) 4oz JAR	ON ICE	002	X		X									X				

Date	Time	Relinquished by:	Received by:	Date	Time
1-23	1645	Kurt Hoekstra		1/23/19	1645
1/23/19	1829			01/24/19	0815

Remarks:

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