



December 20, 2022

NMOCD District 2
Mr. Mike Bratcher
Artesia, NM 88210

Re: Site Assessment, Remediation, and Closure Report
Pearsall Federal SWD 1
API No. 30-025-40712
GPS: Latitude 32.8065033 Longitude -103.7759476
UL "E", Sec. 28, T17S, R32E
Eddy County, NM
NMOCD Ref. No. NAPP2218026857

Paragon Environmental, LLC (Paragon) has been contracted by Spur Energy Partners (Spur) to perform a spill assessment and remediation activities for the Release Site known as the Pearsall Federal SWD 1 (Pearsall). Details of the release are summarized below:

Release Details			
Type of Release:	Produced Water	Volume of Release:	20 bbls
		Volume Recovered:	17 bbls
Source of Release:	Flow Line - Injection	Date of Release:	06/27/22
Was Immediate Notice Given?	Yes	If, Yes, to Whom?	Mike Bratcher, NMOCD
Was a Watercourse Reached?	No	If Yes, Volume Impacting Watercourse:	N/A
Surface Owner:	Federal	Mineral Owner:	
The injection line developed a corrosion issue that resulted in the failure of the flowline.			

Topographical and Aerial Maps are provided in Figures #3 and #5. A copy of the Initial Release Notification and Corrective Action (NMOCD Form C-141) can be found in Appendix C.

REGULATORY FRAMEWORK

Surface impacts from unauthorized releases of fluids or gases are generally regulated by the New Mexico Oil Conservation Division (NMOCD) in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). 19.15.29 NMAC establishes reporting, site assessment/characterization, remediation, closure, variance, and enforcement procedures. Table I of 19.15.29.12 NMAC determines the closure criteria for soils impacted by a release based on depth to groundwater and the following characteristics:

Site Characteristics	
Approximate Depth to Groundwater	124'
Within 330 ft. of any continuously flowing or significant watercourse?	NO
Within 200 ft. of any lakebed, sinkhole, or playa lake?	NO
Within 300 ft. of an occupied permanent residence, school, hospital, or institution?	NO
Within 500 ft. of a spring, or private, domestic fresh water well?	NO
Within 1000 ft. of any fresh water well?	NO
Within the incorporated municipal boundaries or within a municipal well field?	NO
Within 300 ft. of a wetland?	NO
Within the area overlying a subsurface mine?	NO
Within an unstable area such as Karst?	NO
Within a 100-year floodplain?	NO

A search of the groundwater database maintained by the New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average groundwater depth within one (1) Mile radius of the Release Site and identify any registered water wells within ½ Mile of the Release Site. The data initially found on the State Engineers website showed that there was water at a depth of 124' within a ½ mile radius. However, because the spill happened off the pad, it was cleaned based on the strictest criteria.

Depth to groundwater information is provided in Appendix A.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is in the Quaternary Formation- and is made up of Eolian and piedmont deposits (Holocene to middle Pleistocene)— Interlayered eolian sands and piedmont-slope deposits along the eastern flank of the Pecos River valley, primarily between Roswell and Carlsbad. Typically capped by thin eolian deposits. The soil in this area is made up of Maljamar and Paloma fine sands, with 0 to 3 percent slopes, according to the United States Department of Agriculture Natural Resources Conservation Service. The drainage courses in this area are well-drained. There is NOT a high potential for karst geology to be present around the Pearsall (Figure #3).

The Soil Survey and FEMA Flood Map are provided in Appendix B. A Karst Map is provided in Figure #4.

TABLE I CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE			
	Constituent	Method	Limit
≤50 Feet	Chloride	EPA 300.0	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

INITIAL SITE ASSESSMENT & SOIL SAMPLING EVENT

On July 11, 2022, Paragon conducted an initial site assessment. During the initial site assessment, we obtained samples in the open pasture area along the spill path. The spill path measured approximately 85 feet long by 10 feet wide. Five (5) soil samples were collected in these areas in an effort to determine the vertical extent of soil impact. These samples were collected in accordance with NMAC 19.15.29 and submitted to an approved laboratory for analysis. A table summarizing laboratory analytical results from soil samples collected during the above-stated activities is provided below:

7-11-22 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is >100')								
Sample Date: 7-11-22		Closure Criteria ≤ 50 mg/kg	Closure Criteria ≤ 10 mg/kg				Closure Criteria 100 mg/kg	Closure Criteria ≤ 600 mg/kg
Sample ID	Depth (BGS)	BTEX	Benzene	GRO	DRO	MRO	Total TPH	CHLORIDES
S-1	0-6"	ND	ND	ND	ND	ND	ND	2400
	1'	ND	ND	ND	ND	ND	ND	192
S-2	0-6"	ND	ND	ND	ND	ND	ND	5680
	1'	ND	ND	ND	ND	ND	ND	5860
	2'	—	—	—	—	—	—	6400
	3'	—	—	—	—	—	—	5360
	4'	—	—	—	—	—	—	3080
S-3	0-6"	ND	ND	ND	49.7	ND	49.7	3040
	1'	ND	ND	ND	ND	ND	ND	4960
	2'	—	—	—	—	—	—	10200
	3'	—	—	—	—	—	—	12700
	4'	—	—	—	—	—	—	5120
S-4	0-6"	ND	ND	ND	ND	ND	ND	144
	1'	ND	ND	ND	ND	ND	ND	1440
	2'	—	—	—	—	—	—	2720
	3'	—	—	—	—	—	—	5200
	4'	—	—	—	—	—	—	15100
S-5	0-6"	ND	ND	ND	ND	ND	ND	16
	1'	ND	ND	ND	ND	ND	ND	48

ND-Analyte Not Detected

All Laboratory analytical reports are provided in Appendix E. A Site Map is provided in Figure #1.

REMEDIATION ACTIVITIES

On August 4, 2022, Paragon mobilized personnel and heavy equipment to conduct remedial activities. Based on the analytical results, site characteristics, and field observations made during the site assessment, the following remedial activities were undertaken to advance the Release Site toward an NMOCD-approved closure.

- S-1 was excavated to a depth of 1-foot BGS.
- S-2 through S-4 was excavated to a depth of 5-feet BGS.
- In the area of S-5, we excavated 6 inches to remove the staining. The initial sampling for this area proved to be below the closure criteria.

All excavated soils were temporarily stockpiled on-site atop a poly liner during the project. Once these areas were excavated, we obtained confirmation bottom and sidewall samples. We utilized composite sampling, where each sample was representative of no more than 200 sq/ft. The results of this event are in the following data table:

8-24-22 Confirmation Samples

NMOCD Table 1 Closure Criteria 19.15.29 NMAC								
Sample Date: 8-24-22		Closure Criteria ≤ 50 mg/kg	Closure Criteria ≤ 10 mg/kg				Closure Criteria ≤ 100 mg/kg	Closure Criteria ≤ 600 mg/kg
Sample ID	Depth (BGS)	BTEX	Benzene	GRD	DRO	MRO	Total TPH	CHLORIDES
S-1 BOTTOM	1'	ND	ND	ND	ND	ND	ND	ND
SW E-1		ND	ND	ND	ND	ND	ND	48
SW S-1		ND	ND	ND	ND	ND	ND	16
SW W-1		ND	ND	ND	ND	ND	ND	ND
S-2 BOTTOM	5'	ND	ND	ND	ND	ND	ND	ND
SW W-2		ND	ND	ND	ND	ND	ND	ND
SW E-2		ND	ND	ND	ND	ND	ND	48
S-3 BOTTOM	5'	ND	ND	ND	ND	ND	ND	32
SW W-3		ND	ND	ND	ND	ND	ND	16
SW E-3		ND	ND	ND	ND	ND	ND	16
S-4 BOTTOM	5'	ND	ND	ND	ND	ND	ND	16
SW W-4		ND	ND	ND	ND	ND	ND	32
SW E-4		ND	ND	ND	ND	ND	ND	32

ND- Analyte Not Detected

The laboratory analytical results confirmed that the soil sample concentrations were below NMOCD Closure Criteria. We then began to transport the contaminated material to Lea Land, an NMOCD-approved waste disposal facility. The excavated areas were backfilled utilizing the surrounding sand dunes to keep the area's native soils intact. The affected area was then contoured and machine compacted to match the surrounding grade.

CLOSURE REQUEST

After careful review, Paragon requests that this incident, NAPP2218026857, be closed. SPUR has complied with the applicable closure requirements outlined in rule 19.15.19.12 NMAC.

If you have any questions or need additional information, please get in touch with Chris Jones by phone at (575)631-6977 or email at chris@paragonenvironmental.net.

Respectfully,



Chris Jones
Environmental Professional
Paragon Environmental, LLC



Attachments

Figures:

- 1- Site Map
- 2- Confirmation Sample Map
- 3- Topographic Map
- 4- Karst Map
- 5- Aerial Map

Appendices:

- Appendix A – Referenced Water Surveys
- Appendix B – Soil Survey and FEMA Flood Map
- Appendix C – C-141
- Appendix D – Photographic Documentation
- Appendix E – Laboratory Reports





Figures:

- 1-Site Map
- 2- Confirmation Sample Map
- 3- Topo Map
- 4- Karst Map
- 5- Aerial Map


Spur Energy Partners

Pearsall Federal SWD #1
API# 30-025-40712
Lea County, NM
Site Map

Legend

-  Sample
-  Spill Area



 Pearsall Fed SWD #1 32.8065033, -103.7759476

Google Earth

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90 ft



Spur Energy Partners

Pearsall Federal SWD #1
API# 30-025-40712
Lea County, NM
Sidewall Sample Map

Legend

- Sample
- Spill Area

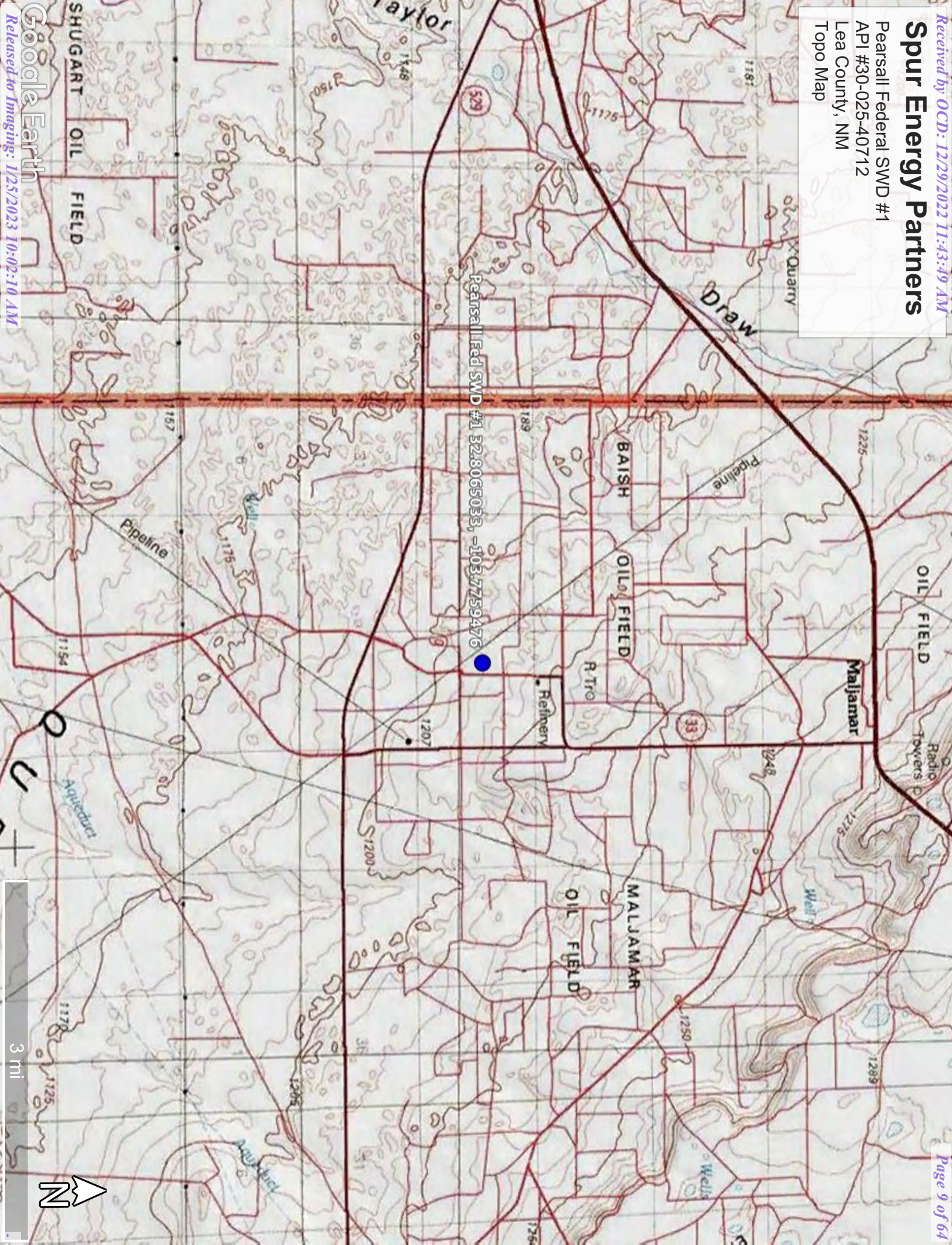


Pearsall Fed SWD #1 32.8065033, -103.7759476



Spur Energy Partners


Pearsall Federal SWD #1
API #30-025-40712
Lea County, NM
Topo Map



Spur Energy Partners

Pearsall Federal SWD #1
API #30-025-40712
Lea County, NM
Karst Map

Legend

-  Feature 1
-  Low
-  Medium

Pearsall Fed SWD #1 32.8065033, -103.7759476



Google Earth

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10 mi



Spur Energy Partners

Pearsall Federal SWD #1
API #30-025-40712
Lea County, NM
Location Map

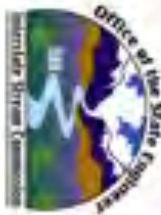
Pearsall Fed SWD #1 32.8065033, -103.7759476





Appendix A
Referenced Water Data:

New Mexico State of Engineers Office



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		Sub-	Q Q Q				Tws				Rng				X				Y				DistanceDepthWellDepthWater Column																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
POD Number	Code	basin	County	64	16	4	Sec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Average Depth to Water: 82 feet

Minimum Depth: 75 feet

Maximum Depth: 92 feet

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 614599.323

Northing (Y): 3630498.923

Radius: 1000

*UTM location was derived from PLSS - see Help

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


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WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	RA 12721 POD2	1	1	4	28	17S	32E	615055	3630407 

Driller License:	1456	Driller Company:	WHITE DRILLING COMPANY		
Driller Name:	JOHN W WHITE				
Drill Start Date:	04/18/2019	Drill Finish Date:	04/19/2019	Plug Date:	
Log File Date:	05/15/2019	PCW Rev Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	0 GPM
Casing Size:	2.00	Depth Well:	124 feet	Depth Water:	75 feet

Water Bearing Stratifications:		Top	Bottom	Description
		56	99	Sandstone/Gravel/Conglomerate
		99	102	Sandstone/Gravel/Conglomerate
		102	103	Shale/Mudstone/Siltstone
		103	105	Shale/Mudstone/Siltstone
		105	117	Shale/Mudstone/Siltstone
		117	118	Other/Unknown
		118	120	Shale/Mudstone/Siltstone
		120	121	Sandstone/Gravel/Conglomerate
		121	124	Shale/Mudstone/Siltstone
Casing Perforations:		Top	Bottom	
		84	124	

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

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POINT OF DIVERSION SUMMARY



Appendix B
Soil Survey:

U.S.D.A.
FEMA Flood Map

Map Unit Description: Maljamar and Palomas fine sands, 0 to 3 percent slopes---Lea County,
New Mexico

Lea County, New Mexico

MF—Maljamar and Palomas fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: dmqb

Elevation: 3,000 to 3,900 feet

Mean annual precipitation: 10 to 15 inches

Mean annual air temperature: 60 to 62 degrees F

Frost-free period: 190 to 205 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Maljamar and similar soils: 46 percent

Palomas and similar soils: 44 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maljamar

Setting

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand

Bt - 24 to 50 inches: sandy clay loam

Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 40 to 60 inches to petrocalcic

Drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 7e

Map Unit Description: Maljamar and Palomas fine sands, 0 to 3 percent slopes---Lea County,
New Mexico

Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Description of Palomas

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sandstone

Typical profile

A - 0 to 16 inches: fine sand
Bt - 16 to 60 inches: sandy clay loam
Bk - 60 to 66 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water
(Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 7.5
inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 5 percent
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Wink

Percent of map unit: 5 percent
Ecological site: R042XC003NM - Loamy Sand

Map Unit Description: Maljamar and Palomas fine sands, 0 to 3 percent slopes---Lea County,
New Mexico

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 18, Sep 10, 2021








103°46'52"W 32°48'39"N















Legend




SEE THIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	 Without Base Flood Elevation (BFE) Zone A, V, A99 With BFE or Depth Zone AE, AO, AH, VE, AR Regulatory Floodway
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OTHER AREAS OF FLOOD HAZARD	 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	 Future Conditions 1% Annual Chance Flood Hazard Zone X
	 Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	 Area with Flood Risk due to Levee Zone D

OTHER AREAS	 Area of Minimal Flood Hazard Zone X
	 Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	 Channel, Culvert, or Storm Sewer
	 Levee, Dike, or Floodwall

 20.2 17.5	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
OTHER FEATURES	 Hydrographic Feature

MAP PANELS	 Digital Data Available
	 No Digital Data Available
	 Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/21/2022 at 12:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmapped areas cannot be used for regulatory purposes.



Appendix C:

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	nAPP2218026857
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Spur Energy Partners, LLC	OGRID	328947
Contact Name	Chad Hensley	Contact Telephone	(346) 339-1494
Contact email	chensley@spurenergy.com	Incident # (assigned by OCD)	nAPP2218026857
Contact mailing address	9655 Katy Freeway, Suite 500, Houston, TX 77024		

Location of Release Source

Latitude 32.8065033 Longitude -103.7759476
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Pearsall federal SWD #1	Site Type	SWD
Date Release Discovered	6-27-2022	API# (if applicable)	30-025-40712

Unit Letter	Section	Township	Range	County
E	28	17S	32E	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 20	Volume Recovered (bbls) 17
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release


Corrosion in injection line.

Incident ID	nAPP2218026857
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Chad Hensley</u>	Title: <u>EHS Coordinator</u>
Signature: <u></u>	Date: <u>06/29/2022</u>
email: <u>chensley@spurenergy.com</u>	Telephone: <u>(346) 339-1494</u>
<u>OCD Only</u>	
Received by: <u>Jocelyn Harimon</u>	Date: <u>06/29/2022</u>

State of New Mexico
Oil Conservation Division

Form C-141

Incident ID	NAPP2218026857
District RP	
Facility ID	
Application ID	

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>124</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 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

Oil Conservation Division

Incident ID	NAPP2218026857
District RP	
Facility ID	
Application ID	

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.

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: Kathy Purvis.

Title: HSE Coordinator

Signature: Katherine Purvis

Date: 12/29/2022

email: katherine.purvis@spurenergy.com

Telephone: 575-441-8619

OCD Only

Received by: Jocelyn Harimon

Date: 12/29/2022

Incident ID	NAPP2218026857
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kathy Purvis.

Title: HSE Coordinator

Signature: Katherine Purvis

Date: 12/29/2022

email: katherine.purvis@spurenergy.com

Telephone: 575-441-8619

OCD Only

Received by: Jocelyn Harimon

Date: 12/29/2022

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: Jennifer Nobui

Date: 01/25/2023

Printed Name: Jennifer Nobui

Title: Environmental Specialist A



Appendix D:
Photographic Documentation



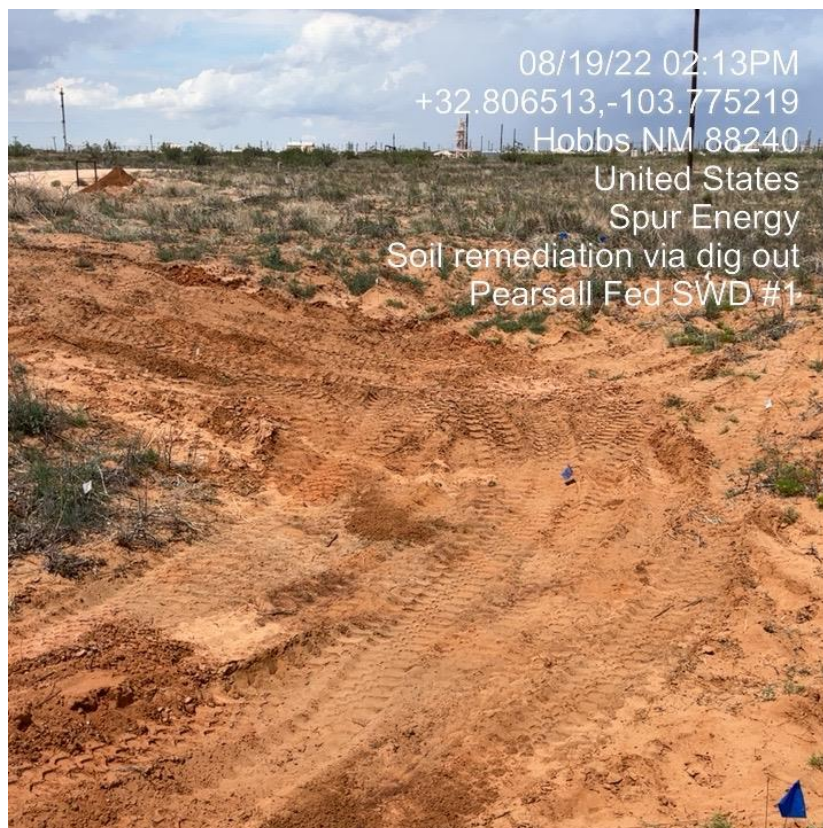
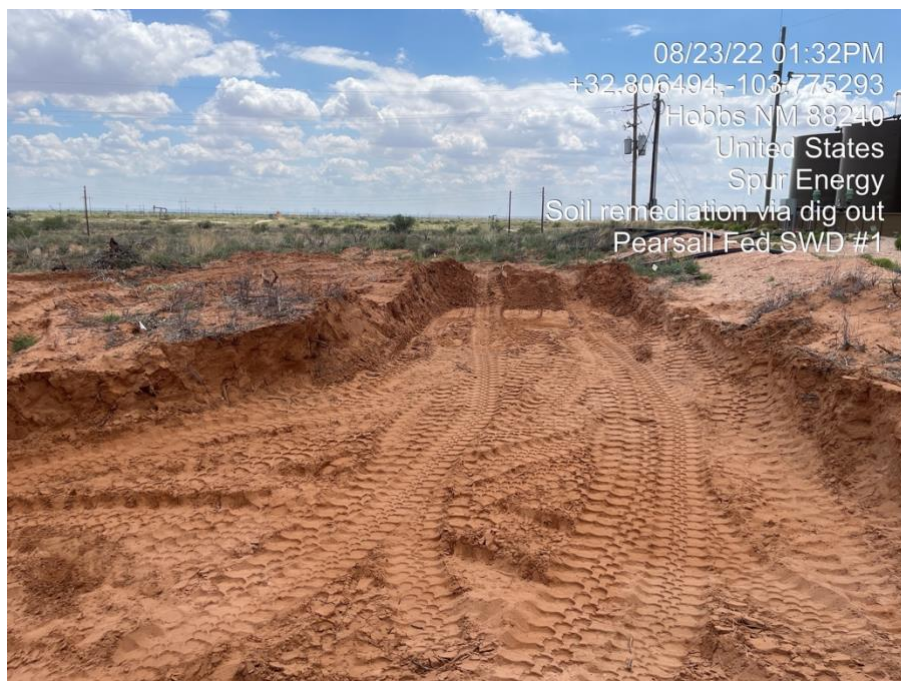
Photographic Documentation

Before Remediation



During





Completed





Appendix E:
Laboratory Results



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

July 15, 2022

CHRIS JONES

PARAGON ENVIROMENTAL

5002 CARRAIGE RD

HOBBS, NM 88242

RE: PEARSALL FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/12/22 16:55.

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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S1 0-6 (H222997-01)

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	07/13/2022	ND	1.91	95.3	2.00	10.2	
Toluene*	0.068	0.050	07/13/2022	ND	1.97	98.3	2.00	10.1	
Ethylbenzene*	<0.050	0.050	07/13/2022	ND	2.01	100	2.00	11.8	
Total Xylenes*	<0.150	0.150	07/13/2022	ND	6.08	101	6.00	11.0	
Total BTEX	<0.300	0.300	07/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	179	89.3	200	5.04	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	194	96.8	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 70.0 % 43-149

Surrogate: 1-Chlorooctadecane 80.1 % 42.5-161

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S1 1' (H222997-02)

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	07/13/2022	ND	1.91	95.3	2.00	10.2	
Toluene*	<0.050	0.050	07/13/2022	ND	1.97	98.3	2.00	10.1	
Ethylbenzene*	<0.050	0.050	07/13/2022	ND	2.01	100	2.00	11.8	
Total Xylenes*	<0.150	0.150	07/13/2022	ND	6.08	101	6.00	11.0	
Total BTEx	<0.300	0.300	07/13/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	179	89.3	200	5.04	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	194	96.8	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 76.4 % 43-149

Surrogate: 1-Chlorooctadecane 87.9 % 42.5-161

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S2 0-6 (H222997-06)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEx	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	179	89.3	200	5.04	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	194	96.8	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 69.4 % 43-149

Surrogate: 1-Chlorooctadecane 81.0 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S2 1' (H222997-07)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEX	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5860	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	179	89.3	200	5.04	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	194	96.8	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 66.9 % 43-149

Surrogate: 1-Chlorooctadecane 74.9 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S3 1' (H222997-11)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEX	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4960	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	179	89.3	200	5.04	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	194	96.8	200	2.90	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 77.2 % 43-149

Surrogate: 1-Chlorooctadecane 85.8 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S4 1' (H222997-15)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEx	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1440	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	210	105	200	6.12	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	223	112	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 88.5 % 43-149

Surrogate: 1-Chlorooctadecane 87.0 % 42.5-161

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S5 1' (H222997-19)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEx	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	210	105	200	6.12	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	223	112	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 82.8 % 43-149

Surrogate: 1-Chlorooctadecane 81.3 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S3 0-6 (H222997-23)

BTX 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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTX	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3040	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	210	105	200	6.12	
DRO >C10-C28*	49.7	10.0	07/13/2022	ND	223	112	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 93.4 % 43-149

Surrogate: 1-Chlorooctadecane 93.1 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S4 0-6 (H222997-24)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEx	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	07/14/2022	ND	432	108	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	07/13/2022	ND	210	105	200	6.12	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	223	112	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 95.1 % 43-149

Surrogate: 1-Chlorooctadecane 93.9 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
CHRIS JONES
5002 CARRAIGE RD
HOBBS NM, 88242
Fax To:

Received: 07/12/2022
Reported: 07/15/2022
Project Name: PEARSALL FEDERAL SWD
Project Number: 1-13
Project Location: MALAGA

Sampling Date: 07/11/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: S5 0-6 (H222997-25)

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	07/14/2022	ND	1.91	95.3	2.00	10.2		
Toluene*	<0.050	0.050	07/14/2022	ND	1.97	98.3	2.00	10.1		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.01	100	2.00	11.8		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.08	101	6.00	11.0		
Total BTEx	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500CI-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	07/14/2022	ND	432	108	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	07/13/2022	ND	210	105	200	6.12	
DRO >C10-C28*	<10.0	10.0	07/13/2022	ND	223	112	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	07/13/2022	ND					

Surrogate: 1-Chlorooctane 100 % 43-149

Surrogate: 1-Chlorooctadecane 98.3 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager

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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

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



Page 13 of 15



† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Page 15 of 15



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

August 31, 2022

CASON SPURLOCK
PARAGON ENVIROMENTAL
5002 CARRAIGE RD
HOBBS, NM 88242

RE: PEARSALL FEDERAL SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 08/25/22 16:55.

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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene
Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: S1 (H223929-01)

BTX 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	08/29/2022	ND	2.13	106	2.00	2.16	
Toluene*	<0.050	0.050	08/29/2022	ND	2.12	106	2.00	2.64	
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.05	103	2.00	2.11	
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.43	107	6.00	2.80	
Total BTX	<0.300	0.300	08/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	200	99.8	200	0.784	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	214	107	200	2.05	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 93.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 112 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWE1 (H223929-02)

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	08/29/2022	ND	2.13	106	2.00	2.16		
Toluene*	<0.050	0.050	08/29/2022	ND	2.12	106	2.00	2.64		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.05	103	2.00	2.11		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.43	107	6.00	2.80		
Total BTEx	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	200	99.8	200	0.784	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	214	107	200	2.05	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 94.4 % 45.3-161

Surrogate: 1-Chlorooctadecane 111 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWS1 (H223929-03)

BTX 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	08/30/2022	ND	2.13	106	2.00	2.16	
Toluene*	<0.050	0.050	08/30/2022	ND	2.12	106	2.00	2.64	
Ethylbenzene*	<0.050	0.050	08/30/2022	ND	2.05	103	2.00	2.11	
Total Xylenes*	<0.150	0.150	08/30/2022	ND	6.43	107	6.00	2.80	
Total BTX	<0.300	0.300	08/30/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 101 % 45.3-161

Surrogate: 1-Chlorooctadecane 108 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWW1 (H223929-04)

BTX 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	08/29/2022	ND	2.13	106	2.00	2.16	
Toluene*	<0.050	0.050	08/29/2022	ND	2.12	106	2.00	2.64	
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.05	103	2.00	2.11	
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.43	107	6.00	2.80	
Total BTX	<0.300	0.300	08/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 99.2 % 45.3-161

Surrogate: 1-Chlorooctadecane 105 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: S2 (H223929-05)

BTX 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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTX	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 93.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 99.2 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWW2 (H223929-06)

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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTEx	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 93.9 % 45.3-161

Surrogate: 1-Chlorooctadecane 99.6 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWE2 (H223929-07)

BTX 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	08/29/2022	ND	2.06	103	2.00	1.56	
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954	
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479	
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281	
Total BTX	<0.300	0.300	08/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 85.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 90.2 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: S3 (H223929-08)

BTX 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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTX	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500CI-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	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 88.4 % 45.3-161

Surrogate: 1-Chlorooctadecane 91.8 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWW3 (H223929-09)

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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTEx	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 84.7 % 45.3-161

Surrogate: 1-Chlorooctadecane 86.8 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWE3 (H223929-10)

BTX 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	08/29/2022	ND	2.06	103	2.00	1.56	
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954	
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479	
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281	
Total BTX	<0.300	0.300	08/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/29/2022	ND	432	108	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	08/26/2022	ND	203	101	200	0.285	
DRO >C10-C28*	<10.0	10.0	08/26/2022	ND	216	108	200	1.41	
EXT DRO >C28-C36	<10.0	10.0	08/26/2022	ND					

Surrogate: 1-Chlorooctane 88.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 92.4 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWW4 (H223929-11)

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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTEx	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500CI-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	08/29/2022	ND	432	108	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	08/29/2022	ND	189	94.6	200	2.40	
DRO >C10-C28*	<10.0	10.0	08/29/2022	ND	192	96.2	200	0.884	
EXT DRO >C28-C36	<10.0	10.0	08/29/2022	ND					

Surrogate: 1-Chlorooctane 90.9 % 45.3-161

Surrogate: 1-Chlorooctadecane 109 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: SWE4 (H223929-12)

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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTEx	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-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	08/29/2022	ND	416	104	400	3.77		

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	08/29/2022	ND	189	94.6	200	2.40	
DRO >C10-C28*	<10.0	10.0	08/29/2022	ND	192	96.2	200	0.884	
EXT DRO >C28-C36	<10.0	10.0	08/29/2022	ND					

Surrogate: 1-Chlorooctane 91.1 % 45.3-161

Surrogate: 1-Chlorooctadecane 107 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

PARAGON ENVIROMENTAL
 CASON SPURLOCK
 5002 CARRAIGE RD
 HOBBS NM, 88242
 Fax To:

Received:	08/25/2022	Sampling Date:	08/24/2022
Reported:	08/31/2022	Sampling Type:	Soil
Project Name:	PEARSALL FEDERAL SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: S4 (H223929-13)

BTX 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	08/29/2022	ND	2.06	103	2.00	1.56		
Toluene*	<0.050	0.050	08/29/2022	ND	2.31	116	2.00	0.0954		
Ethylbenzene*	<0.050	0.050	08/29/2022	ND	2.23	111	2.00	0.479		
Total Xylenes*	<0.150	0.150	08/29/2022	ND	6.98	116	6.00	0.281		
Total BTX	<0.300	0.300	08/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/29/2022	ND	416	104	400	3.77		

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	08/29/2022	ND	189	94.6	200	2.40	
DRO >C10-C28*	<10.0	10.0	08/29/2022	ND	192	96.2	200	0.884	
EXT DRO >C28-C36	<10.0	10.0	08/29/2022	ND					

Surrogate: 1-Chlorooctane 90.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 105 % 46.3-178

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Paragon Environmental		P.O. #:		BILL TO															
Project Manager: Cason Spurlock		Company: Spur Energy		ANALYSIS REQUEST															
Address: 5002 Carriage Rd		Attn:																	
City: Hobbs		Address:																	
Phone #: 575-631-6977		City:																	
Fax #:		State:																	
Project #:		Project Owner: Spur Energy																	
Project Name: Percussall Federal SUD #11		State:																	
Project Location:		Zip:																	
Sampler Name:		Phone #:																	
FOR LAB USE ONLY		Fax #:																	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX		PRESERV	SAMPLING	DATE	TIME										
				GROUNDWATER															
				WASTEWATER															
				SOIL															
				OIL															
				SLUDGE															
				OTHER :															
				ACID/BASE:															
				ICE / COOL															
				OTHER :															
H23987	SI							8/24		Chlorides									
1	SWE1									TPT									
2	SWS1									BTX									
3	SWS1																		
4	SWS1																		
5	SWS2																		
6	SWS2																		
7	SWE2																		
8	SWS2																		
9	SWS3																		
10	SWE3																		
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Relinquished By:		Date: 8-25-22	Received By:																
Relinquished By:		Time: 1:55	Received By:																
Delivered By: (Circle One) 3.12 2.56		Sample Condition		Cool		Intact		CHECKED BY: (Initials)											
Sampler - UPS - Bus - Other:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
REMARKS:																			

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

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Company Name: Paragon Environmental		P.O. #:		BILL TO										ANALYSIS REQUEST																									
Project Manager: Cason Spurlock		Company: Spur Energy																																					
Address: 5002 Carriage Rd		Attn:																																					
City: Hobbs		Address:																																					
State: NM Zip: 88242		City:																																					
Phone #: 575-631-6977		State:																																					
Fax #:		Zip:																																					
Project #:		Project Owner: Spur Energy																																					
Project Name: Russell Federal BUD #1		City:																																					
Project Location:		State:																																					
Fax #:		Phone #:																																					
Sample Name:		Fax #:																																					
FOR LAB USE ONLY																																							
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											
H223929		SWW4		G		1																				8/24				Chlaides TPH BTEX									
11		SWW4		G		1																																	
12		SWW4		G		1																																	
13		SWW4		G		1																																	

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 171112

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 171112
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	1/25/2023