

SITE INFORMATION

Report Type: Work Plan NAPP2103564128

General Site Information:

Site:	EVGSAU 0546-001 Flowline Release					
Company:	ConocoPhillips					
Section, Township and Range	Unit Letter O	Sec. 32	T 17S	R 35E		
Lease Number:	N/A					
County:	Lea					
GPS:	32.786404			-103.478239		
Surface Owner:	State					
Mineral Owner:	N/A					
Directions:	Depart from Buckeye (NM238/Buckeye Rd.). Head east on Buckeye Rd. for 1.17 miles. Turn right onto dirt road. Head south for 0.43 miles. Turn left onto dirt road. Head southeast for 0.59 miles. Arrive at location.					

Release Data:

Date Released:	2/4/2021	
Type Release:	Produced Water	
Source of Contamination:	Flowline Leak	
Fluid Released:	29.9 bbls	
Fluids Recovered:	20 bbls	

Official Communication:

Name:	Sam Widmer	Christian Llull	Ryan Mann
Company:	Conoco Phillips - RMR	Tetra Tech	New Mexico State Land Office
Address:	935 N. Eldridge Pkwy.	8911 North Capital of Texas Hwy	2827 N. Dal Paso Suite 117
		Building 2, Suite 2310	Hobbs, NM 88240
City:	Houston, Texas 77079	Austin, Texas	Office: (575) 392-3697
Phone number:	281-206-5298	(512) 338-2861	Cell: (505) 699-1989
Fax:			
Email:	Sam.Widmer@conocophillips.com	christian.llull@tetrattech.com	rmann@slo.state.nm.us

Site Characterization

Shallowest Depth to Groundwater:	77' below surface
Impact to groundwater or surface water:	No
Extents within 300 feet of a watercourse:	No
Extents within 200 feet of lakebed, sinkhole, or playa lake:	No
Extents within 300 feet of an occupied structure:	No
Extents within 500 horizontal feet of a private water well:	No
Extents within 1000 feet of any water well or spring:	No
Extents within incorporated municipal well field:	No
Extents within 300 feet of a wetland:	No
Extents overlying a subsurface mine:	No
Karst Potential:	Low
Extents within a 100-year floodplain:	No
Impact to areas not on a production site:	No

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	Chloride
10 mg/kg	50 mg/kg	1,000	2,500 mg/kg	10,000 mg/kg
Reclamation Requirements				
			TPH (GRO+DRO+MRO)	Chloride
			100 mg/kg	600 mg/kg



September 14, 2021

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

**Re: Release Characterization and Remediation Work Plan
ConocoPhillips
EVGSAU 0546-001 Flowline Release
Unit Letter O, Section 32, Township 17 South, Range 35 East
Lea County, New Mexico
Incident ID# NAPP2103564128**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess a release that occurred on a flowline from the East Vacuum Grayburg San Andres Unit (EVGSAU) 0546-001 well. The release footprint is located in Public Land Survey System (PLSS) Unit Letter O, Section 32, Township 17 South, Range 35 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.786404°, -103.478239°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on February 4, 2021. Approximately 28.7 barrels (bbls) of produced water and 1.2 bbls of oil were released, of which 20 bbls of produced water were reported recovered. Portions of the release footprint were indicated as overspray. The New Mexico Oil Conservation Division (NMOCD) approved the initial C-141 report form for the release on March 25, 2021. The release was subsequently assigned the Incident ID NAPP2103564128.

An earlier release (Incident ID nCH1821833189, 1RP-5145), which occurred on July 9, 2018 from a flowline associated with the EVGSAU 0546-038 well, partially overlaps the release extent of the EVGSAU 0546-001 Flowline Release. This earlier release was assessed and fully delineated by Tetra Tech on behalf of ConocoPhillips in late 2020 and in January 2021. The 1RP-5145 release is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively. A separate Release Characterization and Remediation Work Plan will be submitted to the NMOCD via the fee application portal. With like correspondence from NMOCD, ConocoPhillips will plan to remediate both releases concurrently.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.09 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential. A playa lake is located approximately 750 feet southwest of the release location.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are two (2) water wells located within an 800-meter (approximately ½-mile) radius of the release location with an

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average depth to groundwater at 77 feet below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint location 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 (GRO+DRO+ORO)	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 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 feet bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirements
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg

SITE ASSESSMENT

Tetra Tech personnel conducted a soil investigation on March 2 and 24, 2021 on behalf of ConocoPhillips. A total of five (5) borings (BH-1 through BH-5) were installed within and around the perimeter of the release extent to depths ranging from 1 to 5 feet bgs using an air rotary drilling rig. Additionally, three (3) borings (AH-1 through AH-3) were installed within the release extent to depths ranging from 0.5 feet to 1 foot bgs using a hand auger. Soils at the Site consist of approximately 1.5 feet of brown silty clay underlain by a caliche cap rock. Figure 3 depicts the approximate release extent and the March 2021 soil boring locations. Photographic documentation of the release prior to the soil assessment is presented in Appendix C.

A total of fourteen (14) samples were collected from the eight (8) borings and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D.

SUMMARY OF SAMPLING RESULTS

Results from the March 2021 soil sampling event are summarized in Table 1. The analytical results associated with sample locations BH-1, AH-1, and AH-2 exceeded the Site reclamation requirements for chloride and TPH in surface soils (0-4 feet bgs). There were no exceedances of Site RRALs in the subsurface (4-5 feet bgs) sample taken from BH-1, which is located at the point of the release. The results associated with perimeter sample locations BH-2 through BH-5 were below the reclamation requirements for chloride, TPH, and BTEX.

REMEDIATION WORK PLAN

Based on the analytical results from the additional assessment, ConocoPhillips proposes to remove the impacted material within the release extent as shown in Figure 4. Impacted soils will be excavated using

heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 3 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the Site RRLs. The portion of the release extent that lies in the production lease road will be scraped to 0.5 feet bgs. The portion of the extent south of the lease road will be hand dug to 3' bgs or the maximum extent practicable, based on site safety concerns. The pipeline operators for this portion of the extent requested minimal disturbances in the vicinity of their lines.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for chloride, TPH, and BTEX. Once analytical 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 approximately 670 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, COP proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Fourteen (14) confirmation floor samples and twenty (20) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 7,980 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 square feet of excavated area. Confirmation samples will be sent to Pace Laboratories for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (USEPA Method 300.0). Once results are received, NMOCD will be notified, and the excavation will then be backfilled with clean material to surface grade.

SITE RECLAMATION AND RESTORATION PLAN

Post-remediation, the backfilled pasture areas will be seeded (in the next first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Loamy (L) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix E. Final reclamation will create a landform that approximates and blends in with the surrounding landform, while controlling erosion.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 120 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD. As noted, it is COP's desire to remediate these coincident releases (Incident ID nCH1821833189 and NAPP2103564128) concurrently, as such work plans for each incident will be submitted in quick succession for prompt approvals.

Release Characterization and Remediation Work Plan
September 14, 2021

ConocoPhillips

If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 739-7874 or Christian at (512) 338-2861.

Sincerely,

Tetra Tech, Inc.



Samantha K. Abbott, P.G.
Senior Staff Geologist



Christian M, Llull, P.G.
Project Manager

cc:

Mr. Sam A. Widmer, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU - ConocoPhillips

LIST OF ATTACHMENTS

Figures:

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

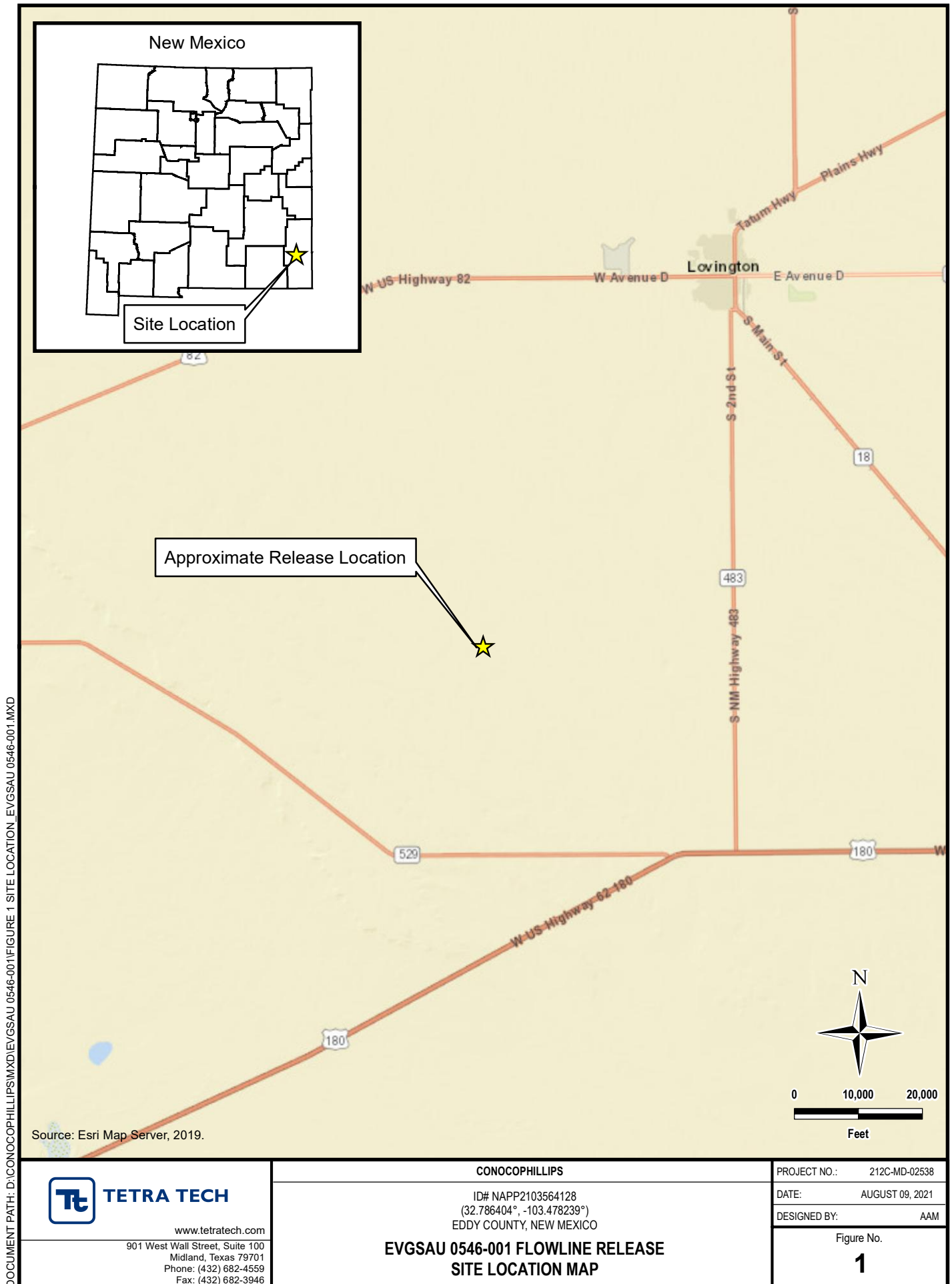
Tables:

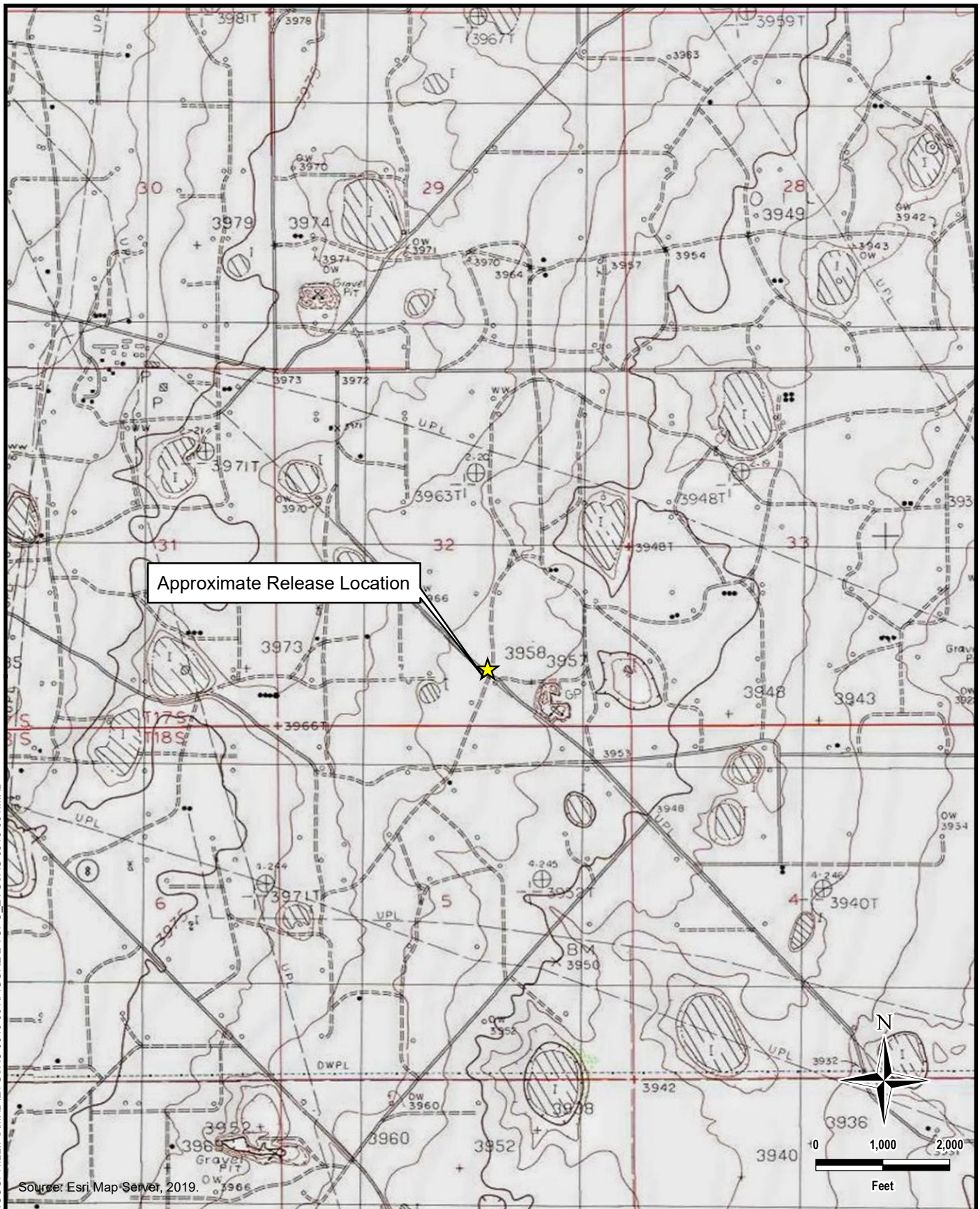
- Table 1 – Summary of Analytical Results – Soil Assessment

Appendices:

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

FIGURES





DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\EVGSAU 0546-001\FIGURE 2 TOPO EVGSAU 0546-001.MXD


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 Midland, Texas 79701
 Phone: (432) 682-4559
 Fax: (432) 682-3946

CONOCOPHILLIPS

 ID# NAPP2103564128
 (32.786404°, -103.478239°)
 EDDY COUNTY, NEW MEXICO

**EVGSAU 0546-001 FLOWLINE RELEASE
 TOPOGRAPHIC MAP**

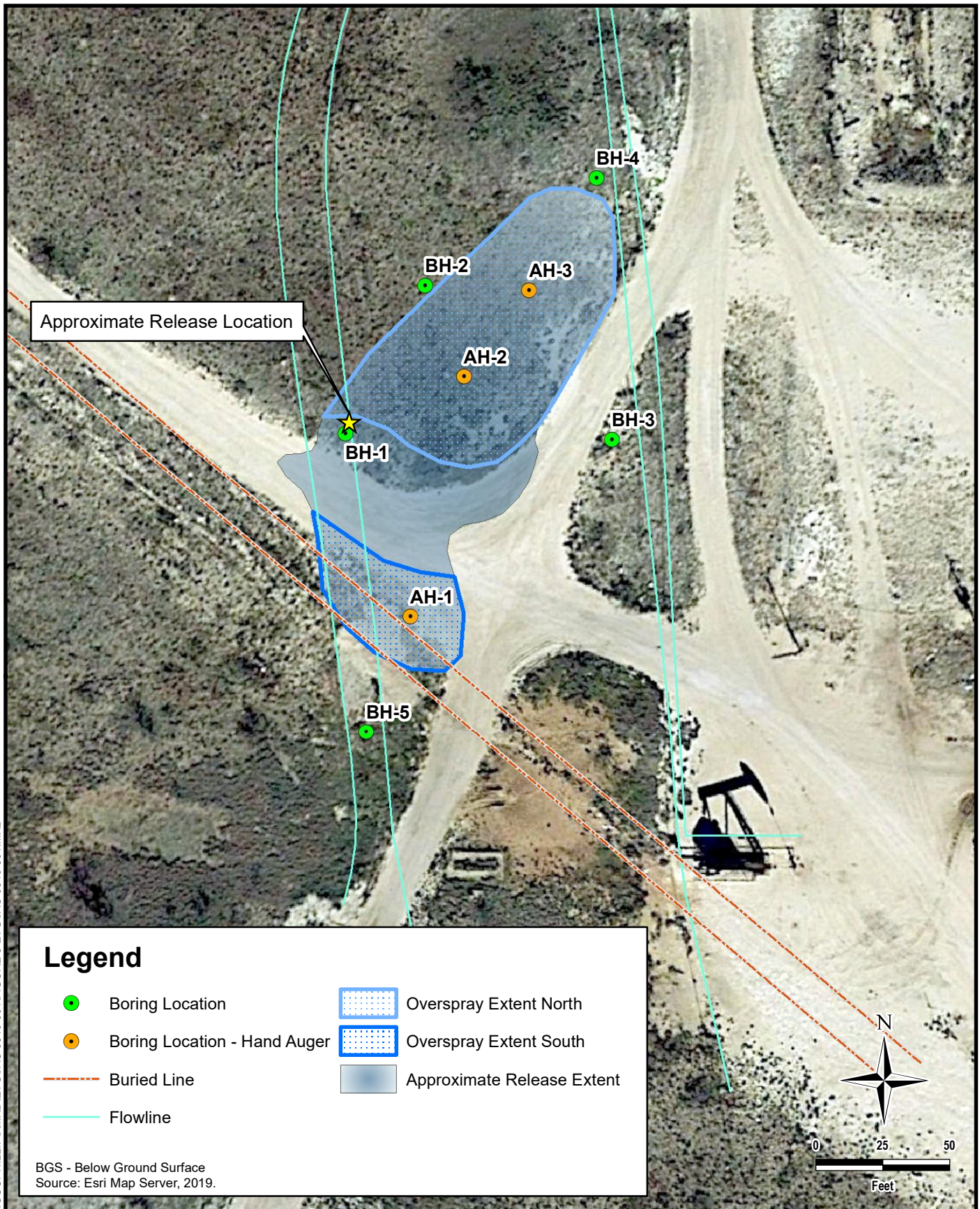
PROJECT NO.: 212C-MD-02538

DATE: AUGUST 09, 2021

DESIGNED BY: AAM

Figure No.

2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MD\EVGSAU 0546-001\FIGURE 3 EVGSAU 0546-001.MXD

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CONOCOPHILLIPS

ID# NAPP2103564128
(32.786404°, -103.478239°)
EDDY COUNTY, NEW MEXICO

**EVGSAU 0546-001 FLOWLINE RELEASE
APPROXIMATE RELEASE EXTENT AND SITE ASSESSMENT**

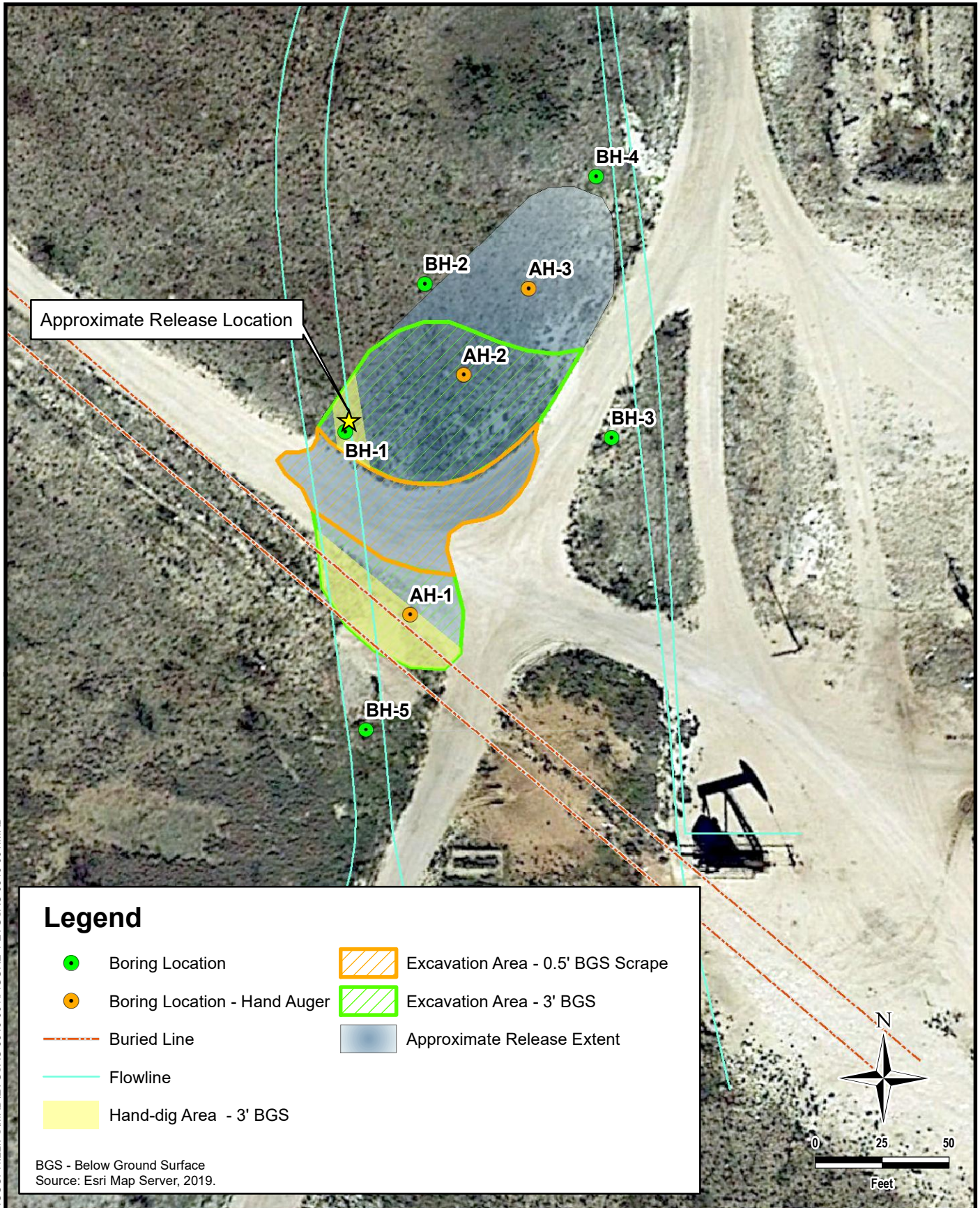
PROJECT NO.: 212C-MD-02538

DATE: AUGUST 10, 2021

DESIGNED BY: AAM

Figure No.

3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\EVGSAU 0546-001\FIGURE 4 EVGSAU 0546-001.MXD



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CONOCOPHILLIPS

ID# NAPP2103564128
(32.786404°, -103.478239°)
EDDY COUNTY, NEW MEXICO

**EVGSAU 0546-001 FLOWLINE RELEASE
PROPOSED REMEDIATION EXTENT**

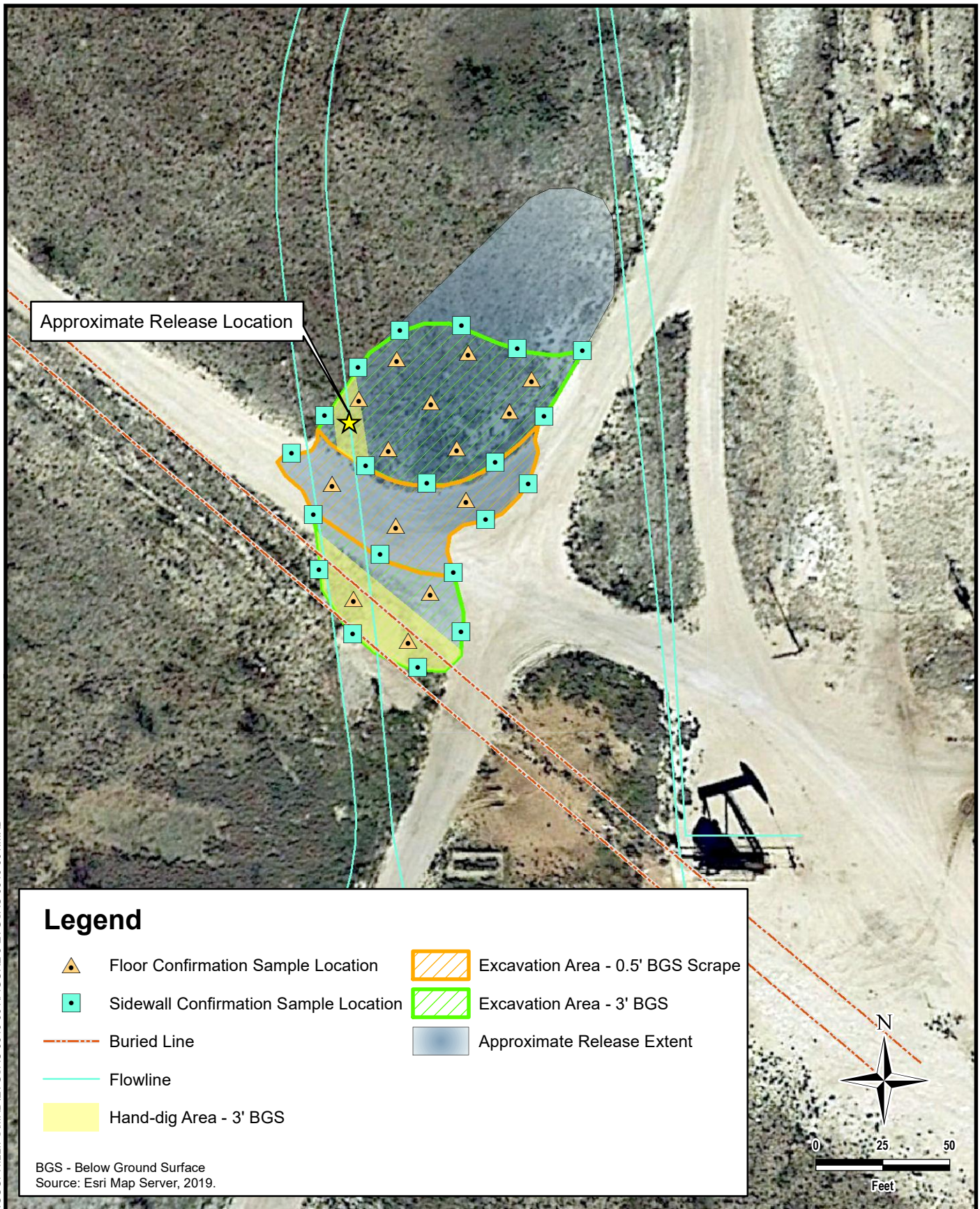
PROJECT NO.: 212C-MD-02538

DATE: AUGUST 10, 2021

DESIGNED BY: AAM

Figure No.

4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\EVGSAU 0546-001\FIGURE 5 EVGSAU 0546-001.MXD

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Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

CONOCOPHILLIPS

ID# NAPP2103564128
(32.786404°, -103.478239°)
EDDY COUNTY, NEW MEXICO

**EVGSAU 0546-001 FLOWLINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN**

PROJECT NO.: 212C-MD-02538

DATE: AUGUST 10, 2021

DESIGNED BY: AAM

Figure No.

5

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT
CONOCOPHILLIPS
EVGSAU 0546-001 FLOWLINE RELEASE
NAPP2103564128
LEA COUNTY, NM

Sample ID	Sample Date	Sampled Depth	Chloride ¹		BTEX ²										TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO ⁴		DRO		ORO		Total TPH	
															C ₆ - C ₁₀		C ₁₀ - C ₂₈		C ₂₈ - C ₃₆			
		ft. bgs	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			
BH-1	3/2/2021	(0'-1')	2,240		0.098		0.270		0.130		0.263		0.762		< 10.0		615		84.3		699	
	3/2/2021	(1'-2')	1,420		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		233		31.9		265	
	3/2/2021	(2'-3')	928		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		161		23.5		185	
	3/2/2021	(3'-4')	272		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		15.5		< 10.0		15.5	
	3/2/2021	(4'-5')	288		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
BH-2	3/2/2021	(0'-1')	48.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
BH-3	3/2/2021	(0'-1')	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
BH-4	3/2/2021	(0'-1')	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
BH-5	3/2/2021	(0'-1')	16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
AH-1	3/24/2021	(0'-0.5')	4,320		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		111		58.9		170	
AH-2	3/24/2021	(0'-0.5')	1,640		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		574		208		782	
	3/24/2021	(0.5'-1')	256		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		145		40.5		186	
AH-3	3/24/2021	(0'-0.5')	80.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	
	3/24/2021	(0.5'-1')	80.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	

NOTES:

Bold and italicized values indicate exceedance of proposed RRALs based on the region's depth to groundwater and the sampled depths bgs.

Shaded rows indicate intervals proposed for excavation.

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
NS Not sampled
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
1 Method SM4500Cl-B
2 EPA Method 8021M
3 EPA Method 8015M
4 EPA Method 8015D/GRO

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	NAPP2103564128
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	ConocoPhillips Company	OGRID	217817
Contact Name	Kelsy Waggaman	Contact Telephone	505-577-9071
Contact email	Kelsy.Waggaman@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2103564128
Contact mailing address	29 Vacuum Complex Lane, Lovington, NM 88260		

Location of Release Source

Latitude 32.786111 Longitude -103.478056
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	EVGSAU 0546-001 Flowline - off-location	Site Type	Flowline - off-location
Date Release Discovered	2/4/21	API# (if applicable)	N/A

Unit Letter	Section	Township	Range	County
O	32	17S	35E	Lea

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	1.2	Volume Recovered (bbls)	0
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)	28.7	Volume Recovered (bbls)	20
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release


Flowline Failure

Incident ID	NAPP2103564128
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release exceeded 25 bbls of produced water.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notification of Release (NOR)/C-141a was submitted electronically through NMOCD portal by Kelsy Waggaman, ConocoPhillips Environmental Coordinator on 2/4/21. Action ID #17099.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kelsy Waggaman</u>	Title: <u>Environmental Coordinator</u>
Signature: <u></u>	Date: <u>3/15/21</u>
email: <u>Kelsy.Waggaman@ConocoPhillips.com</u>	Telephone: <u>505-577-9071</u>
<u>OCD Only</u>	
Received by: <u>Karen Collins</u>	Date: <u>3/25/2021</u>

L48 Spill Volume Estimate Form									
Facility Name & Number:		EVGSAU 0546-001							
Asset Area:		SENM (BUCKEYE)							
Release Discovery Date & Time:		2/4/2021 7:00AM MST							
Release Type:		Oil Mixture							
Provide any known details about the event:		Flowline Leak, Vacuum truck picked up approx. 20bbbls fluid as well.							
Spill Calculation - Subsurface Spill - Rectangle									
Was the release on pad or off-pad?		On Pad - 10.5%; Off Pad - 15.12% soil spilled-fluid saturation factor							
Has it rained at least a half inch in the last 24 hours?		Yes, On Pad - 8%; Off Pad - 13.57% soil spilled-fluid saturation factor; if No, use factors above.							
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	35.0	8.0	2.00	15.12%	8.307	1.256	12.50%	0.157	1.099
Rectangle B	60.0	25.0	2.00	15.12%	44.500	6.728	12.50%	0.841	5.887
Rectangle C	15.0	15.0	3.00	15.12%	10.013	1.514	12.50%	0.189	1.325
Rectangle D	65.0	30.0	0.10	15.12%	2.893	0.437	12.50%	0.055	0.383
Rectangle E					0.000	0.000		0.000	0.000
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Rectangle J					0.000	0.000		0.000	0.000
Total Volume Release:						9.936		1.242	8.694

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2103564128
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?	77 _____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

Form C-141

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2103564128
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: Sam Widmer Title: Program Manager
Signature: Sam Widmer Date: 09/13/2021
email: Sam.Widmer@cop.com Telephone: 281-206-5298

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	NAPP2103564128
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: Sam Widmer Title: Program Manager
 Signature: Sam Widmer Date: 09/13/2021
 email: Sam.Widmer@cop.com Telephone: 281-206-5298

OCD Only

Received by: Chad Hensley Date: 10/07/2021

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

Signature: Chad Hensley Date: 10/07/2021

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-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 04829 S	L	LE		3	4	32	17S	35E		642554	3628586*	48	198	85	113
L 04931	L	LE		1	2	05	18S	35E		642561	3628183*	427	237	70	167

Average Depth to Water: **77 feet**

Minimum Depth: **70 feet**

Maximum Depth: **85 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 642510.8

Northing (Y): 3628607.47

Radius: 800

*UTM location was derived from PLSS - see Help

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

8/11/21 9:50 AM





Page 1 of 1


WATER COLUMN/ AVERAGE
DEPTH TO WATER

EVGSAU 0546-001

Karst Potential Map

Legend

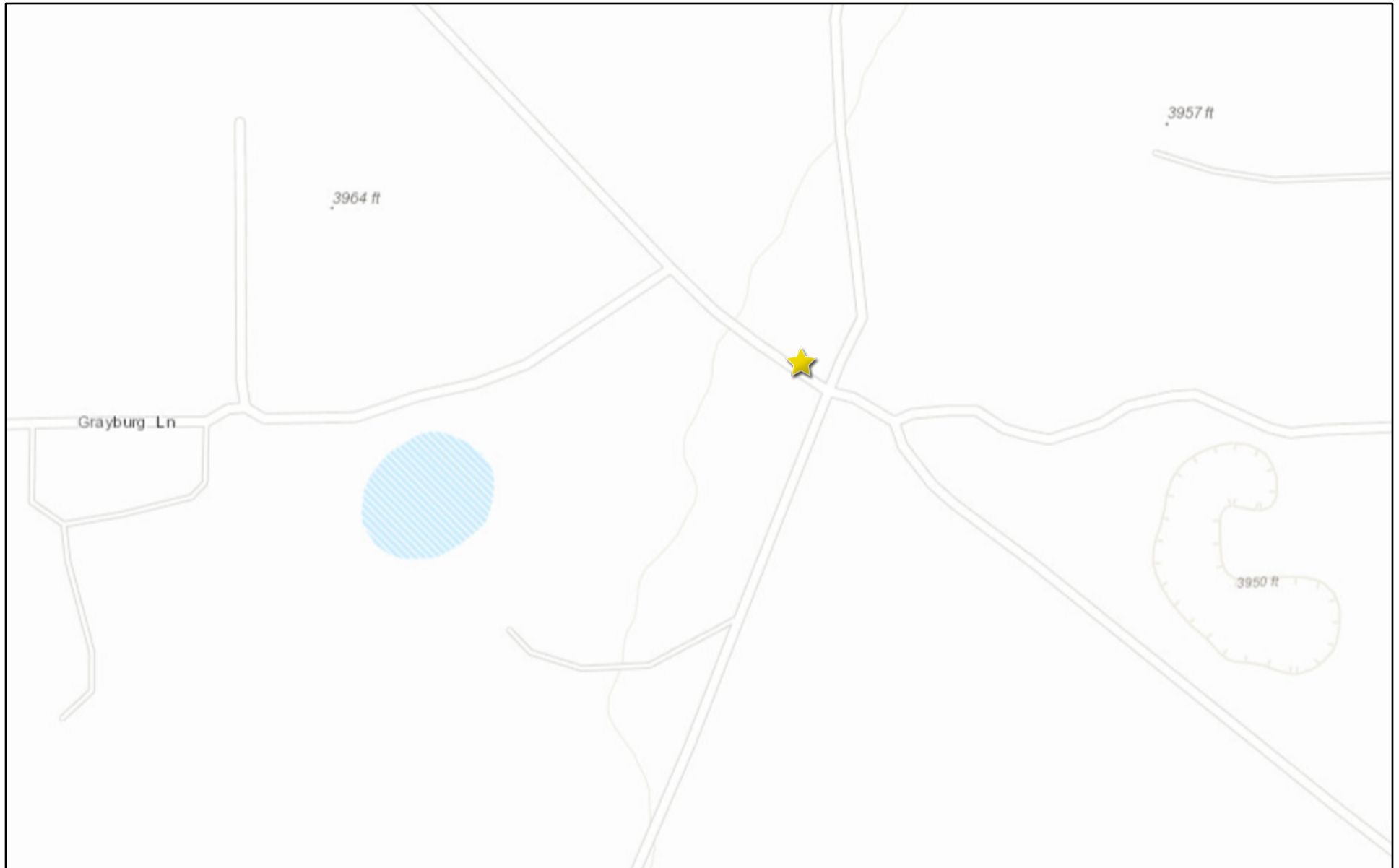
-  Approximate Release Point
-  High
-  Low
-  Medium

 Approximate Release Point

Google Earth



EVGSAU 0546-001 Flowline Release



7/22/2021, 2:50:47 PM



Override 1



OCD District Offices



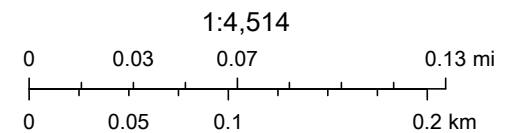
PLJV Probable Playas



OSE Water-bodies



OSE Streams



OCD, Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE,

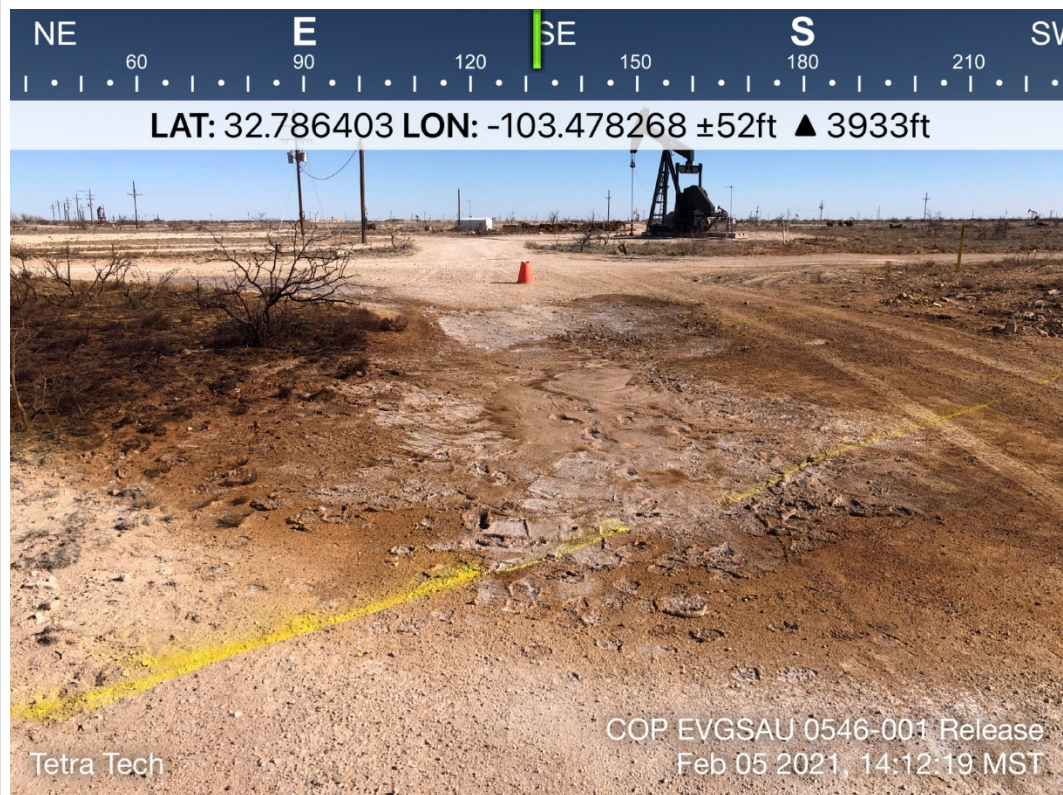
New Mexico Oil Conservation Division

APPENDIX C

Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View east southeast of the release area and lease road.	1
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View southeast of the release area, lease road, and the EVGSAU #015 well.	2
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View south southeast of the release area and lease road	3
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View east of the release area and lease road.	4
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



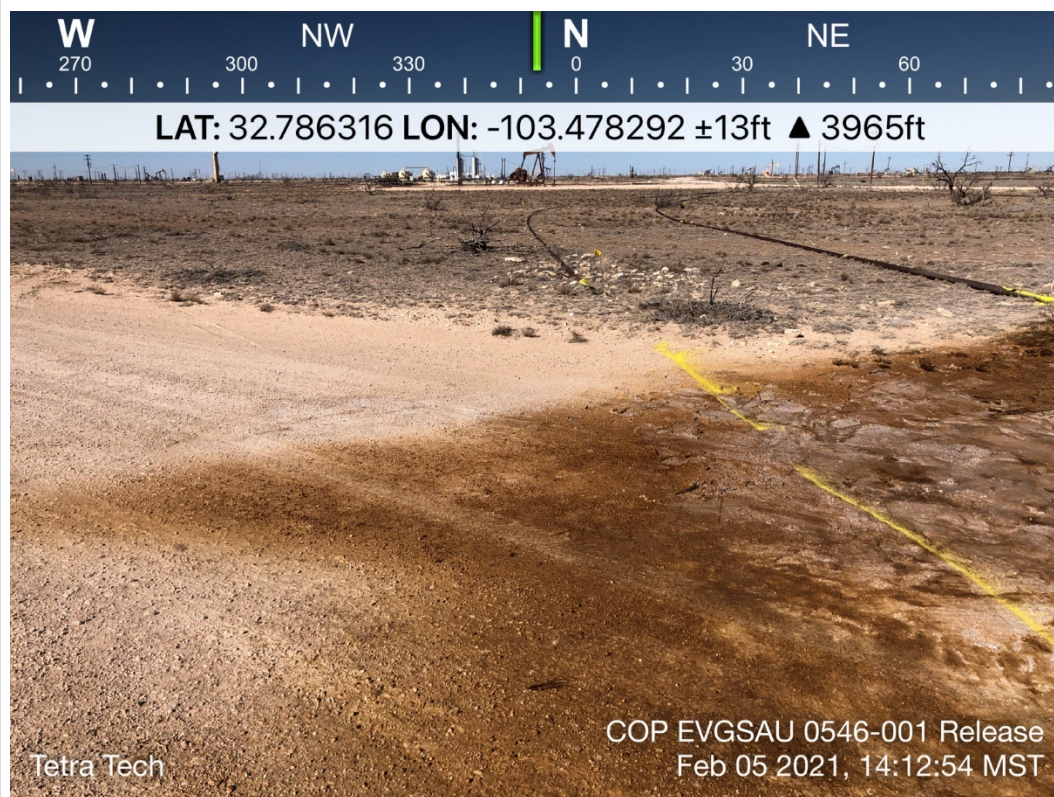
TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View southeast of the release area and lease road.	5
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View east of the release area and lease road.	6
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View northeast of the release area, lease road, and surface lines.	7
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View north of the release area, lease road, and surface lines.	8
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View southeast of the lease road.	9
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02538	DESCRIPTION	View east of the release area, lease road, and surface lines.	10
	SITE NAME	ConocoPhillips EVGSAU 0546-001 Flowline Release	2/5/2021

APPENDIX D

Laboratory Analytical Data



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

March 04, 2021

JOE TYLER

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: EVGSAU 0546-001 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 03/02/21 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 1 (0-1) (H210500-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.098	0.050	03/03/2021	ND	2.23	112	2.00	0.770	
Toluene*	0.270	0.050	03/03/2021	ND	2.26	113	2.00	1.03	
Ethylbenzene*	0.130	0.050	03/03/2021	ND	2.18	109	2.00	1.12	
Total Xylenes*	0.263	0.150	03/03/2021	ND	6.33	106	6.00	0.986	
Total BTX	0.762	0.300	03/03/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	03/03/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	615	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	84.3	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 82.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 1 (1-2) (H210500-02)

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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTEx	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1420	16.0	03/03/2021	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	233	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	31.9	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 85.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.8 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 1 (2-3) (H210500-03)

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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTEx	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	03/03/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	161	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	23.5	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 80.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.5 % 42.2-156

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 1 (3-4) (H210500-04)

BTX 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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTX	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	03/03/2021	ND	416	104	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	03/03/2021	ND	211	106	200	3.47		
DRO >C10-C28*	15.5	10.0	03/03/2021	ND	203	102	200	1.36		
EXT DRO >C28-C36	<10.0	10.0	03/03/2021	ND						

Surrogate: 1-Chlorooctane 78.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 80.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 1 (4-5) (H210500-05)

BTX 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	03/03/2021	ND	2.23	112	2.00	0.770	
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03	
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986	
Total BTX	<0.300	0.300	03/03/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	03/03/2021	ND	416	104	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	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	<10.0	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 80.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 83.0 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 2 (0-1) (H210500-08)

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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTEx	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	03/03/2021	ND	416	104	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	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	<10.0	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 77.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 78.2 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 3 (0-1) (H210500-09)

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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTEx	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/03/2021	ND	416	104	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	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	<10.0	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 77.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 79.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 4 (0-1) (H210500-10)

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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTEx	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/03/2021	ND	416	104	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	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	<10.0	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 71.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 72.0 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/02/2021	Sampling Date:	03/02/2021
Reported:	03/04/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: BH - 5 (H210500-11)

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	03/03/2021	ND	2.23	112	2.00	0.770		
Toluene*	<0.050	0.050	03/03/2021	ND	2.26	113	2.00	1.03		
Ethylbenzene*	<0.050	0.050	03/03/2021	ND	2.18	109	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/03/2021	ND	6.33	106	6.00	0.986		
Total BTEx	<0.300	0.300	03/03/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	03/03/2021	ND	416	104	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	03/03/2021	ND	211	106	200	3.47	
DRO >C10-C28*	<10.0	10.0	03/03/2021	ND	203	102	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	03/03/2021	ND					

Surrogate: 1-Chlorooctane 73.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 74.7 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

ANALYSIS REQUEST

BILL TO

Company Name: ConocoPhillips

Project Manager: Joe Tyler with Tetra Tech

Address:

City:

Phone #: (432) 210-6952

Project #: 212C-MD-02377

Project Name:

Project Location:

Sample Name:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

H210500

11

12

13

14

15

BH-5

BH-6

BH-7

BH-8

BH-9

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

3-2-21

TPH

BTEX

Chlorides

Hold

X

X

X

X

X

X

X

X

X

X

X

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X

X

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X

X

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X

Relinquished By:

Date:

3-2-21

Time:

1500

Received By:

Date:

3-2-21

Time:

1500

Received By:

Date:

3-2-21

Time:

1500

Received By:

Date:

3-2-21

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Received By:

Date:

3-2-21

Time:

1500

Received By:

Date:

3-2-21

Time:

1500

Received By:

Date:

3-2-21

Time:

1500

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition

Cool Intact

CHECKED BY:

(Initials)

REMARKS:

Phone Result:

Fax Result:

Add'l Phone #:

Add'l Fax #:

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

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



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

March 26, 2021

JOE TYLER

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: EVGSAU 0546-001 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 03/24/21 11:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/24/2021	Sampling Date:	03/24/2021
Reported:	03/26/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: AH - 1 (0' - 0.5') (H210738-01)

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	03/24/2021	ND	2.12	106	2.00	1.70	
Toluene*	<0.050	0.050	03/24/2021	ND	2.05	103	2.00	2.01	
Ethylbenzene*	<0.050	0.050	03/24/2021	ND	1.97	98.7	2.00	1.93	
Total Xylenes*	<0.150	0.150	03/24/2021	ND	5.85	97.5	6.00	1.75	
Total BTEX	<0.300	0.300	03/24/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4320	16.0	03/24/2021	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	03/24/2021	ND	211	105	200	2.37	
DRO >C10-C28*	111	10.0	03/24/2021	ND	207	104	200	3.89	
EXT DRO >C28-C36	58.9	10.0	03/24/2021	ND					

Surrogate: 1-Chlorooctane 81.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 80.0 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received: 03/24/2021
 Reported: 03/26/2021
 Project Name: EVGSAU 0546-001 RELEASE
 Project Number: 212C-MD-02377
 Project Location: EVGSAU 0546-001

Sampling Date: 03/24/2021
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: AH - 2 (0' - 0.5') (H210738-02)

BTX 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	03/24/2021	ND	2.12	106	2.00	1.70	
Toluene*	<0.050	0.050	03/24/2021	ND	2.05	103	2.00	2.01	
Ethylbenzene*	<0.050	0.050	03/24/2021	ND	1.97	98.7	2.00	1.93	
Total Xylenes*	<0.150	0.150	03/24/2021	ND	5.85	97.5	6.00	1.75	
Total BTX	<0.300	0.300	03/24/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1640	16.0	03/24/2021	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	03/24/2021	ND	211	105	200	2.37	
DRO >C10-C28*	574	10.0	03/24/2021	ND	207	104	200	3.89	
EXT DRO >C28-C36	208	10.0	03/24/2021	ND					

Surrogate: 1-Chlorooctane 81.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/24/2021	Sampling Date:	03/24/2021
Reported:	03/26/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: AH - 2 (0.5' - 1.0') (H210738-03)

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	03/24/2021	ND	2.12	106	2.00	1.70		
Toluene*	<0.050	0.050	03/24/2021	ND	2.05	103	2.00	2.01		
Ethylbenzene*	<0.050	0.050	03/24/2021	ND	1.97	98.7	2.00	1.93		
Total Xylenes*	<0.150	0.150	03/24/2021	ND	5.85	97.5	6.00	1.75		
Total BTEx	<0.300	0.300	03/24/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	03/24/2021	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	03/24/2021	ND	211	105	200	2.37	
DRO >C10-C28*	145	10.0	03/24/2021	ND	207	104	200	3.89	
EXT DRO >C28-C36	40.5	10.0	03/24/2021	ND					

Surrogate: 1-Chlorooctane 69.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 78.2 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/24/2021	Sampling Date:	03/24/2021
Reported:	03/26/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: AH - 3 (0' - 0.5') (H210738-04)

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	03/24/2021	ND	2.12	106	2.00	1.70		
Toluene*	<0.050	0.050	03/24/2021	ND	2.05	103	2.00	2.01		
Ethylbenzene*	<0.050	0.050	03/24/2021	ND	1.97	98.7	2.00	1.93		
Total Xylenes*	<0.150	0.150	03/24/2021	ND	5.85	97.5	6.00	1.75		
Total BTEx	<0.300	0.300	03/24/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/24/2021	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	03/24/2021	ND	211	105	200	2.37	
DRO >C10-C28*	<10.0	10.0	03/24/2021	ND	207	104	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	03/24/2021	ND					

Surrogate: 1-Chlorooctane 61.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 58.5 % 42.2-156

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Analytical Results For:

Conoco Phillips - Hobbs
 JOE TYLER
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	03/24/2021	Sampling Date:	03/24/2021
Reported:	03/26/2021	Sampling Type:	Soil
Project Name:	EVGSAU 0546-001 RELEASE	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02377	Sample Received By:	Tamara Oldaker
Project Location:	EVGSAU 0546-001		

Sample ID: AH - 3 (0.5' - 1.0') (H210738-05)

BTX 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	03/24/2021	ND	2.12	106	2.00	1.70	
Toluene*	<0.050	0.050	03/24/2021	ND	2.05	103	2.00	2.01	
Ethylbenzene*	<0.050	0.050	03/24/2021	ND	1.97	98.7	2.00	1.93	
Total Xylenes*	<0.150	0.150	03/24/2021	ND	5.85	97.5	6.00	1.75	
Total BTX	<0.300	0.300	03/24/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/24/2021	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	03/24/2021	ND	211	105	200	2.37	
DRO >C10-C28*	<10.0	10.0	03/24/2021	ND	207	104	200	3.89	
EXT DRO >C28-C36	<10.0	10.0	03/24/2021	ND					

Surrogate: 1-Chlorooctane 70.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 67.9 % 42.2-156

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Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "C. D. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

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Page 7 of 1

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APPENDIX E

NMSLO Seed Mixture Details


Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 17, Jun 8, 2020

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

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

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

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	0.9	100.0%
Totals for Area of Interest		0.9	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.

Custom Soil Resource Report

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

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

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

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

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

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

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

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

Custom Soil Resource Report

Lea County, New Mexico

KU—Kimbrough-Lea complex, dry, 0 to 3 percent slopes

Map Unit Setting*National map unit symbol:* 2tw46*Elevation:* 2,500 to 4,800 feet*Mean annual precipitation:* 14 to 16 inches*Mean annual air temperature:* 57 to 63 degrees F*Frost-free period:* 180 to 220 days*Farmland classification:* Not prime farmland**Map Unit Composition***Kimbrough and similar soils:* 45 percent*Lea and similar soils:* 25 percent*Minor components:* 30 percent*Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Kimbrough****Setting***Landform:* Plains, playa rims*Down-slope shape:* Linear, convex*Across-slope shape:* Linear, concave*Parent material:* Loamy eolian deposits derived from sedimentary rock**Typical profile***A - 0 to 3 inches:* gravelly loam*Bw - 3 to 10 inches:* loam*Bkkm1 - 10 to 16 inches:* cemented material*Bkkm2 - 16 to 80 inches:* cemented material**Properties and qualities***Slope:* 0 to 3 percent*Depth to restrictive feature:* 4 to 18 inches to petrocalcic*Drainage class:* Well drained*Runoff class:* High*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.01 in/hr)*Depth to water table:* More than 80 inches*Frequency of flooding:* None*Frequency of ponding:* None*Calcium carbonate, maximum content:* 95 percent*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)*Sodium adsorption ratio, maximum:* 1.0*Available water capacity:* Very low (about 1.4 inches)**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7s*Hydrologic Soil Group:* D*Ecological site:* R077DY049TX - Very Shallow 12-17" PZ*Hydric soil rating:* No

Custom Soil Resource Report

Description of Lea**Setting**

Landform: Plains

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Calcareous, loamy eolian deposits from the blackwater draw formation of pleistocene age over indurated caliche of pliocene age

Typical profile

A - 0 to 10 inches: loam

Bk - 10 to 18 inches: loam

Bkk - 18 to 26 inches: gravelly fine sandy loam

Bkkm - 26 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 22 to 30 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

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: 90 percent

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

Sodium adsorption ratio, maximum: 3.0

Available water capacity: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R077DY047TX - Sandy Loam 12-17" PZ

Hydric soil rating: No

Minor Components**Douro**

Percent of map unit: 12 percent

Landform: Plains

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R077DY047TX - Sandy Loam 12-17" PZ

Other vegetative classification: Unnamed (G077DH000TX)

Hydric soil rating: No

Kenhill

Percent of map unit: 12 percent

Landform: Plains

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R077DY038TX - Clay Loam 12-17" PZ

Hydric soil rating: No

Custom Soil Resource Report

Spraberry

Percent of map unit: 6 percent

Landform: Plains, playa rims

Down-slope shape: Linear, convex

Across-slope shape: Linear

Ecological site: R077DY049TX - Very Shallow 12-17" PZ

Other vegetative classification: Unnamed (G077DH000TX)

Hydric soil rating: No

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Custom Soil Resource Report

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NMSLO Seed Mix**Loamy (L)****LOAMY (L) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Black grama	VNS, Southern	1.0	D
Blue grama	Lovington	1.0	D
Sideoats grama	Vaughn, El Reno	4.0	F
Sand dropseed	VNS, Southern	2.0	S
Alkali sacaton	VNS, Southern	1.0	
Little bluestem	Cimarron, Pastura	1.5	F
Forbs:			
Firewheel (<i>Gaillardia</i>)	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	Marana, Santa Rita	1.0	D
Common winterfat	VNS, Southern	0.5	F
Total PLS/acre		18.0	

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

Action 48231

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 48231
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	The OCD request 16 floor samples to be collected for closure.	10/7/2021
chensley	The OCD request that a closure report be submitted by 1/07/0222.	10/7/2021