



June 1, 2023

Mike Bratcher
District Supervisor
Oil Conservation Division, District 2
811 S. First St.
Artesia, NM 88210

**Re: Remediation Work Plan
ConocoPhillips
James A Battery Line Release
Unit Letter J, Section 2, Township 22 South, Range 30 East
Eddy County, New Mexico
2RP-406
Incident ID nMLB1011352696**

Dear Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from a transition line at the James A Battery. The release point is located on the James A Battery production pad, which is shared with the plugged and abandoned James A #002 well (API No. 30-015-25699). The release footprint is located in Public Land Survey System (PLSS) Unit Letter J, Section 2, Township 22 South, Range 30 East, in Eddy County, New Mexico (Site). The approximate release point occurred at coordinates 32.418694°, -103.849278°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report, on April 22, 2010 a release occurred from a 1-inch hole on a 3-inch transition line at the James A Battery due to internal corrosion. The release consisted of approximately 12 barrels (bbls) of produced water, of which none were recovered. The release reportedly affected a 741-ft by 3-ft area of caliche pad and pasture. The New Mexico Oil Conservation District (NMOCD) approved the initial C-141 on April 23, 2010 and subsequently assigned the release the Remediation Permit (RP) number 2RP-406 and the Incident ID nMLB1011352696. The initial C-141 form is included in Appendix A. The 2RP-406 release is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively.

A portion of the release footprint was coincident with a newer release with Incident ID nAB1800955828 (DOR: 01/07/2018). The release area associated with the 2018 release was remediated in November and December of 2019. Remediation, as proposed in the Work Plan, included excavation, disposal and confirmation sampling. Following remediation and reclamation, a Closure Report was submitted to NMOCD on February 24, 2020. The Closure Report was approved on June 17, 2021 by Bradford Billings of the NMOCD. The remediated area associated with Incident ID nAB1800955828 is indicated in Figure 3.

LAND OWNERSHIP

The Site is located on land owned by the New Mexico State Land Office (NMSLO). Prior to conducting remediation activities, this Remediation Work Plan will be submitted to the NMSLO for review.

SITE CHARACTERIZATION

A site characterization was performed and no lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated

Tetra Tech

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municipal boundaries, subsurface mines, or floodplains are located within the specified in 19.15.29 New Mexico Administrative Code (NMAC). However, the site is in a high karst potential area.

The Site is within a New Mexico oil and gas production area. According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within 800 meters (approximately ½ mile) of the Site. Based on available data from one (1) water well located within 5,600 meters (approximately 3.5 miles) of the Site, the average depth to groundwater is 262 ft below ground surface (bgs).

As the available water level information is from a well further than ½ mile asway from the site, ConocoPhillips elected to drill a boring to verify depth to groundwater. On September 26, 2022, a licensed well drilling subcontractor was onsite to drill a groundwater determination borehole (DTW) to 55 feet bgs along the edge of the James A Waterflood Facility pad (0.14 mile from the James A Battery Line Release). The borehole was temporarily set and screened using 2-inch PVC well materials. No water was present in the well during or after drilling. The well screen and casing were removed, and the borehole was plugged with 3/8-inch bentonite chips. The site characterization data, boring log, and temporary well diagram are included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization (high potential for karst), the RRALs for the Site are as follows:

Constituent	RRAL
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

RECORDS REVIEW AND VISUAL SITE INSPECTION

A file search on the NMOCD Online Imaging web application revealed no records of investigation, assessment, or remediation activities taken at the Site, nor communications between agencies regarding the 2RP-406 release. The reported release point from the C-141 is in the pasture east of the battery pad. Based on a review of available historical aerial imagery, the approximate release point occurred approximately 515 feet west-northwest of the coordinates provided on the initial C-141. A cursory review of aerial imagery from October 2010 indicated an approximate footprint that matched the extent described in the initial C-141 (Figure 3).

On behalf of COP, on June 11, 2020 Tetra Tech personnel conducted a visual Site inspection at the 2RP-406 release area to evaluate current conditions at the Site. Photographic documentation from the visual inspection (with GPS coordinates) is included as Appendix C. A list of field observations describing the Site follow:

- No evidence of soil staining was noted in the pasture southwest of the battery.
- No odor was noted in soils on the production pad or in the pasture southwest of the battery.
- Vegetation was noted to be in various stages of growth throughout the pasture area southwest of the battery.

CLOSURE REQUEST REJECTION

On March 30, 2021, Tetra Tech, on behalf of COP, prepared and submitted a Closure Report to NMOCD. Due to a lack of response, the Closure Report was resubmitted in February 2023. The request for closure of Incident ID nMLB1011352696 was rejected by NMOCD on February 24, 2023 via email from Ashley Maxwell. NMOCD provided the following reasoning for the rejection:

- *“Closure criteria sampling will need to show samples tested for all components in Table 1 of the OCD Spill Rule. The OCD cannot accept field screening results from Petro FLAG Analyzer Systems, PID Meters, Ground Conductivity Meters, and other field screening tools for closure criteria sampling determination.*
- *Proceed with collecting confirmation samples for laboratory analysis per 19.15.29.12 NMAC.*
- *Submit report via the OCD permitting portal by 6/2/2023.”*

Email correspondence associated with the rejection of the closure request is included in Appendix D.

SITE ASSESSMENT ACTIVITIES

On March 28, 2023, Tetra Tech personnel were onsite to delineate and sample the release area. A total of twelve (12) borings (HA-2 and HA-4 through HA-6, HA-9 and HA-11 through HA-14) were installed via hand auger within and around the release footprint. Soils were collected to a maximum depth of 5 feet bgs.

On May 9 and May 17, 2023, Tetra Tech personnel returned to the Site to complete delineation of the release area. A total of four (4) trenches (T-1 through T-4) and five (5) hand auger borings (HA-1, HA-3, HA-7, HA-8 and HA-10) were advanced to a maximum depth of 11 feet bgs. Trench T-2 was installed in the same area as HA-2 to complete vertical delineation in that area. Figure 3 depicts the approximate release extent and the 2023 soil boring and trench locations. Photographic documentation of Site conditions during the assessment activities is included in Appendix C.

A total of thirty-seven (37) soil samples were collected from the sample locations and transferred under chain of custody and analyzed within appropriate holding times by Cardinal Laboratories (Cardinal). The soil samples were analyzed for TPH via Method 8015 Modified, chloride via Method SM4500Cl-B, and BTEX via Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

SUMMARY OF SOIL SAMPLING RESULTS

Analytical results from the March and May 2023 site assessment activities are summarized in Table 1. Results associated with HA-2 and HA-4 exceeded the chloride RRAL to depths of 5 feet bgs and 4 feet bgs, respectively. Results associated T-2 and T-4 exceeded the chloride RRAL to 10 feet bgs and 3 feet bgs, respectively. Horizontal and vertical delineation were completed following the May 2023 assessment.

During an evaluation of results from the 2023 assessment activities, sample location T-2 exhibited anomalous results when compared to the remainder of the pad assessment locations. Based on review of the analytical results from T-2, it is likely that cross contamination was present at T-2 during the trenching activities. It is conceivable that the upper impacted material may have sloughed into the trench during sampling at this location resulting in cross-contamination or “hot spot”. These data anomalies will be verified by confirmation sampling during the proposed remedial activities. The HA-2/T-2 area will be initially excavated down to approximately 4 feet and the excavation floor will be sampled. If results indicate impact above the 600 mg/kg threshold for chloride, excavation will continue until the results are below the RRALs for the Site.

REMEDATION WORK PLAN

Based on the analytical results, COP proposes to remove the remaining impacted material as shown on Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 5 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the applicable RRALs. Tetra Tech personnel will collect confirmation floor samples to be evaluated for chloride, TPH and BTEX. If concentrations exceed the site RRALs, the defined areas will be further excavated until a representative sample from the bottom of the excavation is below the applicable RRALs. Any area containing pressurized lines will be hand-dug to the proposed depth shown on Figure 4 or the maximum extent practicable; heavy equipment will come no more than 4 feet from any pressurized lines.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Prior to confirmation sampling the NMOCD district office will be notified via email in accordance with Subsection D of 19.15.29.12 NMAC. Confirmation floor and sidewall samples will be collected for

verification of remedial activities and analyzed for TPH, BTEX, and chloride. The estimated total volume of material to be remediated is approximately 1,150 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Seven (7) confirmation floor samples and twelve (12) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 7,550 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 400 square feet of excavated area. Confirmation samples will be sent to an accredited analytical laboratory for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (USEPA Method 300.0 or equivalent). Once results are received, the excavation will then be backfilled with clean material to pre-release surface grade.

SITE RECLAMATION AND RESTORATION PLAN

Due to the Site being located within a high karst area, the release area will be remediated to the most stringent RRALs in accordance with Subsection D of 19.15.29.13 NMAC.

The backfilled areas located outside of oil and gas operations areas will be seeded in Spring 2024, or the first favorable growing season following backfilling, to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Sandy Loamy (SL) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix F.

CONCLUSION

Remediation activities at the Site are proposed to begin within 120 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD.

If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 217-7254 or Christian at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.



Ryan C. Dickerson
Project Manager



Christian M. Llull, P.G.
Program Manager

cc:
Mr. Sam Widmer, RMR – ConocoPhillips

LIST OF ATTACHMENTS

Figures:

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Approximate Release Extent and Site Assessment
- Figure 4 – Proposed Remediation Extent
- Figure 5 – Alternative Confirmation Sampling Plan

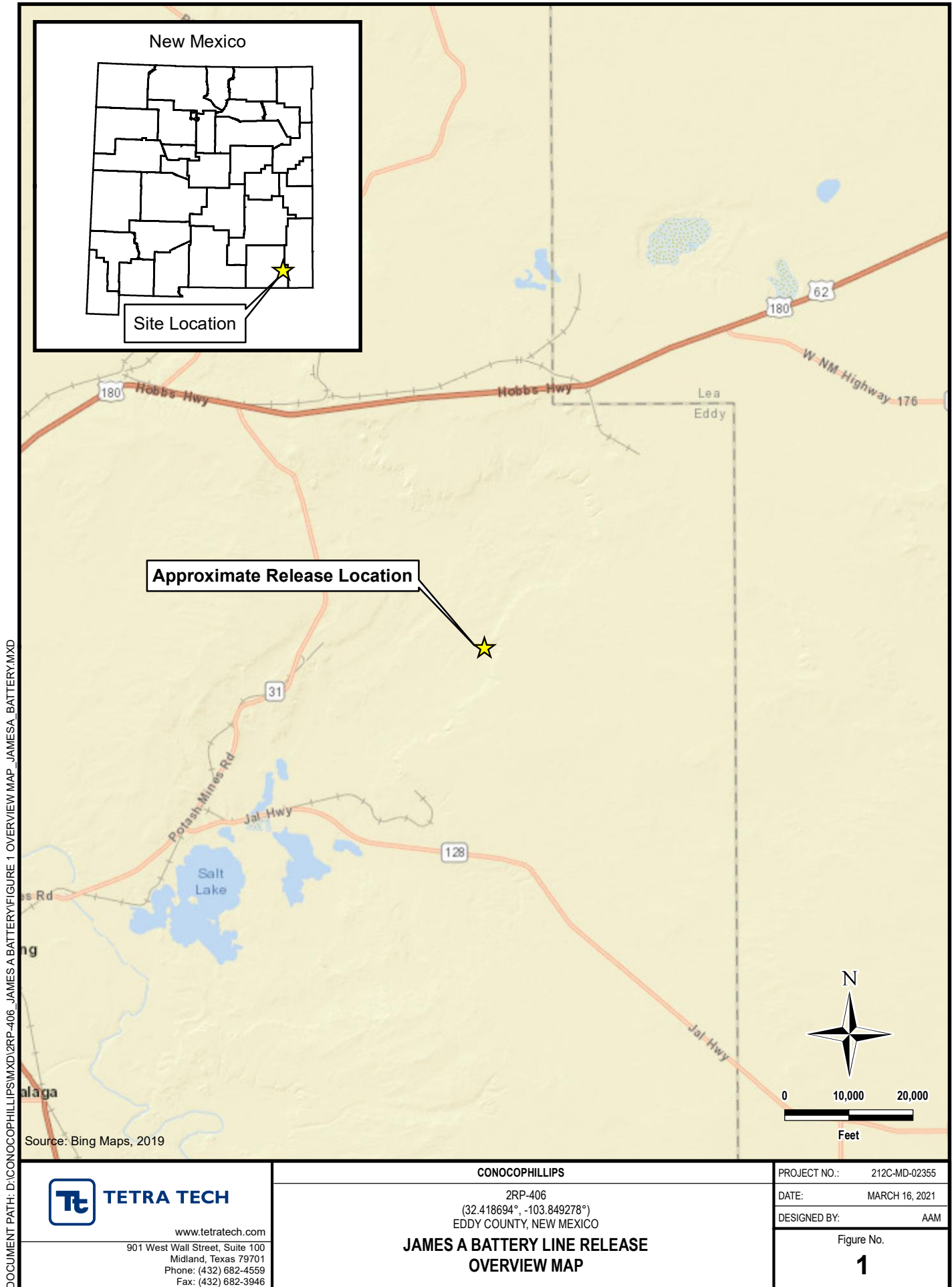
Tables:

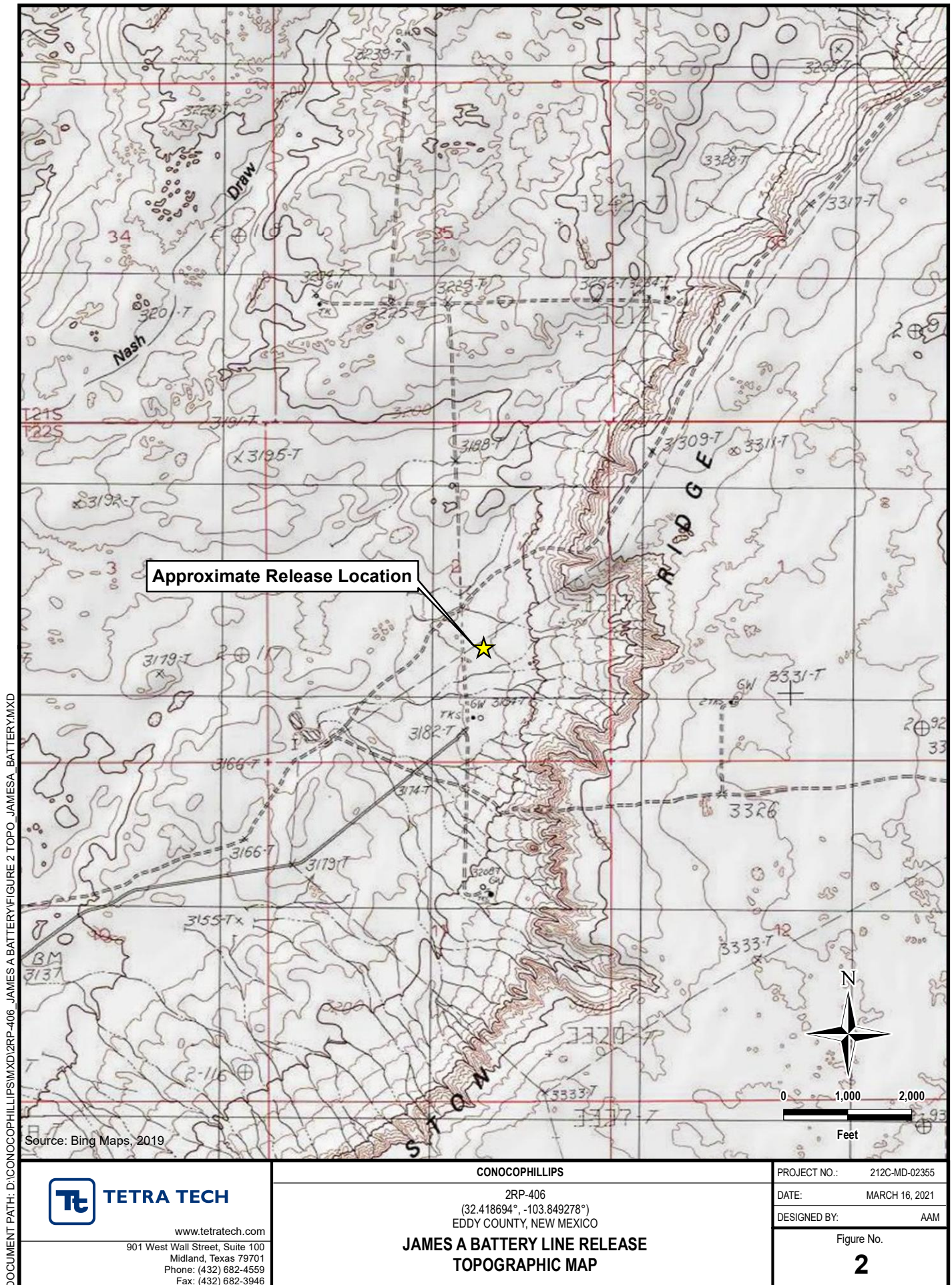
- Table 1 – Summary of Analytical Results – Soil Assessment

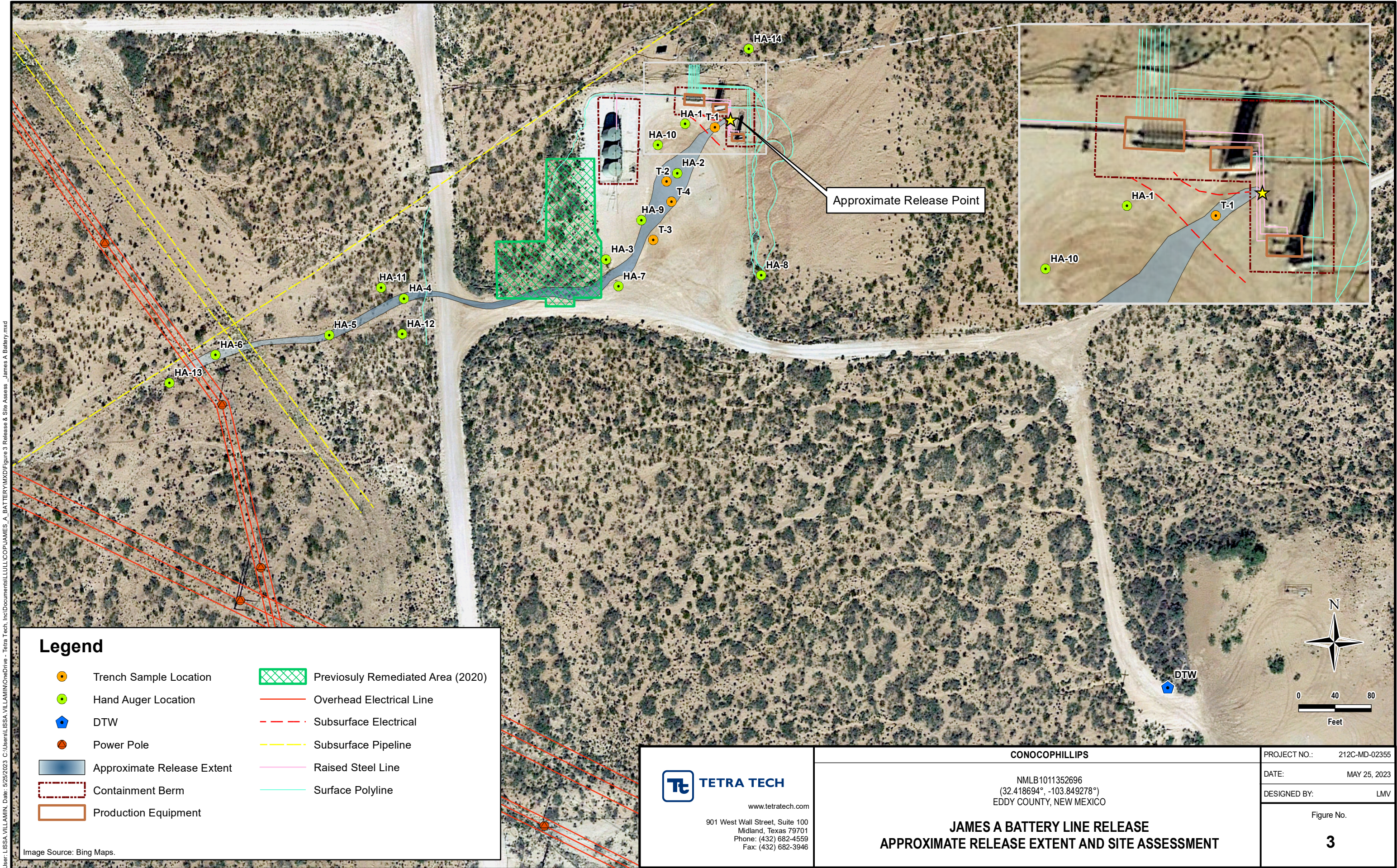
Appendices:

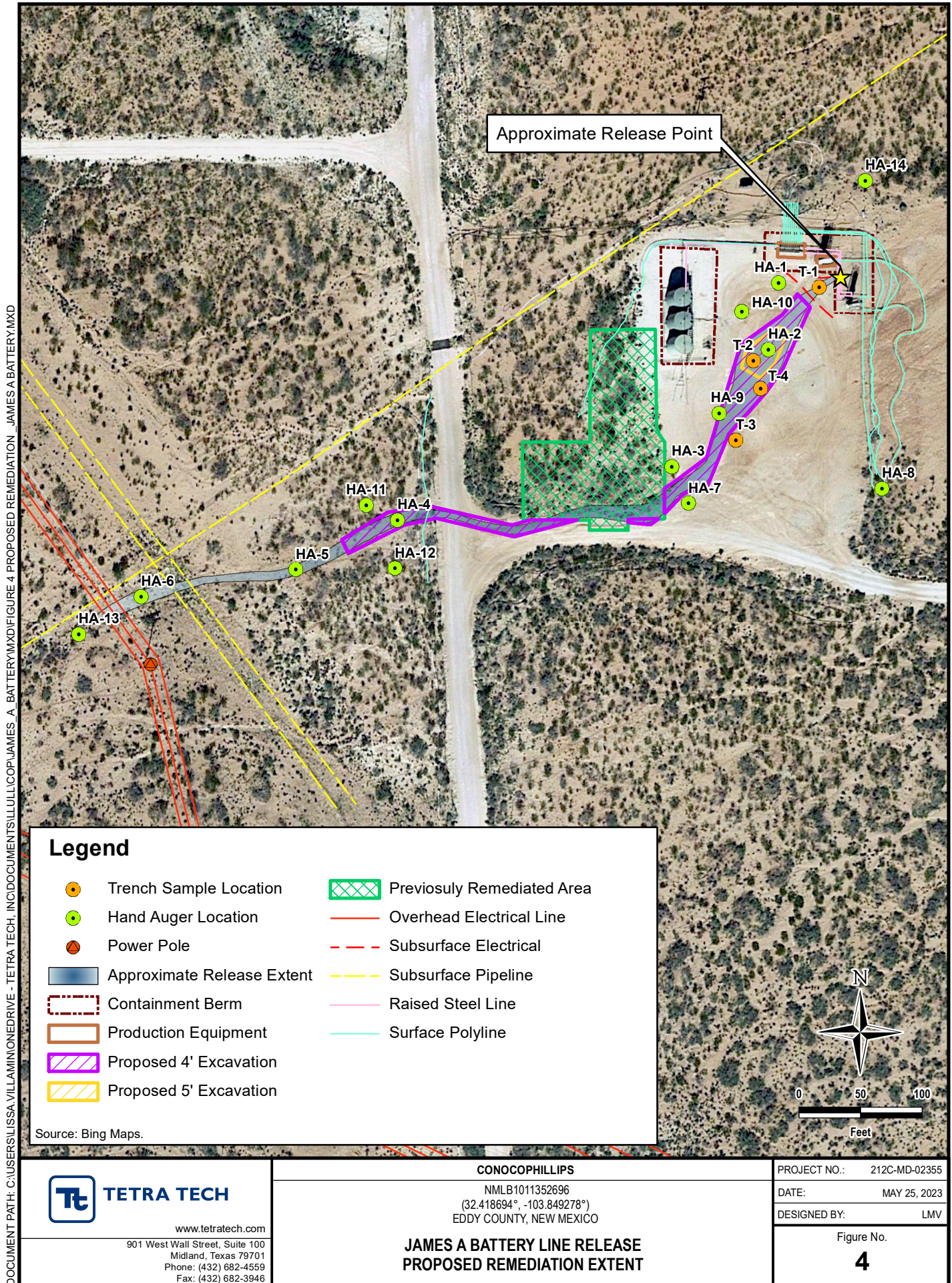
- Appendix A – C-141 Forms
- Appendix B – Site Characterization Data
- Appendix C – Photographic Documentation
- Appendix D – Regulatory Correspondence
- Appendix E – Laboratory Analytical Data
- Appendix F – NMSLO Seed Mixture Details

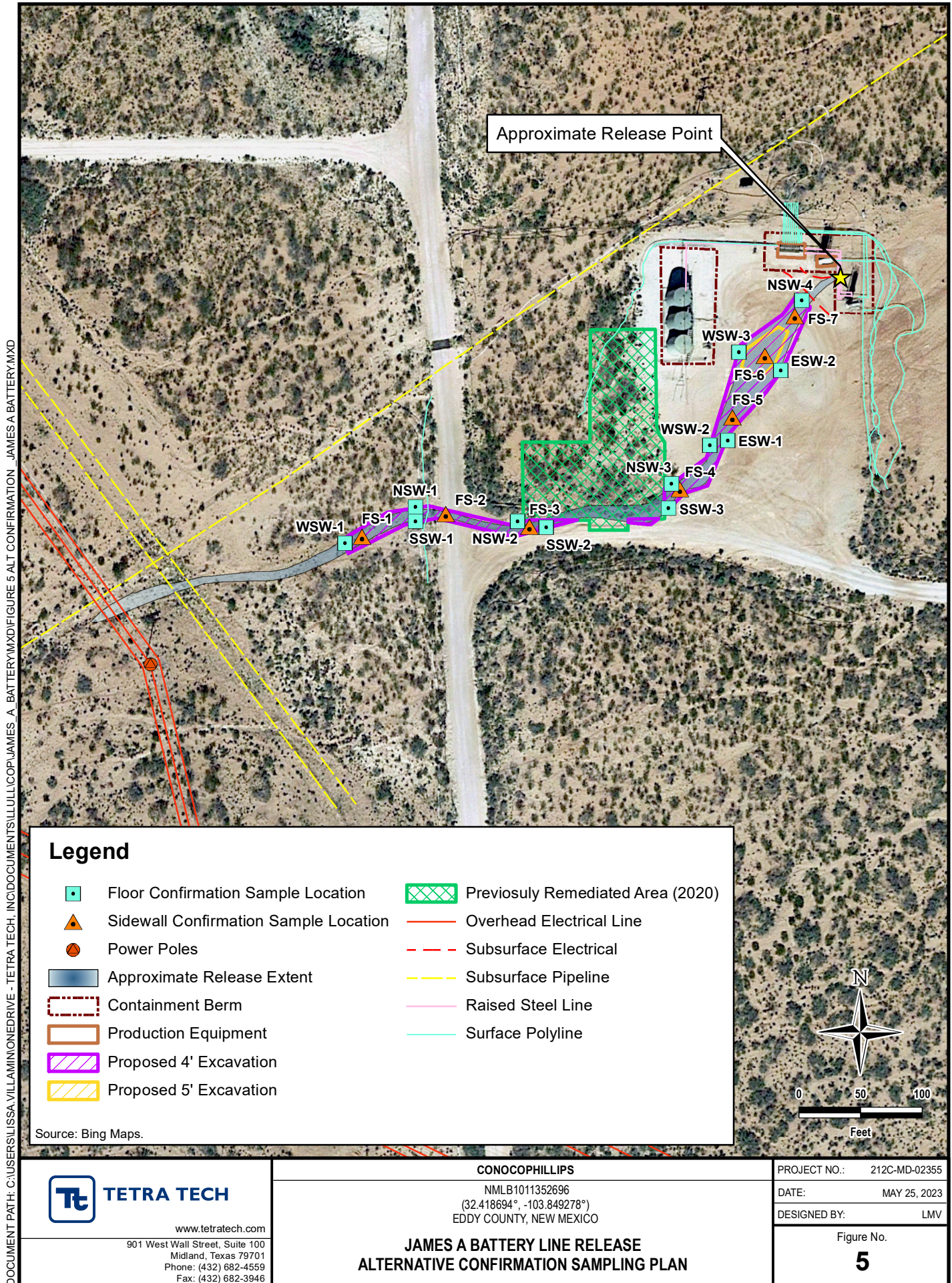
FIGURES











TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - nMLB1011352696
CONOCOPHILLIPS
JAMES A BATTERY LINE RELEASE
EDDY COUNTY, NEW MEXICO

19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release (≤ 50 ft):				Chlorides ¹		BTEX ²										TPH ³							
Sample ID	Sample Date	Sample Depth Interval	Field Screening Results Chlorides	< 600 mg/kg		< 10 mg/kg		Toluene		Ethylbenzene		Total Xylenes		< 50 mg/kg		GRO		DRO		EXT DRO		< 100 mg/kg	-
				Chloride		Benzene								Total BTEX		C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆		Total TPH (GRO+DRO+EXT DRO)	GRO+DRO
				mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg
HA-1	5/9/2023	0-1	498	352		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-2	3/28/2023	0-1	1,670	1,650		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		1-2	2,010	1,600		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		3-4	1,730	1,520		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		4-5	1,020	1,040		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-3	5/17/2023	0-1	-	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-4	3/28/2023	0-1	1,130	1,120		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		1-2	995	800		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		2-3	909	880		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		3-4	712	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		4-5	169	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-5	3/28/2023	0-1	84	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		1-2	75.9	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-6	3/28/2023	0-1	-	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		1-2	-	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-7	5/17/2023	0-1	-	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-8	5/9/2023	0-1	350	96.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-9	3/28/2023	0-1	335	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		31		31.9		62.9	31.9
HA-10	5/9/2023	0-1	561	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-11	3/28/2023	0-1	66.9	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-12	3/28/2023	0-1	35.9	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-13	3/28/2023	0-1	55.9	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
HA-14	3/28/2023	0-1	55.1	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
T-1	5/9/2023	0-1	209	96.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		2-3	313	240.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
T-2	5/9/2023	5-6	2,340	1,390		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		6-7	2,170	1,920		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		7-8	2,110	2,000		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		8-9	1,510	720		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		9-10	748	768		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		10-11	341	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
T-3	5/9/2023	0-1	84.0	32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		2-3	146	32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		4-5	441	256.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
T-4	5/9/2023	0-1	877	128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		2-3	952	720		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
		4-5	332	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-

NOTES:

ft. Feet
bgs Below ground surface
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
1 Method SM4500Cl-B
2 Method 8021B
3 Method 8015M

Bold and italicized values indicate exceedance of proposed RRALs.
Shaded rows indicate intervals proposed for excavation.

APPENDIX A C-141 Forms

RECEIVED APR 23 2010

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

30-015-25699

Release Notification and Corrective Action

MLB1011352696

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips Company 217817	Contact Jesse A. Sosa
Address 3300 N. "A" St., Bldg. 6 #247 Midland, TX 79705-5	Telephone No. (505)391-3126
Facility Name James A Battery	Facility Type Oil

Surface Owner NMOCD	Mineral Owner BLM	Lease No. 3001525699
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	02	22S	30E	1652	South	1980	East	Eddy

Latitude N32 25.112' Longitude W103 50.857'

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 12 BBL	Volume Recovered 0 BBL
Source of Release 3" steel line connection adapter	Date and Hour of Occurrence 4/22/10	Date and Hour of Discovery 4/22/10
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Jesse Sosa	Date and Hour 4/22/10 2:50 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

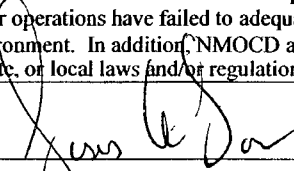
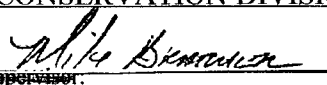
Describe Cause of Problem and Remedial Action Taken.*

MSO located a 1" hole on a 3 inch metal male poly adapter in transition line. The release was due to internal corrosion. The MSO called in a vacuum truck, but the remaining produced water could not be picked up prior to soaking in. The line was isolated, and the metal component has been removed from service to prevent future corrosion issues. Total spill volume was 12 BPW with 0 bbls recovered fluid.

Describe Area Affected and Cleanup Action Taken.*

Affected was 741' x 3' of caliche pad and pasture land. Notifications were made to supervision upon discovery of the spill, and the area will be remediated in place. NMOCD was notified. Soil to be hauled off and replaced. Soil samples will be taken to verify clean up and sent to NMOCD (Mike Bratcher) for finalization.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Jesse A. Sosa		Signed By:  Approved by District Supervisor	
Title: HSER Lead		Approval Date: APR 23 2010	Expiration Date:
E-mail Address: Jesse.A.Sosa@conocophillips.com		Conditions of Approval: REMEDIAION per OCD Rules and Guidelines. SUBMIT REMEDIATION PROPOSAL BY: 5/23/10	
Date: 04/22/2010	Phone: (505)391-3126	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

PMLB1011353322

Incident ID	nMLB1011352696
District RP	2RP-406
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>55 _____ (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 checked="" type="checkbox"/> Yes <input 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

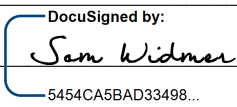
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	nMLB1011352696
District RP	2RP-406
Facility ID	
Application ID	

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

Printed Name: Sam Widmer Title: Principal Program Manager
Signature:  Date: May-31-2023
email: Sam.Widmer@conocophillips.com Telephone: 281-206-5298

OCD Only

Received by: _____ Date: _____

Incident ID	nMLB1011352696
District RP	2RP-406
Facility ID	
Application ID	

Remediation Plan

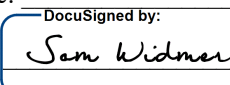
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.


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

Printed Name: Sam Widmer Title: Principal Program Manager
Signature:  Date: May-31-2023
email: Sam.Widmer@conocophillips.com Telephone: 281-206-5298

OCD Only

Received by: OCD Date: 06/02/2023

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

Signature:  Date: 06/05/2023

Variance request for sampling plan approved. Samples collected are not to exceed 400 square feet.

APPENDIX B

Site Characterization Data

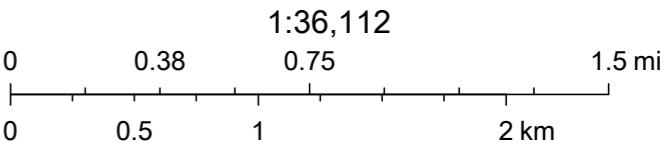
OCD Karst Potential Map



4/17/2023, 9:58:34 AM

Karst Occurrence Potential

- High
- Medium
- Low



BLM, OCD, New Mexico Tech, Esri, HERE, Garmin, Maxar



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 608198.14

Northing (Y): 3587428.83

Radius: 800

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

4/17/23 10:25 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

212C-MD-02792		TETRA TECH		LOG OF BORING DTW			Page 1 of 1		
Project Name: James A Waterflood Release									
Borehole LocationGPS: 32.416966°, -103.847724°					Surface Elevation: 3198 ft				
Borehole Number:DTW				Borehole Diameter (in.): 8		Date Started: 9/26/2022		Date Finished: 9/26/2022	

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS		DEPTH (ft)	REMARKS	
												While Drilling	Upon Completion of Drilling			
			ExStik	PID								While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:				
5													-SP- SILTY SAND: Light brown to brown, loose, dry, fine grained, with trace caliche nodules, no staining impact or odor -SM- SAND: Brown, weakly cemented, dry, very fine grained, with trace caliche		3	
10																
15																
20																
25													-SC- CLAYEY SAND: Reddish brown, moderately cemented, moist -SM- SILTY SAND: Reddish Brown, dense, weakly cemented, dry		19	
30																
35																
40																
45																
50																
55																

Bottom of borehole at 55.0 feet.

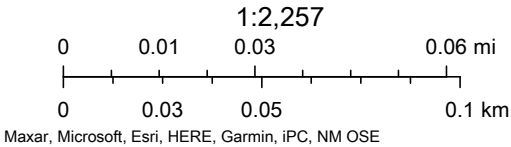
Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear Discrete Sample Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Surface elevation is based on Google Earth data.
Logger: Colton Bickerstaff	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

OCD Waterbodies Map



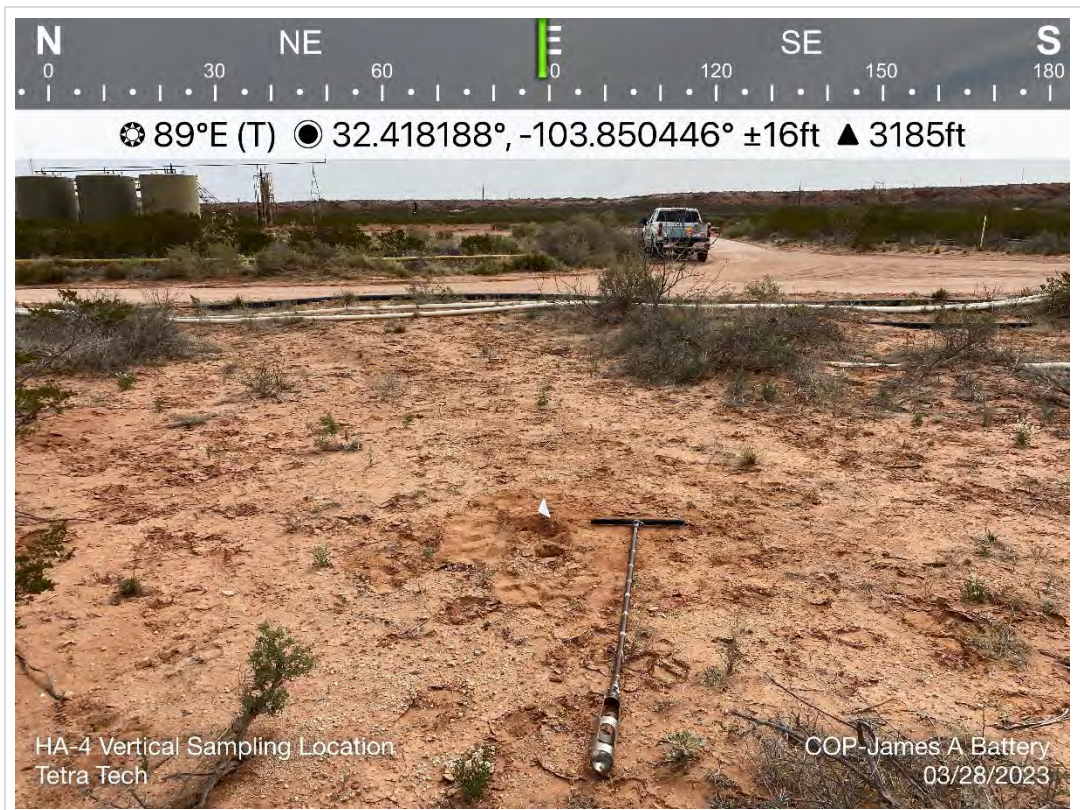
4/17/2023, 11:20:22 AM

— OSE Streams

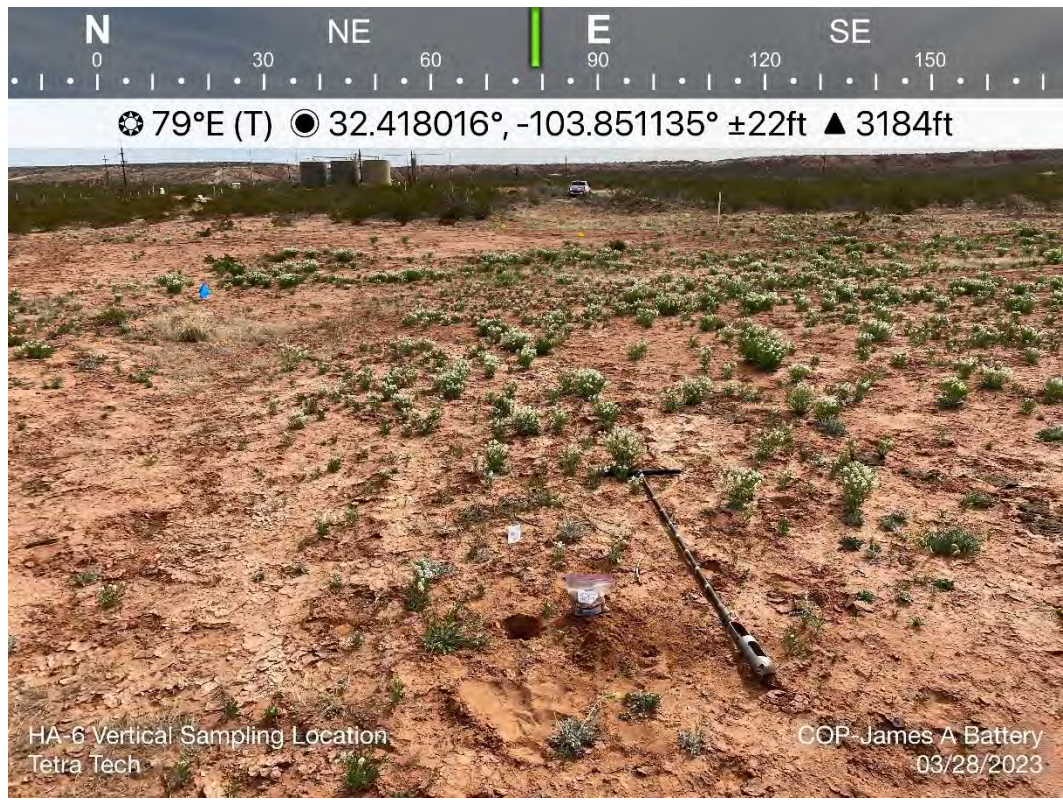


APPENDIX C

Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View east from HA-4 vertical sampling location.	1
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



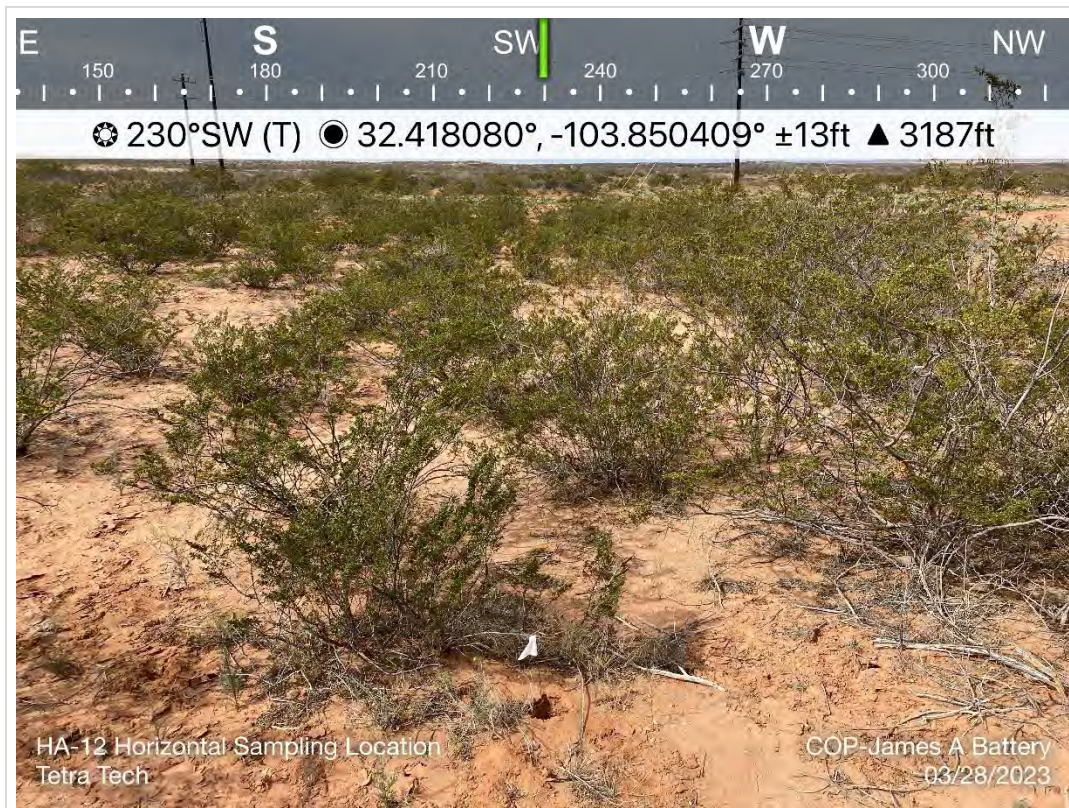
TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View east from HA-6 vertical sampling location.	2
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View east from HA-5 vertical sampling location.	3
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



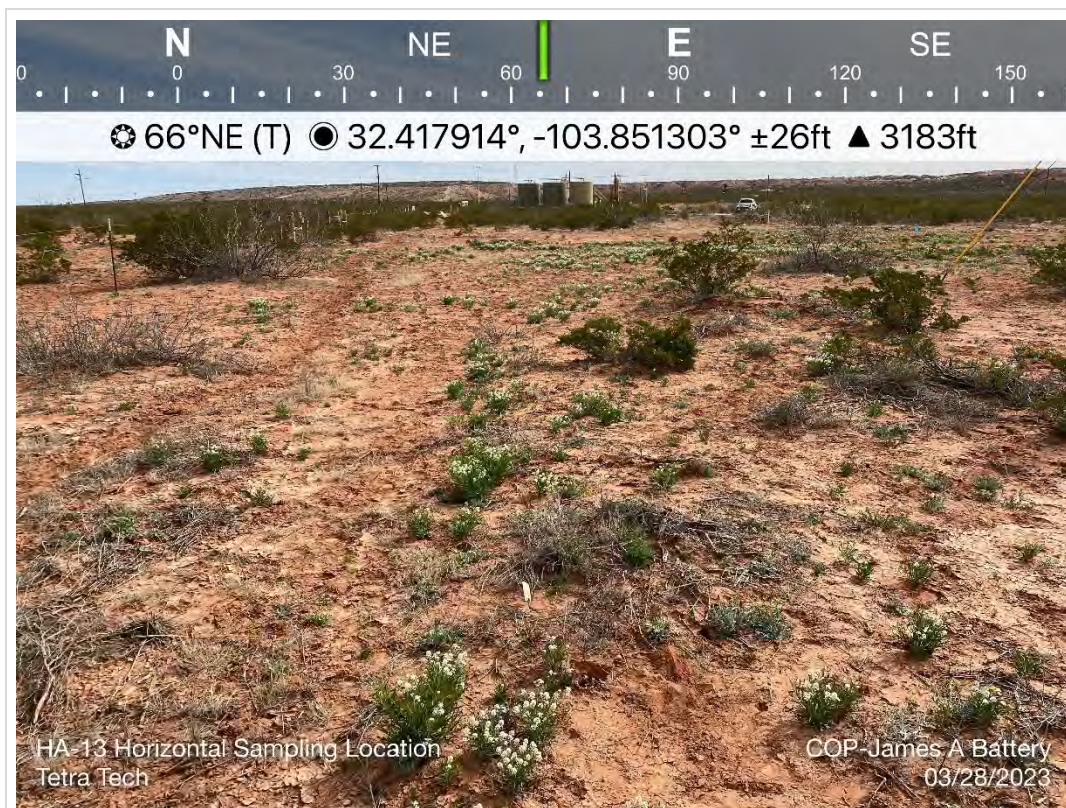
TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View east from HA-11 horizontal sampling location.	4
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



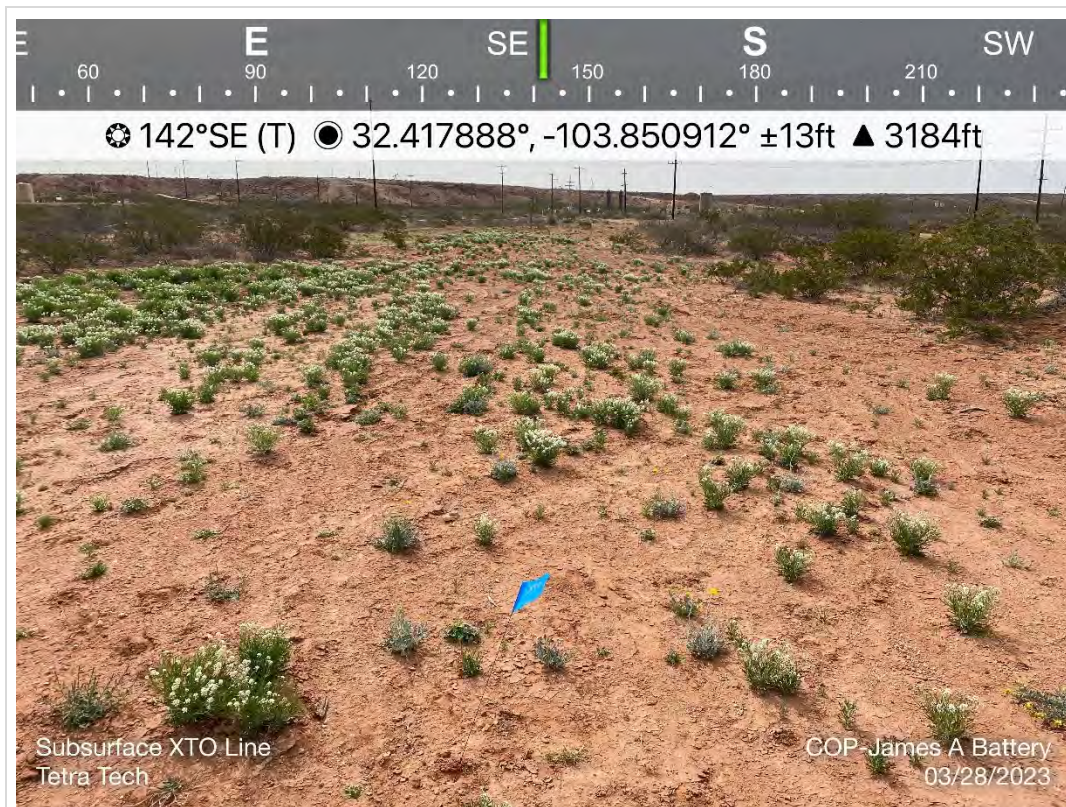
TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View southwest from HA-12 horizontal sampling location.	5
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



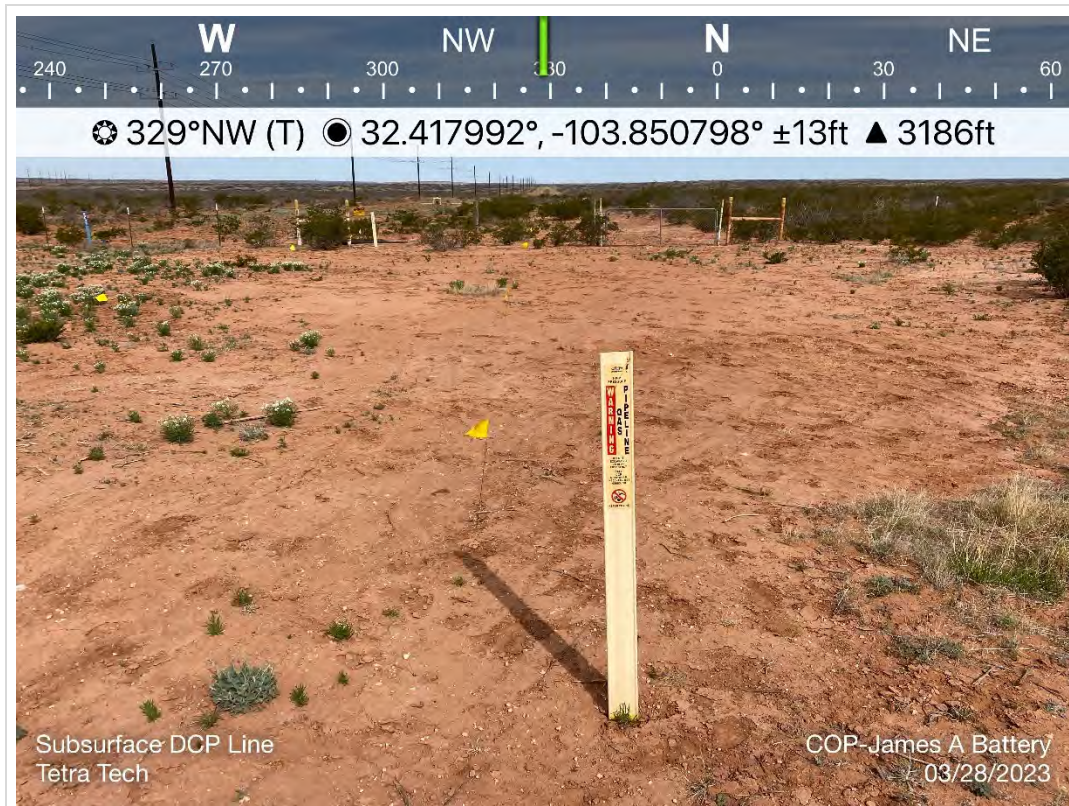
TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View south from HA-14 horizontal sampling location.	6
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



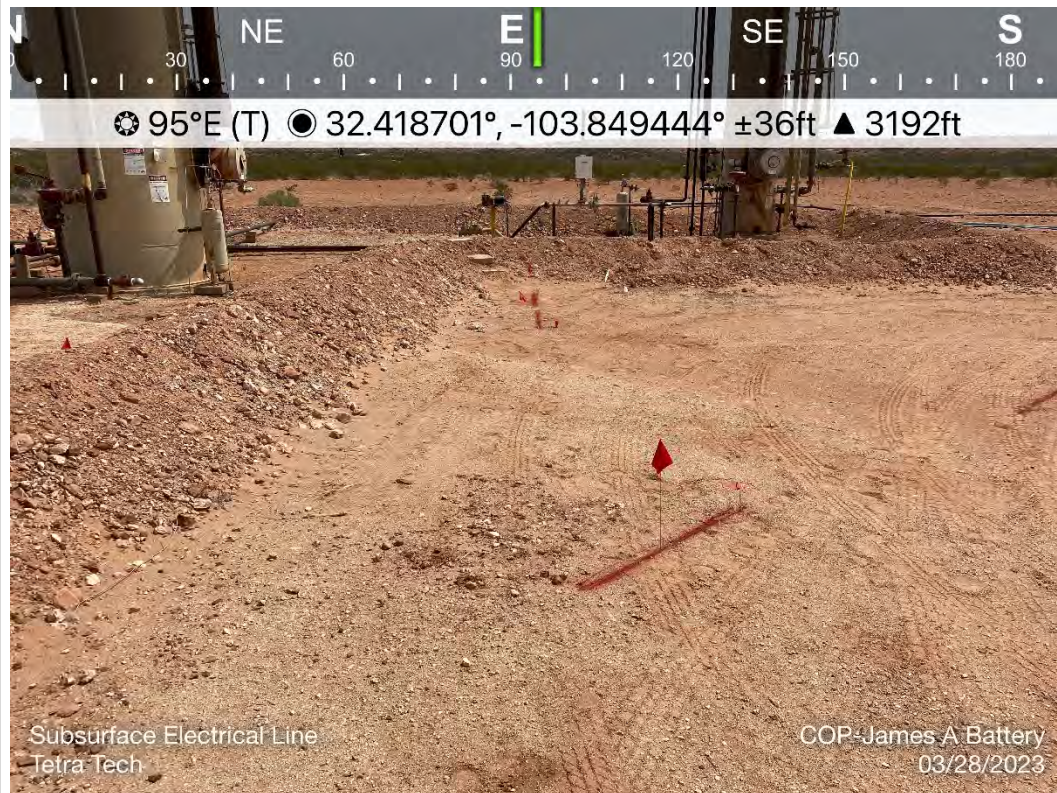
TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View east-northeast from HA-13 horizontal sampling location.	7
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View southeast of subsurface XTO line.	8
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View northwest of subsurface DCP line.	9
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View east of subsurface electrical line.	10
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View north-northwest of subsurface electrical line.	11
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View south-southeast of subsurface electrical line.	12
	SITE NAME	James A Battery (2RP-406) Release	3/28/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View northeast of the northern portion of the release footprint on the lease pad.	13
	SITE NAME	James A Battery (2RP-406) Release	5/9/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02355	DESCRIPTION	View southwest of the release footprint near the southwestern corner of the lease pad.	14
	SITE NAME	James A Battery (2RP-406) Release	5/9/2023

APPENDIX D

Regulatory Correspondence

Dickerson, Ryan

From: OCDOnline@state.nm.us
Sent: Friday, February 24, 2023 3:49 PM
To: Llull, Christian
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 22348

⚠ CAUTION: This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

To whom it may concern (c/o Christian Llull for CONOCOPHILLIPS COMPANY),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nMLB1011352696, for the following reasons:

- **. Closure criteria sampling will need to show samples tested for all components in Table 1 of the OCD Spill Rule. The OCD cannot accept field screening results from Petro FLAG Analyzer Systems, PID Meters, Ground Conductivity Meters, and other field screening tools for closure criteria sampling determination.**
- **Proceed with collecting confirmation samples for laboratory analysis per 19.15.29.12 NMAC.**
- **Submit report via the OCD permitting portal by 6/2/2023.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 22348.

Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Ashley Maxwell
Projects Environmental Specialist - A
505-635-5000
Ashley.Maxwell@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

APPENDIX E

Analytical Laboratory Data



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

March 30, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: JAMES A BATTERY (2RP-406)

Enclosed are the results of analyses for samples received by the laboratory on 03/28/23 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	03/28/2023	Sampling Date:	03/28/2023
Reported:	03/30/2023	Sampling Type:	Soil
Project Name:	JAMES A BATTERY (2RP-406)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02355	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO, NEW MEXICO		

Sample ID: HA - 4 (0-1') (H231411-01)

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	03/30/2023	ND	1.89	94.4	2.00	3.90	
Toluene*	<0.050	0.050	03/30/2023	ND	1.86	93.2	2.00	4.02	
Ethylbenzene*	<0.050	0.050	03/30/2023	ND	1.74	87.0	2.00	2.28	
Total Xylenes*	<0.150	0.150	03/30/2023	ND	5.05	84.1	6.00	1.83	
Total BTX	<0.300	0.300	03/30/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 78.5 % 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	1120	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 90.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 4 (1'-2') (H231411-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/30/2023	ND	1.89	94.4	2.00	3.90		
Toluene*	<0.050	0.050	03/30/2023	ND	1.86	93.2	2.00	4.02		
Ethylbenzene*	<0.050	0.050	03/30/2023	ND	1.74	87.0	2.00	2.28		
Total Xylenes*	<0.150	0.150	03/30/2023	ND	5.05	84.1	6.00	1.83		
Total BTEX	<0.300	0.300	03/30/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.5 % 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	800	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 94.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 4 (2'-3') (H231411-03)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/30/2023	ND	1.89	94.4	2.00	3.90		
Toluene*	<0.050	0.050	03/30/2023	ND	1.86	93.2	2.00	4.02		
Ethylbenzene*	<0.050	0.050	03/30/2023	ND	1.74	87.0	2.00	2.28		
Total Xylenes*	<0.150	0.150	03/30/2023	ND	5.05	84.1	6.00	1.83		
Total BTEX	<0.300	0.300	03/30/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 84.9 % 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	880	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 4 (3'-4') (H231411-04)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/30/2023	ND	1.89	94.4	2.00	3.90		
Toluene*	<0.050	0.050	03/30/2023	ND	1.86	93.2	2.00	4.02		
Ethylbenzene*	<0.050	0.050	03/30/2023	ND	1.74	87.0	2.00	2.28		
Total Xylenes*	<0.150	0.150	03/30/2023	ND	5.05	84.1	6.00	1.83		
Total BTEX	<0.300	0.300	03/30/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 84.1 % 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	640	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 4 (4'-5') (H231411-05)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	80.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 65.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 5 (0-1') (H231411-06)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEx	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	80.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 5 (1'-2') (H231411-07)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEx	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	16.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 89.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 6 (0-1') (H231411-08)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTX	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	32.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 76.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 6 (1'-2') (H231411-09)

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	03/29/2023	ND	1.95	97.7	2.00	7.91	
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30	
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83	
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05	
Total BTEX	<0.300	0.300	03/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 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	112	16.0	03/30/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 87.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 9 (0-1') (H231411-10)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	31.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	31.9	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 76.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 11 (0-1') (H231411-11)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	48.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 91.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 12 (0-1') (H231411-12)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	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	32.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 96.3 % 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

Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 13 (0-1') (H231411-13)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEx	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	<16.0	16.0	03/30/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 91.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.3 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 14 (0-1') (H231411-14)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	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	<16.0	16.0	03/30/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 (0-1') (H231411-15)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEx	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1650	16.0	03/30/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 (1'-2') (H231411-16)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTX	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1600	16.0	03/30/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 96.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 (3'-4') (H231411-17)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	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	1520	16.0	03/30/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.1 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/28/2023
 Reported: 03/30/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 03/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 (4'-5') (H231411-18)

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	03/29/2023	ND	1.95	97.7	2.00	7.91		
Toluene*	<0.050	0.050	03/29/2023	ND	1.99	99.7	2.00	7.30		
Ethylbenzene*	<0.050	0.050	03/29/2023	ND	1.97	98.4	2.00	5.83		
Total Xylenes*	<0.150	0.150	03/29/2023	ND	6.09	102	6.00	6.05		
Total BTEX	<0.300	0.300	03/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	1040	16.0	03/30/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/29/2023	ND	164	82.1	200	0.555	
DRO >C10-C28*	<10.0	10.0	03/29/2023	ND	176	88.0	200	4.06	
EXT DRO >C28-C36	<10.0	10.0	03/29/2023	ND					

Surrogate: 1-Chlorooctane 93.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Tetra Tech				BILL TO				ANALYSIS REQUEST																																																																																																																																																																																																					
Project Manager: Christian Llull				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>TPH 8015M</div> <div>BTEX 8021B</div> <div>Chloride SM4500Cl-B</div> </div>																																																																																																																																																																																																					
Address: 8911 Capital o Texas Hwy, Suite 2310				Company: Tetra Tech																																																																																																																																																																																																									
City: Austin State: TX Zip:				Attn: Christian Llull																																																																																																																																																																																																									
Phone #: (512)565-0190 Fax #:				Address: EMAIL																																																																																																																																																																																																									
Project #: 212C-MD-02355 Project Owner: ConocoPhillips				City:																																																																																																																																																																																																									
Project Name: James A Battery (2RP-406)				State: Zip:																																																																																																																																																																																																									
Project Location: Eddy County, New Mexico				Phone #:																																																																																																																																																																																																									
Sampler Name: Colton Bickerstaff				Fax #:																																																																																																																																																																																																									
<table border="1"> <thead> <tr> <th rowspan="2">Lab I.D.</th> <th rowspan="2">Sample I.D.</th> <th rowspan="2">(GRAB OR (COMP. # CONTAINERS</th> <th colspan="5">MATRIX</th> <th colspan="2">PRESERV.</th> <th colspan="2">SAMPLING</th> <th rowspan="2">TPH 8015M</th> <th rowspan="2">BTEX 8021B</th> <th rowspan="2">Chloride SM4500Cl-B</th> </tr> <tr> <th>GROUNDWATER</th> <th>WASTEWATER</th> <th>SOIL</th> <th>OIL</th> <th>SLUDGE</th> <th>OTHER: ACID/BASE:</th> <th>ICE / COOL</th> <th>OTHER:</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>H231411</td> <td>HA-4 (0-1')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>1</td> <td>HA-4 (1'-2')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>2</td> <td>HA-4 (2'-3')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>3</td> <td>HA-4 (3'-4')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>4</td> <td>HA-4 (4'-5')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>5</td> <td>HA-5 (0-1')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>6</td> <td>HA-5 (1'-2')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>7</td> <td>HA-6 (0-1')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>8</td> <td>HA-6 (1'-2')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>9</td> <td>HA-6 (1'-2')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>10</td> <td>HA-9 (0-1')</td> <td>G 1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>3/28/2023</td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>																Lab I.D.	Sample I.D.	(GRAB OR (COMP. # CONTAINERS	MATRIX					PRESERV.		SAMPLING		TPH 8015M	BTEX 8021B	Chloride SM4500Cl-B	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER: ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	H231411	HA-4 (0-1')	G 1		X				X		3/28/2023		X	X	X	1	HA-4 (1'-2')	G 1		X				X		3/28/2023		X	X	X	2	HA-4 (2'-3')	G 1		X				X		3/28/2023		X	X	X	3	HA-4 (3'-4')	G 1		X				X		3/28/2023		X	X	X	4	HA-4 (4'-5')	G 1		X				X		3/28/2023		X	X	X	5	HA-5 (0-1')	G 1		X				X		3/28/2023		X	X	X	6	HA-5 (1'-2')	G 1		X				X		3/28/2023		X	X	X	7	HA-6 (0-1')	G 1		X				X		3/28/2023		X	X	X	8	HA-6 (1'-2')	G 1		X				X		3/28/2023		X	X	X	9	HA-6 (1'-2')	G 1		X				X		3/28/2023		X	X	X	10	HA-9 (0-1')	G 1		X				X		3/28/2023		X	X	X
Lab I.D.	Sample I.D.	(GRAB OR (COMP. # CONTAINERS	MATRIX					PRESERV.		SAMPLING		TPH 8015M	BTEX 8021B	Chloride SM4500Cl-B																																																																																																																																																																																															
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1	HA-4 (1'-2')	G 1		X				X		3/28/2023		X	X	X																																																																																																																																																																																															
2	HA-4 (2'-3')	G 1		X				X		3/28/2023		X	X	X																																																																																																																																																																																															
3	HA-4 (3'-4')	G 1		X				X		3/28/2023		X	X	X																																																																																																																																																																																															
4	HA-4 (4'-5')	G 1		X				X		3/28/2023		X	X	X																																																																																																																																																																																															
5	HA-5 (0-1')	G 1		X				X		3/28/2023		X	X	X																																																																																																																																																																																															
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Relinquished By: Colton Bickerstaff	Date: 3/28/23	Received By: <i>Samara Alcantara</i>	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1450		All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com	
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C Corrected Temp. °C 6.4 5.8	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: (Initials) <i>Jo</i>	Turnaround Time: Standard <input checked="" type="checkbox"/> Bacteria (only) Sample Condition: Rush: <input checked="" type="checkbox"/> N/A, Standard TAT <input type="checkbox"/> Cool Intact Observed Temp. °C Thermometer ID #113 Correction Factor -0.5°C <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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



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

May 15, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: JAMES A BATTERY (2RP-406)

Enclosed are the results of analyses for samples received by the laboratory on 05/09/23 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 / T-2 (5'-6') (H232304-01)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42	
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 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	1390	16.0	05/10/2023	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	05/10/2023	ND	161	80.4	200	2.41	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 83.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.9 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 / T-2 (6'-7') (H232304-02)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42		
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900		
Total BTEx	<0.300	0.300	05/10/2023	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	1920	16.0	05/10/2023	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	05/10/2023	ND	161	80.4	200	2.41	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 77.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.2 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 / T-2 (7'-8') (H232304-03)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2023	ND	2.02	101	2.00	2.85	
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47	
Total BTEx	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	2000	16.0	05/10/2023	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	05/10/2023	ND	161	80.4	200	2.41	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 82.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.2 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 / T-2 (8'-9') (H232304-04)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	720	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 97.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 / T-2 (9'-10') (H232304-05)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	768	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 99.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 2 / T-2 (10'-11') (H232304-06)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	112	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 1 (0-1') (H232304-07)

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	05/10/2023	ND	2.02	101	2.00	2.85	
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	96.0	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 97.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 1 (2'-3') (H232304-08)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2023	ND	2.02	101	2.00	2.85	
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	240	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 94.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 3 (0-1') (H232304-09)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEX	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	32.0	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 3 (2'-3') (H232304-10)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEX	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 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	32.0	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 94.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 3 (4'-5') (H232304-11)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	256	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 1 (0-1') (H232304-12)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	352	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 8 (0-1') (H232304-13)

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	05/10/2023	ND	2.02	101	2.00	2.85	
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	96.0	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 10 (0-1') (H232304-14)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEX	<0.300	0.300	05/10/2023	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	176	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 96.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 4 (0-1') (H232304-15)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	128	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 90.5 % 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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Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 4 (2'-3') (H232304-16)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEx	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	720	16.0	05/10/2023	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	05/10/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 92.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/09/2023
 Reported: 05/15/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/09/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T - 4 (4'-5') (H232304-17)

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	05/10/2023	ND	2.02	101	2.00	2.85		
Toluene*	<0.050	0.050	05/10/2023	ND	2.08	104	2.00	3.24		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.01	100	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.22	104	6.00	4.47		
Total BTEX	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	240	16.0	05/10/2023	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	05/11/2023	ND	163	81.5	200	5.99	
DRO >C10-C28*	<10.0	10.0	05/11/2023	ND	147	73.7	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	05/11/2023	ND					

Surrogate: 1-Chlorooctane 93.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 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

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Tetra Tech Project Manager: Christian Llull Address: 8911 Capital o Texas Hwy, Suite 2310 City: Austin Phone #: (512)665-0190 Fax #: State: TX Zip: Project #: 212C-MD-02355 Project Owner: ConocoPhillips Project Name: James A Battery (2RP-406) Project Location: Eddy County, New Mexico Sampler Name: Colton Bickelstaff Phone #: Fax #:										BILL TO										ANALYSIS REQUEST									
Company: Tetra Tech Attn: Christian Llull Address: EMAIL City: State: Zip:										P.O. #:																			
Sample I.D.:										Sample I.D.:																			
Lab I.D.:										Lab I.D.:																			
HA-2/T-2 (5-6)										HA-2/T-2 (5-6)																			
HA-2/T-2 (6-7)										HA-2/T-2 (6-7)																			
HA-2/T-2 (7-8)										HA-2/T-2 (7-8)																			
HA-2/T-2 (8-9)										HA-2/T-2 (8-9)																			
HA-2/T-2 (9-10)										HA-2/T-2 (9-10)																			
HA-2/T-2 (10-11)										HA-2/T-2 (10-11)																			
T-1 (0-1)										T-1 (0-1)																			
T-1 (2-3)										T-1 (2-3)																			
T-3 (0-1)										T-3 (0-1)																			
T-3 (2-3)										T-3 (2-3)																			
HA-2/T-2 (5-6)										HA-2/T-2 (5-6)																			
HA-2/T-2 (6-7)										HA-2/T-2 (6-7)																			
HA-2/T-2 (7-8)										HA-2/T-2 (7-8)																			
HA-2/T-2 (8-9)										HA-2/T-2 (8-9)																			
HA-2/T-2 (9-10)										HA-2/T-2 (9-10)																			
HA-2/T-2 (10-11)										HA-2/T-2 (10-11)																			
T-1 (0-1)										T-1 (0-1)																			
T-1 (2-3)										T-1 (2-3)																			
T-3 (0-1)										T-3 (0-1)																			
T-3 (2-3)										T-3 (2-3)																			
HA-2/T-2 (5-6)										HA-2/T-2 (5-6)																			
HA-2/T-2 (6-7)										HA-2/T-2 (6-7)																			
HA-2/T-2 (7-8)										HA-2/T-2 (7-8)																			
HA-2/T-2 (8-9)										HA-2/T-2 (8-9)																			
HA-2/T-2 (9-10)										HA-2/T-2 (9-10)																			
HA-2/T-2 (10-11)										HA-2/T-2 (10-11)																			
T-1 (0-1)										T-1 (0-1)																			
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HA-2/T-2 (5-6)										HA-2/T-2 (5-6)																			
HA-2/T-2 (6-7)										HA-2/T-2 (6-7)																			
HA-2/T-2 (7-8)										HA-2/T-2 (7-8)																			
HA-2/T-2 (8-9)										HA-2/T-2 (8-9)																			
HA-2/T-2 (9-10)										HA-2/T-2 (9-10)																			
HA-2/T-2 (10-11)										HA-2/T-2 (10-11)																			
T-1 (0-1)										T-1 (0-1)																			
T-1 (2-3)										T-1 (2-3)																			
T-3 (0-1)										T-3 (0-1)																			
T-3 (2-3)										T-3 (2-3)																			
HA-2/T-2 (5-6)										HA-2/T-2 (5-6)																			
HA-2/T-2 (6-7)										HA-2/T-2 (6-7)																			
HA-2/T-2 (7-8)										HA-2/T-2 (7-8)																			
HA-2/T-2 (8-9)										HA-2/T-2 (8-9)																			
HA-2/T-2 (9-10)										HA-2/T-2 (9-10)																			
HA-2/T-2 (10-11)										HA-2/T-2 (10-11)																			
T-1 (0-1)										T-1 (0-1)																			
T-1 (2-3)										T-1 (2-3)																			
T-3 (0-1)										T-3 (0-1)																			
T-3 (2-3)										T-3 (2-3)																			
HA-2/T-2 (5-6)										HA-2/T-2 (5-6)																			
HA-2/T-2 (6-7)										HA-2/T-2 (6-7)																			
																													



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]



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

May 22, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: JAMES A BATTERY (2RP-406)

Enclosed are the results of analyses for samples received by the laboratory on 05/17/23 11:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	05/17/2023	Sampling Date:	05/17/2023
Reported:	05/22/2023	Sampling Type:	Soil
Project Name:	JAMES A BATTERY (2RP-406)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02355	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO, NEW MEXICO		

Sample ID: HA - 3 (0-1') (H232473-01)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/19/2023	ND	2.11	106	2.00	4.23	
Toluene*	<0.050	0.050	05/19/2023	ND	2.11	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	05/19/2023	ND	2.19	109	2.00	4.09	
Total Xylenes*	<0.150	0.150	05/19/2023	ND	6.49	108	6.00	3.85	
Total BTEX	<0.300	0.300	05/19/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	32.0	16.0	05/18/2023	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	05/18/2023	ND	157	78.7	200	6.23	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	157	78.5	200	8.11	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane 82.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.7 % 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:

TETRA TECH
 CHRISTIAN LLULL
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 05/17/2023
 Reported: 05/22/2023
 Project Name: JAMES A BATTERY (2RP-406)
 Project Number: 212C-MD-02355
 Project Location: COP - EDDY CO, NEW MEXICO

Sampling Date: 05/17/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 7 (0-1') (H232473-02)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/19/2023	ND	2.11	106	2.00	4.23		
Toluene*	<0.050	0.050	05/19/2023	ND	2.11	105	2.00	3.51		
Ethylbenzene*	<0.050	0.050	05/19/2023	ND	2.19	109	2.00	4.09		
Total Xylenes*	<0.150	0.150	05/19/2023	ND	6.49	108	6.00	3.85		
Total BTEx	<0.300	0.300	05/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	<16.0	16.0	05/18/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/18/2023	ND	157	78.7	200	6.23	
DRO >C10-C28*	<10.0	10.0	05/18/2023	ND	157	78.5	200	8.11	
EXT DRO >C28-C36	<10.0	10.0	05/18/2023	ND					

Surrogate: 1-Chlorooctane 84.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Tetra Tech Project Manager: Chrystian Lull Address: City: State: Zip: Phone #: Fax #:		P.O. #: Company: Tetra Tech Attn: Chrystian Lull Address: email City: State: Zip: Phone #: Fax #:	
Project #: 2016-MD-02855 Project Name: James A. Batters (2016-406) Project Location: Batters County, NM Sampler Name: Carter Batters		Project Owner: Lane to Phillips City: State: Zip:	
FOR LAB USE ONLY			
Lab I.D. H232423 14-3 (0-1') 14-7 (0-1')	Sample I.D.	MATRIX (G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:	PRESERV ACID/BASE: ICE / COOL OTHER:
DATE 5/17/23		TIME 5/17/23	
REMARKS: T.P.H. BTEX Chlorides		ANALYSIS REQUEST	

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

Delivered By: (Circle One) Impiler - UPS - Bus - Other: FROM: 000 033 07710222	Observed Temp. °C 33 Corrected Temp. °C 2.7	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) [Signature]
Received By: [Signature] Date: 5/17/23 Time: 11:25	Received By: [Signature] Date: 5/17/23 Time: 11:25	Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Thermometer ID #113 Correction Factor -0.6°C	Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: All Results are emailed. Please provide Email address: Chrystian.Lull@tetratech.com

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

APPENDIX F

NMSLO Seed Mixture Details



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Eddy Area, New Mexico

James A Battery Release



May 24, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report
Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow


 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	0.7	100.0%
Totals for Area of Interest		0.7	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

Eddy Area, New Mexico**PD—Pajarito-Dune land complex, 0 to 3 percent slopes****Map Unit Setting**

National map unit symbol: 1w55
Elevation: 3,000 to 5,000 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Pajarito and similar soils: 46 percent
Dune land: 45 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pajarito**Setting**

Landform: Plains, interdunes, dunes
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 36 inches: fine sandy loam
H3 - 36 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Custom Soil Resource Report

Description of Dune Land**Setting***Landform:* Dune fields*Landform position (two-dimensional):* Shoulder, backslope, footslope*Landform position (three-dimensional):* Talf*Down-slope shape:* Convex, linear*Across-slope shape:* Convex, linear*Parent material:* Mixed alluvium and/or eolian sands**Typical profile***H1 - 0 to 6 inches:* sandy loam*H2 - 6 to 60 inches:* sandy loam**Interpretive groups***Land capability classification (irrigated):* None specified*Ecological site:* R070BD003NM - Loamy Sand*Hydric soil rating:* No**Minor Components****Rock outcrop***Percent of map unit:* 5 percent*Hydric soil rating:* No**Largo***Percent of map unit:* 4 percent*Ecological site:* R070BC007NM - Loamy*Hydric soil rating:* No

NMSLO Seed Mix**Sandy Loam (SL)****SANDY LOAM (SL) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Galleta grass	Viva, VNS, So.	2.5	F
Little bluestem	Cimmaron, Pastura	2.5	F
Blue grama	Hachita, Lovington	2.0	D
Sideoats grama	Vaughn, El Reno	2.0	F
Sand dropseed	VNS, Southern	1.0	S
Forbs:			
Indian blanketflower	VNS, Southern	1.0	D
Parry penstemon	VNS, Southern	1.0	D
Blue flax	Appar	1.0	D
Desert globemallow	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	VNS, Southern	2.0	D
Common winterfat	VNS, Southern	1.0	F
Apache plume	VNS, Southern	0.75	F
Total PLS/acre		17.75	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

- VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.
- Double above seed rates for broadcast or hydroseeding.
- If Parry penstemon is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow or Nelson globemallow.
- If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



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

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

CONDITIONS

Action 223320

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 223320
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Work plan approved.	6/5/2023
amaxwell	Variance request for alternative sampling plan is approved. Samples collected are not to exceed 400 square feet.	6/5/2023
amaxwell	Submit a closure report by 9/22/2023 via the OCD permitting portal.	6/5/2023