

Incident ID: nAPP2419428272
Preliminary Delineation Report and Remediation Plan
Monument ABO CTB
Produced Water Release
Lea County, New Mexico

Latitude: 32.61177
Longitude: -103.33286

LAI Project No. 24-0121-02

November 6, 2024

Prepared for:
Apache Corporation
303 Veterans Airpark Lane, Suite 3000
Midland, Texas 79705

Prepared by:
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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI), has prepared this delineation report and remediation plan on behalf of Apache Corporation (Apache) for submittal to the New Mexico Oil Conservation Division (NMOCD) District I in Hobbs, New Mexico, for a produced water release at the Monument Abo CTB (Site) located in Unit M (SW/4 of SW/4), Section 35, Township 19 South, Range 36 East in Lea County, New Mexico. The geodetic position is 32.61177 and -103.33286. Figure 1 presents a topographic map.

1.1 Background

The release was discovered on June 30, 2024, and resulted from corrosion of a heater treater fill line, which allowed about 79 barrels (bbls) of produced water to be released over an area of 2,624 square feet on privately owned land; 78 bbls were recovered. The initial C-141 was submitted to NMOCD District I on July 12, 2024, and assigned incident number nAPP2419428272. Appendix A presents the initial C-141 and Apache spill calculation.

1.2 Physical Setting

The physical setting is as follows:

- Surface elevation is approximately 3,618 feet above mean sea level (msl).
- Surface topography slopes gently to the southeast.
- The nearest continuously flowing water course (Pecos River) is located 61 miles to the west.
- The nearest lakebed, sinkhole, or playa lake is located about 0.55 miles to the north.
- The nearest wetland is located 0.55 miles to the north.
- The nearest subsurface mine is located 27.2 miles to the west.
- The nearest 100-year flood plain is located 16.1 miles to the southeast.
- The nearest active water well for stock watering is located 1.22 miles to the southwest.
- USGS karst occurrence potential data designates the area as low risk.
- The soils are designated as Pyote and Maljamar fine sands, where the Pyote setting consists of 0 to 30 inches fine sand underlain by 30 to 60 inches of fine sandy loam; and the Maljamar setting consists of 0 to 24 inches of fine sand, underlain by 24 to 50 inches of sandy clay loam, and 50 to 60 inches of cemented material (caliche).
- The geology is composed of Holocene to middle Pleistocene eolian and piedmont deposits consisting of interlayered eolian sands and piedmont-slope deposits.
- Groundwater was reported to be about 50 feet below ground surface (bgs), based on a groundwater well drilled on September 19, 1997, about 0.17 miles west of the Site (L-10804).

Appendix B presents a karst potential map. Appendix C presents the well record and log for L-10804.

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1.3 Remediation Standards

The following delineation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC for groundwater less than 51 feet bgs:

Parameter	Limit
Benzene	10 mg/Kg
BTEX	50 mg/Kg
TPH	100 mg/Kg
Chloride	600 mg/Kg

Furthermore, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

2.0 DELINEATION

Between July 15 and August 16, 2024, Diamondback Disposal and Services (Diamondback) personnel collected 42 samples from 12 sample locations (SP-1 through SP-4, H-1, H-2, H-2 at 25 feet out, H-3, H-3 at 10 feet out, H-4, and H-4 at 5 feet out) at depths between 0 and 15 feet bgs. The samples were delivered to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW-846 Method 8021B; total petroleum hydrocarbons (TPH), including gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO) by Method 8015M; and chloride by SM4500Cl-B. Cardinal reported that all samples were below the delineation limit for benzene and BTEX. TPH and/or chloride was above the NMOCD delineation limits of 100 mg/Kg or 600 mg/Kg, respectively, in the lowermost sample from the following sample locations:

Sample	Depth (feet)	TPH (mg/Kg)	Chloride (mg/Kg)
SP-1	15	--	8,240
SP-2	2	7,801	--
SP-3	5	117	--
SP-4	8	346	5,300

On September 19, 2024, Scarborough Drilling Inc. (SDI), under the guidance of LAI personnel, used an air rotary drilling rig to collect additional delineation soil samples at SP-1 every 5 feet between about 20 and 45 feet bgs the samples were delivered under chain-of-custody and preservation to Eurofins Laboratories (Eurofins) in Midland, Texas, which analyzed the samples for BTEX, TPH and chloride. BTEX, and TPH were analyzed by the aforementioned analytical methods and chloride was analyzed EPA Method 300. The lowermost sample from location SP-1 was collected at 45 feet bgs and benzene, BTEX, and TPH were reported below NMOCD delineation limits. Chloride was reported above the NMOCD delineation limit at 9,690 mg/Kg.

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The release was not fully delineated due to proximity to production equipment that prevented access to mechanical drilling equipment. The spill will be delineated during remediation. Table 1 presents the delineation soil sample analytical data summary. Figure 3 presents the soil sample location map. Appendix D presents the laboratory analytical reports.

3.0 REMEDIATION PLAN

Apache proposes the following remedial actions:

- Complete vertical delineation of locations SP-2 through SP-4 during remediation.
- Drill a soil boring to determine depth groundwater and collect groundwater samples.
- Analyze groundwater samples for BTEX, TDS, and chloride to determine if groundwater was impacted by the release.
- Use Hydro/manual excavation methods to remove impacted soil from an area of approximately 1,231 square feet inside of the tank battery containment.
- Use mechanical excavations methods to remove impacted material from an area of about 2,062 square feet on the pad, outside of the tank battery containment.
- Collect about 25 composite confirmation samples from the bottom and sidewalls of the excavation, or approximately every 200 square feet, and analyze samples for benzene, BTEX, TPH, and chloride.
- Depth of excavation, amount of soil removed, and confirmation soil sample closure criteria will be determined by Table I of 19.15.29.12 NMAC, based on depth to groundwater measurement established by proposed soil boring.
- Backfill excavation with clean non-waste containing soil to surface level.
- Prepare closure report for submittal to the NMOCD.

Figure 3 presents the proposed excavation map.

Tables

Table 1
Delineation Soil Sample Analytical Data Summary
Monument ABO CTB
Lea County, New Mexico
32.61177, -103.33286

Sample ID	Depth Feet	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	MRO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Delineation Limits:				10	50				100	600
SP-1	0	08/16/2024	In-situ	<0.050	3.39	159	19,500	4,130	23,789	3,200
SP-1	1	08/16/2024	In-situ	<0.200	33.1	893	7,590	1,350	9,833	1,800
SP-1	2	08/16/2024	In-situ	<0.050	5.10	154	2,030	351	2,535	2,800
SP-1	3	08/16/2024	In-situ	<0.200	27.7	153	1,760	302	2,215	1,360
SP-1	4	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	5,680
SP-1	5	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	3,840
SP-1	6	08/16/2024	In-situ	<0.050	2.02	27.2	704	157	888	34,000
SP-1	7	08/16/2024	In-situ	<0.050	1.17	54.2	2,200	482	2,736	48,800
SP-1	8	08/16/2024	In-situ	<0.050	<0.300	<10.0	62.2	<10.0	62.2	20,000
SP-1	9	08/16/2024	In-situ	<0.050	<0.300	<10.0	19.7	<10.0	19.7	14,800
SP-1	10	08/16/2024	In-situ	<0.050	<0.300	<10.0	53.9	<10.0	53.9	16,200
SP-1	11	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	11,400
SP-1	12	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	11,800
SP-1	13	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	10,300
SP-1	14	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	7,600
SP-1	15	08/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	8,240
SP-1	20	09/19/2024	In-situ	<0.00201	<0.00402	<49.7	<49.7	<49.7	<49.7	2,670
SP-1	25	09/19/2024	In-situ	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	1,530
SP-1	30	09/19/2024	In-situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	3,310
SP-1	35	09/19/2024	In-situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	3,890
SP-1	40	09/19/2024	In-situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	4,890
SP-1	45	09/19/2024	In-situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	9,690
SP-2	0	7/11/2024	In-situ	<0.050	9.98	413	17,700	4,980	23,093	304
SP-2	1	7/11/2024	In-situ	<0.200	54.9	1,130	5,770	955	7,855	160
SP-2	2	7/11/2024	In-situ	<0.200	57.2	1,160	5,730	911	7,801	480
SP-3	0	7/11/2024	In-situ	<0.050	<0.300	<50.0	8,020	1,750	9,770	2,000
SP-3	1	7/11/2024	In-situ	<0.050	<0.300	<10.0	236	51.2	287	4,440
SP-3	2	7/11/2024	In-situ	<0.050	<0.300	<10.0	38.3	<10.0	38.3	2,720
SP-3	3	7/11/2024	In-situ	<0.050	<0.300	<10.0	52.9	12.5	65.4	1,550
SP-3	4	7/11/2024	In-situ	<0.050	<0.300	<10.0	29.0	<10.0	29.0	576
SP-3	5	7/15/2024	In-situ	<0.050	<0.300	<10.0	92.2	24.8	117	336

Table 1
Delineation Soil Sample Analytical Data Summary
Monument ABO CTB
Lea County, New Mexico
32.61177, -103.33286

Sample ID	Depth Feet	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	MRO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Delineation Limits:				10	50				100	600
SP-4 ¹	0	7/15/2024	In-situ	<0.050	0.8890	118	19,500	5,580	25,198	9,280
SP-4 ¹	1	7/15/2024	In-situ	<0.050	8.05	1,020	7,520	1,390	9,930	1,620
SP-4 ¹	2	7/15/2024	In-situ	<0.050	<0.300	<10.0	102	22.4	124	3,120
SP-4 ¹	3	7/15/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	96.0
SP-4 ¹	4	7/15/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	432
SP-4 ¹	5	7/15/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	752
SP-4 ¹	6	7/15/2024	In-situ	<0.050	<0.300	<10.0	89.6	26.2	116	2,360
SP-4 ¹	7	7/15/2024	In-situ	<0.050	<0.300	34	960	292	1,286	6,560
SP-4 ¹	8	7/15/2024	In-situ	<0.050	<0.300	<10.0	262	83.9	346	5,300
H-1 ¹	0.5	7/11/2024	In-situ	<0.050	<0.300	<10.0	44.7	<10.0	44.7	176
H-1 ¹	0.5	8/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	272
H-2 25' out ¹	0.5	7/11/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	176
H-2 ¹	0.5	8/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	336
H-3 10' out ¹	0.5	7/11/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	80.0
H-3 ¹	0.5	8/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
H-4 5' out ¹	0.5	7/11/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	192
H-4 15' out ¹	0.5	8/16/2024	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	304

Notes:

1: Analysis performed by Cardinal Laboratories, in Hobbs, New Mexico, by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and SM4500Cl-B (chloride).
2: Analysis performed by Eurofins-Xenco (Xenco), in Midland, Texas, by EPA SW-846 Methods 8021B (BTEX) and 8015M (TPH), and EPA Method 300 (chloride).
BTEX: benzene, toluene, ethylbenzene, xylene
TPH: total petroleum hydrocarbons
GRO: gasoline range organics (C6-C10)
DRO: diesel range organics (>C10-C28)
MRO: oil range organics (>C28-C36)
mg/Kg: milligrams per kilogram; equivalent to parts per million (ppm)
<: indicates that parameter concentration is below method analytical reporting limit
Depth reported in feet below ground surface (bgs)

Bold and highlighted indicates parameter concentration is above NMOCD closure criteria

Figures



Figure 1 - Topographic Map



Legend

- Spill Area
- Vertical Sample Location
- Horizontal Sample Location

Figure 2 - Aerial Map

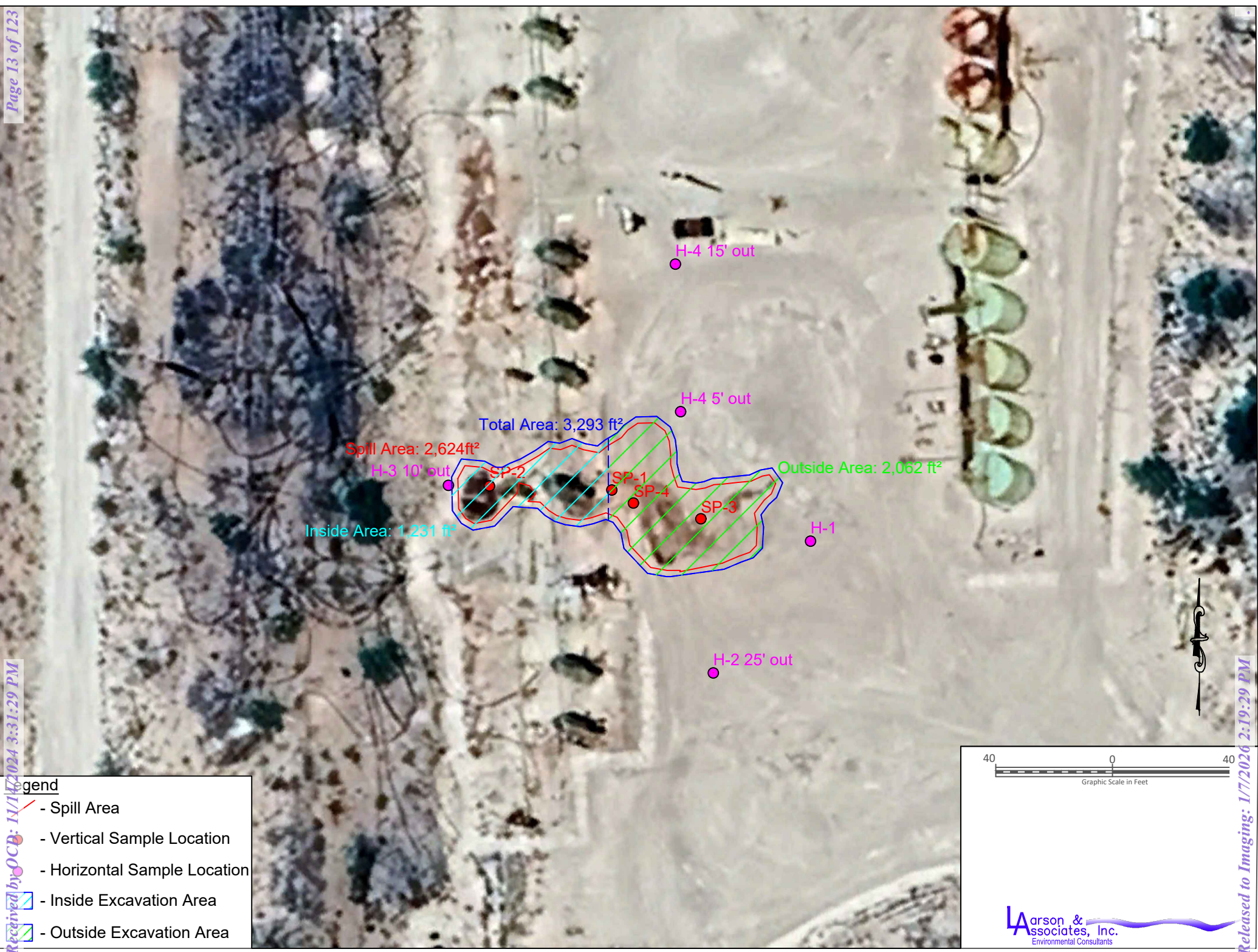


Figure 3 - Aerial Map Showing Proposed Excavation Areas

Appendix A

Initial C-141 and Spill Calculation

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Apache Corporation	OGRID	873
Contact Name	Larry Baker	Contact Telephone	432-250-8384
Contact email	larry.baker@apachecorp.com		
Contact mailing address	303 Veterans Airpark Lane Midland, TX 79705		
Incident # (assigned by OCD)			

Location of Release Source

Latitude 32.611914 Longitude -103.332948
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Monument ABO CTB	Site Type	Battery
Date Release Discovered	6/30/2024	API# (if applicable)	

Unit Letter	Section	Township	Range	County
M	35	19S	36E	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) 79 barrels	Volume Recovered (bbls) 78 barrels
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Corrosion on a a heater treater fill line.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Larry Baker notified Mike Bratcher via email on 7/1/2024.	

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>Larry Baker</u>	Title: <u>Environmental Specialist Sr.</u>
Signature: <u>Larry Baker</u>	Date: <u>7/12/2024</u>
email: <u>larry.baker@apachecorp.com</u>	Telephone: <u>432-250-8384</u>
<u>OCD Only</u> Received by: _____ Date: _____	

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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>50</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 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.

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

Printed Name: Larry Baker Title: Environmental Tech SR.
Signature: *Larry Baker* Date: 11/14/2024
email: larry.baker@apachecorp.com Telephone: 432-250-8384

OCD Only

Received by: _____ Date: _____

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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: Larry Baker Title: Environmental Tech SR.
Signature: Larry Baker Date: 11/14/2024
email: larry.baker@apachecorp.com Telephone: 432-250-8384

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Volume Calculation

87.465 cubic feet of soil contamination X 7.48 gallons per cubic foot = 654 gallons/42 gallons to a barrel=
15 barrels X .05 soil porosity= 0.77 + 78 barrels recovered= 79 barrels total lost.

Appendix B

Karst Risk Potential



Childress Rd

Childress Rd

Childress Rd

Monument ABO CTB

LEGEND

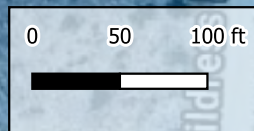
● Site Location

Karst Risk Potential

High

Medium

Low



Appendix C

Well Records and Log

STATE ENGINEER OFFICE
WELL RECORD

Revised
June 1972

Section 1. GENERAL INFORMATION

(A) Owner of well Texas-New Mexico Pipeline Company Owner's Well No. _____
Street or Post Office Address 3330 Executive Drive, P. O. Box 60028
City and State San Angelo, Texas 76406
Well was drilled under Permit No. L-10,804 and is located in the :
a. 1/4 1/4 SE 1/4 SE 1/4 of Section 34 Township 19S
Range 36E N.M.P.M.
b. Tract No. _____ of Map No, _____ of the _____
c. Lot No. _____ of block No. _____ of the _____
Subdivision, recorded in _____ County.
d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____
Zone in the _____ Grant

(B) Drilling Contractor Alan G. Eades License No. WD-1044
Address 1200 East Bender Blvd., Hobbs, NM 88240
Drilling Began 9-16-97 Completed 9-16-97 Type Tools Rotary Size of hole 9.5 in.
Elevation of land surface or _____ at well is _____ ft. Total depth of well 66 ft.
Completed well is ☒ shallow ☐ artesian Depth to water upon completion of well ~50 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			
52	66	14	Sandy Red Clay	

Section 3. RECORD OF CASING

Diameter (INCHES)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
6	160				66		36	66

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

Section 5. PLUGGING RECORD

Plugging Contractor _____
Address _____
Plugging Method _____
Date Well Plugged _____
Plugging approved by: _____
State Engineer Representative _____

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

Date Received 05/14/98 FOR USE OF STATE ENGINEER ONLY
Quad _____ FWL _____ FSL _____
File No. L-10,804 Use Pollution Control Location No. _____
488261

Section 6. LOG OF HOLE

Depth in Feet		Thickness in Feet	Color and Type of Material Encountered
From	To		
0	6	6	Top Soil
6	14	8	Caliche
14	34	20	Sand
34	51	17	Sandy Brown Clay
51	52	1	Rock
52	66	14	Sandy Red Clay
			Texas-New Mexico Pipeline Company

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

to the best of his knowledge and belief, the foregoing is a
scribed hole.

Alan Eade by Andrew Root
Driller

INSTRUCTIONS:

This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

Appendix D

Laboratory Reports



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

July 17, 2024

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: MONUMENT ABO CTB

Enclosed are the results of analyses for samples received by the laboratory on 07/11/24 16:46.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 1 SURFACE (H244169-01)

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	07/15/2024	ND	1.94	96.8	2.00	0.315	
Toluene*	0.126	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	0.563	0.050	07/15/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	1.49	0.150	07/15/2024	ND	6.16	103	6.00	0.576	
Total BTX	2.18	0.300	07/15/2024	ND					GC-NC1

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	52000	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	60.0	50.0	07/15/2024	ND	225	112	200	3.90		
DRO >C10-C28*	12600	50.0	07/15/2024	ND	200	99.8	200	5.88		
EXT DRO >C28-C36	3210	50.0	07/15/2024	ND						

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 404 % 49.1-148

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:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/11/2024	Sampling Date:	07/11/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 1' (H244169-02)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	2.61	0.200	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	12.7	0.200	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	39.1	0.600	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTEX	54.4	1.20	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 141 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19600	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1830	50.0	07/15/2024	ND	225	112	200	3.90	
DRO >C10-C28*	6680	50.0	07/15/2024	ND	200	99.8	200	5.88	
EXT DRO >C28-C36	1070	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 253 % 48.2-134

Surrogate: 1-Chlorooctadecane 182 % 49.1-148

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:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/11/2024	Sampling Date:	07/11/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 2' (H244169-03)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	1.93	0.200	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	9.97	0.200	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	26.8	0.600	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTEX	38.7	1.20	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 154 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5800	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1630	50.0	07/15/2024	ND	225	112	200	3.90	
DRO >C10-C28*	6690	50.0	07/15/2024	ND	200	99.8	200	5.88	
EXT DRO >C28-C36	1140	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 241 % 48.2-134

Surrogate: 1-Chlorooctadecane 186 % 49.1-148

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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:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 1 @ 3' (H244169-04)

BTX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	4.16	0.500	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	21.7	0.500	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	43.1	1.50	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTX	68.9	3.00	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 138 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7400	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2600	50.0	07/15/2024	ND	225	112	200	3.90	
DRO >C10-C28*	8590	50.0	07/15/2024	ND	200	99.8	200	5.88	
EXT DRO >C28-C36	1420	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 328 % 48.2-134

Surrogate: 1-Chlorooctadecane 219 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 1 @ 4' (H244169-05)

BTX 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	1.11	0.100	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	6.61	0.100	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	23.9	0.300	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTX	31.6	0.600	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 180 % 71.5-134

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	890	10.0	07/15/2024	ND	225	112	200	3.90	
DRO >C10-C28*	3360	10.0	07/15/2024	ND	200	99.8	200	5.88	
EXT DRO >C28-C36	548	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 140 % 48.2-134

Surrogate: 1-Chlorooctadecane 141 % 49.1-148

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:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/11/2024	Sampling Date:	07/11/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	NONE GIVEN		

Sample ID: SP 2 SURFACE (H244169-06)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	0.972	0.050	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	2.92	0.050	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	6.10	0.150	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTEX	9.98	0.300	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 149 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	413	50.0	07/15/2024	ND	194	97.2	200	1.62	QM-07
DRO >C10-C28*	17700	50.0	07/15/2024	ND	194	97.2	200	3.72	QM-07
EXT DRO >C28-C36	4890	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 153 % 48.2-134

Surrogate: 1-Chlorooctadecane 530 % 49.1-148

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:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 2 @ 1' (H244169-07)

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	2.80	0.200	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	9.93	0.200	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	42.2	0.600	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTEX	54.9	1.20	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 151 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1130	50.0	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	5770	50.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	955	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 191 % 48.2-134

Surrogate: 1-Chlorooctadecane 162 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/11/2024	Sampling Date:	07/11/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	NONE GIVEN		

Sample ID: SP 2 @ 2' (H244169-08)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/16/2024	ND	1.94	96.8	2.00	0.315	GC-NC
Toluene*	2.23	0.200	07/16/2024	ND	1.96	98.1	2.00	0.546	GC-NC1
Ethylbenzene*	10.6	0.200	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	44.4	0.600	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTEX	57.2	1.20	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 155 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	07/15/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1160	50.0	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	5730	50.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	911	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 195 % 48.2-134

Surrogate: 1-Chlorooctadecane 167 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 3 SURFACE (H244169-09)

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	07/16/2024	ND	1.94	96.8	2.00	0.315	
Toluene*	<0.050	0.050	07/16/2024	ND	1.96	98.1	2.00	0.546	
Ethylbenzene*	0.054	0.050	07/16/2024	ND	2.09	105	2.00	0.456	
Total Xylenes*	<0.150	0.150	07/16/2024	ND	6.16	103	6.00	0.576	
Total BTEx	<0.300	0.300	07/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	07/15/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	8020	50.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	1750	50.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 121 % 48.2-134

Surrogate: 1-Chlorooctadecane 248 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 3 @ 1' (H244169-10)

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	07/16/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/16/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/16/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/16/2024	ND	6.16	103	6.00	0.576		
Total BTEX	<0.300	0.300	07/16/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4440	16.0	07/15/2024	ND	416	104	400	7.41		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	236	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	51.2	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 116 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 3 @ 2' (H244169-11)

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	07/16/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/16/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/16/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/16/2024	ND	6.16	103	6.00	0.576		
Total BTEx	<0.300	0.300	07/16/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2720	16.0	07/15/2024	ND	432	108	400	3.64	QM-07	

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	38.3	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/11/2024	Sampling Date:	07/11/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Alyssa Parras
Project Location:	NONE GIVEN		

Sample ID: SP 3 @ 3' (H244169-12)

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	07/15/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.16	103	6.00	0.576		
Total BTEX	<0.300	0.300	07/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1550	16.0	07/15/2024	ND	432	108	400	3.64		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	52.9	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	12.5	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: SP 3 @ 4' (H244169-13)

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	07/15/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.16	103	6.00	0.576		
Total BTEX	<0.300	0.300	07/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	07/15/2024	ND	432	108	400	3.64		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	29.0	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: H 1 (H244169-14)

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	07/15/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.16	103	6.00	0.576		
Total BTEX	<0.300	0.300	07/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	07/15/2024	ND	432	108	400	3.64		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	44.7	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: H 2 25' OUT (H244169-15)

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	07/15/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.16	103	6.00	0.576		
Total BTEX	<0.300	0.300	07/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	07/15/2024	ND	432	108	400	3.64		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: H 3 10' OUT (H244169-16)

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	07/15/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.16	103	6.00	0.576		
Total BTEx	<0.300	0.300	07/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/15/2024	ND	432	108	400	3.64		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/11/2024
 Reported: 07/17/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/11/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: H 4 5' OUT (H244169-17)

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	07/15/2024	ND	1.94	96.8	2.00	0.315		
Toluene*	<0.050	0.050	07/15/2024	ND	1.96	98.1	2.00	0.546		
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.09	105	2.00	0.456		
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.16	103	6.00	0.576		
Total BTEx	<0.300	0.300	07/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	07/15/2024	ND	432	108	400	3.64		

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	07/15/2024	ND	194	97.2	200	1.62	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	194	97.2	200	3.72	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache							BILL TO		ANALYSIS REQUEST					
Project Manager: Bruce Baker							P.O. #:							
Address:							Company:							
City: Hobbs							Attn:							
State: NM Zip: 88240							Address:							
Phone #: _____ Fax #: _____							City:							
Project #: _____ Project Owner:							State:							
Project Location: Monsieur ABO CTB							Zip:							
Sampler Name: Julio Rivera							Phone #:							
FOR LAB USE ONLY							Fax #:							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	CL EXT TPH BTX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
1	SP1 surface	G	1									7-11-24	4:04	
2	SP1 @ 1'	G	1										4:06	
3	SP1 @ 3'	G	1										4:08	
4	SP1 @ 4'	G	1										4:10	
5	SPA surface	G	1										4:12	
6	SPA @ 1'	G	1										4:14	
7	SPA @ 3'	G	1										4:16	
8	SPA surface	G	1										4:18	
9	SP3 surface	G	1										4:20	
10	SP3 @ 1'	G	1											

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Relinquished By: Julio Rivera		Date: 7-11-24	Received By: [Signature]
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C 19°C	Corrected Temp. °C 19°C
Turnaround Time: _____		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>	Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Observed Temp. °C Corrected Temp. °C
REMARKS: L.Baker; Jason O.; jason.yesenia@diamondback.com		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: 9821452@gmail	
Email Results		All Results are emailed. Please provide Email address:	



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

July 19, 2024

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: MONUMENT ABO CTB

Enclosed are the results of analyses for samples received by the laboratory on 07/15/24 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 5' (H244216-01)

BTX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/17/2024	ND	1.88	93.9	2.00	6.49	GC-NC
Toluene*	1.74	0.100	07/17/2024	ND	1.86	92.9	2.00	6.53	GC-NC1
Ethylbenzene*	7.68	0.100	07/17/2024	ND	1.87	93.6	2.00	6.50	
Total Xylenes*	37.1	0.300	07/17/2024	ND	5.50	91.7	6.00	6.48	
Total BTX	46.5	0.600	07/17/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 281 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1720	50.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	8320	50.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	1490	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 258 % 48.2-134

Surrogate: 1-Chlorooctadecane 207 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 6' (H244216-02)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/17/2024	ND	1.88	93.9	2.00	6.49	GC-NC
Toluene*	2.28	0.100	07/17/2024	ND	1.86	92.9	2.00	6.53	GC-NC1
Ethylbenzene*	8.25	0.100	07/17/2024	ND	1.87	93.6	2.00	6.50	
Total Xylenes*	41.3	0.300	07/17/2024	ND	5.50	91.7	6.00	6.48	
Total BTEx	51.8	0.600	07/17/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 312 % 71.5-134

Chloride, SM4500CI-B			mg/kg					Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	07/16/2024	ND	432	108	400	3.64	QM-07

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1670	50.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	7300	50.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	1280	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 245 % 48.2-134

Surrogate: 1-Chlorooctadecane 193 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 7' (H244216-03)

BTX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/17/2024	ND	1.88	93.9	2.00	6.49	GC-NC
Toluene*	1.74	0.100	07/17/2024	ND	1.86	92.9	2.00	6.53	GC-NC1
Ethylbenzene*	6.78	0.100	07/17/2024	ND	1.87	93.6	2.00	6.50	
Total Xylenes*	35.6	0.300	07/17/2024	ND	5.50	91.7	6.00	6.48	
Total BTX	44.1	0.600	07/17/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 305 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6640	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1120	50.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	5440	50.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	881	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 216 % 48.2-134

Surrogate: 1-Chlorooctadecane 200 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 8' (H244216-04)

BTX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/17/2024	ND	1.88	93.9	2.00	6.49	GC-NC
Toluene*	1.22	0.100	07/17/2024	ND	1.86	92.9	2.00	6.53	GC-NC1
Ethylbenzene*	4.20	0.100	07/17/2024	ND	1.87	93.6	2.00	6.50	
Total Xylenes*	21.5	0.300	07/17/2024	ND	5.50	91.7	6.00	6.48	
Total BTX	27.0	0.600	07/17/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 243 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	989	50.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	5780	50.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	1030	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 206 % 48.2-134

Surrogate: 1-Chlorooctadecane 177 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 9' (H244216-05)

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	07/17/2024	ND	1.88	93.9	2.00	6.49		
Toluene*	<0.050	0.050	07/17/2024	ND	1.86	92.9	2.00	6.53		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	1.87	93.6	2.00	6.50		
Total Xylenes*	0.181	0.150	07/17/2024	ND	5.50	91.7	6.00	6.48		
Total BTEX	<0.300	0.300	07/17/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	07/16/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	11.5	10.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	410	10.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	87.5	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 139 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 10' (H244216-06)

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	07/17/2024	ND	1.88	93.9	2.00	6.49		
Toluene*	<0.050	0.050	07/17/2024	ND	1.86	92.9	2.00	6.53		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	1.87	93.6	2.00	6.50		
Total Xylenes*	<0.150	0.150	07/17/2024	ND	5.50	91.7	6.00	6.48		
Total BTEx	<0.300	0.300	07/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4240	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	236	10.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	50.2	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 139 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 5' (H244216-07)

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	07/17/2024	ND	1.88	93.9	2.00	6.49		
Toluene*	<0.050	0.050	07/17/2024	ND	1.86	92.9	2.00	6.53		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	1.87	93.6	2.00	6.50		
Total Xylenes*	<0.150	0.150	07/17/2024	ND	5.50	91.7	6.00	6.48		
Total BTEx	<0.300	0.300	07/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	07/16/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	92.2	10.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	24.8	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 131 % 48.2-134

Surrogate: 1-Chlorooctadecane 157 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 4 @ SURFACE (H244216-08)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2024	ND	2.09	105	2.00	3.18	
Toluene*	0.054	0.050	07/17/2024	ND	2.18	109	2.00	1.64	GC-NC1
Ethylbenzene*	0.133	0.050	07/17/2024	ND	2.28	114	2.00	2.45	
Total Xylenes*	0.703	0.150	07/17/2024	ND	7.14	119	6.00	3.35	
Total BTEX	0.889	0.300	07/17/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 152 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9280	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	118	50.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	19500	50.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	5580	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 163 % 48.2-134

Surrogate: 1-Chlorooctadecane 574 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 4 @ 1' (H244216-09)

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2024	ND	2.09	105	2.00	3.18	
Toluene*	0.797	0.050	07/17/2024	ND	2.18	109	2.00	1.64	GC-NC1
Ethylbenzene*	1.24	0.050	07/17/2024	ND	2.28	114	2.00	2.45	
Total Xylenes*	6.01	0.150	07/17/2024	ND	7.14	119	6.00	3.35	
Total BTEX	8.05	0.300	07/17/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 564 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1620	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1020	50.0	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	7520	50.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	1390	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 240 % 48.2-134

Surrogate: 1-Chlorooctadecane 201 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 4 @ 2' (H244216-10)

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	07/16/2024	ND	2.09	105	2.00	3.18		
Toluene*	<0.050	0.050	07/16/2024	ND	2.18	109	2.00	1.64		
Ethylbenzene*	<0.050	0.050	07/16/2024	ND	2.28	114	2.00	2.45		
Total Xylenes*	<0.150	0.150	07/16/2024	ND	7.14	119	6.00	3.35		
Total BTEX	<0.300	0.300	07/16/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3120	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	102	10.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	22.4	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 138 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 4 @ 3' (H244216-11)

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	07/16/2024	ND	2.09	105	2.00	3.18		
Toluene*	<0.050	0.050	07/16/2024	ND	2.18	109	2.00	1.64		
Ethylbenzene*	<0.050	0.050	07/16/2024	ND	2.28	114	2.00	2.45		
Total Xylenes*	<0.150	0.150	07/16/2024	ND	7.14	119	6.00	3.35		
Total BTEx	<0.300	0.300	07/16/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	185	92.6	200	3.49	
DRO >C10-C28*	<10.0	10.0	07/16/2024	ND	171	85.6	200	7.33	
EXT DRO >C28-C36	<10.0	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 128 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 4' (H244216-12)

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	07/16/2024	ND	2.09	105	2.00	3.18		
Toluene*	<0.050	0.050	07/16/2024	ND	2.18	109	2.00	1.64		
Ethylbenzene*	<0.050	0.050	07/16/2024	ND	2.28	114	2.00	2.45		
Total Xylenes*	<0.150	0.150	07/16/2024	ND	7.14	119	6.00	3.35		
Total BTEX	<0.300	0.300	07/16/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	180	90.0	200	1.58	
DRO >C10-C28*	<10.0	10.0	07/16/2024	ND	177	88.7	200	0.969	
EXT DRO >C28-C36	<10.0	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 5' (H244216-13)

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	07/16/2024	ND	2.09	105	2.00	3.18		
Toluene*	<0.050	0.050	07/16/2024	ND	2.18	109	2.00	1.64		
Ethylbenzene*	<0.050	0.050	07/16/2024	ND	2.28	114	2.00	2.45		
Total Xylenes*	<0.150	0.150	07/16/2024	ND	7.14	119	6.00	3.35		
Total BTEx	<0.300	0.300	07/16/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	752	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	180	90.0	200	1.58	
DRO >C10-C28*	<10.0	10.0	07/16/2024	ND	177	88.7	200	0.969	
EXT DRO >C28-C36	<10.0	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 4 @ 6' (H244216-14)

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	07/17/2024	ND	1.97	98.5	2.00	4.05		
Toluene*	<0.050	0.050	07/17/2024	ND	2.14	107	2.00	3.45		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	2.20	110	2.00	3.02		
Total Xylenes*	<0.150	0.150	07/17/2024	ND	6.83	114	6.00	2.91		
Total BTEX	<0.300	0.300	07/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2360	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	180	90.0	200	1.58	
DRO >C10-C28*	89.6	10.0	07/16/2024	ND	177	88.7	200	0.969	
EXT DRO >C28-C36	26.2	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 07/15/2024
 Reported: 07/19/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 7' (H244216-15)

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	07/17/2024	ND	1.97	98.5	2.00	4.05		
Toluene*	<0.050	0.050	07/17/2024	ND	2.14	107	2.00	3.45		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	2.20	110	2.00	3.02		
Total Xylenes*	0.183	0.150	07/17/2024	ND	6.83	114	6.00	2.91		
Total BTEX	<0.300	0.300	07/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 128 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6560	16.0	07/16/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	34.3	10.0	07/16/2024	ND	180	90.0	200	1.58	
DRO >C10-C28*	960	10.0	07/16/2024	ND	177	88.7	200	0.969	
EXT DRO >C28-C36	292	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 4 @ 8' (H244216-16)

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	07/17/2024	ND	1.97	98.5	2.00	4.05		
Toluene*	<0.050	0.050	07/17/2024	ND	2.14	107	2.00	3.45		
Ethylbenzene*	<0.050	0.050	07/17/2024	ND	2.20	110	2.00	3.02		
Total Xylenes*	0.185	0.150	07/17/2024	ND	6.83	114	6.00	2.91		
Total BTEx	<0.300	0.300	07/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 127 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5300	16.0	07/16/2024	ND	432	108	400	3.64		

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	07/16/2024	ND	180	90.0	200	1.58	
DRO >C10-C28*	262	10.0	07/16/2024	ND	177	88.7	200	0.969	
EXT DRO >C28-C36	83.9	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache		P.O. #:		BILL TO				ANALYSIS REQUEST			
Project Manager: Bruce Baker		Company:									
Address:		Attn:									
City: Hobbs		State: NM		Zip: 88240							
Phone #:		Fax #:		City:		State:		Zip:			
Project #:		Project Owner:		Phone #:		Fax #:					
Project Location: Monument 482 CTD		Sample Name: Julio Rivera									
FOR LAB USE ONLY		Matrix		PRESERV.		SAMPLING					
Lab I.D.		Sample I.D.		(G) GAS OR (C) OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER	
H244216		1 SP105'		1		1		1		1	
2 SP106'		1		1		1		1		1	
3 SP107'		1		1		1		1		1	
4 SP108'		1		1		1		1		1	
5 SP109'		1		1		1		1		1	
6 SP110'		1		1		1		1		1	
7 SP111'		1		1		1		1		1	
8 SP112'		1		1		1		1		1	
9 SP113'		1		1		1		1		1	
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127 SP231'		1		1		1		1		1	
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157 SP261'		1		1		1		1		1	
158 SP262'		1		1		1		1		1	
159 SP263'		1									



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

August 21, 2024

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: MONUMENT ABO CTB

Enclosed are the results of analyses for samples received by the laboratory on 08/16/24 16:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 SURFACE (H245012-01)

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	08/21/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.050	0.050	08/21/2024	ND	1.78	89.1	2.00	3.19	GC-NC
Ethylbenzene*	0.998	0.050	08/21/2024	ND	1.85	92.3	2.00	3.29	GC-NC1
Total Xylenes*	2.39	0.150	08/21/2024	ND	5.48	91.3	6.00	3.24	GC-NC1
Total BTX	3.39	0.300	08/21/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	08/20/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	159	50.0	08/20/2024	ND	212	106	200	0.231		
DRO >C10-C28*	19500	50.0	08/20/2024	ND	207	104	200	0.421		
EXT DRO >C28-C36	4130	50.0	08/20/2024	ND						

Surrogate: 1-Chlorooctane 133 % 48.2-134

Surrogate: 1-Chlorooctadecane 436 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 1' (H245012-02)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/21/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.200	0.200	08/21/2024	ND	1.78	89.1	2.00	3.19	GC-NC
Ethylbenzene*	9.03	0.200	08/21/2024	ND	1.85	92.3	2.00	3.29	GC-NC1
Total Xylenes*	22.1	0.600	08/21/2024	ND	5.48	91.3	6.00	3.24	GC-NC1
Total BTEX	33.1	1.20	08/21/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 137 % 71.5-134

Chloride, SM4500Cl-B			mg/kg					Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1800	16.0	08/20/2024	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	893	50.0	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	7590	50.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	1350	50.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 184 % 48.2-134

Surrogate: 1-Chlorooctadecane 159 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 @ 2' (H245012-03)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/21/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.050	0.050	08/21/2024	ND	1.78	89.1	2.00	3.19	GC-NC
Ethylbenzene*	1.55	0.050	08/21/2024	ND	1.85	92.3	2.00	3.29	GC-NC1
Total Xylenes*	3.55	0.150	08/21/2024	ND	5.48	91.3	6.00	3.24	GC-NC1
Total BTEX	5.10	0.300	08/21/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 137 % 71.5-134

Chloride, SM4500Cl-B			mg/kg					Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	08/20/2024	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*	154	10.0	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	2030	10.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	351	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 3' (H245012-04)

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/21/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.200	0.200	08/21/2024	ND	1.78	89.1	2.00	3.19	GC-NC
Ethylbenzene*	8.53	0.200	08/21/2024	ND	1.85	92.3	2.00	3.29	GC-NC1
Total Xylenes*	19.0	0.600	08/21/2024	ND	5.48	91.3	6.00	3.24	GC-NC1
Total BTEX	27.7	1.20	08/21/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 142 % 71.5-134

Chloride, SM4500Cl-B			mg/kg					Analyzed By: HM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	08/20/2024	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*	153	10.0	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	1760	10.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	302	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 @ 4' (H245012-05)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTEX	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	08/20/2024	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	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 98.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 @ 5' (H245012-06)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTEx	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3840	16.0	08/20/2024	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	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: SP 1 @ 6' (H245012-07)

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	08/20/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19	GC-NC
Ethylbenzene*	0.202	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29	GC-NC1
Total Xylenes*	1.82	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24	GC-NC1
Total BTX	2.02	0.300	08/20/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	34000	16.0	08/20/2024	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*	27.2	10.0	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	704	10.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	157	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 7' (H245012-08)

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	08/20/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19	GC-NC
Ethylbenzene*	0.095	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29	GC-NC1
Total Xylenes*	1.08	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24	GC-NC1
Total BTX	1.17	0.300	08/20/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48800	16.0	08/20/2024	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*	54.2	10.0	08/20/2024	ND	212	106	200	0.231	
DRO >C10-C28*	2200	10.0	08/20/2024	ND	207	104	200	0.421	
EXT DRO >C28-C36	482	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 8' (H245012-09)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTEx	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20000	16.0	08/20/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	62.2	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 93.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 9' (H245012-10)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTEx	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14800	16.0	08/20/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	19.7	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 95.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 10' (H245012-11)

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	08/20/2024	ND	1.89	94.4	2.00	3.02	
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19	
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29	
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24	
Total BTX	<0.300	0.300	08/20/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16200	16.0	08/20/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	53.9	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 91.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 11' (H245012-12)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTX	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11400	16.0	08/20/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 98.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 12' (H245012-13)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTEX	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11800	16.0	08/20/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 126 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 13' (H245012-14)

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	08/20/2024	ND	1.89	94.4	2.00	3.02		
Toluene*	<0.050	0.050	08/20/2024	ND	1.78	89.1	2.00	3.19		
Ethylbenzene*	<0.050	0.050	08/20/2024	ND	1.85	92.3	2.00	3.29		
Total Xylenes*	<0.150	0.150	08/20/2024	ND	5.48	91.3	6.00	3.24		
Total BTEX	<0.300	0.300	08/20/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10300	16.0	08/21/2024	ND	416	104	400	3.77	QM-07	

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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 82.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 14' (H245012-15)

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	08/21/2024	ND	2.16	108	2.00	0.905		
Toluene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.05		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.03		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.68	111	6.00	0.957		
Total BTEx	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	08/21/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 77.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 15' (H245012-16)

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	08/21/2024	ND	2.16	108	2.00	0.905	
Toluene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.05	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.03	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.68	111	6.00	0.957	
Total BTEx	<0.300	0.300	08/21/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8240	16.0	08/21/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 92.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: H 1 (H245012-17)

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	08/21/2024	ND	2.16	108	2.00	0.905		
Toluene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.05		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.03		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.68	111	6.00	0.957		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	08/21/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: H 2 (H245012-18)

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	08/21/2024	ND	2.16	108	2.00	0.905		
Toluene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.05		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.03		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.68	111	6.00	0.957		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	08/21/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received: 08/16/2024
 Reported: 08/21/2024
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 08/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: H 3 (H245012-19)

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	08/21/2024	ND	2.16	108	2.00	0.905		
Toluene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.05		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.03		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.68	111	6.00	0.957		
Total BTEX	<0.300	0.300	08/21/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/21/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 93.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

Received:	08/16/2024	Sampling Date:	08/16/2024
Reported:	08/21/2024	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	NONE GIVEN		

Sample ID: H 4 (H245012-20)

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	08/21/2024	ND	2.16	108	2.00	0.905		
Toluene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.05		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.16	108	2.00	1.03		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.68	111	6.00	0.957		
Total BTEx	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	08/21/2024	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	08/20/2024	ND	211	105	200	2.11	
DRO >C10-C28*	<10.0	10.0	08/20/2024	ND	227	113	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/20/2024	ND					

Surrogate: 1-Chlorooctane 90.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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



Page 23 of 24

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache		P.O. #:		ANALYSIS REQUEST	
Project Manager: Bruce Baker		Company:			
Address:		Attn:			
City: Hobbs		Address:			
State: NM Zip: 88240		City:			
Phone #:		State:			
Fax #:		Zip:			
Project #:		Project Owner:			
Project Name:		Phone #:			
Project Location: Monument ABO CTB		Fax #:			
Sampler Name: Julio M Rivera					
FOR LAB USE ONLY					
Lab I.D.	Sample I.D.	(G) RAB OR (C) OMP		DATE	
		# CONTAINERS		TIME	
		MATRIX			
		GROUNDWATER			
		WASTEWATER			
		SOIL			
		OIL			
		SLUDGE			
		OTHER:			
		ACID/BASE:			
		ICE / COOL			
		OTHER:			
		PRESERV			
		SAMPLING			
11	SP1 @ 10'			8/16/24	11:46
12	SP1 @ 11'				2:18
13	SP1 @ 12'				2:20
14	SP1 @ 13'				2:22
15	SP1 @ 14'				2:24
16	SP1 @ 15'				2:26
17	H1				12:44
18	H2				12:46
19	H3				12:48
20	H4				12:50
				CL	
				B TEX	
				EXT. TPH	

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Relinquished By: Julio Rivera
Received By: Stoddard
Date: 8/16/24
Time: 4:03
Received By: Stoddard

Delivered By: (Circle One) Observed Temp. °C 16.0
Sample Condition: Cool Intact ☒ Yes ☐ No
Checked By: (Initials) SR
Thermometer ID #140 Correction Factor: -0.02

Remarks: e-mail Results
Baker, yesenia L @diamondbacknm.com
Standard ☒ Bacteria (only) Sample Condition ☐
Cool Intact ☐ Observed Temp. °C ☐
Corrected Temp. °C ☐

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Mark J Larson
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 9/30/2024 4:03:06 PM

JOB DESCRIPTION

Monument ABO CTB
24-0121-02

JOB NUMBER

880-48810-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.



Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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9/30/2024 4:03:06 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Laboratory Job ID: 880-48810-1
SDG: 24-0121-02

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.
α	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: Larson & Associates, Inc.
Project: Monument ABO CTB

Job ID: 880-48810-1

Job ID: 880-48810-1

Eurofins Midland

Job Narrative 880-48810-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 9/23/2024 9:30 AM. 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 -4.5°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SP-1 20' (880-48810-1), SP-1 25' (880-48810-2), SP-1 30' (880-48810-3), SP-1 35' (880-48810-4), SP-1 40' (880-48810-5) and SP-1 45' (880-48810-6).

GC VOA

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

Diesel Range Organics

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-91450/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-91514 and analytical batch 880-91521 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 20'

Lab Sample ID: 880-48810-1

Date Collected: 09/19/24 11:28

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/23/24 15:12	09/24/24 06:06	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/23/24 15:12	09/24/24 06:06	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/23/24 15:12	09/24/24 06:06	1
m,p-Xylenes	<0.00402	U	0.00402	mg/Kg		09/23/24 15:12	09/24/24 06:06	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/23/24 15:12	09/24/24 06:06	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/23/24 15:12	09/24/24 06:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	09/23/24 15:12	09/24/24 06:06	1
1,4-Difluorobenzene (Surr)	77		70 - 130	09/23/24 15:12	09/24/24 06:06	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/24/24 06:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/24/24 14:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		09/23/24 09:42	09/24/24 14:50	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		09/23/24 09:42	09/24/24 14:50	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		09/23/24 09:42	09/24/24 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130	09/23/24 09:42	09/24/24 14:50	1
o-Terphenyl (Surr)	84		70 - 130	09/23/24 09:42	09/24/24 14:50	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2670	F1	24.8	mg/Kg			09/24/24 11:39	5

Client Sample ID: SP-1 25'

Lab Sample ID: 880-48810-2

Date Collected: 09/19/24 11:43

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/23/24 15:12	09/24/24 06:26	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/23/24 15:12	09/24/24 06:26	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/23/24 15:12	09/24/24 06:26	1
m,p-Xylenes	<0.00404	U	0.00404	mg/Kg		09/23/24 15:12	09/24/24 06:26	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/23/24 15:12	09/24/24 06:26	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		09/23/24 15:12	09/24/24 06:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	09/23/24 15:12	09/24/24 06:26	1
1,4-Difluorobenzene (Surr)	84		70 - 130	09/23/24 15:12	09/24/24 06:26	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 25'

Lab Sample ID: 880-48810-2

Date Collected: 09/19/24 11:43

Matrix: Solid

Date Received: 09/23/24 09:30

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/24/24 06:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			09/24/24 15:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/23/24 09:42	09/24/24 15:24	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/23/24 09:42	09/24/24 15:24	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/23/24 09:42	09/24/24 15:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130			09/23/24 09:42	09/24/24 15:24	1
o-Terphenyl (Surr)	84		70 - 130			09/23/24 09:42	09/24/24 15:24	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1530		25.3	mg/Kg			09/24/24 12:05	5

Client Sample ID: SP-1 30'

Lab Sample ID: 880-48810-3

Date Collected: 09/19/24 11:52

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:02	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:02	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:02	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		09/24/24 09:01	09/24/24 17:02	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/24/24 09:01	09/24/24 17:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			09/24/24 09:01	09/24/24 17:02	1
1,4-Difluorobenzene (Surr)	100		70 - 130			09/24/24 09:01	09/24/24 17:02	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/24/24 17:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/24/24 15:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/23/24 09:42	09/24/24 15:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/23/24 09:42	09/24/24 15:40	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 30'

Lab Sample ID: 880-48810-3

Date Collected: 09/19/24 11:52

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/23/24 09:42	09/24/24 15:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	113		70 - 130			09/23/24 09:42	09/24/24 15:40	1
o-Terphenyl (Surr)	90		70 - 130			09/23/24 09:42	09/24/24 15:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3310		49.7	mg/Kg			09/24/24 12:14	10

Client Sample ID: SP-1 35'

Lab Sample ID: 880-48810-4

Date Collected: 09/19/24 12:10

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:23	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:23	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:23	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		09/24/24 09:01	09/24/24 17:23	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/24/24 09:01	09/24/24 17:23	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/24/24 09:01	09/24/24 17:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			09/24/24 09:01	09/24/24 17:23	1
1,4-Difluorobenzene (Surr)	100		70 - 130			09/24/24 09:01	09/24/24 17:23	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/24/24 17:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/24/24 15:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/23/24 09:42	09/24/24 15:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/23/24 09:42	09/24/24 15:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/23/24 09:42	09/24/24 15:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	116		70 - 130			09/23/24 09:42	09/24/24 15:57	1
o-Terphenyl (Surr)	91		70 - 130			09/23/24 09:42	09/24/24 15:57	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3890		49.9	mg/Kg			09/24/24 12:41	10

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 40'

Lab Sample ID: 880-48810-5

Date Collected: 09/19/24 12:20

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 17:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 17:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 17:43	1
m,p-Xylenes	<0.00399	U	0.00399	mg/Kg		09/24/24 09:01	09/24/24 17:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 17:43	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/24/24 09:01	09/24/24 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	09/24/24 09:01	09/24/24 17:43	1
1,4-Difluorobenzene (Surr)	101		70 - 130	09/24/24 09:01	09/24/24 17:43	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/24/24 17:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			09/24/24 16:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/23/24 09:42	09/24/24 16:14	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/23/24 09:42	09/24/24 16:14	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/23/24 09:42	09/24/24 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130	09/23/24 09:42	09/24/24 16:14	1
o-Terphenyl (Surr)	90		70 - 130	09/23/24 09:42	09/24/24 16:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4890		49.8	mg/Kg			09/24/24 12:50	10

Client Sample ID: SP-1 45'

Lab Sample ID: 880-48810-6

Date Collected: 09/19/24 12:45

Matrix: Solid

Date Received: 09/23/24 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 18:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 18:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 18:04	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		09/24/24 09:01	09/24/24 18:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 18:04	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/24/24 09:01	09/24/24 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	09/24/24 09:01	09/24/24 18:04	1
1,4-Difluorobenzene (Surr)	100		70 - 130	09/24/24 09:01	09/24/24 18:04	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 45'

Lab Sample ID: 880-48810-6

Date Collected: 09/19/24 12:45

Matrix: Solid

Date Received: 09/23/24 09:30

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/24/24 18:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/24/24 16:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/23/24 09:42	09/24/24 16:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/23/24 09:42	09/24/24 16:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/23/24 09:42	09/24/24 16:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	125		70 - 130	09/23/24 09:42	09/24/24 16:31	1
o-Terphenyl (Surr)	101		70 - 130	09/23/24 09:42	09/24/24 16:31	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9690		99.2	mg/Kg			09/24/24 12:59	20

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
880-48810-1	SP-1 20'	89	77
880-48810-2	SP-1 25'	89	84
880-48810-3	SP-1 30'	108	100
880-48810-4	SP-1 35'	110	100
880-48810-5	SP-1 40'	111	101
880-48810-6	SP-1 45'	109	100
LCS 880-91451/1-A	Lab Control Sample	102	83
LCS 880-91593/1-A	Lab Control Sample	105	98
LCSD 880-91451/2-A	Lab Control Sample Dup	128	108
LCSD 880-91593/2-A	Lab Control Sample Dup	104	99
MB 880-91429/5-A	Method Blank	74	92
MB 880-91451/5-A	Method Blank	74	92
MB 880-91593/5-A	Method Blank	105	97

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)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-48810-1	SP-1 20'	109	84
880-48810-2	SP-1 25'	107	84
880-48810-3	SP-1 30'	113	90
880-48810-4	SP-1 35'	116	91
880-48810-5	SP-1 40'	112	90
880-48810-6	SP-1 45'	125	101
LCS 880-91450/2-A	Lab Control Sample	131 S1+	119
LCSD 880-91450/3-A	Lab Control Sample Dup	119	107
MB 880-91450/1-A	Method Blank	97	79

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-91429/5-A

Matrix: Solid

Analysis Batch: 91435

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 91429

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/23/24 08:30	09/23/24 11:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/23/24 08:30	09/23/24 11:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/23/24 08:30	09/23/24 11:50	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		09/23/24 08:30	09/23/24 11:50	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/23/24 08:30	09/23/24 11:50	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/23/24 08:30	09/23/24 11:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	09/23/24 08:30	09/23/24 11:50	1
1,4-Difluorobenzene (Surr)	92		70 - 130	09/23/24 08:30	09/23/24 11:50	1

Lab Sample ID: MB 880-91451/5-A

Matrix: Solid

Analysis Batch: 91435

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 91451

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/23/24 09:44	09/23/24 22:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/23/24 09:44	09/23/24 22:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/23/24 09:44	09/23/24 22:30	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		09/23/24 09:44	09/23/24 22:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/23/24 09:44	09/23/24 22:30	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/23/24 09:44	09/23/24 22:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	09/23/24 09:44	09/23/24 22:30	1
1,4-Difluorobenzene (Surr)	92		70 - 130	09/23/24 09:44	09/23/24 22:30	1

Lab Sample ID: LCS 880-91451/1-A

Matrix: Solid

Analysis Batch: 91435

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 91451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08451		mg/Kg		85	70 - 130
Toluene	0.100	0.08900		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.08807		mg/Kg		88	70 - 130
m,p-Xylenes	0.200	0.2003		mg/Kg		100	70 - 130
o-Xylene	0.100	0.1053		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

Lab Sample ID: LCSD 880-91451/2-A

Matrix: Solid

Analysis Batch: 91435

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 91451

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09342		mg/Kg		93	70 - 130	10	35

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

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

Lab Sample ID: LCSD 880-91451/2-A

Matrix: Solid

Analysis Batch: 91435

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 91451

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08722		mg/Kg		87	70 - 130	2	35
Ethylbenzene	0.100	0.09383		mg/Kg		94	70 - 130	6	35
m,p-Xylenes	0.200	0.1749		mg/Kg		87	70 - 130	14	35
o-Xylene	0.100	0.09350		mg/Kg		94	70 - 130	12	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: MB 880-91593/5-A

Matrix: Solid

Analysis Batch: 91584

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 91593

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 11:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 11:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 11:21	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		09/24/24 09:01	09/24/24 11:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/24/24 09:01	09/24/24 11:21	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/24/24 09:01	09/24/24 11:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	09/24/24 09:01	09/24/24 11:21	1
1,4-Difluorobenzene (Surr)	97		70 - 130	09/24/24 09:01	09/24/24 11:21	1

Lab Sample ID: LCS 880-91593/1-A

Matrix: Solid

Analysis Batch: 91584

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 91593

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09086		mg/Kg		91	70 - 130
Toluene	0.100	0.09198		mg/Kg		92	70 - 130
Ethylbenzene	0.100	0.09101		mg/Kg		91	70 - 130
m,p-Xylenes	0.200	0.1906		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09471		mg/Kg		95	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-91593/2-A

Matrix: Solid

Analysis Batch: 91584

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 91593

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09099		mg/Kg		91	70 - 130	0	35
Toluene	0.100	0.09223		mg/Kg		92	70 - 130	0	35
Ethylbenzene	0.100	0.09270		mg/Kg		93	70 - 130	2	35

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

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

Lab Sample ID: LCSD 880-91593/2-A

Matrix: Solid

Analysis Batch: 91584

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 91593

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m,p-Xylenes	0.200	0.1917		mg/Kg		96	70 - 130	1	35
o-Xylene	0.100	0.09543		mg/Kg		95	70 - 130	1	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	104		70 - 130						
1,4-Difluorobenzene (Surr)	99		70 - 130						

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

Lab Sample ID: MB 880-91450/1-A

Matrix: Solid

Analysis Batch: 91608

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 91450

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/23/24 09:41	09/24/24 05:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/23/24 09:41	09/24/24 05:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/23/24 09:41	09/24/24 05:05	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane (Surr)	97		70 - 130	09/23/24 09:41	09/24/24 05:05	1		
o-Terphenyl (Surr)	79		70 - 130	09/23/24 09:41	09/24/24 05:05	1		

Lab Sample ID: LCS 880-91450/2-A

Matrix: Solid

Analysis Batch: 91608

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 91450

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec		
			Added	Result	Qualifier			Limits	Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1184		mg/Kg		118	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	993.7		mg/Kg		99	70 - 130		
Surrogate	LCS	LCS	Limits								
	%Recovery	Qualifier									
1-Chlorooctane (Surr)	131	S1+	70 - 130								
o-Terphenyl (Surr)	119		70 - 130								

Lab Sample ID: LCSD 880-91450/3-A

Matrix: Solid

Analysis Batch: 91608

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 91450

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1113		mg/Kg		111	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	876.3		mg/Kg		88	70 - 130	13	20

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

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

Lab Sample ID: LCSD 880-91450/3-A
Matrix: Solid
Analysis Batch: 91608

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 91450

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane (Surr)	119		70 - 130
o-Terphenyl (Surr)	107		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-91514/1-A
Matrix: Solid
Analysis Batch: 91521

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier							
Chloride	<5.00	U	5.00	mg/Kg			09/24/24 09:06		1

Lab Sample ID: LCS 880-91514/2-A
Matrix: Solid
Analysis Batch: 91521

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	250	244.6		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-91514/3-A
Matrix: Solid
Analysis Batch: 91521

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Chloride	250	244.1		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 880-48810-1 MS
Matrix: Solid
Analysis Batch: 91521

Client Sample ID: SP-1 20'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2670	F1	1240	4403	F1	mg/Kg		140	90 - 110		

Lab Sample ID: 880-48810-1 MSD
Matrix: Solid
Analysis Batch: 91521

Client Sample ID: SP-1 20'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Chloride	2670	F1	1240	4406	F1	mg/Kg		140	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

GC VOA

Prep Batch: 91429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-91429/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 91435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Total/NA	Solid	8021B	91451
880-48810-2	SP-1 25'	Total/NA	Solid	8021B	91451
MB 880-91429/5-A	Method Blank	Total/NA	Solid	8021B	91429
MB 880-91451/5-A	Method Blank	Total/NA	Solid	8021B	91451
LCS 880-91451/1-A	Lab Control Sample	Total/NA	Solid	8021B	91451
LCSD 880-91451/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	91451

Prep Batch: 91451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Total/NA	Solid	5035	
880-48810-2	SP-1 25'	Total/NA	Solid	5035	
MB 880-91451/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-91451/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-91451/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 91584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-3	SP-1 30'	Total/NA	Solid	8021B	91593
880-48810-4	SP-1 35'	Total/NA	Solid	8021B	91593
880-48810-5	SP-1 40'	Total/NA	Solid	8021B	91593
880-48810-6	SP-1 45'	Total/NA	Solid	8021B	91593
MB 880-91593/5-A	Method Blank	Total/NA	Solid	8021B	91593
LCS 880-91593/1-A	Lab Control Sample	Total/NA	Solid	8021B	91593
LCSD 880-91593/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	91593

Prep Batch: 91593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-3	SP-1 30'	Total/NA	Solid	5035	
880-48810-4	SP-1 35'	Total/NA	Solid	5035	
880-48810-5	SP-1 40'	Total/NA	Solid	5035	
880-48810-6	SP-1 45'	Total/NA	Solid	5035	
MB 880-91593/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-91593/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-91593/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 91766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Total/NA	Solid	Total BTEX	
880-48810-2	SP-1 25'	Total/NA	Solid	Total BTEX	
880-48810-3	SP-1 30'	Total/NA	Solid	Total BTEX	
880-48810-4	SP-1 35'	Total/NA	Solid	Total BTEX	
880-48810-5	SP-1 40'	Total/NA	Solid	Total BTEX	
880-48810-6	SP-1 45'	Total/NA	Solid	Total BTEX	

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

GC Semi VOA

Prep Batch: 91450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Total/NA	Solid	8015NM Prep	
880-48810-2	SP-1 25'	Total/NA	Solid	8015NM Prep	
880-48810-3	SP-1 30'	Total/NA	Solid	8015NM Prep	
880-48810-4	SP-1 35'	Total/NA	Solid	8015NM Prep	
880-48810-5	SP-1 40'	Total/NA	Solid	8015NM Prep	
880-48810-6	SP-1 45'	Total/NA	Solid	8015NM Prep	
MB 880-91450/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-91450/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-91450/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 91608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Total/NA	Solid	8015B NM	91450
880-48810-2	SP-1 25'	Total/NA	Solid	8015B NM	91450
880-48810-3	SP-1 30'	Total/NA	Solid	8015B NM	91450
880-48810-4	SP-1 35'	Total/NA	Solid	8015B NM	91450
880-48810-5	SP-1 40'	Total/NA	Solid	8015B NM	91450
880-48810-6	SP-1 45'	Total/NA	Solid	8015B NM	91450
MB 880-91450/1-A	Method Blank	Total/NA	Solid	8015B NM	91450
LCS 880-91450/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	91450
LCSD 880-91450/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	91450

Analysis Batch: 91733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Total/NA	Solid	8015 NM	
880-48810-2	SP-1 25'	Total/NA	Solid	8015 NM	
880-48810-3	SP-1 30'	Total/NA	Solid	8015 NM	
880-48810-4	SP-1 35'	Total/NA	Solid	8015 NM	
880-48810-5	SP-1 40'	Total/NA	Solid	8015 NM	
880-48810-6	SP-1 45'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 91514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Soluble	Solid	DI Leach	
880-48810-2	SP-1 25'	Soluble	Solid	DI Leach	
880-48810-3	SP-1 30'	Soluble	Solid	DI Leach	
880-48810-4	SP-1 35'	Soluble	Solid	DI Leach	
880-48810-5	SP-1 40'	Soluble	Solid	DI Leach	
880-48810-6	SP-1 45'	Soluble	Solid	DI Leach	
MB 880-91514/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-91514/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-91514/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-48810-1 MS	SP-1 20'	Soluble	Solid	DI Leach	
880-48810-1 MSD	SP-1 20'	Soluble	Solid	DI Leach	

Analysis Batch: 91521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-1	SP-1 20'	Soluble	Solid	300.0	91514
880-48810-2	SP-1 25'	Soluble	Solid	300.0	91514

Eurofins Midland

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

HPLC/IC (Continued)

Analysis Batch: 91521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-48810-3	SP-1 30'	Soluble	Solid	300.0	91514
880-48810-4	SP-1 35'	Soluble	Solid	300.0	91514
880-48810-5	SP-1 40'	Soluble	Solid	300.0	91514
880-48810-6	SP-1 45'	Soluble	Solid	300.0	91514
MB 880-91514/1-A	Method Blank	Soluble	Solid	300.0	91514
LCS 880-91514/2-A	Lab Control Sample	Soluble	Solid	300.0	91514
LCSD 880-91514/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	91514
880-48810-1 MS	SP-1 20'	Soluble	Solid	300.0	91514
880-48810-1 MSD	SP-1 20'	Soluble	Solid	300.0	91514

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 20'
Date Collected: 09/19/24 11:28
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-1
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			4.97 g	5 mL	91451	09/23/24 15:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91435	09/24/24 06:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91766	09/24/24 06:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			91733	09/24/24 14:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	91450	09/23/24 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91608	09/24/24 14:50	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91514	09/23/24 13:12	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	91521	09/24/24 11:39	CH	EET MID

Client Sample ID: SP-1 25'
Date Collected: 09/19/24 11:43
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-2
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			4.95 g	5 mL	91451	09/23/24 15:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91435	09/24/24 06:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91766	09/24/24 06:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			91733	09/24/24 15:24	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	91450	09/23/24 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91608	09/24/24 15:24	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	91514	09/23/24 13:12	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	91521	09/24/24 12:05	CH	EET MID

Client Sample ID: SP-1 30'
Date Collected: 09/19/24 11:52
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-3
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			5.02 g	5 mL	91593	09/24/24 09:01	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91584	09/24/24 17:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91766	09/24/24 17:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			91733	09/24/24 15:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	91450	09/23/24 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91608	09/24/24 15:40	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	91514	09/23/24 13:12	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91521	09/24/24 12:14	CH	EET MID

Client Sample ID: SP-1 35'
Date Collected: 09/19/24 12:10
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-4
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			5.03 g	5 mL	91593	09/24/24 09:01	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91584	09/24/24 17:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91766	09/24/24 17:23	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Client Sample ID: SP-1 35'
Date Collected: 09/19/24 12:10
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			91733	09/24/24 15:57	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	91450	09/23/24 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91608	09/24/24 15:57	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	91514	09/23/24 13:12	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91521	09/24/24 12:41	CH	EET MID

Client Sample ID: SP-1 40'
Date Collected: 09/19/24 12:20
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-5
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	91593	09/24/24 09:01	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91584	09/24/24 17:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91766	09/24/24 17:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			91733	09/24/24 16:14	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	91450	09/23/24 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91608	09/24/24 16:14	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91514	09/23/24 13:12	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91521	09/24/24 12:50	CH	EET MID

Client Sample ID: SP-1 45'
Date Collected: 09/19/24 12:45
Date Received: 09/23/24 09:30

Lab Sample ID: 880-48810-6
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			4.99 g	5 mL	91593	09/24/24 09:01	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91584	09/24/24 18:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91766	09/24/24 18:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			91733	09/24/24 16:31	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	91450	09/23/24 09:42	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91608	09/24/24 16:31	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91514	09/23/24 13:12	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91521	09/24/24 12:59	CH	EET MID

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

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	06-30-25
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: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

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	EPA	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
- EPA = US Environmental Protection Agency
- 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: Larson & Associates, Inc.
Project/Site: Monument ABO CTB

Job ID: 880-48810-1
SDG: 24-0121-02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-48810-1	SP-1 20'	Solid	09/19/24 11:28	09/23/24 09:30
880-48810-2	SP-1 25'	Solid	09/19/24 11:43	09/23/24 09:30
880-48810-3	SP-1 30'	Solid	09/19/24 11:52	09/23/24 09:30
880-48810-4	SP-1 35'	Solid	09/19/24 12:10	09/23/24 09:30
880-48810-5	SP-1 40'	Solid	09/19/24 12:20	09/23/24 09:30
880-48810-6	SP-1 45'	Solid	09/19/24 12:45	09/23/24 09:30

- 1
- 2
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- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

No. 3328

CHAIN-OF-CUSTODY

[illegible]

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-48810-1

SDG Number: 24-0121-02

Login Number: 48810
List Number: 1
Creator: Vasquez, Julisa

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	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 403451

QUESTIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2419428272
Incident Name	NAPP2419428272 MONUMENT ABO CTB @ FAPP2223741231
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received
Incident Facility	[fAPP2223741231] Monument ABO

Location of Release Source	
Please answer all the questions in this group.	
Site Name	MONUMENT ABO CTB
Date Release Discovered	06/30/2024
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Pipeline (Any) Produced Water Released: 79 BBL Recovered: 78 BBL Lost: 1 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 403451

QUESTIONS (continued)

Operator: APACHE CORPORATION 303 Veterans Airport Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Larry Baker Title: Sr Environmental Tech Email: larry.baker@apachecorp.com Date: 07/12/2024
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QUESTIONS, Page 3

Action 403451

QUESTIONS (continued)

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	Yes
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	48800
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	25138
GRO+DRO (EPA SW-846 Method 8015M)	19659
BTEX (EPA SW-846 Method 8021B or 8260B)	57.2
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	01/02/2025
On what date will (or did) the final sampling or liner inspection occur	01/20/2025
On what date will (or was) the remediation complete(d)	01/30/2025
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	3233
What is the estimated volume (in cubic yards) that will be remediated	120

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 403451

QUESTIONS (continued)

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	fEEM0112340644 R360 ARTESIA LLC LANDFARM
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Larry Baker Title: Sr Environmental Tech Email: larry.baker@apachecorp.com Date: 11/14/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 403451

QUESTIONS (continued)

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 403451

QUESTIONS (continued)

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 403451

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 403451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Preliminary Delineation Report and Remediation Plan is conditionally approved to include the following: 1. Complete delineation activities to define the remaining part of the release as proposed in the report; these sample points include SP1 through SP4, vertically, for TPH and chloride. 2. Complete a temporary groundwater monitoring well at SP1 and collect a groundwater sample for lab analysis of BTEX, chloride and TDS, as proposed. 3. Depth of excavation, amount of soil removed, and confirmation soil sample closure criteria will be determined by Table I of 19.15.29.12 NMAC, based on depth to groundwater measurement established by proposed soil boring. 4. Submit the next report to OCD no later than 90-days from receipt of this determination, the new due date to submit for closure is 04/10/2026	1/7/2026