Remediation Summary and Closure Request

May 24, 2023

Skaggs B #005
Produced Water Release
Incident #: nTO1418853404 (1RP-3146)

Prepared For:

Penroc Oil Corporation
1515 Calle Sur, Suite 174
Hobbs, New Mexico 88240

Prepared By:

Crain Environmental
2925 East 17th Street
Odessa, Texas 79761

Cynthia K. Crain, P.G.

Grain Environmental

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APPENDICES

1.0 Introduction

Crain Environmental (CE), on behalf of Penroc Oil Corporation (Penroc), has prepared this *Remediation Summary and Closure Request* for the produced water release at Skaggs B #005 (Site), located approximately 7 miles southwest of Hobbs, in Lea County, New Mexico. The global positioning system (GPS) coordinates for the Release Site are 32.592175, -103.2081299. The property surface rights are federally owned. The location of the Release Site is depicted on Figure 1.

2.0 Background

On July 7, 2014, a ConocoPhillips (the operator on that date) employee observed that a produced water release had occurred at the valve box of the Skaggs B #005 well. All fluid was contained to the valve box, except for one barrel (bbl) of water that had leaked onto the surface to the east of the well. An Initial Release Notification Report (C-141) was submitted to the New Mexico Oil Conservation Division (NMOCD), and Incident # nTO1418853404 (1RP-3146) was assigned. The release point and the surface extent of the crude oil and produced water release are depicted on Figure 2. Even though a copy of the initial C-141 could not be found in the NMOCD database, a final C-141 is provided in Appendix A.

3.0 NMOCD Closure Criteria

Cleanup standards for crude oil and produced water spills are provided in 19.15.29 NMAC. The cleanup standards (described in the rule as "Closure Criteria") are based primarily on depth to groundwater but are also based on other criteria.

The Closure Criteria applicable to the Site will be based on the estimated depth to groundwater at the Release Site, which dictates the moderately stringent regulatory guidelines typically associated with groundwater depths of greater than fifty (50) feet bgs. The NMOCD requires that soil concentrations from surface to a depth of 4 feet bgs must meet the most stringent Closure Criteria regardless of depth to groundwater; however, at depths greater than 4 feet bgs, the mid-level Closure Criteria is applicable to the Site. A summary of the Closure Criteria is provided in the table below and in Table 1.

NMOCD Closure Criteria

Constituent of Concern		Closure Criteria Based on Depth to Groundwater (mg/kg)		
		≤ 50 feet bgs	51 feet to 100 feet bgs	> 100 feet bgs
Chloride (EPA 300)		600	10,000	20,000
TPH (EPA 8015M)	GRO + DRO + MRO	100	2,500	2,500
	GRO + DRO	NA	1,000	1,000
Total BTEX (EPA 8021 or 8260)		50	50	50
Benzene (EPA 8021 or 8260)		10	10	10

Notes: NA = not applicable
bgs = below ground surface
mg/kg = milligrams per kilogram
GRO = gasoline range organics
DRO = diesel range organics
MRO = motor oil range organics
TPH = total petroleum hydrocarbons
BTEX = benzene, toluene, ethylbenzene, and total xylenes
Green highlighted cells denote applicable Closure Criteria.

4.0 Remediation Activities

On October 31, 2022, CE conducted a site inspection at Skaggs B #005, and collected two soil samples (SP-1 and SP-2) from the surface of the area located east of the well. The soil samples were placed in laboratory prepared containers, properly labeled, immediately placed on ice, and hand delivered to Eurofins Environment Testing (Eurofins) in Midland, Texas for analysis of total petroleum hydrocarbons (TPH) by Environmental Protection Agency (EPA) SW-846 Method 8015 Modified, for benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX) by EPA SW-846 Method 8021B, and for chlorides by Method SM4500Cl-B.

Table 1 provides a summary of the laboratory results, and sample locations with concentrations are provided on Figure 2. The laboratory report and chain-of-custody documentation is provided in Appendix B. Referring to Table 1, concentrations of benzene and BTEX were reported below the Closure Criteria; however, concentrations of TPH and chloride exceeded the Closure Criteria in each sample.

From April 28 through May 1, 2023, Elite Environmental Services, LLC (Elite), conducted treatment of the soil located east of the well. To promote porosity of the soil, the soil was tilled to a depth of 14 inches and a reagent called Bio-Regen SA1000 was applied to the soil. The Bio-Regen SA 1000 product is manufactured by 3Tier Technologies. The reagent is an advanced treatment product that combines two Polyelectrolyte Enhanced Organic Bio-Polymers (PEB) with bio-available calcium. PEB naturally binds, adsorbs, and coordinates sodium cations and chlorine anions. Any sodium/chloride residue creates a new mineral formation resulting in sodium, chloride, cation and anion conversion into a physically and mechanically bound status, thus eliminating salt toxicity and resulting in desalination and chloride/salt toxicity reduction/elimination.

On May 3, 2023, six five-point composite samples (1 through 6) were collected from the treated soil, at a depth of 0 to 12 inches bgs. All soil samples were placed in laboratory prepared containers, properly labeled, immediately placed on ice, and hand delivered to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico for analysis of TPH by Environmental Protection Agency (EPA) SW-846 Method 8015 Modified, for BTEX by EPA SW-846 Method 8021B, and for chlorides by Method SM4500Cl-B.

Table 1 provides a summary of the laboratory results, and sample locations with concentrations are provided on Figure 2. The laboratory report and chain-of-custody documentation is provided in Appendix B. Photographic documentation is provided in Appendix C. Referring to Table 1, concentrations of TPH, BTEX, and chlorides were reported below the Closure Criteria in all samples.

5.0 Laboratory Analytical Data Quality Assurance/Quality Control Results

Data in the Eurofins and Cardinal laboratory reports was reviewed to ensure that reported analytical results met data quality objectives. It was determined by quality control data associated with analytical results that reported concentrations of target analytes are defensible and that measurement data reliability is within the expected limits of sampling and analytical error. All analytical results are usable for characterization of soil at the Site. The laboratory analytical results are provided as Appendix B.

6.0 Request for Closure

From April 28,2023, through May 1, 2023, all affected soil located east of the Skaggs B #005 well was treated until in situ soil concentrations of TPH, BTEX, and chlorides were reported below the NMOCD Closure Criteria.

Penroc respectfully requests that Closure be approved for Incident No. nTO1418853404 (1RP-3146).

7.0 Distribution

Copy 1: Mike Bratcher
New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Copy 2: Merch Merchant
Penroc Oil Corporation
1515 Calle Sur, Suite 174
Hobbs, New Mexico 88240

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TABLE

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
PENROC OIL CORPORATION
SKAGGS B #005

Sample ID	Sample Date	Sample Depth	Soil Status	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chloride
				milligrams per kilogram (mg/kg)									
NMOCD Closure Criteria (Surface to 4' bgs)				-		-	100	10	-	-	-	50	600
SP-1	10/31/22	0-6"	In Situ	**107 J B**	**7,180 B**	**1,380**	**8,670**	<0.00953	<0.0113	**0.140**	**0.629**	**0.769**	**1,710**
1	05/03/23	0-12"	In Situ	<10.0	**13.6**	<10.0	**13.6**	<0.050	<0.050	<0.050	<0.150	<0.300	**16.0**
SP-2	10/31/22	0-6"	In Situ	**83.3 J B**	**3,080 B**	**741**	**3,900**	<0.00961	<0.0114	**0.0268 J**	<0.0252	<0.268 J	**5,340**
4	05/03/23	0-12'	In Situ	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**32.0**
2	05/03/23	0-12"	In Situ	<10.0	**15.3**	<10.0	**15.3**	<0.050	<0.050	<0.050	<0.150	<0.300	**32.0**
3	05/03/23	0-12"	In Situ	<10.0	**50.0**	<10.0	**50.0**	<0.050	<0.050	<0.050	<0.150	<0.300	**16.0**
5	05/03/23	0-12"	In Situ	<10.0	**15.5**	<10.0	**15.5**	<0.050	<0.050	<0.050	<0.150	<0.300	**16.0**
6	05/03/23	0-12"	In Situ	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**32.0**

Notes:

1. GRO: Gasoline Range Organics
2. DRO: Diesel Range Organics
3. MRO: Motor Oil Range Organics
4. bgs: Below ground surface.
5. - : No NMOCD Closure Criteria established.
6. Bold indicates the COC was above the appropriate laboratory method/sample detection limit.
7. < : Indicates the COC was below the appropriate laboratory method/sample detection limit.
8. J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
9. B: Compound was found in the blank and sample.
10. Yellow highlighting indicates the COC was above the appropriate NMOCD Closure Criteria.

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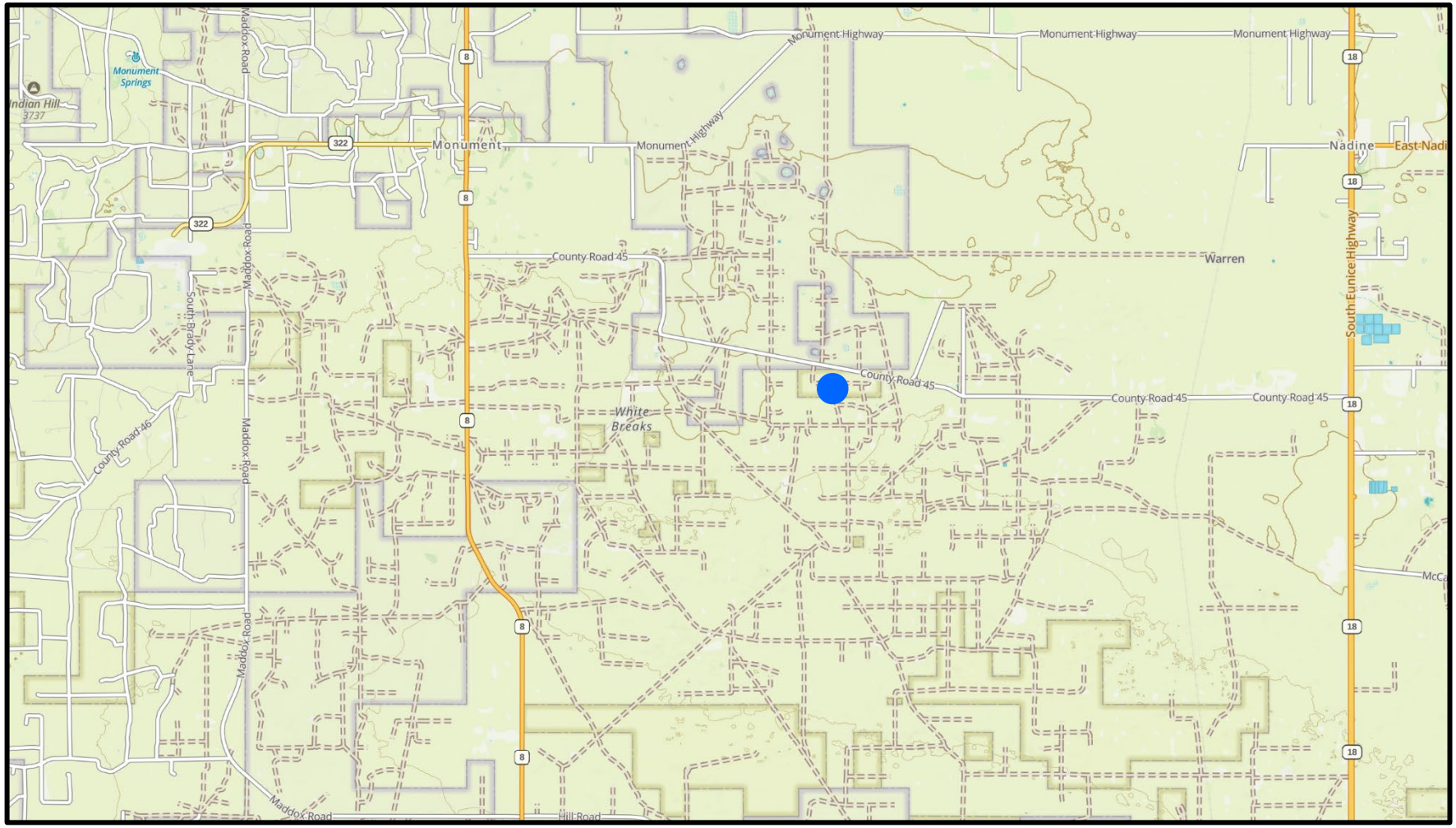
FIGURES



LEGEND:

Site Location

Base Map from GAIA GPS

N W E S

Figure 1
Site Location Map
Penroc Oil Corporation
Skaggs B #005
Lea County, New Mexico

Drafted by: CC | Checked by: CC		
Draft: May 23, 2023		
GPS:	32.592175	-103.2081299

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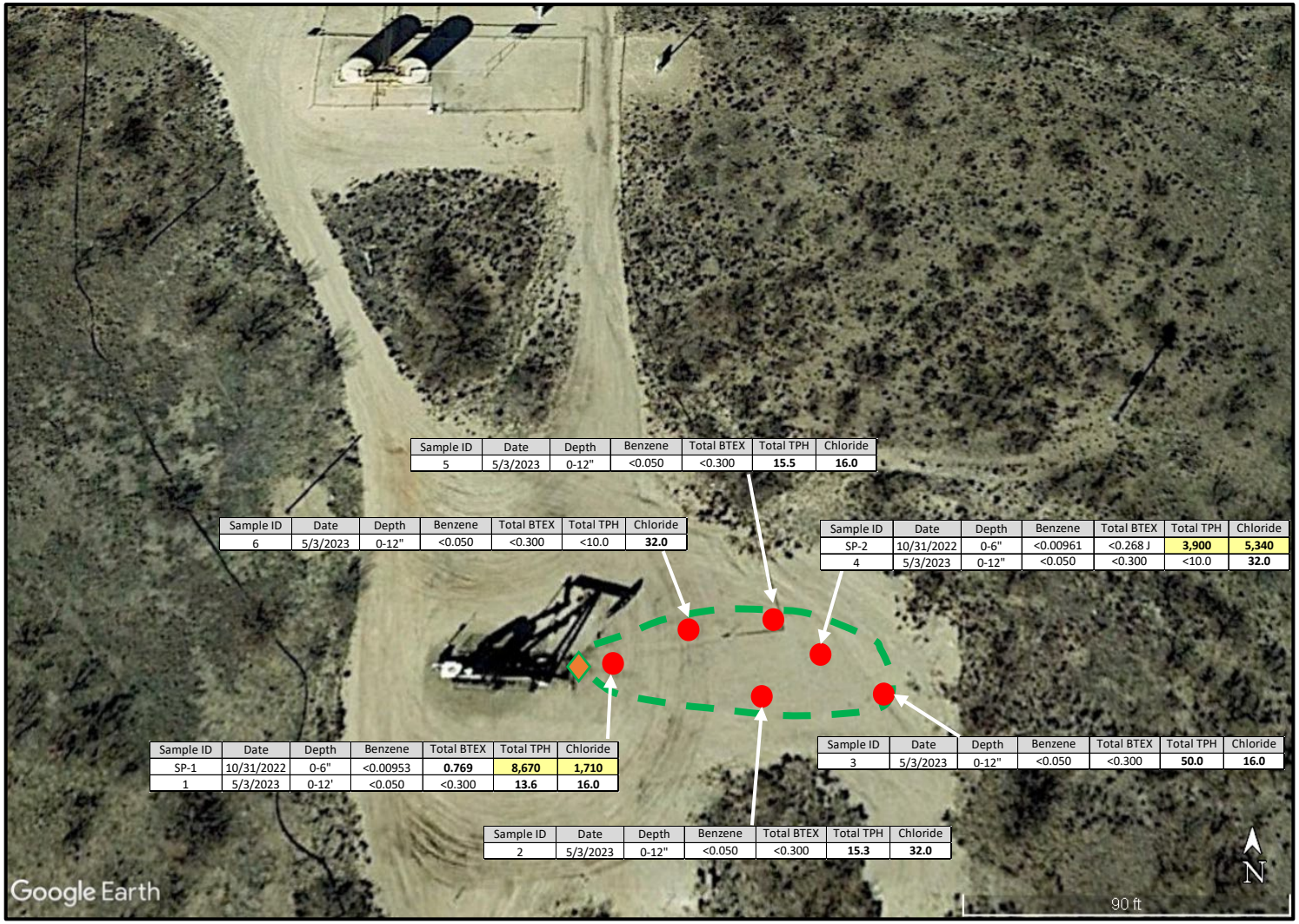

LEGEND:

- Release Boundary
- Release Point
- Sample Location With Depth (ft bgs) and Concentrations (mg/kg)

Figure 2
Sample Location Map
Penroc Oil Corporation
Skaggs B #005
Lea County, New Mexico

Drafted by: CC | Checked by: CC

Draft: May 23, 2023

GPS: 32.592175 -103.2081299

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Appendix A: Release Notification and Corrective Action Form (NMOCD Form C-141)

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	nTO1418853404
District RP	1RP-3146
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Penroc Oil Corporation	OGRID 07213
Contact Name M. Y. Merchant	Contact Telephone (575) 492-1236
Contact email mymerch@penrocoil.com	Incident # *(assigned by OCD)* nTO1418853404 (1RP-3146)
Contact mailing address PO Box 2769, Hobbs, New Mexico 88241	

Location of Release Source

Latitude 32.592175 Longitude -103.0789185
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Skaggs B #005	Site Type Oil Well
Date Release Discovered 7/7/2014	API# *(if applicable)* 30-025-20089

Unit Letter	Section	Township	Range	County
C	12	20S	37E	Lea

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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 1	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		

State of New Mexico
Oil Conservation Division

Incident ID	nTO1418853404
District RP	1RP-3146
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	nTO1418853404
District RP	1RP-3404
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?	_____ (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 4

State of New Mexico
Oil Conservation Division

Incident ID	nTO1418853404
District RP	1RP-3404
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: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	nTO1418853404
District RP	1RP-3146
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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nTO1418853404
District RP	1RP-3146
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: Cindy Crain Title: Agent for Penroc Oil Corporation

Signature: Cindy Crain Date: 5/24/23

email: cindy.crain@gmail.com Telephone: (575) 441-7244

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: Nelson Velez Date: 08/17/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

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Appendix B: Laboratory Analytical Results

eurofins | Environment Testing

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-21006-1
Laboratory Sample Delivery Group: Lea Co. NM
Client Project/Site: Skaggs B #5

For:
Crain Environmental
2925 E. 17th St.
Odessa, Texas 79761

Attn: Cindy Crain

JKramer

Authorized for release by:
11/8/2022 11:29:57 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

Client: Crain Environmental
Project/Site: Skaggs B #5

Laboratory Job ID: 880-21006-1
SDG: Lea Co. NM

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Definitions/Glossary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Job ID: 880-21006-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-21006-1

Receipt
The samples were received on 11/1/2022 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SP-1 (880-21006-1) and SP-2 (880-21006-2).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SP-1 (880-21006-1) and SP-2 (880-21006-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-38436/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SP-1 (880-21006-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-38436 and analytical batch 880-38457 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Client Sample ID: SP-1

Date Collected: 10/31/22 11:55
Date Received: 11/01/22 15:00

Lab Sample ID: 880-21006-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00953	U	0.0495	0.00953	mg/Kg		11/01/22 15:31	11/02/22 10:43	25
Toluene	<0.0113	U	0.0495	0.0113	mg/Kg		11/01/22 15:31	11/02/22 10:43	25
Ethylbenzene	**0.140**		0.0495	0.0140	mg/Kg		11/01/22 15:31	11/02/22 10:43	25
m-Xylene & p-Xylene	**0.379**		0.0990	0.0250	mg/Kg		11/01/22 15:31	11/02/22 10:43	25
o-Xylene	**0.250**		0.0495	0.00851	mg/Kg		11/01/22 15:31	11/02/22 10:43	25
Xylenes, Total	**0.629**		0.0990	0.0250	mg/Kg		11/01/22 15:31	11/02/22 10:43	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*11/01/22 15:31*	*11/02/22 10:43*	*25*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*11/01/22 15:31*	*11/02/22 10:43*	*25*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.769**		0.0990	0.0250	mg/Kg			11/02/22 14:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**8670**		250	74.9	mg/Kg			11/03/22 10:18	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**107**	**J B**	250	74.9	mg/Kg		11/01/22 16:40	11/03/22 04:48	5
Diesel Range Organics (Over C10-C28)	**7180**	**B**	250	74.9	mg/Kg		11/01/22 16:40	11/03/22 04:48	5
Oil Range Organics (Over C28-C36)	**1380**		250	74.9	mg/Kg		11/01/22 16:40	11/03/22 04:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*41*	*S1-*	*70 - 130*	*11/01/22 16:40*	*11/03/22 04:48*	*5*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*11/01/22 16:40*	*11/03/22 04:48*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1710**		25.0	1.97	mg/Kg			11/05/22 20:38	5

Client Sample ID: SP-2

Date Collected: 10/31/22 12:05
Date Received: 11/01/22 15:00

Lab Sample ID: 880-21006-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00961	U	0.0499	0.00961	mg/Kg		11/01/22 15:31	11/02/22 11:09	25
Toluene	<0.0114	U	0.0499	0.0114	mg/Kg		11/01/22 15:31	11/02/22 11:09	25
Ethylbenzene	**0.0268**	**J**	0.0499	0.0141	mg/Kg		11/01/22 15:31	11/02/22 11:09	25
m-Xylene & p-Xylene	<0.0252	U	0.0998	0.0252	mg/Kg		11/01/22 15:31	11/02/22 11:09	25
o-Xylene	<0.00858	U	0.0499	0.00858	mg/Kg		11/01/22 15:31	11/02/22 11:09	25
Xylenes, Total	<0.0252	U	0.0998	0.0252	mg/Kg		11/01/22 15:31	11/02/22 11:09	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*	*11/01/22 15:31*	*11/02/22 11:09*	*25*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*11/01/22 15:31*	*11/02/22 11:09*	*25*

Eurofins Midland

Client Sample Results

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Client Sample ID: SP-2

Date Collected: 10/31/22 12:05
Date Received: 11/01/22 15:00

Lab Sample ID: 880-21006-2

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0268	J	0.0998	0.0252	mg/Kg			11/02/22 14:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3900		250	74.9	mg/Kg			11/03/22 10:18	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	83.3	J B	250	74.9	mg/Kg		11/01/22 16:40	11/03/22 05:09	5
Diesel Range Organics (Over C10-C28)	3080	B	250	74.9	mg/Kg		11/01/22 16:40	11/03/22 05:09	5
Oil Range Organics (Over C28-C36)	741		250	74.9	mg/Kg		11/01/22 16:40	11/03/22 05:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*11/01/22 16:40*	*11/03/22 05:09*	*5*
o-Terphenyl	*120*		*70 - 130*	*11/01/22 16:40*	*11/03/22 05:09*	*5*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5340		50.0	3.95	mg/Kg			11/05/22 20:45	10

Surrogate Summary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21006-1	SP-1	136 S1+	92
880-21006-2	SP-2	144 S1+	82
LCS 880-38425/1-A	Lab Control Sample	126	99
LCSD 880-38425/2-A	Lab Control Sample Dup	129	95
MB 880-38395/5-A	Method Blank	89	89
MB 880-38425/5-A	Method Blank	94	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21006-1	SP-1	41 S1-	142 S1+
880-21006-2	SP-2	102	120
LCS 880-38436/2-A	Lab Control Sample	107	133 S1+
LCSD 880-38436/3-A	Lab Control Sample Dup	108	128
MB 880-38436/1-A	Method Blank	87	109

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38395/5-A
Matrix: Solid
Analysis Batch: 38320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38395

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		11/01/22 13:13	11/01/22 16:33	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		11/01/22 13:13	11/01/22 16:33	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		11/01/22 13:13	11/01/22 16:33	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		11/01/22 13:13	11/01/22 16:33	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		11/01/22 13:13	11/01/22 16:33	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		11/01/22 13:13	11/01/22 16:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*11/01/22 13:13*	*11/01/22 16:33*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*11/01/22 13:13*	*11/01/22 16:33*	*1*

Lab Sample ID: MB 880-38425/5-A
Matrix: Solid
Analysis Batch: 38320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		11/01/22 15:31	11/02/22 06:03	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		11/01/22 15:31	11/02/22 06:03	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		11/01/22 15:31	11/02/22 06:03	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		11/01/22 15:31	11/02/22 06:03	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		11/01/22 15:31	11/02/22 06:03	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		11/01/22 15:31	11/02/22 06:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*11/01/22 15:31*	*11/02/22 06:03*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*11/01/22 15:31*	*11/02/22 06:03*	*1*

Lab Sample ID: LCS 880-38425/1-A
Matrix: Solid
Analysis Batch: 38320

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08146		mg/Kg		81	70 - 130
Toluene	0.100	0.07351		mg/Kg		74	70 - 130
Ethylbenzene	0.100	0.07468		mg/Kg		75	70 - 130
m-Xylene & p-Xylene	0.200	0.1508		mg/Kg		75	70 - 130
o-Xylene	0.100	0.07942		mg/Kg		79	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-38425/2-A
Matrix: Solid
Analysis Batch: 38320

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08998		mg/Kg		90	70 - 130	10	35

QC Sample Results

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-38425/2-A
Matrix: Solid
Analysis Batch: 38320

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38425

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08305		mg/Kg		83	70 - 130	12	35
Ethylbenzene			0.100	0.08113		mg/Kg		81	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1658		mg/Kg		83	70 - 130	9	35
o-Xylene			0.100	0.08488		mg/Kg		85	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-38436/1-A
Matrix: Solid
Analysis Batch: 38457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.45	J	50.0	15.0	mg/Kg		11/01/22 16:40	11/02/22 22:03	1
Diesel Range Organics (Over C10-C28)	19.56	J	50.0	15.0	mg/Kg		11/01/22 16:40	11/02/22 22:03	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		11/01/22 16:40	11/02/22 22:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*11/01/22 16:40*	*11/02/22 22:03*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/01/22 16:40*	*11/02/22 22:03*	*1*

Lab Sample ID: LCS 880-38436/2-A
Matrix: Solid
Analysis Batch: 38457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38436

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	844.0		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1140		mg/Kg		114	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*133*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-38436/3-A
Matrix: Solid
Analysis Batch: 38457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38436

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	881.3		mg/Kg		88	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1139		mg/Kg		114	70 - 130	0	20

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QC Sample Results

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 880-38436/3-A
Matrix: Solid
Analysis Batch: 38457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38436

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*128*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38521/1-A
Matrix: Solid
Analysis Batch: 38782

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			11/05/22 18:57	1

Lab Sample ID: LCS 880-38521/2-A
Matrix: Solid
Analysis Batch: 38782

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.8		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-38521/3-A
Matrix: Solid
Analysis Batch: 38782

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	263.3		mg/Kg		105	90 - 110	1	20

QC Association Summary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

GC VOA

Analysis Batch: 38320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Total/NA	Solid	8021B	38425
880-21006-2	SP-2	Total/NA	Solid	8021B	38425
MB 880-38395/5-A	Method Blank	Total/NA	Solid	8021B	38395
MB 880-38425/5-A	Method Blank	Total/NA	Solid	8021B	38425
LCS 880-38425/1-A	Lab Control Sample	Total/NA	Solid	8021B	38425
LCSD 880-38425/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38425

Prep Batch: 38395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38395/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 38425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Total/NA	Solid	5035	
880-21006-2	SP-2	Total/NA	Solid	5035	
MB 880-38425/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38425/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38425/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 38513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Total/NA	Solid	Total BTEX	
880-21006-2	SP-2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 38436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Total/NA	Solid	8015NM Prep	
880-21006-2	SP-2	Total/NA	Solid	8015NM Prep	
MB 880-38436/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38436/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38436/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Total/NA	Solid	8015B NM	38436
880-21006-2	SP-2	Total/NA	Solid	8015B NM	38436
MB 880-38436/1-A	Method Blank	Total/NA	Solid	8015B NM	38436
LCS 880-38436/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38436
LCSD 880-38436/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38436

Analysis Batch: 38604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Total/NA	Solid	8015 NM	
880-21006-2	SP-2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Soluble	Solid	DI Leach	

QC Association Summary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

HPLC/IC (Continued)

Leach Batch: 38521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-2	SP-2	Soluble	Solid	DI Leach	
MB 880-38521/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 38782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-21006-1	SP-1	Soluble	Solid	300.0	38521
880-21006-2	SP-2	Soluble	Solid	300.0	38521
MB 880-38521/1-A	Method Blank	Soluble	Solid	300.0	38521
LCS 880-38521/2-A	Lab Control Sample	Soluble	Solid	300.0	38521
LCSD 880-38521/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38521

Lab Chronicle

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Client Sample ID: SP-1

Date Collected: 10/31/22 11:55
Date Received: 11/01/22 15:00

Lab Sample ID: 880-21006-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	38425	11/01/22 15:31	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38320	11/02/22 10:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38513	11/02/22 14:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			38604	11/03/22 10:18	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38436	11/01/22 16:40	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	38457	11/03/22 04:48	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38521	11/02/22 14:40	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	38782	11/05/22 20:38	CH	EET MID

Client Sample ID: SP-2

Date Collected: 10/31/22 12:05
Date Received: 11/01/22 15:00

Lab Sample ID: 880-21006-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	38425	11/01/22 15:31	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38320	11/02/22 11:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38513	11/02/22 14:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			38604	11/03/22 10:18	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	38436	11/01/22 16:40	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	38457	11/03/22 05:09	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	38521	11/02/22 14:40	CH	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	38782	11/05/22 20:45	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Crain Environmental
Project/Site: Skaggs B #5

Job ID: 880-21006-1
SDG: Lea Co. NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-21006-1	SP-1	Solid	10/31/22 11:55	11/01/22 15:00
880-21006-2	SP-2	Solid	10/31/22 12:05	11/01/22 15:00

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: 21006

www.xenco.com Page 1 of 1

Project Manager:	Cindy Crain	Bill to: (if different)	Merch Merchant (575) 631-7450
Company Name:	Crain Environmental	Company Name.	Penroc Oil Corp.
Address:	2925 E. 17th St.	Address:	P.O. Box 2769
City, State ZIP:	Odessa, TX 79761	City, State ZIP:	Hobbs, NM 88241
Phone:	(575) 441-7244	Email	cindy.crain@gmail.com / Mymerch@penrocoil.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project: NM
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables. EDD ☐ ADaPT ☐ Other:

Project Name:	Skaggs B # 5	Turn Around	
Project Number:	—	☒ Routine ☐ Rush	
Project Location.	Lea Co., NM	Due Date	
Sampler's Name:	Cindy Crain	TAT starts the day received by the lab, if received by 4.30pm	
PO #:	—		

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8	
Cooler Custody Seals.	Yes No (N/A)	Correction Factor:	-.30	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	0.5	
Total Containers:		Corrected Temperature:	0.2	

Preservative Codes

None NO | DI Water H_2O
Cool Cool | MeOH Me
HCL. HC | HNO_3 HN
H_2SO_4 H_2 | NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH 8015M	BTEX	Chloride	Sample Comments
S-1	S	10/31/22	1155	0-6"	C	1		X	X	X	402
S-2	S	10/31/22	1205	0-6"	C	1		X	X	X	

880-21006 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Cindy Crain		11/1/22 1500	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Crain Environmental

Job Number: 880-21006-1
SDG Number: Lea Co. NM

Login Number: 21006
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

CARDINAL Laboratories

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

May 08, 2023

MIKE HOLDER

ELITE ENVIRONMENTAL SERVICES

P.O. BOX 735

GAINSVILLE, TX 76241

RE: SKAGG B #005

Enclosed are the results of analyses for samples received by the laboratory on 05/03/23 10:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ELITE ENVIRONMENTAL SERVICES
MIKE HOLDER
P.O. BOX 735
GAINSVILLE TX, 76241
Fax To:

Received:	05/03/2023	Sampling Date:	05/03/2023
Reported:	05/08/2023	Sampling Type:	Soil
Project Name:	SKAGG B #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PENROC OIL - LEA CO NM		

Sample ID: 1 (H232177-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2023	ND	1.99	99.3	2.00	10.1	
Toluene*	<0.050	0.050	05/04/2023	ND	2.03	101	2.00	12.9	
Ethylbenzene*	<0.050	0.050	05/04/2023	ND	2.12	106	2.00	11.2	
Total Xylenes*	<0.150	0.150	05/04/2023	ND	6.08	101	6.00	9.71	
Total BTEX	<0.300	0.300	05/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	05/04/2023	ND	416	104	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	05/04/2023	ND	216	108	200	0.752	
DRO >C10-C28*	**13.6**	10.0	05/04/2023	ND	199	99.6	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					

Surrogate: 1-Chlorooctane *80.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ELITE ENVIRONMENTAL SERVICES
MIKE HOLDER
P.O. BOX 735
GAINSVILLE TX, 76241
Fax To:

Received:	05/03/2023	Sampling Date:	05/03/2023
Reported:	05/08/2023	Sampling Type:	Soil
Project Name:	SKAGG B #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PENROC OIL - LEA CO NM		

Sample ID: 2 (H232177-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2023	ND	1.99	99.3	2.00	10.1	
Toluene*	<0.050	0.050	05/04/2023	ND	2.03	101	2.00	12.9	
Ethylbenzene*	<0.050	0.050	05/04/2023	ND	2.12	106	2.00	11.2	
Total Xylenes*	<0.150	0.150	05/04/2023	ND	6.08	101	6.00	9.71	
Total BTEX	<0.300	0.300	05/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	05/04/2023	ND	416	104	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	05/04/2023	ND	216	108	200	0.752	
DRO >C10-C28*	**15.3**	10.0	05/04/2023	ND	199	99.6	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	05/04/2023	ND					

Surrogate: 1-Chlorooctane *71.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *76.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ELITE ENVIRONMENTAL SERVICES
MIKE HOLDER
P.O. BOX 735
GAINSVILLE TX, 76241
Fax To:

Received:	05/03/2023	Sampling Date:	05/03/2023
Reported:	05/08/2023	Sampling Type:	Soil
Project Name:	SKAGG B #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PENROC OIL - LEA CO NM		

Sample ID: 3 (H232177-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2023	ND	1.99	99.3	2.00	10.1	
Toluene*	<0.050	0.050	05/04/2023	ND	2.03	101	2.00	12.9	
Ethylbenzene*	<0.050	0.050	05/04/2023	ND	2.12	106	2.00	11.2	
Total Xylenes*	<0.150	0.150	05/04/2023	ND	6.08	101	6.00	9.71	
Total BTEX	<0.300	0.300	05/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	05/04/2023	ND	416	104	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	05/03/2023	ND	211	105	200	2.89	
DRO >C10-C28*	**50.0**	10.0	05/03/2023	ND	201	101	200	3.24	
EXT DRO >C28-C36	<10.0	10.0	05/03/2023	ND					

Surrogate: 1-Chlorooctane *78.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ELITE ENVIRONMENTAL SERVICES
MIKE HOLDER
P.O. BOX 735
GAINSVILLE TX, 76241
Fax To:

Received:	05/03/2023	Sampling Date:	05/03/2023
Reported:	05/08/2023	Sampling Type:	Soil
Project Name:	SKAGG B #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PENROC OIL - LEA CO NM		

Sample ID: 4 (H232177-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2023	ND	1.99	99.3	2.00	10.1	
Toluene*	<0.050	0.050	05/04/2023	ND	2.03	101	2.00	12.9	
Ethylbenzene*	<0.050	0.050	05/04/2023	ND	2.12	106	2.00	11.2	
Total Xylenes*	<0.150	0.150	05/04/2023	ND	6.08	101	6.00	9.71	
Total BTEX	<0.300	0.300	05/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	05/04/2023	ND	416	104	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	05/03/2023	ND	211	105	200	2.89	
DRO >C10-C28*	<10.0	10.0	05/03/2023	ND	201	101	200	3.24	
EXT DRO >C28-C36	<10.0	10.0	05/03/2023	ND					

Surrogate: 1-Chlorooctane *78.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ELITE ENVIRONMENTAL SERVICES
MIKE HOLDER
P.O. BOX 735
GAINSVILLE TX, 76241
Fax To:

Received:	05/03/2023	Sampling Date:	05/03/2023
Reported:	05/08/2023	Sampling Type:	Soil
Project Name:	SKAGG B #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PENROC OIL - LEA CO NM		

Sample ID: 5 (H232177-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2023	ND	1.99	99.3	2.00	10.1	
Toluene*	<0.050	0.050	05/04/2023	ND	2.03	101	2.00	12.9	
Ethylbenzene*	<0.050	0.050	05/04/2023	ND	2.12	106	2.00	11.2	
Total Xylenes*	<0.150	0.150	05/04/2023	ND	6.08	101	6.00	9.71	
Total BTEX	<0.300	0.300	05/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	05/04/2023	ND	416	104	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	05/03/2023	ND	211	105	200	2.89	
DRO >C10-C28*	**15.5**	10.0	05/03/2023	ND	201	101	200	3.24	
EXT DRO >C28-C36	<10.0	10.0	05/03/2023	ND					

Surrogate: 1-Chlorooctane *76.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *80.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ELITE ENVIRONMENTAL SERVICES
MIKE HOLDER
P.O. BOX 735
GAINSVILLE TX, 76241
Fax To:

Received:	05/03/2023	Sampling Date:	05/03/2023
Reported:	05/08/2023	Sampling Type:	Soil
Project Name:	SKAGG B #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	PENROC OIL - LEA CO NM		

Sample ID: 6 (H232177-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2023	ND	1.99	99.3	2.00	10.1	
Toluene*	<0.050	0.050	05/04/2023	ND	2.03	101	2.00	12.9	
Ethylbenzene*	<0.050	0.050	05/04/2023	ND	2.12	106	2.00	11.2	
Total Xylenes*	<0.150	0.150	05/04/2023	ND	6.08	101	6.00	9.71	
Total BTEX	<0.300	0.300	05/04/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	05/04/2023	ND	416	104	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	05/03/2023	ND	211	105	200	2.89	
DRO >C10-C28*	<10.0	10.0	05/03/2023	ND	201	101	200	3.24	
EXT DRO >C28-C36	<10.0	10.0	05/03/2023	ND					

Surrogate: 1-Chlorooctane *78.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.9 %* *49.1-148*

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

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

Zenco

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Elite Environmental Services	**BILL TO**	
Project Manager:	Mike Holder	P.O. #:	
Address:	P.O Box 735	Company:	Pen Roc
City:	Gardendale State: TX Zip: 76241	Attn:	Merch
Phone #:	918-740-2766 Fax #:	Address:	
Project #:	Project Owner: Pen Roc	City:	
Project Name:	Skaggs B #005	State: Zip:	
Project Location:	Lea, Co. NM	Phone #:	
Sampler Name:	Holder	Fax #:	

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	ANALYSIS REQUEST: TPH 8015m	BTEX	Chloride - EPA 4500
H232177																	
1	1	G	1			X					Y		5-3-23	10:00	X	X	X
2	2	G	1			X					X		5-3-23	10:05	X	X	X
3	3	G	1			X					X		5-3-23	10:08	X	X	X
4	4	G	1			X					X		5-3-23	10:10	X	X	X
5	5	G	1			X					X		5-3-23	10:12	X	X	X
6	6	G	1			X					X		5-3-23	10:15	X	X	X

Relinquished By: Mike Holder	Date: 5-3-23 Time: 1040	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: mholder@eliteenvo.com
			REMARKS: FRIDAY 5-5-23 IF Possible
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.8 Corrected Temp. °C 3.2	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO
Turnaround Time: Standard ☑ Rush ☐	Thermometer ID #113 Correction Factor -0.6°C	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.3 07/18/22

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

Appendix C: Photographic Documentation

Appendix C
Penroc Oil Corporation
Skaggs B #005

Well sign 10/31/22.


View to NW of remediated area.


View to W of remediated area.


View to SW of remediated area.

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

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

CONDITIONS

Action 220024

CONDITIONS

Operator: PENROC OIL CORP P.O. Box 2769 Hobbs, NM 882412769	OGRID: 17213
	Action Number: 220024
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	8/17/2023