TETRA TECH

March 2, 2022

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
MCA 2C Header East Line Release
Unit Letter J, Section 28, Township 17 South, Range 32 East
Lea County, New Mexico
Incident Identification (ID) NAPP2117456525

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to evaluate and assess a release that occurred at the Maljamar Cooperative Agreement (MCA) 2C Production and Water Injection Header. The release footprint is located in Public Land Survey System (PLSS) Unit Letter J, Section 28, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point coordinates are 32.803770°, -103.769476°. The Site location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report, the release was discovered on June 15, 2021, at the MCA 2C Production and Water Injection Header site. The release occurred as the result of an injection line developing a leak at the header, below ground level, at the riser. Approximately 9 barrels (bbls) of produced water were reported released, of which 0 bbl of produced water oil were reported recovered during initial response activities. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on June 24, 2021, and subsequently assigned the Site the Incident Identification (ID) NAPP2117456525. The release footprint is on BLM land. The initial C-141 Form is included in Appendix A.

Prior to the NAPP2117456525 release in June of 2021, there was a release at the Site in October 2019, which was assigned the Remediation Permit (RP) number 1RP-5779 and Incident ID NRM1930950727. The subject release (NAPP2117456525) footprint was coincident with the previous release footprint (NRM1930950727). Assessment activities and release characterization for the previous release (NRM1930950727) was performed by Tetra Tech on behalf of COP. A Release Characterization and Remediation Work Plan was submitted to the NMOCD on July 14, 2021 and approved by Robert Hamlet of the OCD on Monday, November 8, 2021.

SITE CHARACTERIZATION

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

Tetra Tech
901 West Wall St., Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.0029 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

The Site is within a New Mexico oil and gas production area. According to the New Mexico Office of the State Engineers (NMOSE) database, there are 2 wells within a ½ mile (800-meter) radius of the Site with an average depth to groundwater at 99 feet (ft) below ground surface (bgs). The site characterization data is 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 and in accordance with Table I of 19.15.29.12 NMAC, the remediation RRALs for the Site are as follows:

Constituent	Remediation RRAL
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg

Additionally, in accordance with the NMOCD guidance Procedures for Implementation of the Spill Rule (19.15.29 NMAC) (September 6, 2019), the following reclamation requirements for surface soils (0-4 ft bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirements
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg

INITIAL RESPONSE

In accordance with 19.15.29.8.B.(4) NMAC that states “the responsible party may commence remediation immediately after discovery of a release”, COP elected to begin remediation of the impacted area associated with the NAPP2117456525 release in 2021. The on-pad area of the release footprint and off-pad areas in the pasture were hand dug and scraped to approximately 6 inches below ground surface to remove visually impacted soils. Approximately 38 cubic yards of impacted material was removed from the footprint and disposed of at the R360 Halfway Facility in Hobbs, NM. Waste Manifests are included in Appendix E.

SITE ASSESSMENT

In order to achieve horizontal and vertical delineation of the NAPP2117456525 release extent, Tetra Tech personnel conducted soil sampling on February 15 and 16, 2022 on behalf of COP. Due to the abundance of surface flowlines and subsurface injection lines running across and through the release area footprint, a drilling rig was not able to safely access the release extent footprint and drill for delineation. Therefore, the site assessment activities consisted of trenching a series of test pits within the release extent footprint with a mini excavator for vertical delineation, as well as completing borings for horizontal delineation around the release extent perimeter using a hand auger. A total of four (4) trenches (T-1 through T-4) were installed

within the observed release footprint to a depth of 12 ft bgs in order to achieve vertical delineation of the release extent. A total of nine (9) borings (AH-1 through AH-9) were installed along the perimeter of the observed release footprint to achieve horizontal delineation. The trench and boring locations are shown on Figure 4. Photographic documentation of the release area footprint is included as Appendix D.

A total of 42 soil samples were collected from the four trench and nine borehole locations, then submitted to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for a combination of chlorides via Standard Method 4500CL-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. Copies of the laboratory analytical reports and chain-of-custody documentation are included in Appendix C.

SUMMARY OF SAMPLING RESULTS

Analytical results from the February 2022 assessment activities are summarized in Table 1. The analytical results associated with samples collected from interior trench locations T-1 through T-4 exceeded the Site reclamation requirements for soil in the upper four feet. Analytical results associated with the remainder of the samples collected from below four feet were below the proposed RRALs for TPH, BTEX and chloride. Based on the groundwater determination as described in the site characterization (greater than 50 feet below ground surface), the analytical results collected from the trench floors stand as a vertical definition.

Analytical results associated with the 0-1 interval from perimeter location AH-8 exceeded the reclamation requirement for TPH. Boring AH-9 was completed to delineate the impact found in AH-8. All other analytical results from the perimeter boring locations were below Site reclamation requirements. The analytical results within the perimeter sample locations determine the lateral extent of this release and are 600 mg/kg chloride or less.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to remove soils to a total depth of 4 ft bgs in the release area footprint in the pasture, as depicted in Figure 6. A six-inch scrape of the on-pad release footprint will also be conducted, as shown in Figure 6. Screening samples will be collected during the excavation process to determine if the remediation footprint for the site will be modified based on field conditions. Impacted soils will be excavated using heavy equipment (backhoes and mini-excavators) to a maximum depth of 4 ft below surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. Any area of the release extent that runs along flowlines or subsurface piping will be hand-dug to a depth of 4 ft or the maximum extent practicable.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation floor and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chloride. Once the sample results are received, NMOCD will be notified, and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is 325 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 6. Approximately six (6) confirmation floor samples and ten (10) confirmation sidewall samples are proposed for verification of remedial activities. The proposed off pad excavation encompasses an area of approximately 2,078 square feet. The on-pad scrape encompasses approximately 750 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 square feet of excavated area. The appropriate division district office will be notified two business days prior to conducting final sampling. Confirmation samples will be sent to an accredited laboratory for analysis of

TPH, BTEX, and chlorides. Once results are received, the excavation will then be backfilled with clean material to surface grade.

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in the first favorable growing season to aid in revegetation. Based on soils at the Site, the New Mexico State Land Office (NMSLO) Sandy (S) 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 BLM will also be consulted to determine if a specific seed mix is required at the site. 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

ConocoPhillips proposes to begin remediation activities at the Site within sixty (60) days of NMOCD plan approval. As mentioned, the Work Plan for the 1RP-5779 (Incident ID NRM1930950727) release has been previously submitted under separate cover, with proper fee application (HJODA-210714-C-1410) and has been approved by OCD. As the release footprints coincide and the remediation work plans are similar in nature, COP requests the opportunity to remediate both release extents with the expedited approval of this Work Plan.

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

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Program Manager

cc:
Ms. Jenni Fortunato, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU – ConocoPhillips
Ms. Shelly Tucker, BLM

List of Attachments

Figures:

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Approximate Release Extent
- Figure 4 – Site Assessment Map
- Figure 5 – Proposed Remediation Extents
- Figure 6 – Alternative Confirmation Sampling Plan

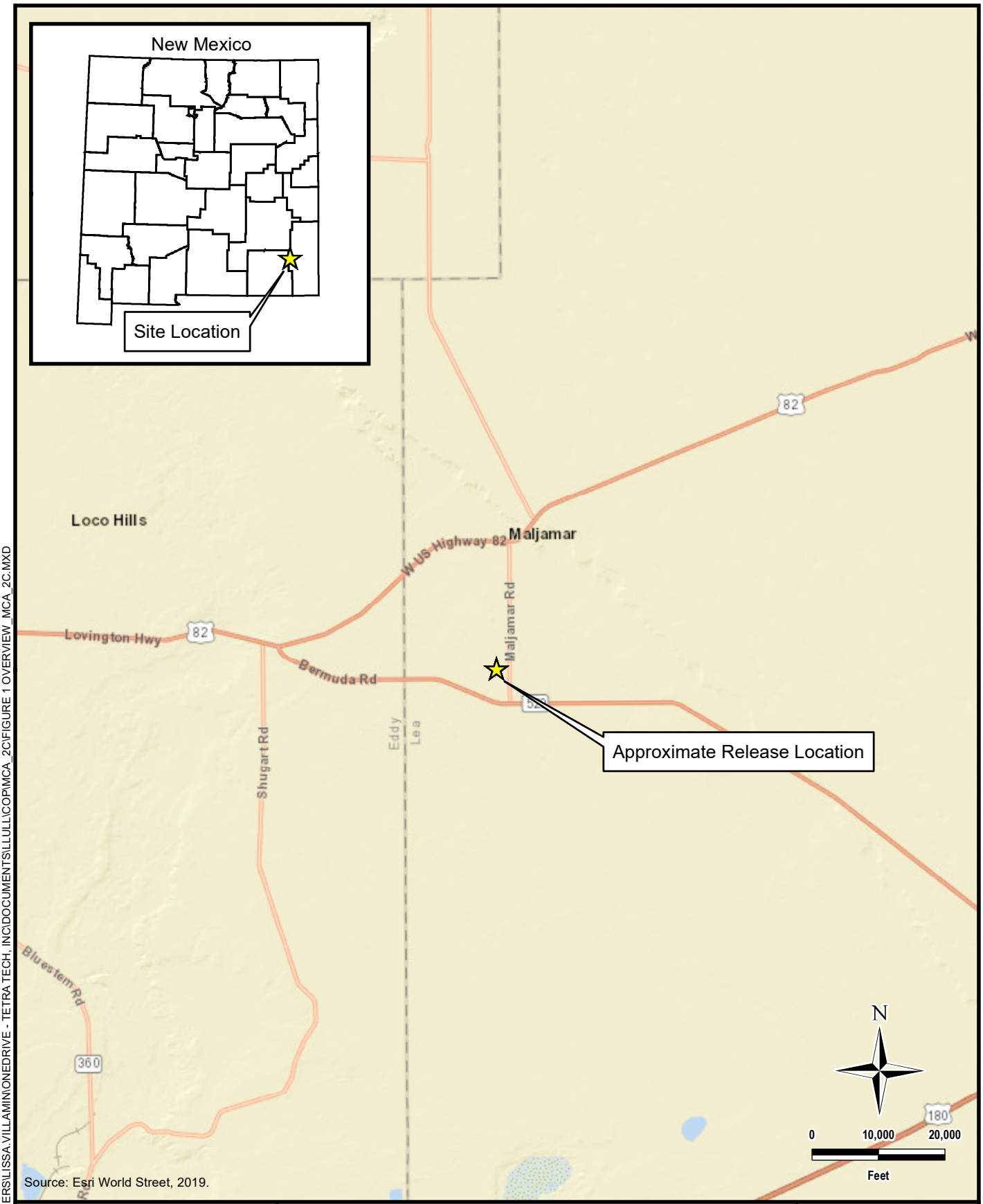
Tables:

- Table 1 – Summary of Analytical Results – Soil Assessment

Appendices:

- Appendix A – C-141 Form
- Appendix B – Site Characterization Data
- Appendix C – Laboratory Analytical Reports
- Appendix D – Photographic Documentation
- Appendix E – NMSLO Seed Mixture

FIGURES



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TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

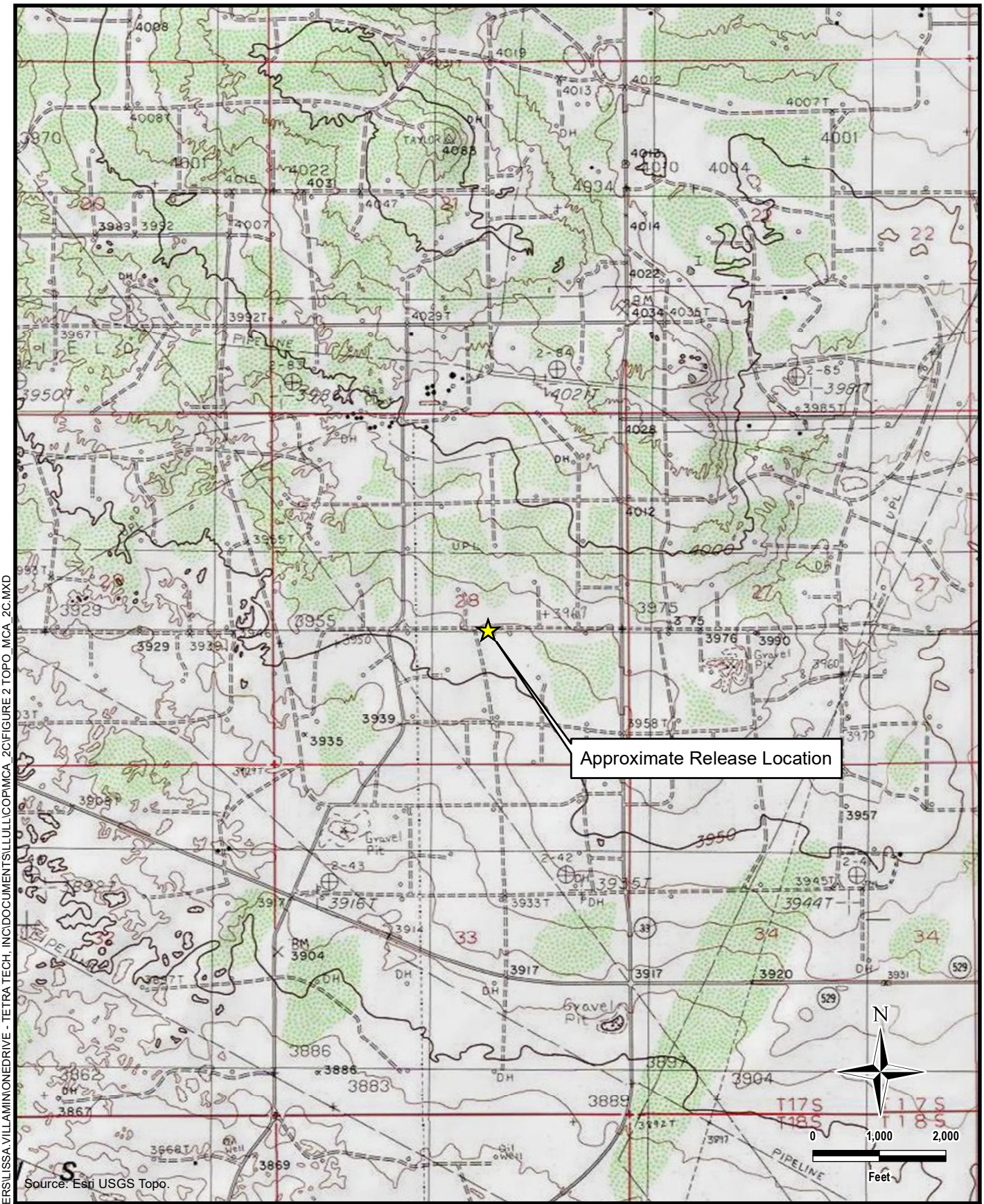
CONOCOPHILLIPS

NAPP2117456525
(32.803770°, -103.769476°)
LEA COUNTY, NEW MEXICO

MCA 2C HEADER EAST LINE RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02119
DATE:	FEBRUARY 24, 2022
DESIGNED BY:	LMV

Figure No.
1



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TETRA TECH

www.tetratech.com

901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

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MCA 2C HEADER EAST LINE RELEASE
TOPOGRAPHIC MAP

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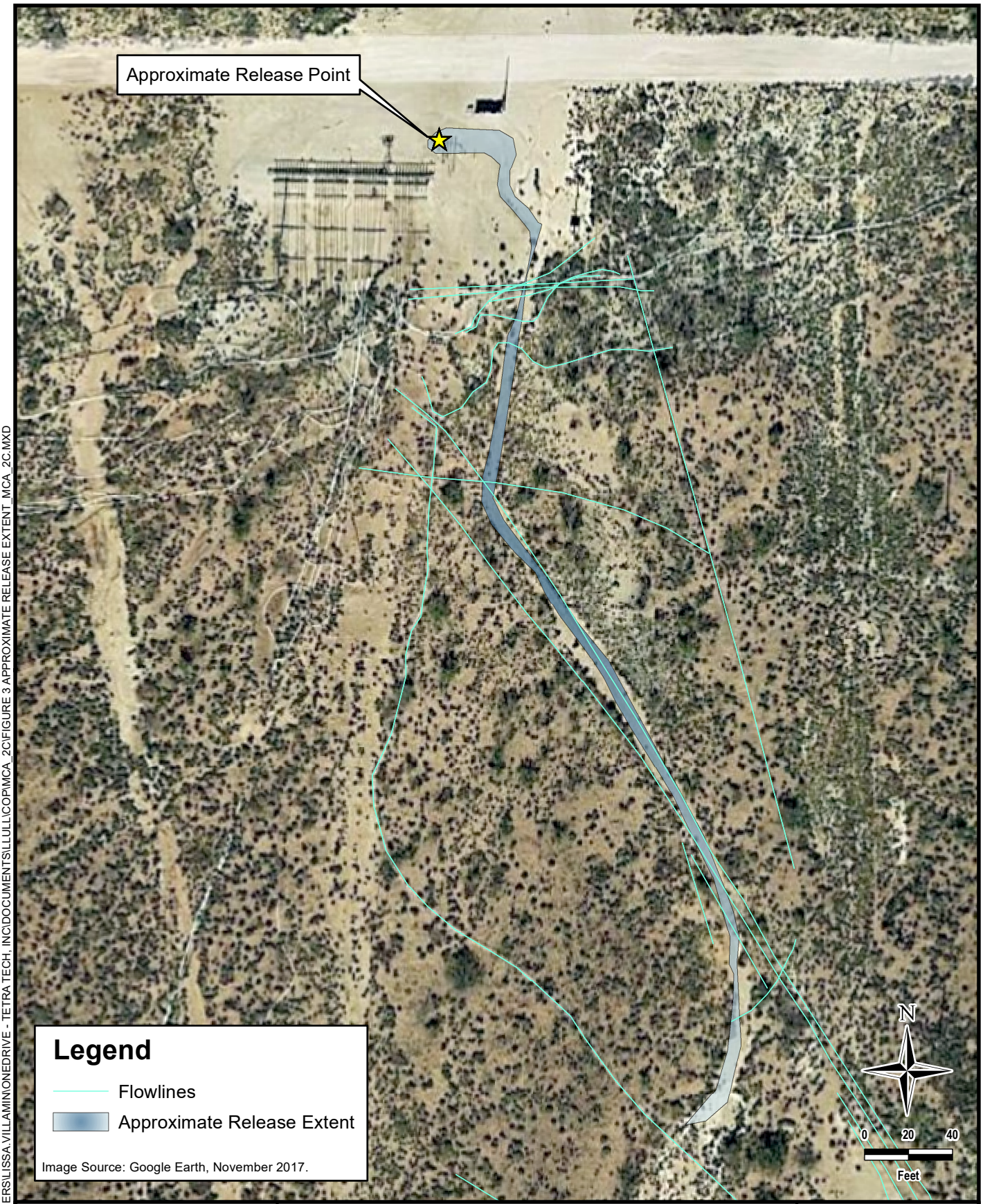
Figure No.
2



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www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

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APPROXIMATE RELEASE EXTENT

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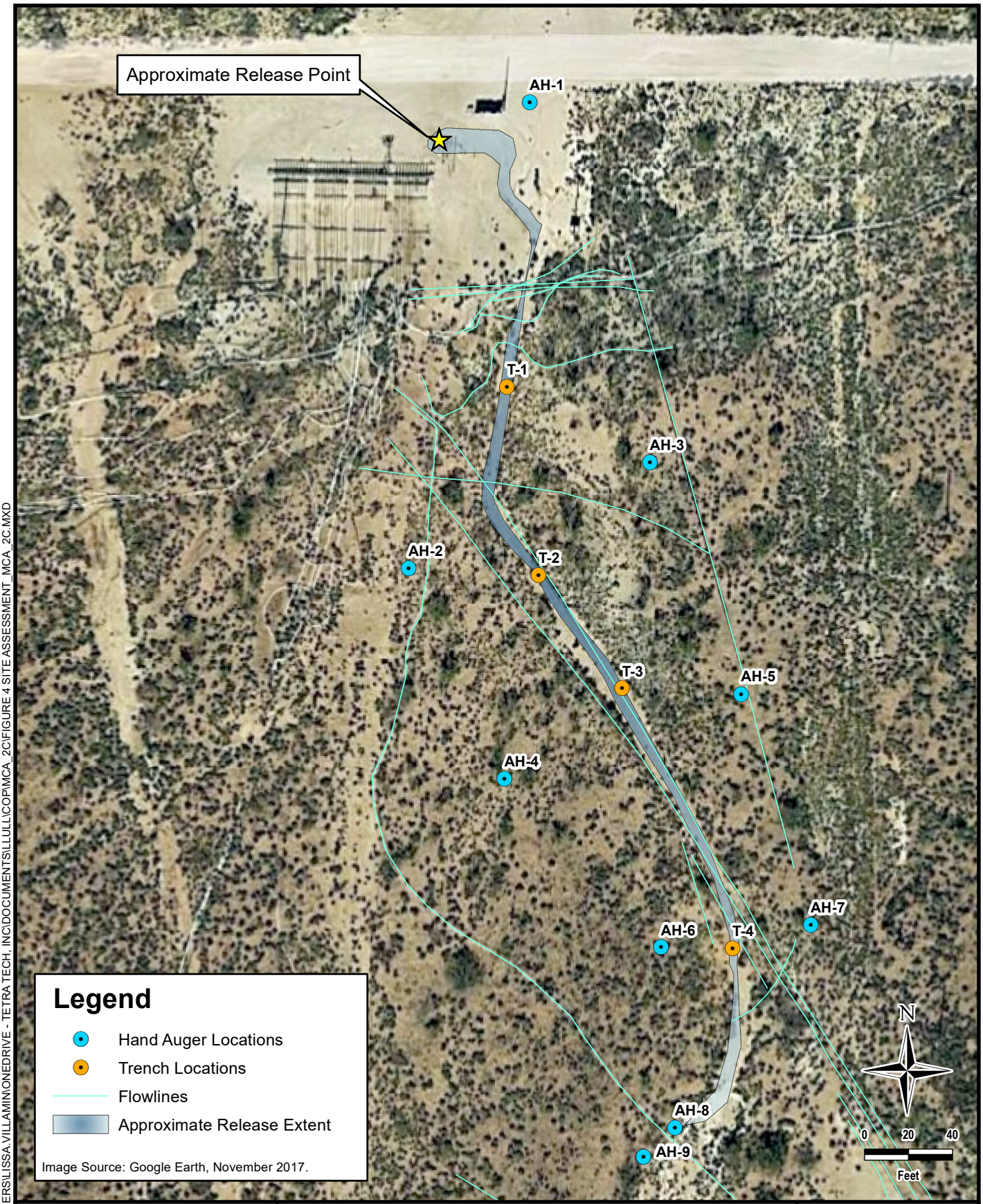
Figure No.
3



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TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

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LEA COUNTY, NEW MEXICO

MCA 2C HEADER EAST LINE RELEASE
SITE ASSESSMENT MAP

PROJECT NO.:	212C-MD-02119
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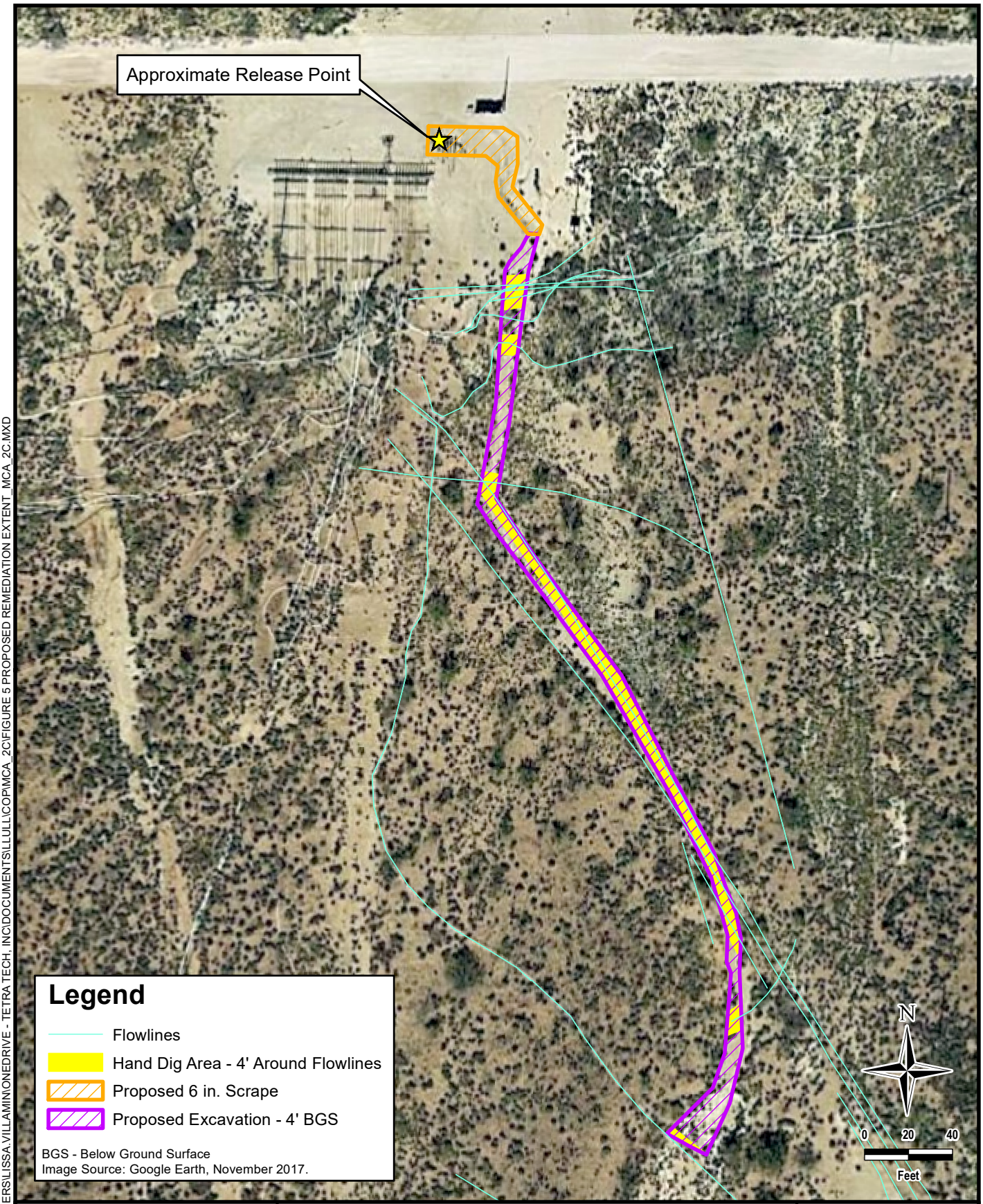
Figure No.
4



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TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

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LEA COUNTY, NEW MEXICO

MCA 2C HEADER EAST LINE RELEASE
PROPOSED REMEDIATION EXTENT

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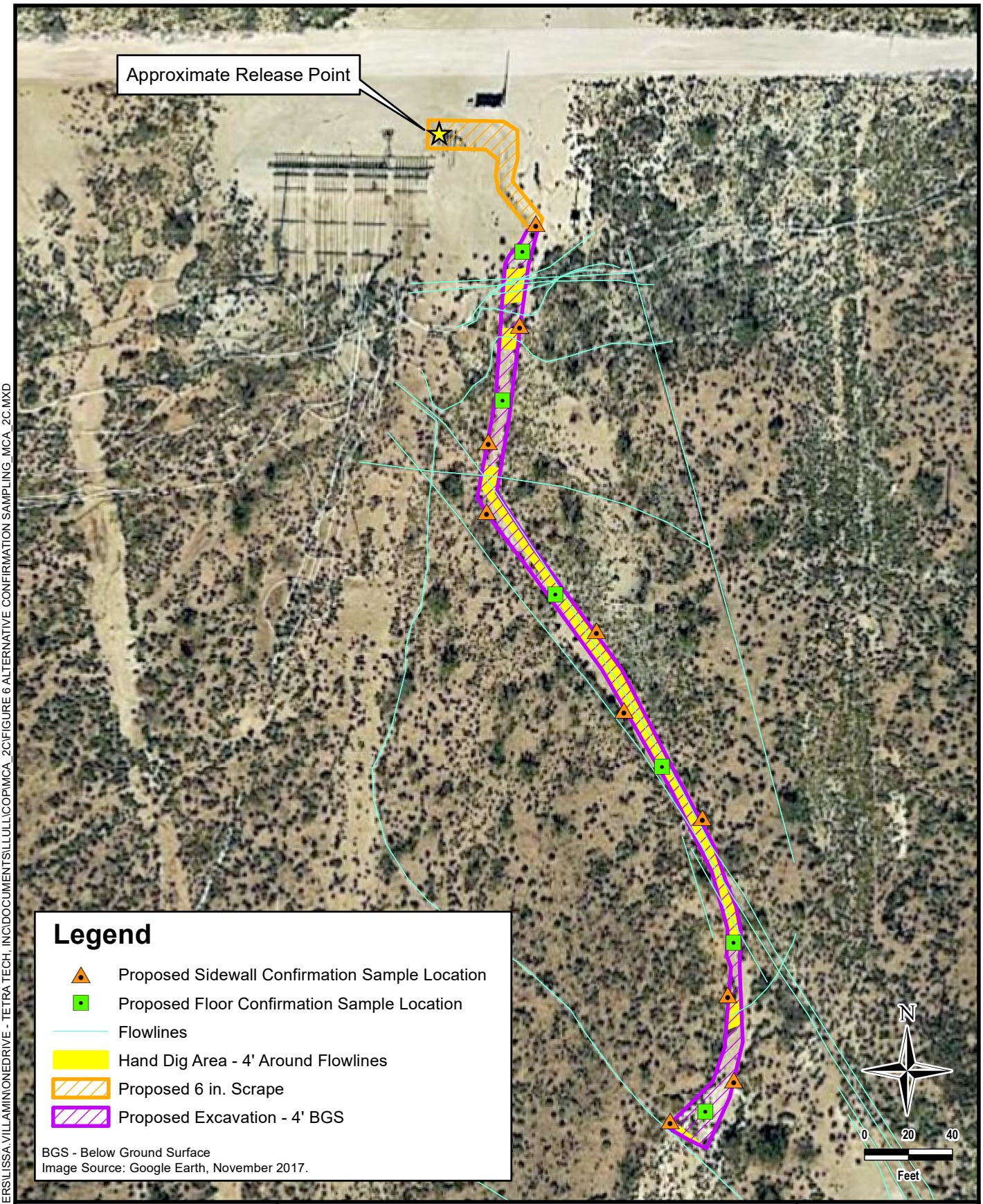
Figure No.
5



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TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

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MCA 2C HEADER EAST LINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02119
DATE:	MARCH 01, 2022
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Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT- NAPP2117456525
CONOCOPHILLIPS
MCA 2C HEADER EAST "2" RELEASE
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]						
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH
																	C_6 - C_{10}		> C_{10} - C_{28}		> C_{28} - C_{36}		(GRO+DRO+EXT DRO)
		ft. bgs	ppm		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
AH-1	2/15/2022	0-1	107	-	80.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	116	-	112		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		14.3		14.3
AH-2	2/15/2022	0-1	155	-	80.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	514	-	256		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-3	2/15/2022	0-1	70.5	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		14.6		< 10.0		14.6
		2-3	499	-	224		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-4	2/15/2022	0-1	41.5	-	48.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	562	-	272		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-5	2/15/2022	0-1	59.4	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	53.6	-	16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-6	2/15/2022	0-1	66.7	-	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	30.0	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-7	2/15/2022	0-1	42.5	-	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	232	-	128		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-8	2/15/2022	0-1	134	-	80.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		188		101		***289***
		2-3	581	-	304		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
AH-9	2/21/2022	0-1	-	-	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
TD-1	2/16/2022	0-1	2,620	-	***2,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	2,240	-	***2,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		4-5	5,740	-	***7,280***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		6-7	2,140	-	***2,080***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		9-10	1,860	-	***1,120***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		11-12	952	-	***992***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
TD-2	2/16/2022	0-1	1,180	-	***994***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	2,500	-	***2,440***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		4-5	3,900	-	***3,840***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		6-7	2,590	-	***2,640***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		9-10	1,150	-	101		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		11-12	833	-	***832***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
TD-3	2/16/2022	0-1	-	-	480		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		37.9		< 10.0		37.9
		2-3	-	-	***1,090***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		4-5	-	-	***1,300***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		96.9		47.0		***144***
		6-7	-	-	***1,470***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		114		11.1		***125***
		9-10	-	-	***992***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		117		23.8		***141***
		11-12	-	-	***1,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		27.8		< 10.0		27.8
TD-4	2/16/2022	0-1	-	-	***1,840***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		2-3	-	-	***1,580***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		4-5	-	-	***3,520***	QM-07	< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		6-7	-	-	***1,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		9-10	-	-	***1,220***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-
		11-12	-	-	***1,460***		< 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 Remediation RRALs and Reclamation Requirements.

Shaded rows indicate intervals proposed for excavation.

QUALIFIERS:

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

APPENDIX A
C-141 Forms

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _Ramona Marcus_____ Date: _6/28/2021_____

L48 Spill Volume Estimate Form

Facility Name & Number:	MOA 2-6 Injection Header
Release Discovery Date & Time:	6-15-21 @2pm
Release Type:	Produced Water
Provide any known details about the event:	leaked occurred below ground on the riser of the injection header

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	See reference table below
Has it rained at least a half inch in the last 24 hours?	See reference table below

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	468.0	4.0	2.00	15.32%	55.536	8.508			
Rectangle B	12.0	10.0	1.00	15.32%	1.780	0.273			
Rectangle C					0.000	0.000			
Rectangle D					0.000	0.000			
Rectangle E					0.000	0.000			
Rectangle F					0.000	0.000			
Rectangle G					0.000	0.000			
Rectangle H					0.000	0.000			
					0.000	0.000			
					0.000	0.000			
					Total Volume Release:	8.781			

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

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 33424
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	6/28/2021

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B
Site Characterization Data

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 12721 POD2	RA	LE	1	1	4	28	17S	32E	615055	3630407	256	124	75	49
RA 12721 POD3	RA	LE	2	3	4	28	17S	32E	615417	3629979	304	115		
RA 12721 POD5	RA	LE	2	4	4	28	17S	32E	615650	3629961	502	130	124	6
RA 12721 POD1	RA	LE	3	2	3	28	17S	32E	614645	3630141	565	125		
RA 12721 POD4	RA	LE	1	1	2	33	17S	32E	615055	3629589	628	140		

Average Depth to Water: **99 feet**

Minimum Depth: **75 feet**

Maximum Depth: **124 feet**

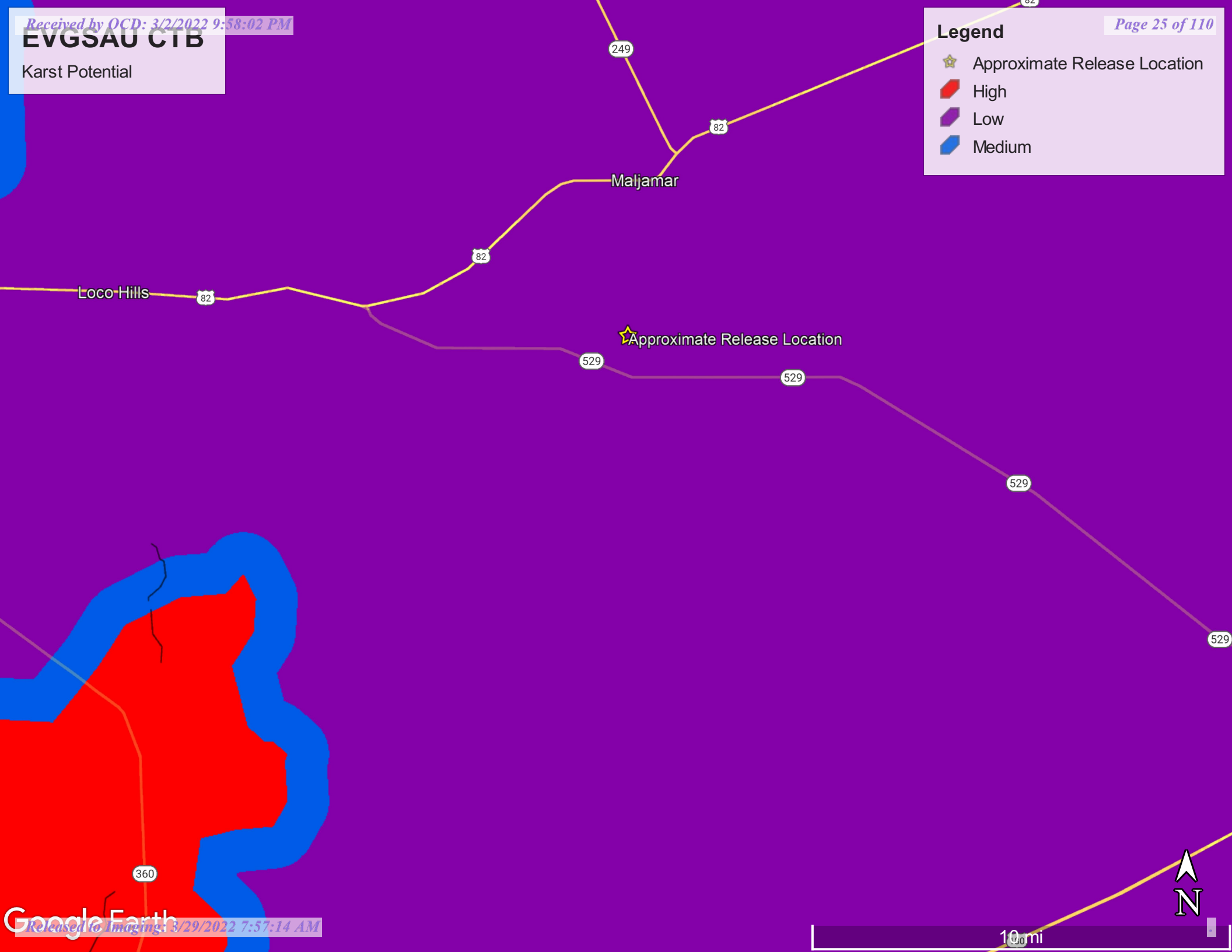
Record Count: 5

UTMNAD83 Radius Search (in meters):

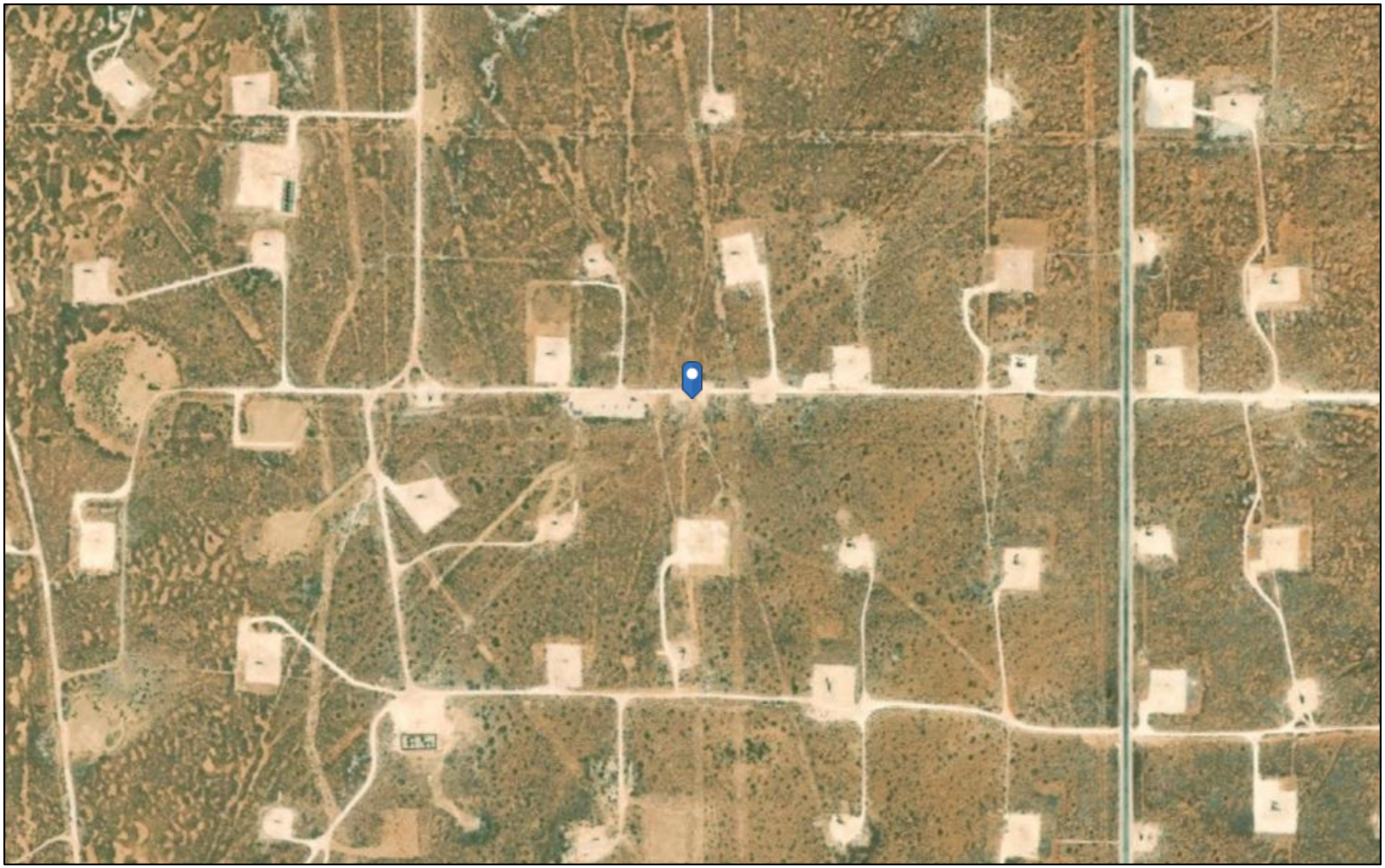
Easting (X): 615207 **Northing (Y):** 3630200 **Radius:** 800

EVGSAU CTB

Karst Potential



OCD Water Bodies



2/22/2022, 4:14:57 PM

OCD District Offices

PLJV Probable Playas

OSE Water-bodies

OSE Streams

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

OCD, Maxar

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

APPENDIX C
Laboratory Analytical Data

CARDINAL Laboratories

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

February 18, 2022

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA 2C HEADER EAST 2 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/15/22 13:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 1 (0-1') (H220575-01)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/16/2022	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	02/16/2022	ND	207	104	200	3.95	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	210	105	200	2.20	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *73.8 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *77.4 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 1 (2'-3') (H220575-02)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/16/2022	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	02/16/2022	ND	207	104	200	3.95	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	210	105	200	2.20	
EXT DRO >C28-C36	**14.3**	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *90.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *95.5 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 2 (0-1') (H220575-03)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *86.4 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *90.1 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 2 (2'-3') (H220575-04)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *95.6 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *102 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 3 (0-1') (H220575-05)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	**14.6**	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *93.0 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *98.9 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 3 (2'-3') (H220575-06)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *92.7 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.7 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 4 (0-1') (H220575-07)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *89.9 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *93.3 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 4 (2'-3') (H220575-08)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *80.5 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *83.4 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 5 (0-1') (H220575-09)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *93.4 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.4 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 5 (2'-3') (H220575-10)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *97.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *104 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 6 (0-1') (H220575-11)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *98.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *104 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 6 (2'-3') (H220575-12)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *95.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *101 %* *59.5-142*

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Analytical Results For:

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 7 (0-1') (H220575-13)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *92.8 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *96.7 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 7 (2'-3') (H220575-14)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *92.1 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.0 %* *59.5-142*

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Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 8 (0-1') (H220575-15)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	**188**	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	**101**	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *86.8 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *103 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/15/2022	Sampling Date:	02/15/2022
Reported:	02/18/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH -8 (2'-3') (H220575-16)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2022	ND	1.98	98.8	2.00	9.13	
Toluene*	<0.050	0.050	02/16/2022	ND	1.92	96.2	2.00	9.06	
Ethylbenzene*	<0.050	0.050	02/16/2022	ND	1.88	93.8	2.00	9.38	
Total Xylenes*	<0.150	0.150	02/16/2022	ND	5.76	96.1	6.00	9.07	
Total BTEX	<0.300	0.300	02/16/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	02/16/2022	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	02/16/2022	ND	237	119	200	0.984	
DRO >C10-C28*	<10.0	10.0	02/16/2022	ND	232	116	200	0.891	
EXT DRO >C28-C36	<10.0	10.0	02/16/2022	ND					

Surrogate: 1-Chlorooctane *92.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *98.6 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1892

Company Name:	~~Tetra Tech~~ ConocoPhillips
Project Manager:	Christian Llull
Address:	Christian.Llull@tetratech.com
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-02119 Project Owner:
Project Name:	MCA 2C Header East "2" Release
Project Location:	Lea County, NM
Sampler Name:	Colton Brickhaff

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Christian Llull
Address:	by email
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	TIME	TPH	BTEX	Chlorides
H220575																	
1	AH-1 (0-1')	G	1			X							2/15/22		X	X	X
2	AH-1 (2'-3')																
3	AH-2 (0-1')																
4	AH-2 (2'-3')																
5	AH-3 (0-1')																
6	AH-3 (2'-3')																
7	AH-4 (0-1')																
8	AH-4 (2'-3')																
9	AH-5 (0-1')																
10	AH-5 (2'-3')																

Relinquished By: Colton Brickhaff	Date: 2/15/22 Time: 1305	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
			REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 22.8 Corrected Temp. °C 22.3	Sample Condition Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) T.O.	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C

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

FORM-006 R 3.2 10/07/21

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

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(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/2

Company Name: ~~Tetra Tech~~ (CB) ConocoPhillips	BILL TO
Project Manager: Christian Llull	P.O. #:
Address: Christian.Llull@tetratech.com	Company: Tetra Tech
City: State: Zip:	Attn: Christian Llull
Phone #: Fax #:	Address: by email
Project #: 212C-MD-02119 Project Owner:	City:
Project Name: MCA 2C Header East "2" Release	State: Zip:
Project Location: Lea County, NM	Phone #:
Sampler Name: Colton Brickerstaff	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH	BTEX	Chlorides
H220575																	
11	AH-6 (0-1')	G	1			X							2/15/22		X	X	X
12	AH-6 (2-3')																
13	AH-7 (0-1')																
14	AH-7 (2-3')																
15	AH-8 (0-1')																
16	AH-8 (2-3')																

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

Relinquished By: Colton Brickerstaff	Date: 2/15/22 Time: 1305	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
			REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 22.8 Corrected Temp. °C 22.3	Sample Condition Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO
			Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C
			Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

February 21, 2022

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA 2C HEADER EAST 2 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/16/22 15:08.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 1 (0-1') (H220609-01)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2022	ND	2.06	103	2.00	1.57	
Toluene*	<0.050	0.050	02/19/2022	ND	2.05	103	2.00	2.09	
Ethylbenzene*	<0.050	0.050	02/19/2022	ND	1.97	98.6	2.00	1.20	
Total Xylenes*	<0.150	0.150	02/19/2022	ND	6.12	102	6.00	0.966	
Total BTEX	<0.300	0.300	02/19/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2200**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *91.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.1 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 1 (2'-3') (H220609-02)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2022	ND	2.06	103	2.00	1.57	
Toluene*	<0.050	0.050	02/19/2022	ND	2.05	103	2.00	2.09	
Ethylbenzene*	<0.050	0.050	02/19/2022	ND	1.97	98.6	2.00	1.20	
Total Xylenes*	<0.150	0.150	02/19/2022	ND	6.12	102	6.00	0.966	
Total BTEX	<0.300	0.300	02/19/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2200**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *85.1 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *90.8 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 1 (4'-5') (H220609-03)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2022	ND	2.06	103	2.00	1.57	
Toluene*	<0.050	0.050	02/19/2022	ND	2.05	103	2.00	2.09	
Ethylbenzene*	<0.050	0.050	02/19/2022	ND	1.97	98.6	2.00	1.20	
Total Xylenes*	<0.150	0.150	02/19/2022	ND	6.12	102	6.00	0.966	
Total BTEX	<0.300	0.300	02/19/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7280**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *89.9 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *95.3 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 1 (6'-7') (H220609-04)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2022	ND	2.06	103	2.00	1.57	
Toluene*	<0.050	0.050	02/19/2022	ND	2.05	103	2.00	2.09	
Ethylbenzene*	<0.050	0.050	02/19/2022	ND	1.97	98.6	2.00	1.20	
Total Xylenes*	<0.150	0.150	02/19/2022	ND	6.12	102	6.00	0.966	
Total BTEX	<0.300	0.300	02/19/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2080**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *80.6 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *85.7 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 1 (9'-10') (H220609-05)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1120**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *94.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *102 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 1 (11'-12') (H220609-06)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**992**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *92.0 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *100 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 2 (0-1') (H220609-07)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**944**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *88.7 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *93.1 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 2 (2'-3') (H220609-08)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2440**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *89.5 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *94.5 %* *59.5-142*

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 2 (4'-5') (H220609-09)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3840**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *89.3 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *93.5 %* *59.5-142*

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 2 (6'-7') (H220609-10)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2640**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *85.2 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *88.6 %* *59.5-142*

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 2 (9'-10') (H220609-11)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1010**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *86.1 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *91.0 %* *59.5-142*

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 2 (11'-12') (H220609-12)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**832**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *89.7 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *96.6 %* *59.5-142*

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CARDINAL Laboratories

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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 3 (0-1') (H220609-13)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**480**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	**37.9**	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *98.4 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *104 %* *59.5-142*

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CARDINAL Laboratories

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 3 (2'-3') (H220609-14)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2022	ND	2.23	112	2.00	4.26	
Toluene*	<0.050	0.050	02/18/2022	ND	2.22	111	2.00	4.68	
Ethylbenzene*	<0.050	0.050	02/18/2022	ND	2.14	107	2.00	4.06	
Total Xylenes*	<0.150	0.150	02/18/2022	ND	6.62	110	6.00	3.65	
Total BTEX	<0.300	0.300	02/18/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1090**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *85.0 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *89.0 %* *59.5-142*

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 3 (4'-5') (H220609-15)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1300**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	**96.9**	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	**47.0**	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *88.5 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.8 %* *59.5-142*

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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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 3 (6'-7') (H220609-16)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1470**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	**114**	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	**11.1**	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *86.9 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *95.1 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 3 (9'-10') (H220609-17)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**992**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	**117**	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	**23.8**	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *90.8 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *100 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 3 (11'-12') (H220609-18)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1200**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	**27.8**	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *85.6 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *93.6 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 4 (0-1') (H220609-19)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1840**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *92.6 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *97.4 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 4 (2'-3') (H220609-20)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1580**	16.0	02/18/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	237	118	200	0.462	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	226	113	200	0.933	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *87.7 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *91.1 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 4 (4'-5') (H220609-21)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3520**	16.0	02/18/2022	ND	400	100	400	3.92	QM-07

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/18/2022	ND	219	110	200	0.691	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	215	107	200	2.46	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *94.6 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *94.6 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 4 (6'-7') (H220609-22)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1200**	16.0	02/18/2022	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	02/18/2022	ND	219	110	200	0.691	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	215	107	200	2.46	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *96.4 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *96.6 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 4 (9'-10') (H220609-23)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1220**	16.0	02/18/2022	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	02/18/2022	ND	219	110	200	0.691	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	215	107	200	2.46	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *98.9 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *99.5 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/16/2022	Sampling Date:	02/16/2022
Reported:	02/21/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: T - 4 (11'-12') (H220609-24)

BTEX 8021B mg/kg Analyzed By: MS/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/20/2022	ND	2.14	107	2.00	1.56	
Toluene*	<0.050	0.050	02/20/2022	ND	2.12	106	2.00	2.72	
Ethylbenzene*	<0.050	0.050	02/20/2022	ND	2.04	102	2.00	2.16	
Total Xylenes*	<0.150	0.150	02/20/2022	ND	6.33	106	6.00	2.59	
Total BTEX	<0.300	0.300	02/20/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1460**	16.0	02/18/2022	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	02/18/2022	ND	219	110	200	0.691	
DRO >C10-C28*	<10.0	10.0	02/18/2022	ND	215	107	200	2.46	
EXT DRO >C28-C36	<10.0	10.0	02/18/2022	ND					

Surrogate: 1-Chlorooctane *99.8 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *100 %* *59.5-142*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

1/3

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips
Project Manager:	Christian Llull
Address:	Christian.Llull@tetratech.com
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-02119 Project Owner:
Project Name:	MCA 2C Header East 2nd Release
Project Location:	Lea County, NM
Sampler Name:	Colton Bickerstaff

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Christian Llull
Address:	by email
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H220609																	
1	T-1 (0-1')	G	1			X							2/16/22		X	X	X
2	T-1 (2'-3')																
3	T-1 (4'-5')																
4	T-1 (6'-7')																
5	T-1 (9'-10')																
6	T-1 (11'-12')																
7	T-2 (0-1')																
8	T-2 (2'-3')																
9	T-2 (4'-5')																
10	T-2 (6'-7')																

Relinquished By:	Date: 2/16/22	Received By:	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Colton Bickerstaff	Time: 1508	Tamara Oldaker	All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	Christian.Llull@tetratech.com
	Time:		REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 22.8	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 22.3	☐ Yes ☑ Yes ☑ No ☐ No	TO	Thermometer ID #113 Correction Factor -0.5°C

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

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/3

		BILL TO	
Company Name:	ConocoPhillips	P.O. #:	
Project Manager:	Christian Llull [redacted] (CB)	Company:	Tetra Tech
Address:	Christian.Llull@tetratech.com	Attn:	Christian Llull
City:	State: Zip:	Address:	by email
Phone #:	Fax #:	City:	
Project #:	212C-MD-02119 Project Owner:	State: Zip:	
Project Name:	MCA 2C Header Bolt "2" Release	Phone #:	
Project Location:	Lea County NM	Fax #:	
Sampler Name:	Colton Bickerstaff		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H220609																	
11	T-2 (9'-10')	G	1			X							2/16/22		X	X	X
12	T-2 (11'-12')																
13	T-3 (0-1')																
14	T-3 (2'-3')																
15	T-3 (4'-5')																
16	T-3 (6'-7')																
17	T-3 (9'-10')																
18	T-3 (11'-12')																
19	T-4 (0-1')																
20	T-4 (2'-3')																

Relinquished By: Colton Bickerstaff	Date: 2/16/22 Time: 1508	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 22.8 Corrected Temp. °C 22.3	Sample Condition Cool ☐ Yes ☑ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TB

REMARKS:

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #113
Correction Factor -0.5°C

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

FORM-006 R 3.2 10/07/21

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

3/3

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips
Project Manager:	Christian Llull
Address:	Christian.Llull@tetratech.com
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-02119 Project Owner:
Project Name:	MCA 2C Header East 2" Release
Project Location:	Lea County, NM
Sampler Name:	Colton Bickerstaff

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Christian Llull
Address:	by email
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	TIME	TPH	BTEX	Chlorides
H220609																	
21	T-4 (4'-5')	G	1			X							2/16/22		X	X	X
22	T-4 (6'-7')	↓	↓			↓							↓		↓	↓	↓
23	T-4 (9'-10')																
24	T-4 (11'-12')																

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

Relinquished By: Colton Bickerstaff	Date: 2/16/22 Time: 1508	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
			REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 22.8 Corrected Temp. °C 22.3	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C

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

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

February 25, 2022

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA 2C HEADER EAST 2 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/21/22 12:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	02/21/2022	Sampling Date:	02/21/2022
Reported:	02/25/2022	Sampling Type:	Soil
Project Name:	MCA 2C HEADER EAST 2 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 02119	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: AH - 9 (0-1') (H220655-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2022	ND	2.25	113	2.00	0.275	
Toluene*	<0.050	0.050	02/24/2022	ND	2.34	117	2.00	2.29	
Ethylbenzene*	<0.050	0.050	02/24/2022	ND	2.29	115	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/24/2022	ND	7.12	119	6.00	1.17	
Total BTEX	<0.300	0.300	02/24/2022	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/22/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/23/2022	ND	210	105	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/23/2022	ND	213	106	200	1.86	
EXT DRO >C28-C36	<10.0	10.0	02/23/2022	ND					

Surrogate: 1-Chlorooctane *104 %* *66.9-136*

Surrogate: 1-Chlorooctadecane *106 %* *59.5-142*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1/1

Company Name: ConocoPhillips
Project Manager: Christian Llull
Address: Christian.Llull@tetratech.com
City: State: Zip:
Phone #: Fax #:
Project #: 212C-MD-02119 Project Owner:
Project Name: MCA 2L Header Batt "2" Release
Project Location: Lea County, NM
Sampler Name: Colton Blankenship

BILL TO
P.O. #:
Company: Tetra Tech
Attn: Christian Llull
Address: by email
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H220655-1	AH-9 (0-1')	G	1			X					X		2/21/22		X	X	X

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

Relinquished By: Colton Blankenship Date: 2/21/22 Time: 1235
Received By: Tamara Oldaker
Relinquished By: Date: Time:
Received By:

Verbal Result: ☐ Yes ☑ No Add'l Phone #:
All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 1.6 Corrected Temp. °C 1.1
Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No
CHECKED BY: (Initials) TO

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113
Correction Factor -0.5°C
Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

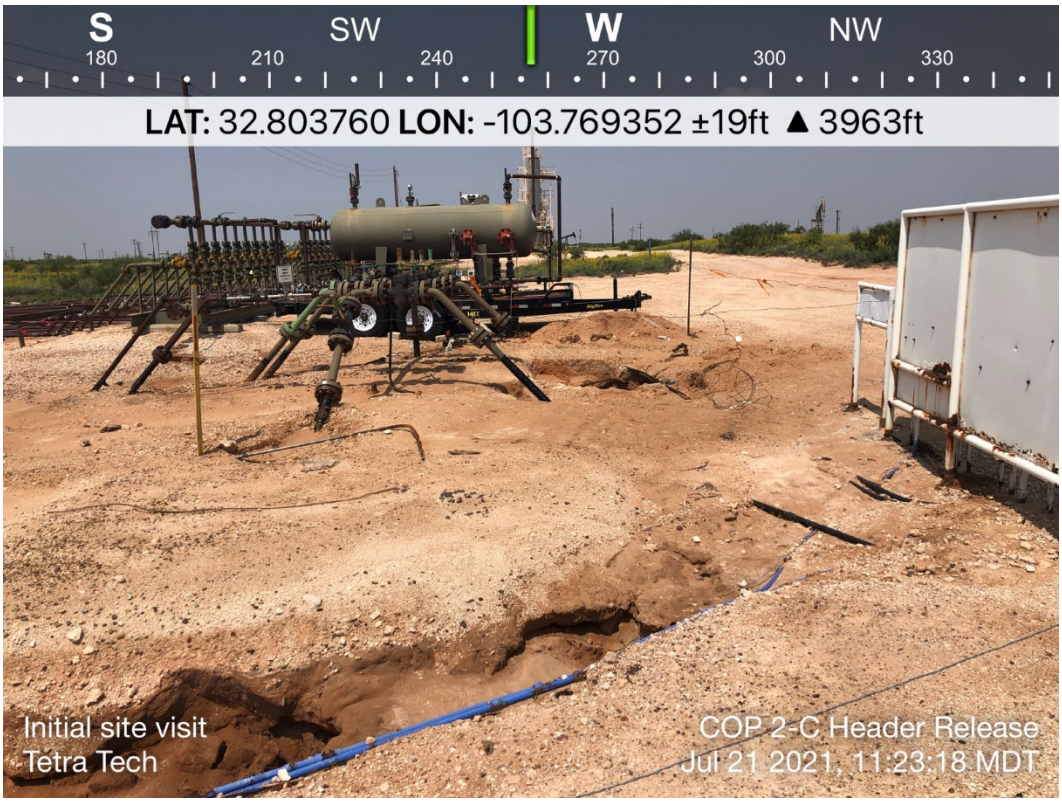
FORM-006 R 3.2 10/07/21

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

APPENDIX D
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	MCA 2C Header Site signage.	1
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View northwest, oil-gas facilities on gravel pad.	2
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View west, exposed line.	3
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

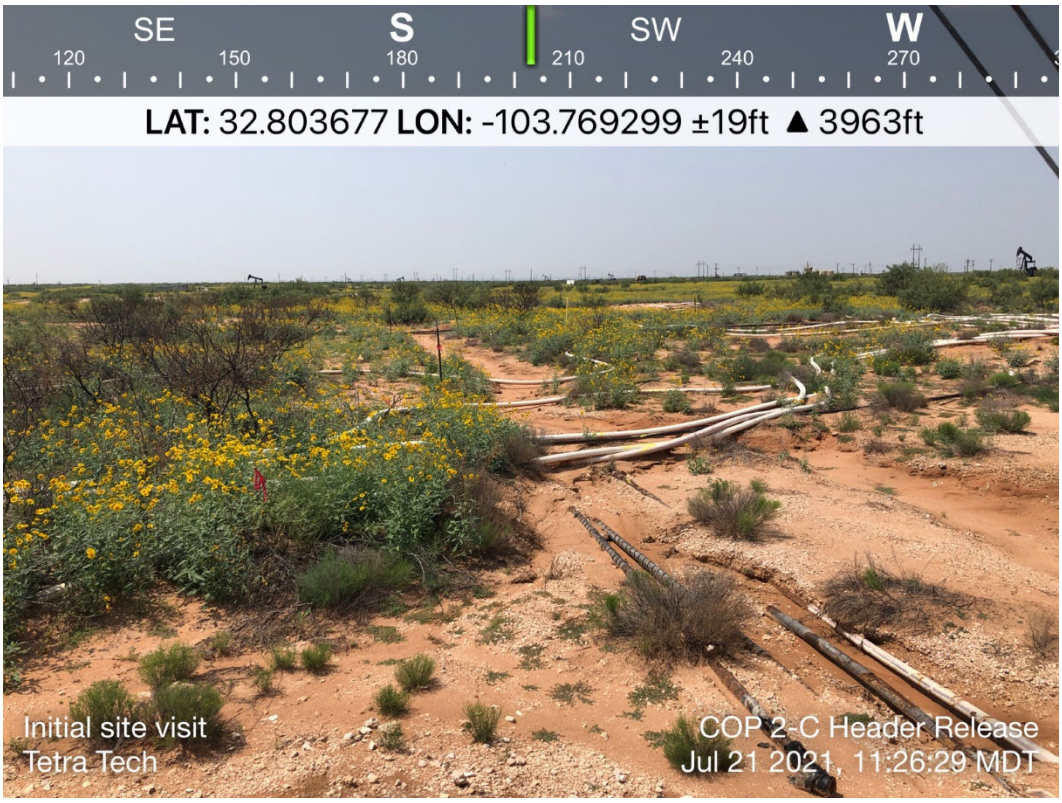
TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	Exposed line and subsurface erosion.	4
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View south, header unit.	5
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

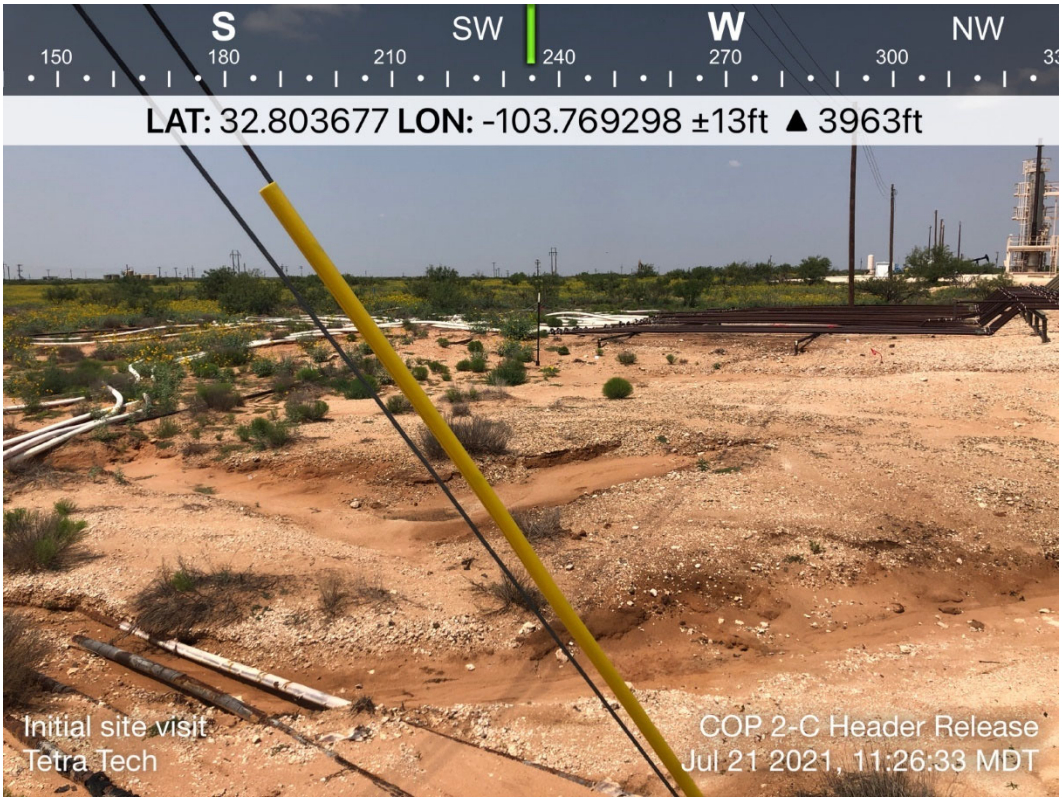
TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View north, channel pathway of release.	6
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View south, channel visible.	7
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View south, surface flowlines visible.	8
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View south, multiple flowlines.	9
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02119	DESCRIPTION	View southwest, flowlines and channel features.	10
	SITE NAME	ConocoPhillips MCA 2C Header East Line Release	7/21/2021

APPENDIX E
Waste Manifests

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-1218590
Customer #:	CRI2190	Bid #:	O6UJ9A000HH0
Ordered by:	ANDREW RICHARD	Date:	6/21/2021
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	999908
Manif. Date:	6/21/2021	Well Name:	MCA 2 C
Hauler:	MCNABB PARTNERS	Well #:	HEADER
Driver	GUMER	Field:	
Truck #	M32	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	12.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	ANDREW RICHARD
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	6/22/2021
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M33
Card #	
Job Ref #	

Ticket #:	700-1218908
Bid #:	O6UJ9A000HH0
Date:	6/22/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	MCA 2 C
Well #:	HEADER
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	9.00	yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-1219138
Customer #:	CRI2190	Bid #:	O6UJ9A000HH0
Ordered by:	ANDREW RICHARD	Date:	6/23/2021
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	999908
Manif. Date:	6/23/2021	Well Name:	MCA 2 C
Hauler:	MCNABB PARTNERS	Well #:	HEADER
Driver	GUMER	Field:	
Truck #	M32	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	8.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature	R360 Representative Signature
_____	_____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01J5ZK

6/23/2021 1:49:26PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	ANDREW RICHARD
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	6/24/2021
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1219389
Bid #:	O6UJ9A000HH0
Date:	6/24/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	MCA 2 C
Well #:	HEADER
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	8.00	yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature _____

R360 Representative Signature _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

APPENDIX F
NMSLO Seed Mixture

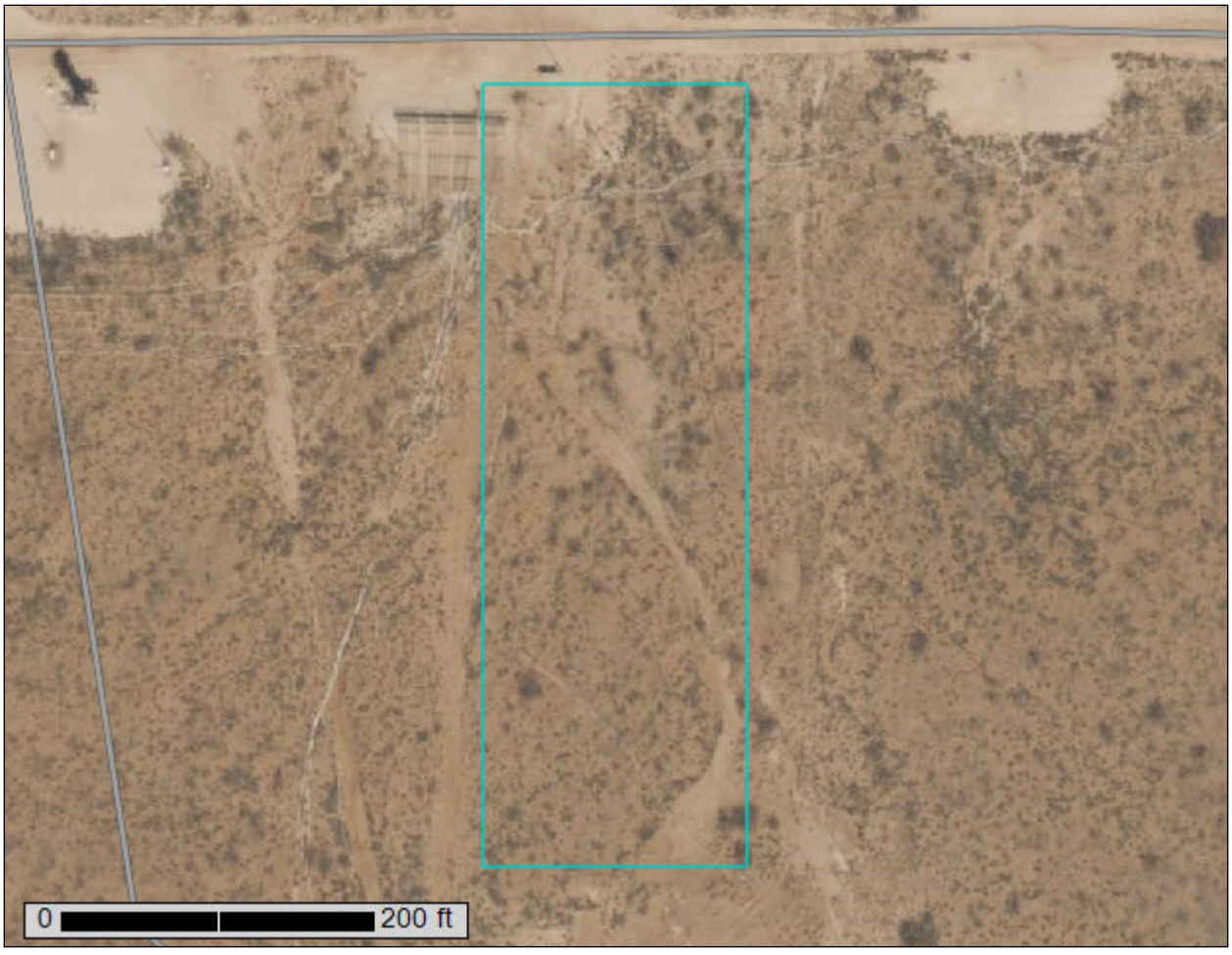
United States Department of Agriculture

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 Lea County, New Mexico



February 23, 2022

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.

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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.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

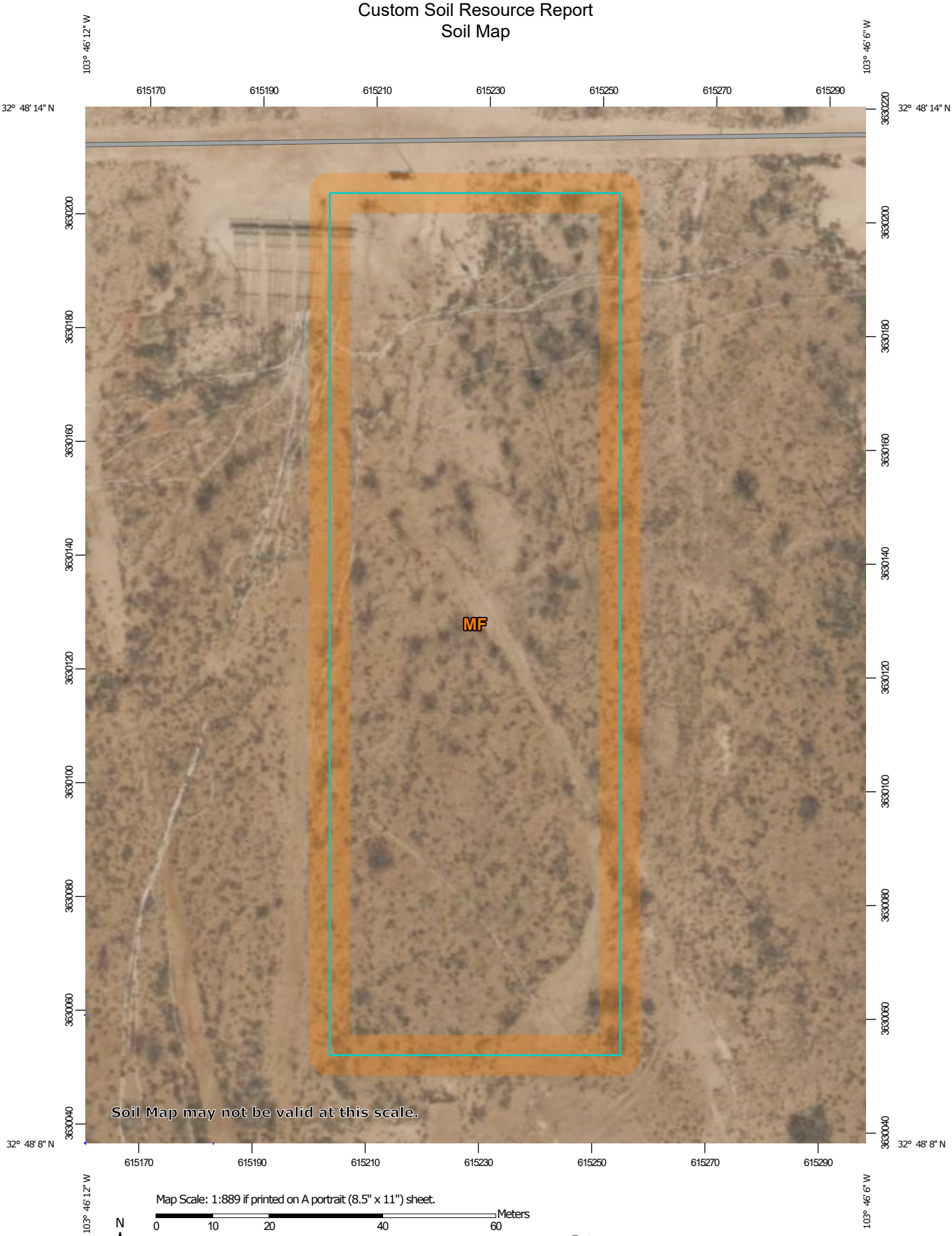
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

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



Map Scale: 1:889 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MF	Maljamar and Palomas fine sands, 0 to 3 percent slopes	1.9	100.0%
Totals for Area of Interest		**1.9**	**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.

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.

Lea County, New Mexico

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

Map Unit Setting

National map unit symbol: dmqb
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Maljamar and similar soils: 46 percent
Palomas and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maljamar

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand
Bt - 24 to 50 inches: sandy clay loam
Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

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

Description of Palomas

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Kermit

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

Wink

Percent of map unit: 5 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

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NMSLO Seed Mix Sandy (S)

SANDY (S) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	**Elida, VNS, So.**	**2.0**	**F**
Little bluestem	**Cimarron, Pastura**	**3.0**	**F**
Black grama	**VNS, Southern**	**1.0**	**D**
Sand dropseed	**VNS, Southern**	**4.0**	**S**
Plains bristlegrass	**VNS, Southern**	**2.0**	**D**
Forbs:			
Firewheel (Gaillardia)	**VNS, Southern**	**1.0**	**D**
Annual Sunflower	**VNS, Southern**	**1.0**	**D**
Shrubs:			
Fourwing Saltbush	**VNS, Southern**	**1.0**	**F**
	Total PLS/acre	**16.0**	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at http://plants.usda.gov.

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

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 85787
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	Closure due 05/30/2022	3/29/2022