December 27, 2019

NMOCD District 1
1625 N. French Drive
Hobbs, NM 88240

RE: Remediation and Closure Report for the Libby Oil Terminal Spill on 9/13/2019
OCD Incident ID: NRM1927531903

This Remediation Closure Report describes the remediation of the release of oil at the Libby Oil Terminal that occurred on September 13, 2019 during the construction of the terminal. This report contains the required information on the C-141 form. The site is in Section 26, Township 20S, Range 34E, Lea County, New Mexico, on private land. Table 1 summarizes the release information and Table 2 outlines the closure criteria.

Table 1: Release Information

Name	Libby Oil Terminal	Company	3 Bear Delaware Operating NM, LLC
API Number	NA	Location	Lea County, NM
Incident Number	NRM1927531903		
Estimated Date of Release	9/13/2019	Date Reported to NMOCD	9/26/2019
Landowner	Private	Reported To	NMOCD
Source of Release	Valve on 6" liquid rural gathering line		
Released Volume	22	Released Material	Crude oil
Recovered Volume	21 bbls	Net Release	1 bbls
Depth to Groundwater	>100 feet, depth to groundwater at site is 719 ft		

Table 2: OCD Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

1.0 Background

On September 13, 2019, a release was discovered to due a leaking valve on a 6" crude oil line. The release occurred at the Libby Oil Terminal site which was under construction at the time. The point of release was close to an excavated trench. Work was occurring in the area due to the construction

Figures 1 and 2 illustrate the vicinity and site location. The C-141 Initial Spill Notification form received by OCD is in Appendix A.

2.0 Site Information and Closure Criteria

The Libby Oil Terminal is located approximately 25 miles west of Hobbs, New Mexico on private land at an elevation of approximately 3720 feet above mean sea level (amsl).

Based upon New Mexico Office of the State Engineer (NMOSE) online water well database (Figure 3), depth to groundwater in the area is estimated to be an average depth to water at 719 feet below grade surface (bgs). The nearest watercourse is approximately 3/4 mile upgradient to the south, an unnamed drainage (Figure 1).

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for groundwater depth of greater than or equal to 100 feet bgs. The closure criteria for the concentration of for BTEX is 50 mg/kg and Benzene 10 mg/kg.

3.0 Release Characterization and Remediation Activities

- On September 13, 2019 a release of 22 bbls of crude oil was found at the Libby Oil Terminal. The spill flowed to a trench that was open due to the construction at the site.
- A leaking valve on a 6" crude oil rural gathering line was determined to be the leak source.
- On September 13, 2019 a vac truck was called to the site and the liquids that collected in the trench were vacuumed into the truck.

- On September 14, 2019 the areas of oily stained soil were excavated. Approximately 4 cubic yards were excavated and disposed of at a landfarm.
- HRL Compliance Solutions came to the site and took two composite samples on September 17, 2019. CS-1 sample was taken in the trench and CS-2 was taken at the origin of the spill.
- Results from Hall Environmental Analysis Laboratory dated 9/18/2019 indicated that the composite sample from the trench (CS-1) did not meet the closure criteria.
- An additional composite sample (CS-3) of the trench was taken on September 27, 2019.
- On September 27, 2019 it was observed that there were still some oil stained soils in the trench.
- Additional area was excavated from the trench and another composite sample was taken on 10/1/2019.
- Results dated 10/2/2019 from Cardinal Laboratory indicated that all the closure criteria in Table 2 were met.
- When it was confirmed that the soil met the closure criteria; the trench was filled in clean fill on approximately 10/3/2019.

Due to small extent of the spill, less than 200 square feet in the trench and less than 200 square feet at the site of the valve; the September 17th sampling included two (2) composite samples. A total of two (2) samples were collected for laboratory analysis for total chloride using EPA Method SM4500CL-B; for benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; for TPH (GRO, DRO, and EXT DRO) by EPA Method 8015M. The approximate location of these initial samples are depicted on Figure 4. Results of the subsequent composite samples are in Appendix C and D.

As shown by the laboratory results in Appendix D the final composite sample taken on October 1, 2019 of the trench meets the NMOCD Closure Criteria for this site. Closure criteria has been met in association with this release. Additionally, the completed Form C-141 Closure Report is in Appendix A.

If there are any questions regarding this report, please contact me at 303-882-4404 or by email at LKlein@3BearLLC.com.

Sincerely,

Liz Klein
Director of EHS
3 Bear Delaware Operating – NM, LLC
1512 Larimer St. Suite 540
Denver, CO 80202

ATTACHMENTS:

Figures:
Figure 1: Topographic Map - Determination of Water Source/Watercourses within 1/2 mile
Figure 2: Libby Oil Terminal Site Map
Figure 3: Depth to Water Determination
Figure 4: Aerial Photograph of Sample Points

Appendices:

Appendix A: Form C-141 Initial Notification and Form C-141 Closure Notification
Appendix B: Analytical Report 9/18/19
Appendix C: Analytical Report 9/27/19
Appendix D: Analytical Report 10/1/2019

FIGURES

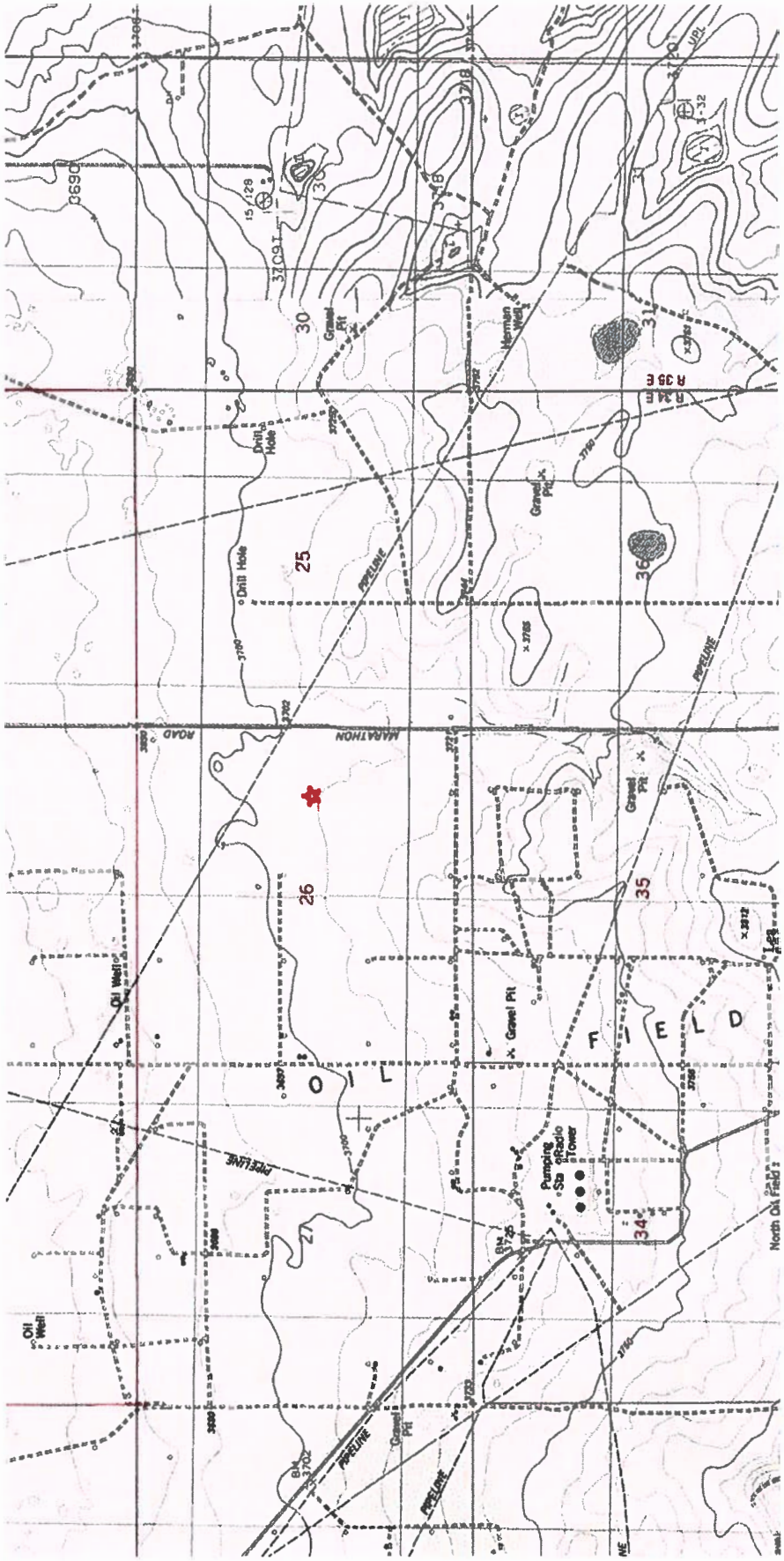

Figure 1. Topographic Map

Figure 3. Depth to Groundwater

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01204 POD1		CP	LE	3	1	1	25	20S	34E	638755	3602250	804	370		
CP 01334 POD1		CP	LE	1	2	4	35	20S	34E	638402	3599879	1633	1253	733	520
CP 01335 POD1		CP	LE	4	1	4	35	20S	34E	638205	3599736	1791	1307	735	572
CP 01288 POD1		CP	LE	4	4	2	34	20S	34E	637134	3600204	1843	1255	758	497
CP 01289 POD1		CP	LE	4	4	2	34	20S	34E	637037	3600261	1874	1222	651	571

Average Depth to Water: **719 feet**
Minimum Depth: **651 feet**
Maximum Depth: **758 feet**

Record Count: 5

Basin/County Search:

County: Lea

UTMNAD83 Radius Search (in meters):

Easting (X): 638433.44 **Northing (Y):** 3601512.78 **Radius:** 2000

9/13/19 1:29 PM WATER COLUMN/ AVERAGE DEPTH TO WATER

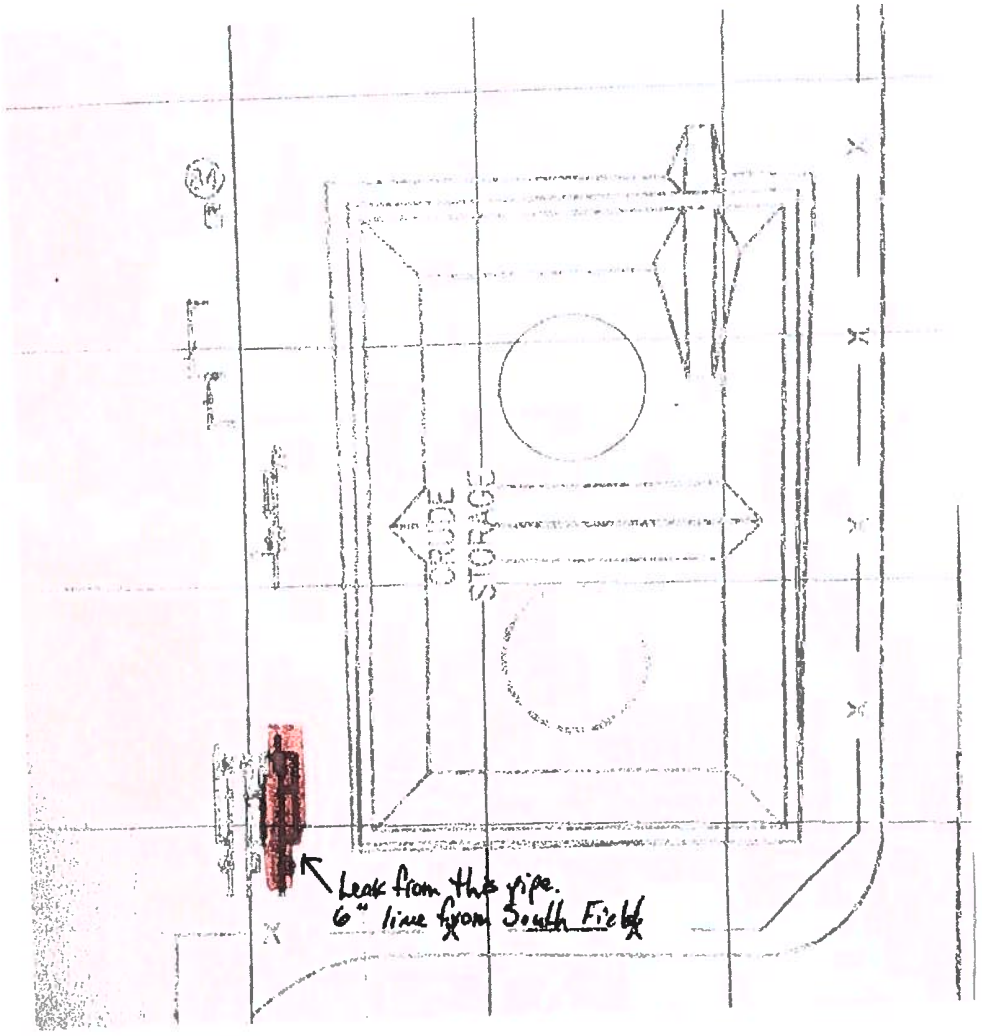

Figure 2. Location of Spill

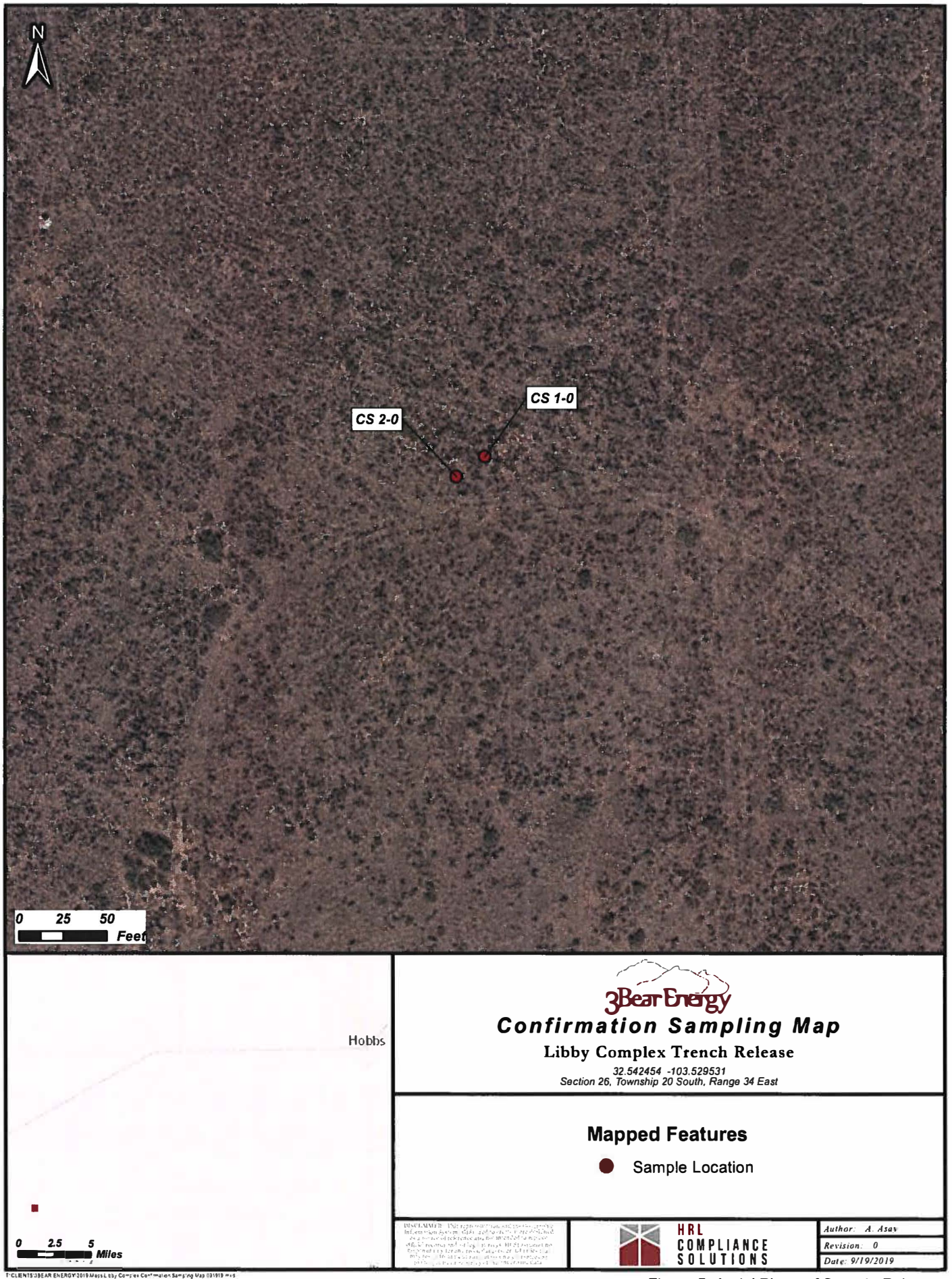

Figure 5. Aerial Photo of Sample Points

Appendix A

Form C-141 Initial Notification and Form C-141 Closure

Received by OCD: 9/27/2019 10:53:46 AM

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	NRM1927531903
District RP	1RP-5724
Facility ID	FRM1927441631
Application ID	pRM1927533456

Release Notification

Responsible Party

Responsible Party: 3 Bear Delaware Operating – NM, LLC	OGRID: 372603
Contact Name: Liz Klein	Contact Telephone: (303) 882-4404
Contact email: lklein@3bearllc.com	Incident # *(assigned by OCD)*
Contact mailing address 1512 Larimer St. Suite 540, Denver, CO 80202	

Location of Release Source

Latitude 32.542454° Longitude -103.529631°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: 3Bear Libby Oil Terminal	Site Type: Oil Terminal
Date Release Discovered: 9/13/19	API# *(if applicable)*:

Unit Letter	Section	Township	Range	County
J rlm, 10/2/2019	26	20S	34E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: 3Bear*)

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) 22	Volume Recovered (bbls) 21
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: Valve was leaking on 6" liquid gathering line.		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1927531903
District RP	1RP-5724
Facility ID	fFRM1927441631
Application ID	pRM1927533456

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

Initial Response

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

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

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Liz Klein Title: Director, EHS Regulatory Compliance

Signature: Liz Klein Date: 9/26/2019

email: lklein@3bearllc.com Telephone: (303) 882-4404

OCD Only

Received by: Ramona Marcus Date: 10/2/2019

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?	719 (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.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nRM1927531903
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: Liz Klein Title: Director, EHS Regulatory Compliance

Signature:  Date: 12/27/2019

email: lklein@3bearllc.com Telephone: (303) 862-3966

OCD Only

Received by: Cristina Eads Date: 03/23/2020

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Elisabeth Klein Title: Director, EHS Regulatory Compliance

Signature:  Date: 12/27/2019

email: lklein@3bearllc.com Telephone: 303-882-4404

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nRM1927531903
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. 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: Elisabeth Klein Title: Director, EHS Regulatory Compliance

Signature:  Date: 12/27/2019

email: lklein@3bearllc.com Telephone: (303) 862-3966

OCD Only

Received by: Cristina Eads Date: 03/23/2020

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: 03/23/2020

Printed Name: Cristina Eads Title: Environmental Specialist

Appendix B

Analytical Report 9/18/19

Analytical Report
Lab Order **1909914**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HRL Compliance Solutions
Project: Libby Complex
Lab ID: 1909914-001 **Matrix:** SOIL

Client Sample ID: CS1
Collection Date: 9/17/2019 11:00:00 AM
Received Date: 9/18/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: **CAS**
Chloride	200	60		mg/Kg	20	9/19/2019 12:50:05 PM	47585
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **BRM**
Diesel Range Organics (DRO)	13000	470		mg/Kg	50	9/19/2019 11:07:32 PM	47557
Motor Oil Range Organics (MRO)	5300	2300		mg/Kg	50	9/19/2019 11:07:32 PM	47557
Surr: DNOP	0	70-130	S	%Rec	50	9/19/2019 11:07:32 PM	47557
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	1000	24		mg/Kg	5	9/19/2019 10:25:41 AM	47568
Surr: BFB	1110	77.4-118	S	%Rec	5	9/19/2019 10:25:41 AM	47568
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	5.3	0.12		mg/Kg	5	9/19/2019 10:25:41 AM	47568
Toluene	41	2.4		mg/Kg	50	9/19/2019 12:19:49 PM	47568
Ethylbenzene	17	0.24		mg/Kg	5	9/19/2019 10:25:41 AM	47568
Xylenes, Total	62	0.48		mg/Kg	5	9/19/2019 10:25:41 AM	47568
Surr: 4-Bromofluorobenzene	177	80-120	S	%Rec	5	9/19/2019 10:25:41 AM	47568

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1909914**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HRL Compliance Solutions
Project: Libby Complex
Lab ID: 1909914-002 **Matrix:** SOIL

Client Sample ID: CS2
Collection Date: 9/17/2019 11:00:00 AM
Received Date: 9/18/2019 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	9/19/2019 1:02:29 PM	47585
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1100	93		mg/Kg	10	9/19/2019 10:45:11 PM	47557
Motor Oil Range Organics (MRO)	640	470		mg/Kg	10	9/19/2019 10:45:11 PM	47557
Surr: DNOP	0	70-130	S	%Rec	10	9/19/2019 10:45:11 PM	47557
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	39	4.8		mg/Kg	1	9/19/2019 10:48:29 AM	47568
Surr: BFB	464	77.4-118	S	%Rec	1	9/19/2019 10:48:29 AM	47568
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	9/19/2019 10:48:29 AM	47568
Toluene	0.57	0.048		mg/Kg	1	9/19/2019 10:48:29 AM	47568
Ethylbenzene	0.55	0.048		mg/Kg	1	9/19/2019 10:48:29 AM	47568
Xylenes, Total	2.4	0.097		mg/Kg	1	9/19/2019 10:48:29 AM	47568
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	9/19/2019 10:48:29 AM	47568

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 Limit
S	% Recovery outside of range due to dilution or matrix		

Appendix C
Analytical Report 9/27/19

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 30, 2019

LIZ KLEIN

3 BEAR ENERGY

674 MARATHON ROAD

HOBBS, NM 88240

RE: LIBBY OIL TERMINAL

Enclosed are the results of analyses for samples received by the laboratory on 09/27/19 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

3 BEAR ENERGY
LIZ KLEIN
674 MARATHON ROAD
HOBBS NM, 88240
Fax To:

Received:	09/27/2019	Sampling Date:	09/27/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	LIBBY OIL TERMINAL	Sampling Condition:	** (See Notes)
Project Number:	OIL TERMINAL	Sample Received By:	Tamara Oldaker
Project Location:	3 BEAR ENERGY-		

Sample ID: CS #3 (H903330-01)

BTEX 8021B mg/L **Analyzed By: BF**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/30/2019	ND	1.80	89.9	2.00	5.37	
Toluene*	**1.24**	0.050	09/30/2019	ND	1.77	88.7	2.00	6.82	
Ethylbenzene*	**1.11**	0.050	09/30/2019	ND	1.75	87.3	2.00	5.82	
Total Xylenes*	**5.07**	0.150	09/30/2019	ND	5.30	88.3	6.00	5.40	
Total BTEX	**7.41**	0.300	09/30/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *81.3-128*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/30/2019	ND	416	104	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**37.1**	10.0	09/30/2019	ND	215	108	200	12.8	
DRO >C10-C28*	**766**	10.0	09/30/2019	ND	211	106	200	11.2	
EXT DRO >C28-C36	**138**	10.0	09/30/2019	ND					

Surrogate: 1-Chlorooctane *93.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *116 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

BS2	Blank spike recovery below laboratory acceptance criteria. Results for analyte potentially biased low.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: 3 Bear Energy LLC	**BILL TO**
Project Manager: Liz Klein	P.O. #:
Address: 674 Marathon Road	Company: 3 Bear
City: Hobbs State: NM Zip: 88240	Attn: Carmen Barron
Phone #: 405 205 5288 Fax #:	Address: 1512 Larimer
Project #: Libby Plant Project Owner: 3 Bear	City: Denver
Project Name: Oil terminal	State: CO Zip: 80202
Project Location: Libby Oil Terminal	Phone #: 405 205 5288
Sampler Name: Gerald Wyche	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	CL	BTEX	TPH Ext
H903330-1	CS #3	C	1			✓							9-27-19	15:00	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Gerald Wyche	Date: 9-27-19 Time: 15:55	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Gerald@3bearllc.com
Delivered By: (Circle One)	Observed Temp. °C 28.5	Sample Condition: Cool ☐ Yes ☐ No, Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO
Sampler - UPS - Bus - Other:	Corrected Temp. °C 28.9		REMARKS: Brought Straight to lab from field.
			Turnaround Time: Standard ☐ Rush ☑ Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No, Intact ☑ Yes ☐ No, Observed Temp. °C
			Thermometer ID #97 Correction Factor +0.4 °C Corrected Temp. °C

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† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Appendix D
Analytical Report 10/1/2019

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 02, 2019

LIZ KLEIN

3 BEAR ENERGY

674 MARATHON ROAD

HOBBS, NM 88240

RE: LIBBY OIL TERMINAL

Enclosed are the results of analyses for samples received by the laboratory on 10/01/19 9:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

3 BEAR ENERGY
LIZ KLEIN
674 MARATHON ROAD
HOBBS NM, 88240
Fax To:

Received:	10/01/2019	Sampling Date:	10/01/2019
Reported:	10/02/2019	Sampling Type:	Soil
Project Name:	LIBBY OIL TERMINAL	Sampling Condition:	** (See Notes)
Project Number:	OIL TERMINAL	Sample Received By:	Tamara Oldaker
Project Location:	3 BEAR ENERGY-		

Sample ID: C 3 (H903342-01)

BTEX 8021B mg/kg **Analyzed By: BF**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/01/2019	ND	1.95	97.3	2.00	1.38	
Toluene*	<0.050	0.050	10/01/2019	ND	1.86	92.8	2.00	0.369	
Ethylbenzene*	<0.050	0.050	10/01/2019	ND	1.84	92.2	2.00	0.260	
Total Xylenes*	<0.150	0.150	10/01/2019	ND	5.72	95.3	6.00	1.91	
Total BTEX	<0.300	0.300	10/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID 86.2 % 73.3-129

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	10/01/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/01/2019	ND	213	106	200	8.86	
DRO >C10-C28*	**134**	10.0	10/01/2019	ND	214	107	200	4.43	
EXT DRO >C28-C36	**36.3**	10.0	10/01/2019	ND					

Surrogate: 1-Chlorooctane 90.4 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Should be CS-4

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	3 Bear Energy LLC
Project Manager:	Liz Klein
Address:	674 Marathon Road
City:	Hobbs State: NM Zip: 88240
Phone #:	405 205 5288 Fax #:
Project #:	Libby Plant Project Owner: 3 Bear
Project Name:	Oil Terminal
Project Location:	Libby Oil Terminal
Sampler Name:	Gerald Wyche

BILL TO

P.O. #:	
Company:	3 Bear
Attn:	Carmen Barron
Address:	1512 Larimer
City:	Denver
State:	CO Zip: 80202
Phone #:	405 205 5288
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Cl
H903342-1	C 3	C	1			✓							10-1-19	0825	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 10-1-19	Received By:	
Relinquished By:	Time: 0905	Received By:	
	Date:		
	Time:		

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address: Gerald@3bearllc.com
REMARKS: Brought Straight to lab from field

Delivered By: (Circle One)	Observed Temp. °C 22.8	Sample Condition Cool	Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☑
Sampler - UPS - Bus - Other:	Corrected Temp. °C 23.2	☐ Yes ☑ No	☑ Yes ☐ No		Thermometer ID #97 Correction Factor +0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com