



December 15, 2022

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

**Re: REVISED
Release Characterization and Remediation Work Plan
ConocoPhillips
Heritage Concho
Roy Batty Federal Com #003H Flange Release
Unit Letter O, Section 11, Township 24 South, Range 33 East
Lea County, New Mexico
Incident ID NOY1811735138**

Dear Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (COPC) to assess a historical release that occurred from a line in the vicinity of the Roy Batty Federal Com #003H (API# 30-025-41333) lease pad. The approximate release site coordinates are 32.225991°, -103.541391°, located in the Public Land Survey System (PLSS) Unit Letter O, Section 11, Township 24 South, Range 33 East, Lea County, New Mexico (Site). The Site location is shown on Figures 1 and 2. The site is located on privately owned land.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report (Appendix A), the release was discovered on April 21, 2018. The release occurred due to a leak on a corroded flange coupler. Approximately 60 barrels (bbls) of produced water were released, of which 50 bbls were reported recovered. The NMOCD received the initial C-141 on April 27, 2018, and subsequently assigned the release the Remediation Permit (RP) number 1RP-5029 and the Incident ID NOY1811735138.

The Roy Batty Federal Com #003H Flange Release (1RP-5029/ NOY1811735138) is included in an Agreed Compliance Order ("ACO") with the NMOCD, related to unresolved releases from COPC's predecessor-in-interest ("COG"). The ACO required COPC to submit characterization and/or remediation plans with proposed timeframes for the ongoing corrective actions or remediations identified to the NMOCD no later than March 31, 2022. As of March 11, 2022, COPC has submitted characterization and remediation plans for all of the properties identified and owned. All documentation was submitted in accordance with ACO terms. These documents have been submitted to the NMOCD via CentreStack, a Secure Access & File Sharing platform, at the direction of Mr. Bradford Billings, NMOCD. The Delineation Workplan previously completed by BBC was included as a portion of the ACO.

As of November 21, 2022, the BBC Delineation Workplan had not been approved nor rejected by the NMOCD. Therefore, the workplan was resubmitted via the NMOCD Fee Application Portal. On December 2, 2022, the NMOCD rejected the BBC Delineation Workplan via email from Brittany Hall. The following reasoning for rejection was included in the email:

Tetra Tech

901 West Wall St., Suite 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com

- “The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.
- 1RP-5029 closed. Refer to incident #nOY1811735138 in all future communications.
- Base and sidewalls samples will need to be representative of no more than 200 square feet and analyzed for all constituents in Table I.
- Please submit a complete report through the OCD Permitting website by 3/3/2023.”

Regulatory correspondence and a copy of the BBC Delineation Workplan is included as Appendix B.

REVISED SITE CHARACTERIZATION

Based on the OCD rejection, a site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). The Site is within a New Mexico oil and gas production area.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within an 800-meter radius (approximately ½ mile) of the Site. There is one (1) water well within 1,600 meters (approximately 1 mile) of the Site with a depth to groundwater of 420 feet below ground surface (bgs). As the available water level information was from a well further than ½ mile away from the Site, COP reviewed adjacent incident release sites with approved reports for possibility of associated borings which could provide a means for determining depth to groundwater in the vicinity of NOY1811735138 release area. As such, subsurface data from the Tyrell Fee #1 Release (NRM2019952683) was reviewed.

On July 30, 2022, a licensed drilling subcontractor was contracted to drill a borehole (DTW) to 55 feet bgs as part of the characterization associated with the Tyrell Fee #1 Release (NRM2019952683) which was granted closure by the NMOCD. The DTW boring is located in the northeastern corner of the existing Roy Batty Federal Com #003H lease pad. The borehole was dry upon completion, and soils were dry from surface to total depth. The depth to groundwater in the area was thus verified as greater than 55 feet bgs. The borehole was plugged with 3/8" bentonite chips. The borehole coordinates are 32.225714°, -103.540550°, and the boring location is indicated on Figure 3. The site characterization data, along with the boring log, is included in Appendix C.

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, the established depth to water, and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

Constituent	Site RRAL
Chloride	10,000 mg/kg
TPH (GRO+DRO+ORO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 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 feet bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirement
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg
BTEX	50 mg/kg

SITE ASSESSMENT AND WORK PLAN

According to information provided by COPC, BBC International, Incorporated (BBC) was initially contracted to map the extent and sample the release footprint and the surrounding area. Based upon the mapped initial extent provided by BBC, the release footprint was approximately 6,050 square feet of lease pad, lease road and adjacent pastureland.

On June 6 and 7, 2018, BBC installed ten (10) borings (SP1 through SP10) within the release footprint to a maximum depth of 9 feet bgs. Additionally, four (4) borings were completed (North, East, South, West) in the cardinal directions to establish horizontal delineation. A total of twenty-eight (28) samples were collected from the sample locations and transferred under chain of custody to Cardinal Laboratories (Cardinal). All soil samples were analyzed for chloride via Method SM4500Cl-B. Selected samples were analyzed for TPH via Method 8015 Modified and BTEX via Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included as part of the BBC Delineation Workplan in Appendix B.

Analytical results associated with SP6 through SP10 indicated chloride concentrations above reclamation requirements for surface soils outside of oil and gas production areas. There was one RRAL exceedance for chloride at SP6 (4'). All other sample results were below RRALs and reclamation requirements for surface soils outside of oil and gas production areas.

BBC was able to confirm horizontal and vertical delineation with their assessment activities. Based on the results of the assessment activities, a Delineation Workplan was completed by BBC and submitted to NMOCD, on behalf of COG, via email in 2018. The same Workplan was resubmitted to NMOCD via email in January 2019. As mentioned previously, the workplan did not provide adequate determination of depth to groundwater. A copy of the BBC Delineation Workplan and associated email correspondence is included in Appendix B.

VISUAL SITE INSPECTION

On behalf of COPC, Tetra Tech personnel conducted a visual inspection of the Site on September 21, 2022 to assess current conditions and look for evidence of the reported release. No visual signs of the release were observed on the lease pad or lease road. Areas of sparse vegetation were observed along the likely release flow path. Photographic documentation from the visual inspection is included as Appendix D.

REMEDIATION WORK PLAN

Based on the analytical results from the BBC assessment activities the OCD rejection, and the revised site characterization, impacted material within the release extent is proposed to be removed as indicated in Figure 4. Impacted soils will be excavated to a maximum depth of 4 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the Site RRALs and/or reclamation requirements for surface soils (0-4 feet bgs) outside of active oil and gas operations. Heavy equipment (backhoe and trackhoe) will be utilized to excavate areas outside the immediate vicinity of pressurized lines and will come no more than 4 feet from any pressurized lines. Impacted soils within the vicinity of the surface and subsurface lines will be dug by hand to the maximum extent practicable.

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 TPH, BTEX, and chlorides. In accordance with Subsection D of 19.15.29.12 NMAC, the

responsible party will notify the appropriate division district office prior to conducting confirmation sampling. The estimated volume of material to be remediated is approximately 600 cubic yards.

In accordance with the NMOCD rejection email included in Appendix B, COPC will collect confirmation samples within the excavated areas to verify remedial efficacy. These confirmation sidewall and floor samples will be representative of no more than approximately 200 square feet of excavated area. The proposed confirmation sample locations are depicted in Figure 5. Approximately ten (10) confirmation floor samples and twenty-one (21) confirmation sidewall samples are proposed in the excavation area. This is a total of 31 confirmation sample locations. The proposed excavation encompasses an area of approximately 6,050 square feet. This Confirmation Sampling Plan meets the stipulations found in the NMOCD rejection. 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.

SITE RECLAMATION AND RESTORATION PLAN

Once acceptable confirmation sample results are received, the excavation will then be backfilled with clean material to surface grade. The backfilled areas within the off-pad pasture area will be seeded in the first favorable growing season to aid in revegetation. Based on the location of the Site, the seed mixture for LPC Sand/Shinnery Sites 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 BLM and/or private landowner 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 BLM seed mixture details and corresponding pounds pure live seed per acre are included in Appendix E.

CONCLUSION

Remediation activities at the Site are proposed to begin within 90 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. The area shall be reclaimed in accordance with 19.15.29.13 NMAC and the BLM. The completed C-141 forms are enclosed in Appendix A.

If you have any questions concerning the revised site characterization or the proposed remediation activities for the Site, please call me at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.



Christian M. Llull, P.G.
Project Manager

cc:
Mr. Ike Tavarez, RMR – 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 Extents
- Figure 5 – Confirmation Sampling Plan

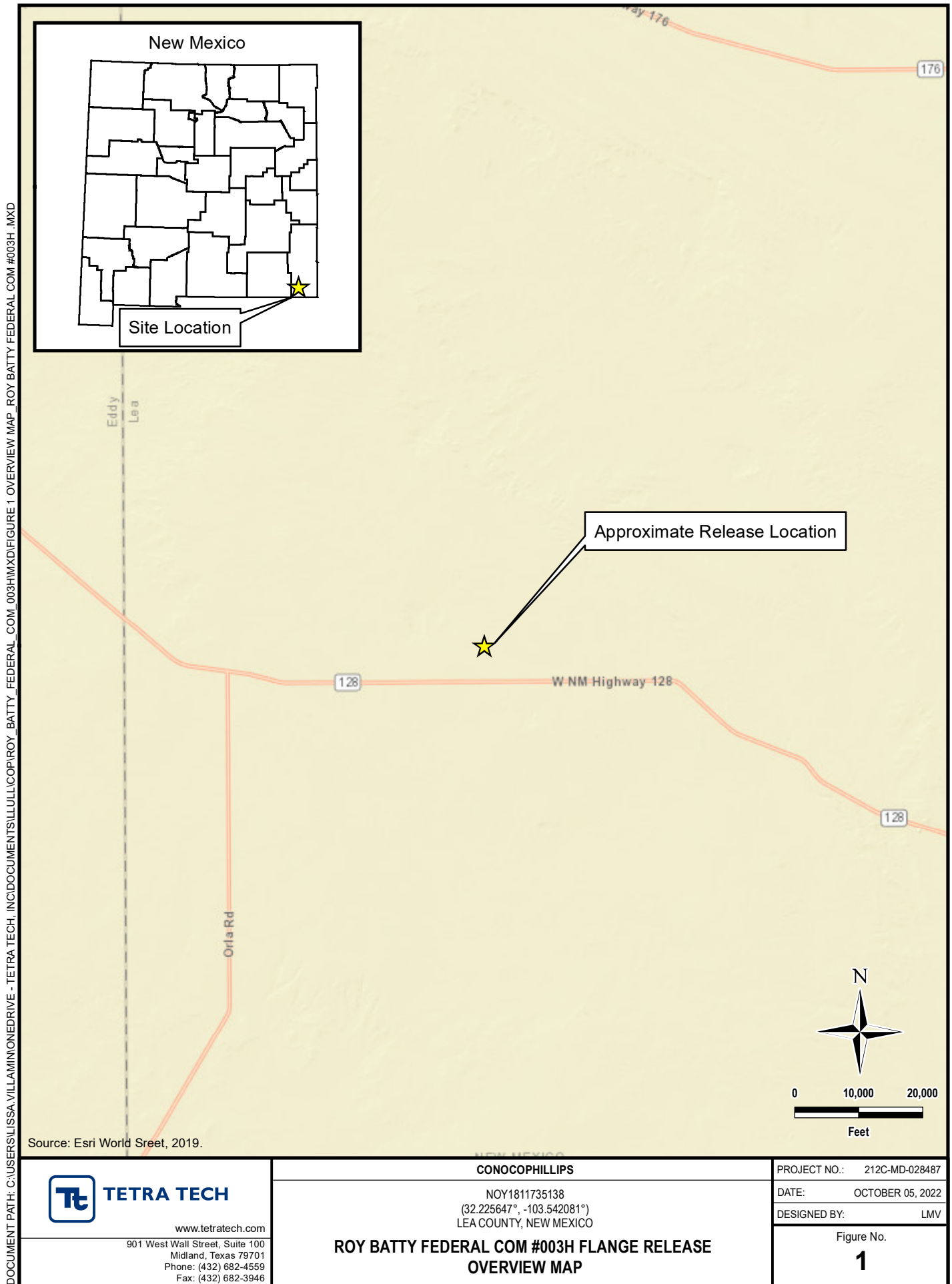
Tables:

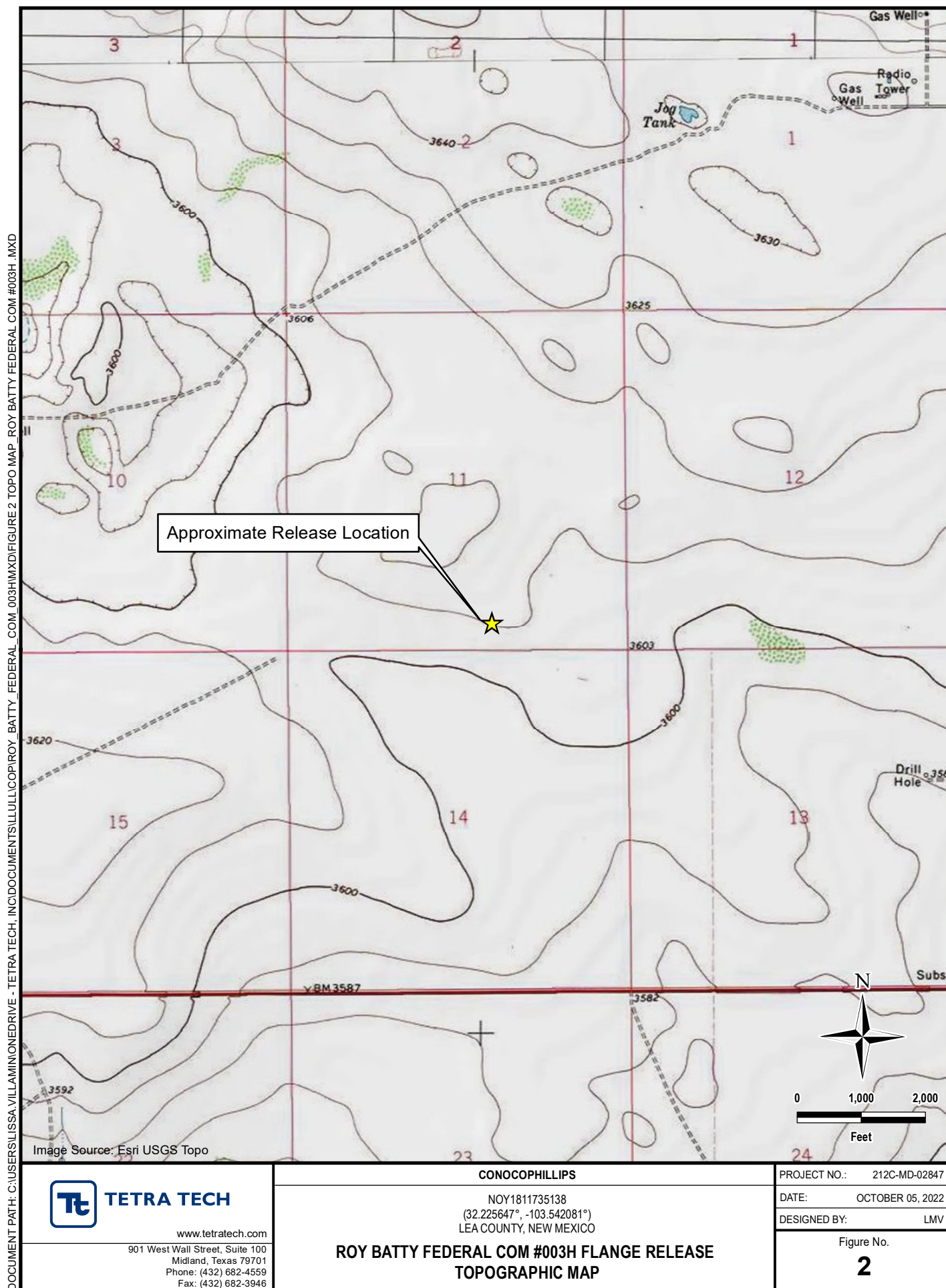
- Table 1 – Summary of Analytical Results – 2018 Soil Assessment

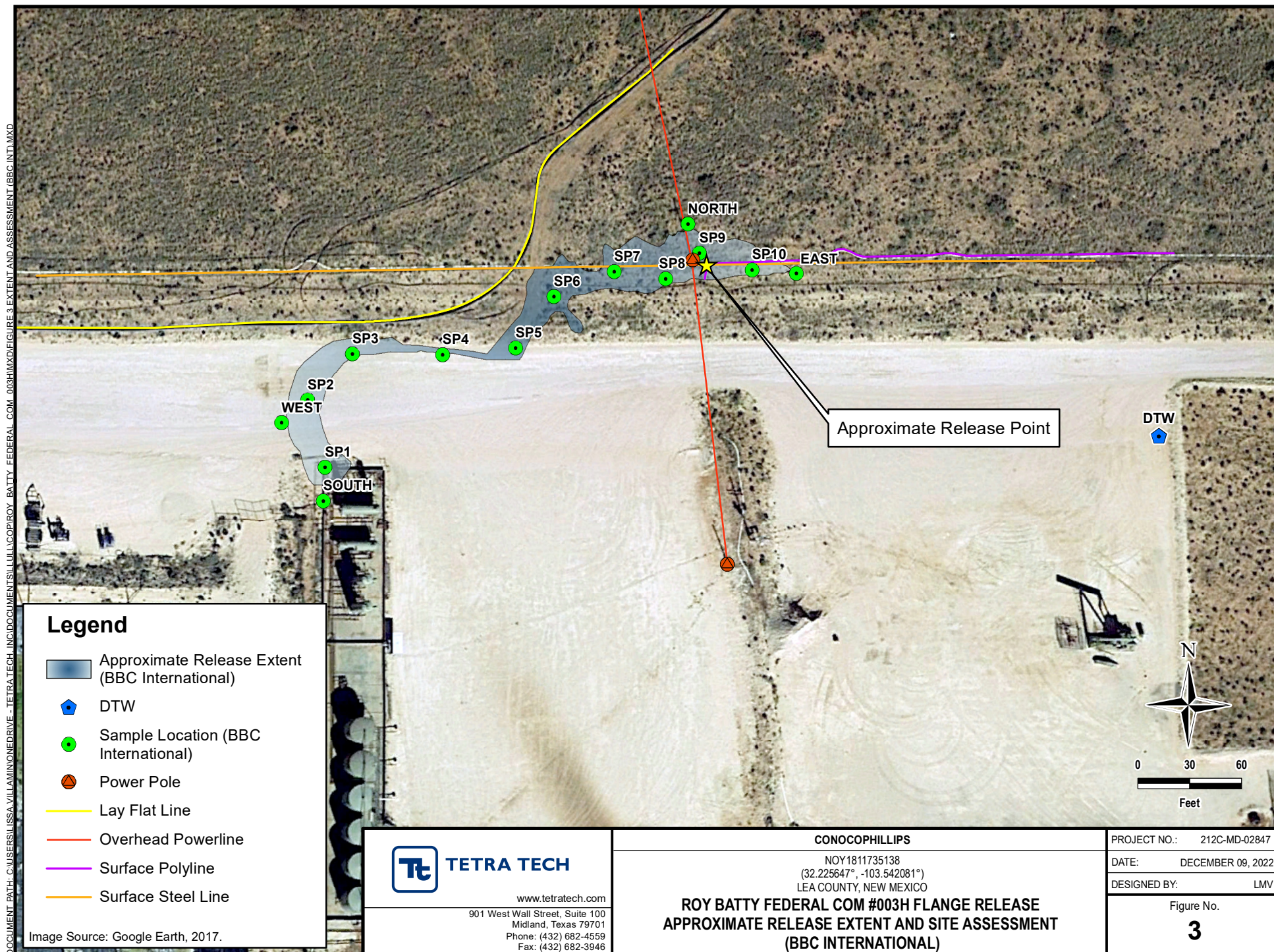
Appendices:

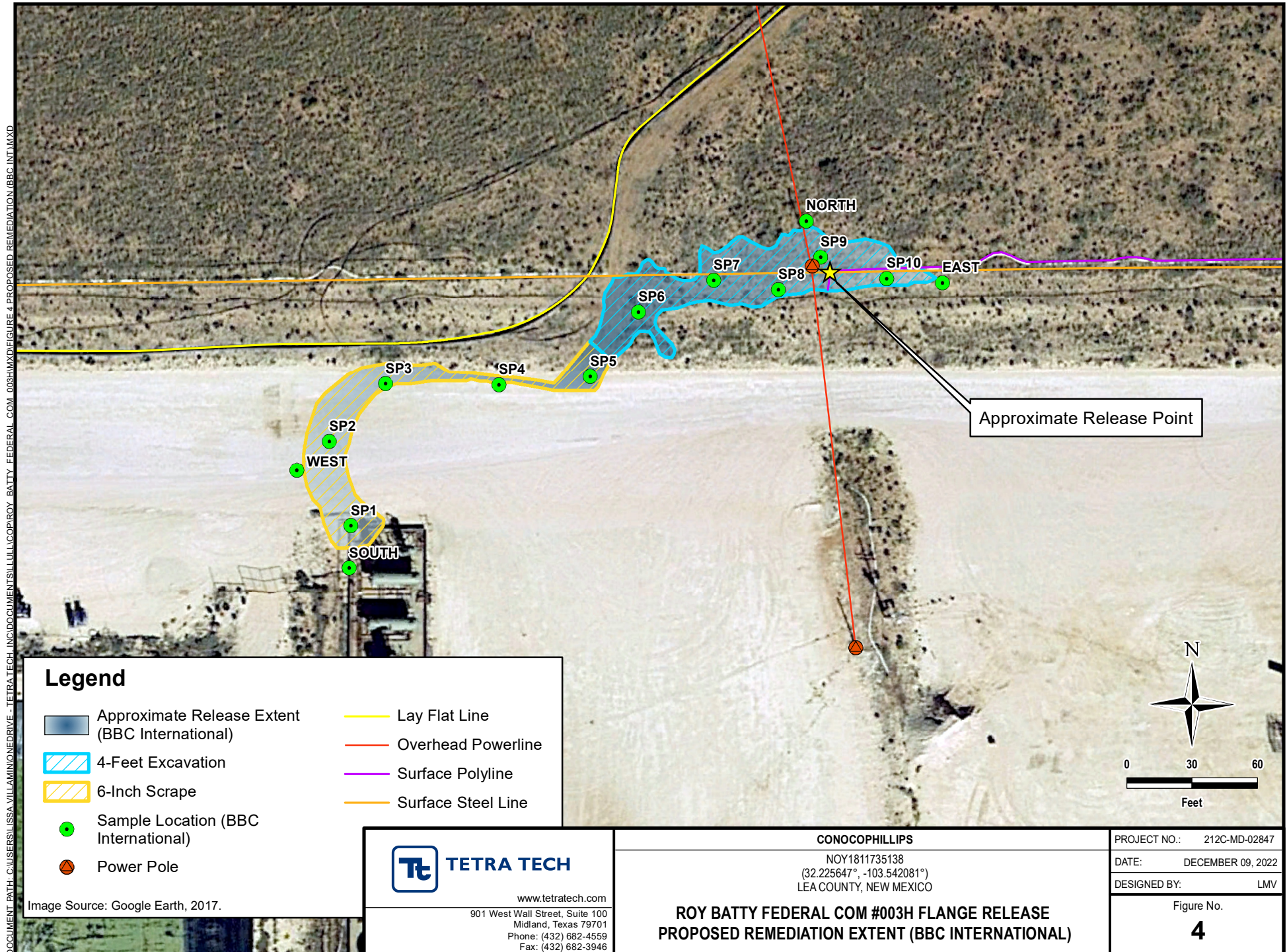
- Appendix A – C-141 Forms
- Appendix B – Regulatory Correspondence &
Delineation Workplan (BBC International Incorporated, 2018)
- Appendix C – Site Characterization Data
- Appendix D – Seed Mixture Details

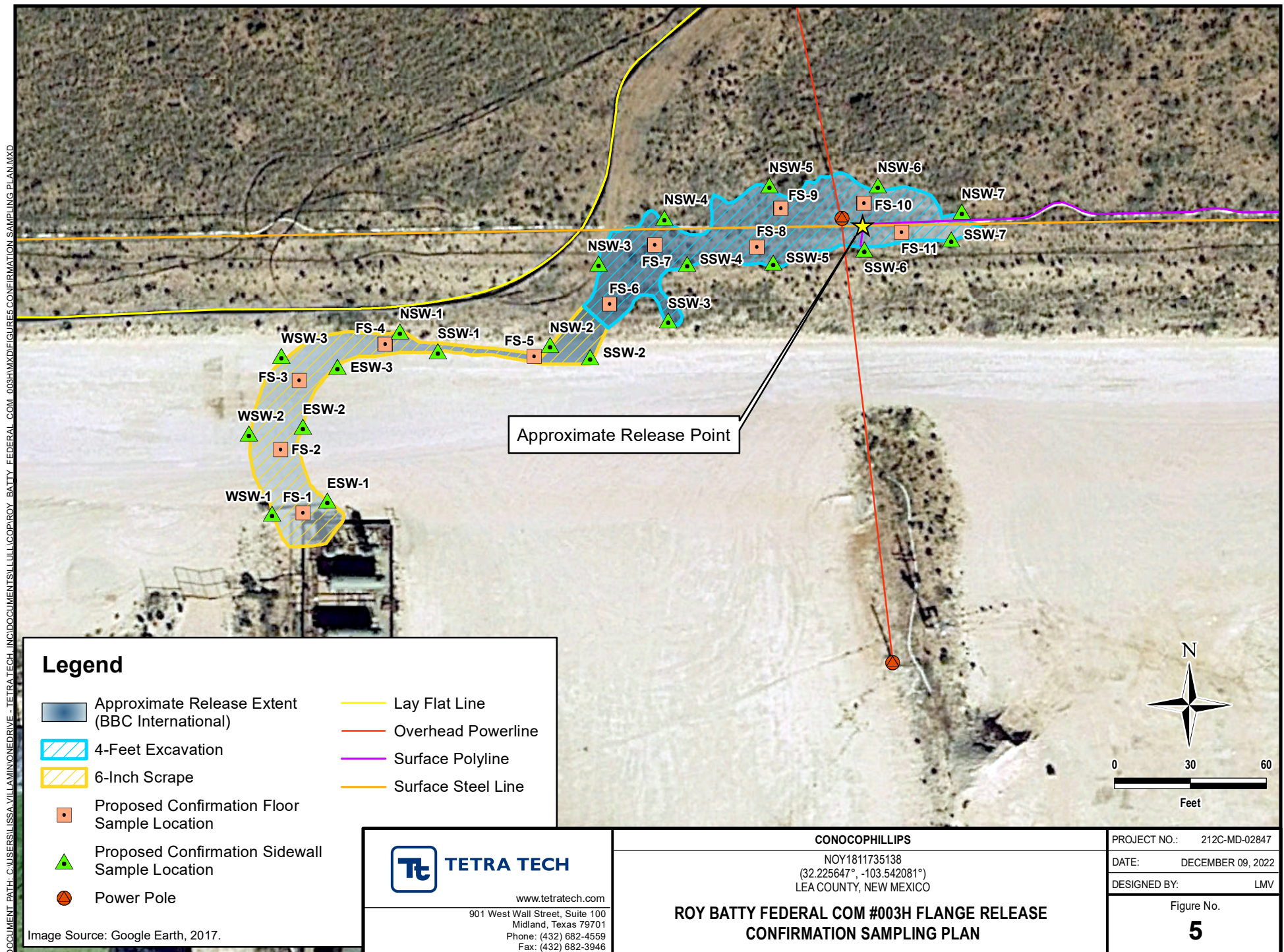
FIGURES











TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
2018 SOIL ASSESSMENT - nOY1811735138
CONOCOPHILLIPS
ROY BATTY FEDERAL COM #003H RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Chloride ¹		BTEX ²										TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
		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	Q	mg/kg	
SP1	6/6/2018	1	48.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		6	80.0		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP2	6/6/2018	1	160		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		6	112		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP3	6/6/2018	1	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		6	32.0		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP4	6/6/2018	1	176		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		6	224		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP5	6/6/2018	1	624		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		2	176		NA		NA		NA		NA		NA		NA		NA		NA		-	
		7	256		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP6	6/6/2018	1	5,600	QM-07	< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		4	20,400		NA		NA		NA		NA		NA		NA		NA		NA		-	
		6	6,660		NA		NA		NA		NA		NA		NA		NA		NA		-	
		8	1,660		NA		NA		NA		NA		NA		NA		NA		NA		-	
		9	176		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP7	6/6/2018	1	4,320		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
	6/7/2018	4	2,400		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP8	6/7/2018	1	5,680		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		4	1,720		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP9	6/7/2018	1	7,200		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		3	9,330		NA		NA		NA		NA		NA		NA		NA		NA		-	
SP10	6/7/2018	1	7,200		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		-	
		4	3,760		NA		NA		NA		NA		NA		NA		NA		NA		-	
North	6/7/2018	surface	192		NA		NA		NA		NA		NA		NA		NA		NA		-	
South	6/7/2018	surface	256		NA		NA		NA		NA		NA		NA		NA		NA		-	
East	6/7/2018	surface	400		NA		NA		NA		NA		NA		NA		NA		NA		-	
West	6/7/2018	surface	256		NA		NA		NA		NA		NA		NA		NA		NA		-	

NOTES:

ft. Feet

bgs Below ground surface

ppm Parts per million

mg/kg Milligrams per kilogram

NA Sample not analyzed

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

1 Method SM4500CI-B

2 Method 8021B

3 Method 8015M

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.

Bold and italicized values indicate exceedance of proposed RRALs and Reclamation Requirements for surface soils outside of oil and gas production areas.

Shaded rows indicate intervals proposed for excavation.

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

Form C-141
Revised April 3, 2017
Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating, LLC (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland, TX 79701	Telephone No. 432-683-7443
Facility Name: Roy Batty Federal Com #003H	Facility Type: Flowline
Surface Owner: Private	Mineral Owner: Federal
API No.	30-025-41333

LOCATION OF RELEASE

Unit Letter O	Section 11	Township 24S	Range 33E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude 32.2259 Longitude -103.5410 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 60 bbl.	Volume Recovered 50 bbl.
Source of Release Flowline Leak	Date and Hour of Occurrence April 21, 2018 9:00am	Date and Hour of Discovery April 21, 2018 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu – NMOCD Shelley Tucker - BLM	
By Whom? Sheldon Hitchcock	Date and Hour April 21, 2018 12:51pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED

By Olivia Yu at 9:36 am, Apr 27, 2018

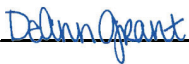

Describe Cause of Problem and Remedial Action Taken.*

The release was due to the flange coupler on the Flex FP150 line corroding causing it to leak. Flange coupler is being replaced.

Describe Area Affected and Cleanup Action Taken.*

The release was within a pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: DeAnn Grant		Approved by Environmental Specialist: 	
Title: HSE Administrative Assistant	Approval Date: 4/27/2018	Expiration Date:	
E-mail Address: agrant@concho.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>	
Date: April 25, 2018	Phone: 432-253-4513	see attached directive	

* Attach Additional Sheets If Necessary

1RP-5029

nOY1811735138

pOY1811735454

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 4/25/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1RP-5029 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 5/27/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

From: Sheldon Hitchcock
To: [Yu, Olivia, EMNRD; stucker@blm.gov](#)
Cc: [Robert McNeill](#); [Rebecca Haskell](#); [Dakota Neel](#); [Christopher Gray](#); [DeAnn Grant](#)
Subject: (Notification) Roy Batty Federal Com #003H
Date: Saturday, April 21, 2018 12:51:06 PM

Ms. Yu/Ms. Tucker,

COG Operating LLC (OGRID# 239137) is reporting a release from a flowline adjacent to the Roy Batty Federal #003.

Release Location:

ULSTR: O-11-24S-33E

Lat/Long: 32.2254181,-103.5406799

Release Volume: >25bbbls

Recovery Volume: Ongoing

COG will have the release evaluated and will submit an Initial C-141. If you have any questions or concerns please do not hesitate to contact me.

Thank you,

Sheldon Hitchcock
HSE Coordinator

Sent from my iPhone

NOTICE: The information in this email may be confidential and/or privileged. If you are not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any review, dissemination or copying of this email and its attachments, if any, or the information contained herein, is prohibited. If you have received this email in error, please immediately notify the sender by return email and delete this email from your system. Further, any contract terms proposed or purportedly accepted in this email are not binding and are subject to management's final approval as memorialized in a separate written instrument, excluding electronic correspondence, executed by an authorized representative of COG Operating LLC or its affiliates.

Incident ID	NOY1811735138
District RP	1RP-5029
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>55 _____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input 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.

Oil Conservation Division

Incident ID	NOY1811735138
District RP	1RP-5029
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: Ike Tavaréz Title: Program Manager, Remediation

Signature:  Date: 12/14/22

email: ike.tavaréz@conocophillips.com Telephone: 432-685-2573

OCD Only

Received by: Jocelyn Harimon Date: 12/16/2022

Incident ID	NOY1811735138
District RP	1RP-5029
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.

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Printed Name: Ike Tavarez Title: Program Manager, Remediation
Signature:  Date: 12/14/22
email: ike.tavarez@conocophillips.com Telephone: 432-685-2573

OCD Only

Received by: Jocelyn Harimon Date: 12/16/2022

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

Signature:  Date: 12/19/2022

APPENDIX B
Regulatory Correspondence
&
Delineation Workplan
(BBC International Incorporated, 2018)



PHONE (575) 397-6388 • FAX (575) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805
E-MAIL: cbrunson@bbcinternational.com

DELINEATION WORKPLAN

COG – ROY BATTY FEDERAL COM #003H (Leak Date: 4/21/18)

RP # 1RP-5029

This delineation workplan and remediation proposal addresses the release associated with RP # 1RP-5029.

The following information includes:

1. Appropriate completed and signed C-141 pages.
2. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
3. GPS information for sample points and sample methodology.
4. Depth to groundwater information (i.e., pdf of OSE search results, USGS search results, and/or copy of Chevron groundwater trend map).
5. Watercourse/features map within 1000 feet.
6. BLM Cave Karst map.
7. FEMA National Flood map.
8. Laboratory analysis results summary table and original laboratory analysis reports.
9. Potentially other pertinent information as necessary for site specific purposes.

Based on the information included in this package and the NMOCD rules, the following remediation is proposed:

COG will excavate the spill area as depicted on the following site diagram. The leak areas near SP1- SP5 (ORANGE shade on diagram) will be excavated to a depth of 6 inches. Approximately 48 cubic yards of material will be removed and hauled to proper disposal. Sidewall confirmation samples will be collected at an interval no greater than 50 feet and analyzed at a laboratory. The remediation will be completed within 90 days of regulatory approval.

SITE RECLAMATION AND RESTORATION

COG will perform the reclamation and revegetation in the pasture area per NMED 19.15.29.13. The reclamation will be achieved by removing the soil to a depth of 4.0' below surface near SP6-SP10. Approximately 640 cubic yards of material will be removed and hauled to proper disposal. Once excavated, soil samples will be collected from the sidewalls to confirm the removal of impact soil greater than 600

ENVIRONMENTAL CONSULTING AND REMEDIATION SERVICES
HOBBS, NEW MEXICO • WEBSITE: www.bbcinternational.com • HOUSTON, TEXAS

DELINEATION WORKPLAN

**COG – ROY BATTY FEDERAL COM #003H
(Leak Date: 4/21/18)**

RP # 1RP-5029

mg/kg chlorides or background (whichever is greater) at an interval of no greater than 50 feet spacing. The backfilled material will be non-contaminated with concentrations below 600 mg/kg chlorides and reseeded per BLM guidelines when appropriate.

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

All excavated materials will be disposed of at an NMOCD-approved disposal facility.

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5029
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?	420 (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
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- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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Form C-141

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	1RP-5029
Facility ID	
Application ID	

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Printed Name: Rebecca HaskellTitle: Senior HSE CoordinatorSignature: Rebecca HaskellDate: 11/16/18email: rhaskell@concho.comTelephone: (432) 683-7443**OCD Only**

Received by: _____

Date: _____

Form C-141

Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5029
Facility ID	
Application ID	

Remediation Plan

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Printed Name: Rebecca HaskellTitle: Senior HSE CoordinatorSignature: Rebecca HaskellDate: 11/6/18email: rhaskell@concho.comTelephone: (432) 683-7443**OCD Only**

Received by: _____ Date: _____

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

Signature: _____

Date: _____

COG, Roy Batty Federal Com #003H

Leak date: 4/21/18
Lea County, NM
AP# 30-025-41333
1RP-5029

Legend

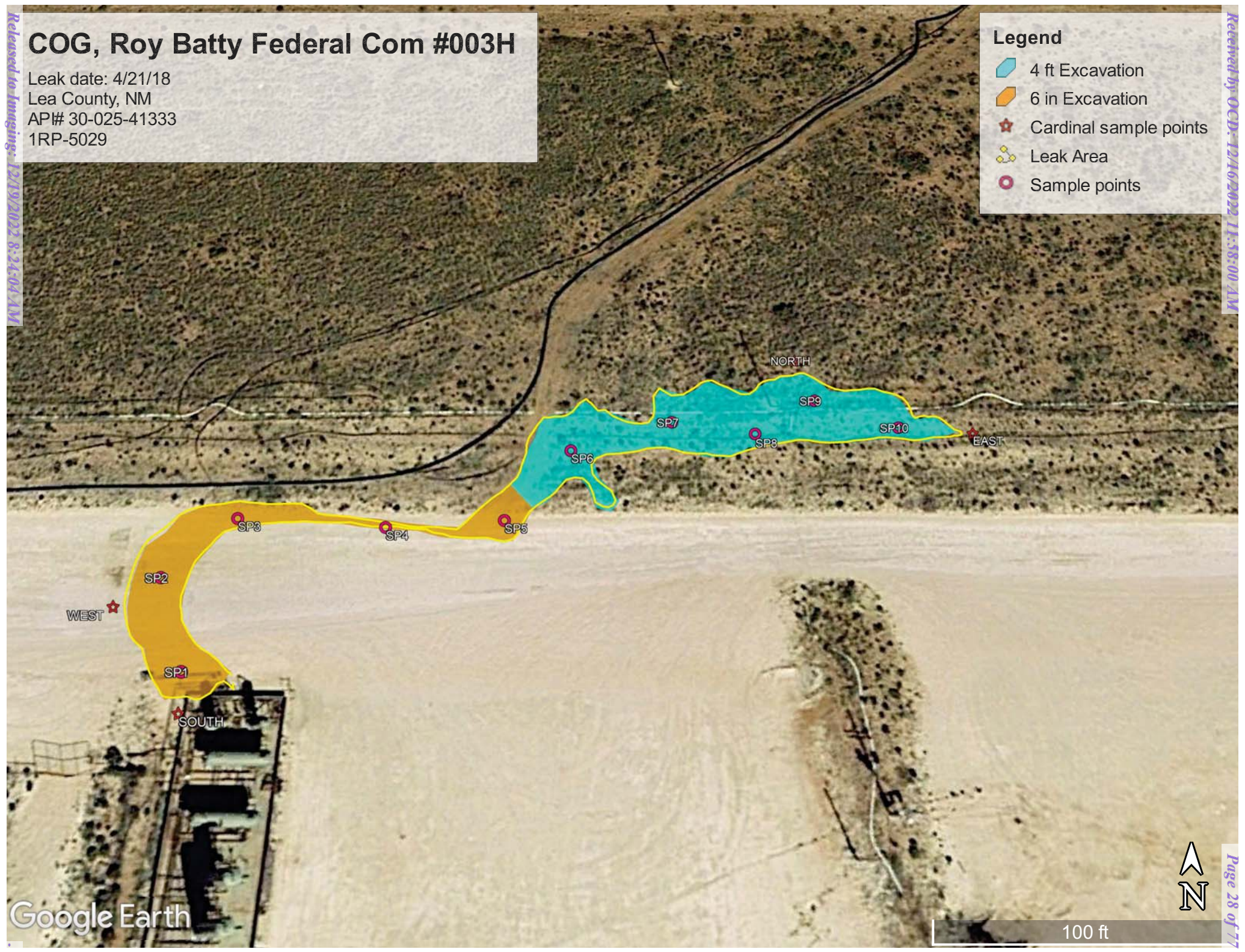
4 ft Excavation

6 in Excavation

Cardinal sample points

Leak Area

Sample points



COG, Roy Batty Federal Com #003H

Sample points

SP1, N 32.22568 W-103.54212

SP2, N 32.22579 W-103.54213

SP3, N 32.22585 W-103.54208

SP4, N 32.22584 W-103.54189

SP5, N 32.22585 W-103.54175

SP6, N 32.22593 W-103.54167

SP7, N 32.22597 W-103.54154

SP8, N 32.22595 W-103.54144

SP9, N 32.22599 W-103.54136

SP10, N 32.22596 W-103.54125

NORTH, N 32.22605 W-103.54138

SOUTH, N 32.22564 W-103.54211

EAST, N 32.22595 W-103.54116

WEST, N 32.22575 W-103.54221



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)		(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 03917 POD1	4	1	3	13	24S	33E	638374	3565212

Driller License: 1058	Driller Company: KEY'S DRILLING & PUMP SERVICE	
Driller Name: CASE KEY		
Drill Start Date: 03/01/2016	Drill Finish Date: 03/04/2016	Plug Date:
Log File Date: 03/11/2016	PCW Rcv Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 30 GPM
Casing Size: 6.00	Depth Well: 600 feet	Depth Water: 420 feet

Water Bearing Stratifications:	Top	Bottom	Description
	520	600	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom	
	300	600	

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.

11/5/18 6:13 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Water Column/Average Depth to Water











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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

		POD														
		Sub-			Q	Q	Q									Water
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Distance	Depth	Well	Depth	Water Column
C 03917 POD1		C	LE	4	1	3	13	24S	33E	638374	3565212		2169	600	420	180
C 02308		CUB	LE	1	3	1	10	24S	33E	634953	3567364*		2339	40	20	20
C 03662 POD1		C	LE	3	1	2	23	24S	33E	637342	3564428		2656	550	110	440
C 04014 POD4		CUB	LE	3	4	2	01	24S	33E	639295	3568859		2688	96	86	10
C 03666 POD1		C	LE	2	3	4	13	24S	33E	639132	3565078		2733	650	390	260
C 04014 POD5		CUB	LE	1	4	2	01	24S	33E	639284	3569086		2835	95	85	10
C 04014 POD3		CUB	LE	2	4	2	01	24S	33E	639497	3569007		2938	95	87	8
C 04014 POD1		CUB	LE	1	1	3	06	24S	34E	639811	3568638		2974	91	81	10
C 04014 POD2		CUB	LE	4	4	2	01	24S	33E	639656	3568917		3003	95	81	14
C 03601 POD1		CUB	LE	4	4	2	23	24S	33E	638124	3563937		3259			

Average Depth to Water: 151 feet

Minimum Depth: 20 feet

Maximum Depth: 420 feet

Record Count: 10

UTM NAD83 Radius Search (in meters):

Easting (X): 637276

Northing (Y): 3567084

Radius: 3400

*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.

11/5/18 6:11 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:


Groundwater

Geographic Area:

New Mexico

GO

Click to hide News Bulletins

- [Please see news on new formats](#)
- **UPDATE, 11/2: The USGS continues to make progress on restoring all of its gages. As of 3 p.m. Friday, November 2, less than 3 percent of USGS streamgages are still not transmitting due to an issue with the telemetry system that records and transmits streamgage data. The USGS will continue to work through the weekend to bring the streamgages back online. Read [more](#)**
- [Full News](#) 

Groundwater levels for New Mexico

Click to hide state-specific text

Site Selection Results -- 3591 sites found

County = Lea

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

Data for individual sites can be obtained by selecting the site number below

Agency	Site Number	Site Name	Period of Record		Levels
			Begin Date	End Date	
		24s.33e.11			

[Questions about sites/data?](#)
[Feedback on this web site](#)
[Automated retrievals](#)
[Help](#)
[Data Tips](#)
[Explanation of terms](#)
[Subscribe for system changes](#)
[News](#)

[Accessibility](#) [Plug-Ins](#) [FOIA](#) [Privacy](#) [Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)



Title: Groundwater levels -- 3591 sites found

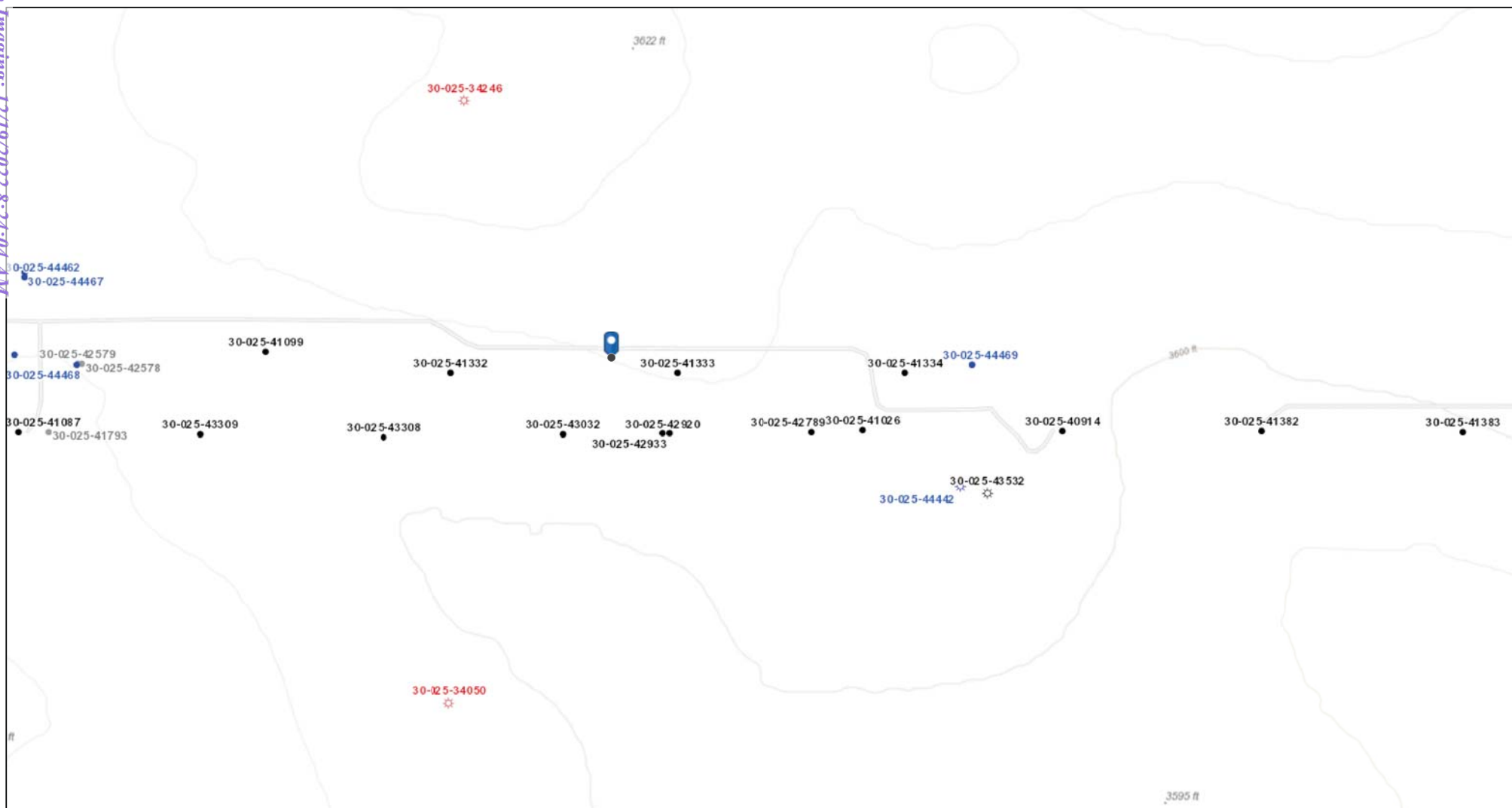
URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>

Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2018-11-05 20:57:07 EST

7.66 1.17 nadww01

Roy Batty Fed Com #003H, Topo Map w/ water features



11/6/2018 8:55:21 AM

Well Locations - Small Scale

- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

Well Locations - Large Scale

- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2, Plugged
- CO2, Temporarily Abandoned

Gas Active

- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active

Injection, Cancelled

- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned

Oil, New

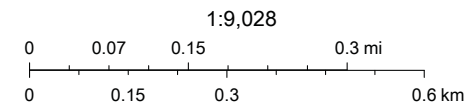
- Oil, Plugged
- Oil, Temporarily Abandoned

Salt Water Injection, Active

- Salt Water Injection, Cancelled
- Salt Water Injection, New

Oil, Active

- Oil, Cancelled




Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, OCD


COG, Roy Batty Fed Com #003H

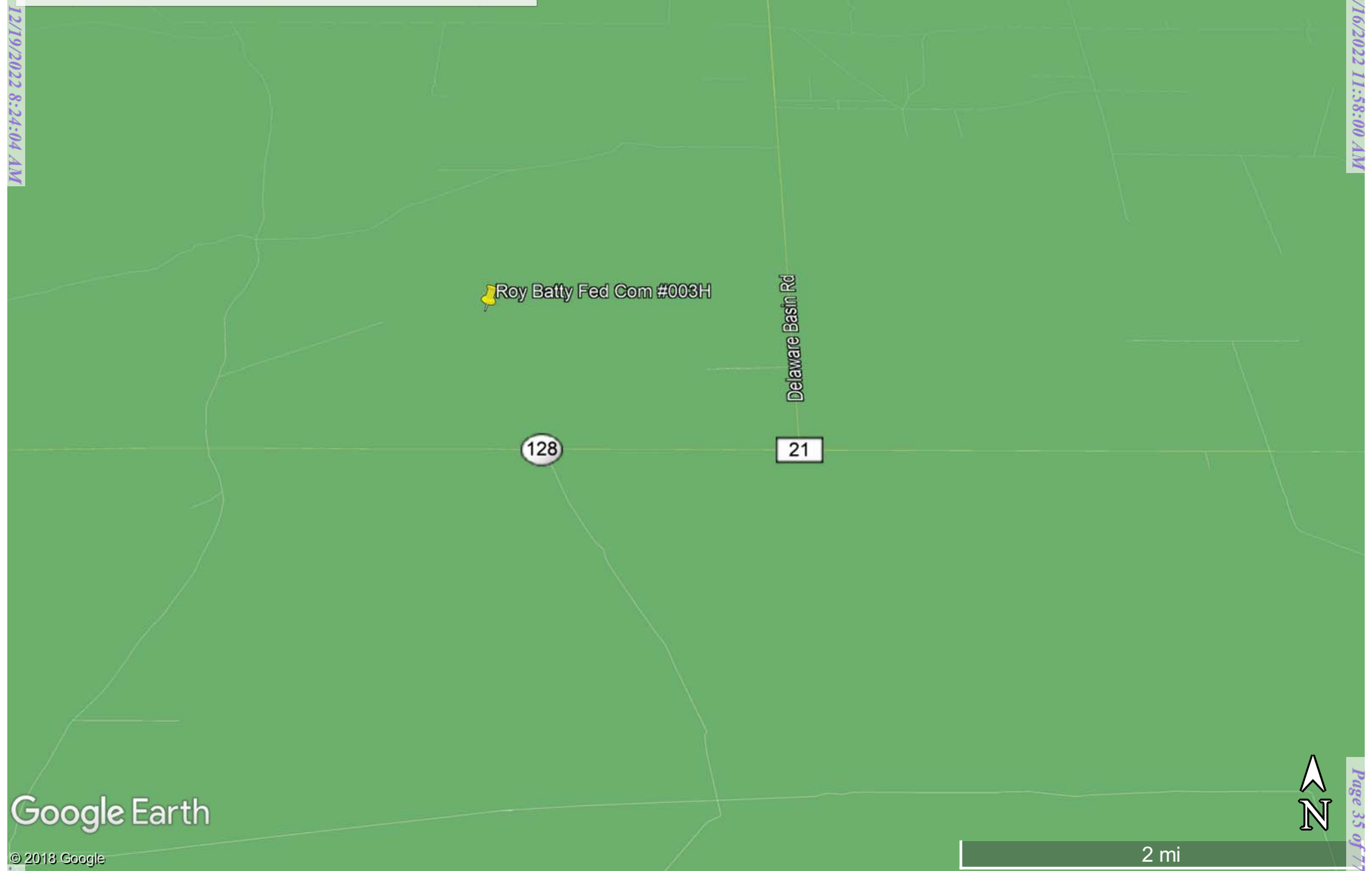
Leak date: 4/21/18
Lea County, NM
AP# 30-025-41333
1RP-5029

BLM Cave Karst Map

Legend

 LOW potential

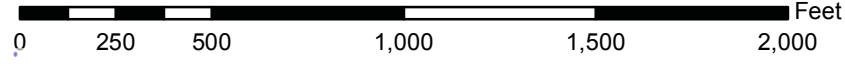
 Roy Batty Fed Com #003H



National Flood Hazard Layer FIRMette



32°13'47.74"N



1:6,000

32°13'17.30"N

Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone X
		NO SCREEN Area of Minimal Flood Hazard Zone X
OTHER AREAS		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/6/2018 at 11:44:42 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Received by: 12/19/2022 8:24:04 AM
MBC 05123009

Received by: 12/19/2022 11:58:00 AM
Page 36 of 77

Laboratory Analytical Results Summary
Roy Batty Federal Com #003H

		Sample ID	SP1 @ 1'	SP1 @ 6'
Analyte	Method	Date	6/6/18	6/6/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		48	80
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP2 @ 1'	SP2 @ 6'
Analyte	Method	Date	6/6/18	6/6/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		160	112
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP3 @ 1'	SP3 @ 6'
Analyte	Method	Date	6/6/18	6/6/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		32	32
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP4 @ 1'	SP4 @ 6'
Analyte	Method	Date	6/6/18	6/6/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		176	224
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP5 @ 1'	SP5 @ 2'	SP5 @ 7'
Analyte	Method	Date	6/6/18	6/6/18	6/6/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a
Chloride	SM4500Cl-B		624	176	256
GRO	TPH 8015M		<10.0	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a

		Sample ID	SP6 @ 1'	SP6 @ 4'	SP6 @ 6'	SP6 @ 8'	SP6 @ 9'
Analyte	Method	Date	6/6/18	6/6/18	6/6/18	6/6/18	6/6/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		5600	20400	6660	1660	176
GRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a

		Sample ID	SP7 @ 1'	SP7 @ 4'
Analyte	Method	Date	6/6/18	6/7/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		4320	2400
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP8 @ 1'	SP8 @ 4'
Analyte	Method	Date	6/7/18	6/7/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		5680	1720
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP9 @ 1'	SP9 @ 3'
Analyte	Method	Date	6/7/18	6/7/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		7200	9330
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

		Sample ID	SP10 @ 1'	SP10 @ 4'
Analyte	Method	Date	6/7/18	6/7/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a
Chloride	SM4500Cl-B		7200	3760
GRO	TPH 8015M		<10.0	n/a
DRO	TPH 8015M		<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a

Cardinal		Sample ID	NORTH @ SURFACE	SOUTH @ SURFACE
Analyte	Method	Date	6/7/18	6/7/18
			mg/kg	mg/kg
Chloride	SM4500Cl-B		192	256

Cardinal		Sample ID	EAST @ SURFACE	WEST @ SURFACE
Analyte	Method	Date	6/7/18	6/7/18
			mg/kg	mg/kg
Chloride	SM4500Cl-B		400	256



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

June 15, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: ROY BATTERY FED COM #003H

Enclosed are the results of analyses for samples received by the laboratory on 06/13/18 12:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 1 @ 1' (H801603-01)

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	06/13/2018	ND	1.74	87.1	2.00	2.24	
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87	
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988	
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886	
Total BTX	<0.300	0.300	06/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

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	06/14/2018	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 82.7 % 41-142

Surrogate: 1-Chlorooctadecane 87.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 1 @ 6' (H801603-02)

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	06/14/2018	ND	448	112	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 2 @ 1' (H801603-03)

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	06/13/2018	ND	1.74	87.1	2.00	2.24		
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87		
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988		
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886		
Total BTEx	<0.300	0.300	06/13/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/14/2018	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 86.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 2 @ 6' (H801603-04)

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	06/14/2018	ND	448	112	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 3 @ 1' (H801603-05)

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	06/13/2018	ND	1.74	87.1	2.00	2.24		
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87		
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988		
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886		
Total BTEx	<0.300	0.300	06/13/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/14/2018	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 75.0 % 41-142

Surrogate: 1-Chlorooctadecane 77.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 3 @ 6' (H801603-06)

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	06/14/2018	ND	448	112	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 4 @ 1' (H801603-07)

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	06/13/2018	ND	1.74	87.1	2.00	2.24		
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87		
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988		
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886		
Total BTEx	<0.300	0.300	06/13/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/14/2018	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 80.0 % 41-142

Surrogate: 1-Chlorooctadecane 82.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 4 @ 6' (H801603-08)

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	06/14/2018	ND	448	112	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 5 @ 1' (H801603-09)

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	06/13/2018	ND	1.74	87.1	2.00	2.24	
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87	
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988	
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886	
Total BTEx	<0.300	0.300	06/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	06/14/2018	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 80.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.7 % 37.6-147

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 5 @ 2' (H801603-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/14/2018	ND	448	112	400	0.00		

Sample ID: SP 5 @ 7' (H801603-11)

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	06/14/2018	ND	448	112	400	0.00	

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 6 @ 1' (H801603-12)

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	06/13/2018	ND	1.74	87.1	2.00	2.24		
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87		
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988		
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886		
Total BTEx	<0.300	0.300	06/13/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5600	16.0	06/14/2018	ND	432	108	400	3.64	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 79.9 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 6 @ 4' (H801603-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20400	16.0	06/14/2018	ND	432	108	400	3.64	

Sample ID: SP 6 @ 6' (H801603-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6660	16.0	06/14/2018	ND	432	108	400	3.64	

Sample ID: SP 6 @ 8' (H801603-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1660	16.0	06/14/2018	ND	432	108	400	3.64		

Sample ID: SP 6 @ 9' (H801603-16)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/14/2018	ND	432	108	400	3.64	

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/06/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 7 @ 1' (H801603-17)

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	06/13/2018	ND	1.74	87.1	2.00	2.24	
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87	
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988	
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886	
Total BTEx	<0.300	0.300	06/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4320	16.0	06/14/2018	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 82.8 % 41-142

Surrogate: 1-Chlorooctadecane 85.4 % 37.6-147

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 7 @ 4' (H801603-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	06/14/2018	ND	432	108	400	3.64		

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 8 @ 1' (H801603-19)

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	06/13/2018	ND	1.74	87.1	2.00	2.24	
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87	
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988	
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886	
Total BTEx	<0.300	0.300	06/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	06/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 84.7 % 37.6-147

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 8 @ 4' (H801603-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1720	16.0	06/14/2018	ND	432	108	400	3.64		

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 9 @ 1' (H801603-21)

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	06/13/2018	ND	1.74	87.1	2.00	2.24	
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87	
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988	
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886	
Total BTEx	<0.300	0.300	06/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7200	16.0	06/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 82.4 % 41-142

Surrogate: 1-Chlorooctadecane 83.2 % 37.6-147

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 9 @ 3' (H801603-22)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	06/14/2018	ND	432	108	400	3.64	

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 10 @ 1' (H801603-23)

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	06/13/2018	ND	1.74	87.1	2.00	2.24	
Toluene*	<0.050	0.050	06/13/2018	ND	1.75	87.4	2.00	1.87	
Ethylbenzene*	<0.050	0.050	06/13/2018	ND	1.77	88.3	2.00	0.988	
Total Xylenes*	<0.150	0.150	06/13/2018	ND	5.50	91.7	6.00	0.886	
Total BTEx	<0.300	0.300	06/13/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7200	16.0	06/14/2018	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2018	ND	187	93.4	200	6.90	
DRO >C10-C28*	<10.0	10.0	06/13/2018	ND	186	92.9	200	7.89	
EXT DRO >C28-C36	<10.0	10.0	06/13/2018	ND					

Surrogate: 1-Chlorooctane 82.6 % 41-142

Surrogate: 1-Chlorooctadecane 85.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	06/13/2018	Sampling Date:	06/07/2018
Reported:	06/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FED COM #003H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP 10 @ 4' (H801603-24)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3760	16.0	06/14/2018	ND	432	108	400	3.64		

Sample ID: NORTH @ SURFACE (H801603-25)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	06/14/2018	ND	432	108	400	3.64		

Sample ID: SOUTH @ SURFACE (H801603-26)

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	06/14/2018	ND	432	108	400	3.64		

Sample ID: EAST @ SURFACE (H801603-27)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	06/14/2018	ND	432	108	400	3.64	

Sample ID: WEST @ SURFACE (H801603-28)

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	06/14/2018	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 23 of 25

Company Name: BBC International, Inc. Project Manager: Cliff Brunson Address: P.O. Box 805 City: Hobbs State: NM Zip: 88241 Phone #: 575-397-6388 Fax #: 575-397-0397 Project #: Project Owner: COG Project Name: ROY BATTY FED COM #003H (4/21/18) Project Location: LEA COUNTY, NM Sampler Name: JEFF ORNELAS				BILL TO P.O. #: Company: COG Attn: Becky Haskell Address: City: State: Zip: Phone #: Fax #:		ANALYSIS REQUEST																			
FOR LAB USE ONLY Lab I.D. H801603		Sample I.D.		(GRAB OR C/COMP.) # CONTAINERS	MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:				PRESERV. ACID/BASE: ICE / COOL OTHER:	SAMPLING DATE TIME		CI BTEX TPH EXT													
1	SP1 @ 1'	G	1								6/6/18	8:41 AM	✓	✓	✓										
2	SP1 @ 6'	G	1								6/6/18	8:59 AM	✓	✓	✓										
3	SP2 @ 1'	G	1								6/6/18	9:20 AM	✓	✓	✓										
4	SP2 @ 6'	G	1								6/6/18	9:51 AM	✓	✓	✓										
5	SP3 @ 1'	G	1								6/6/18	10:20 AM	✓	✓	✓										
6	SP3 @ 6'	G	1								6/6/18	10:50 AM	✓	✓	✓										
7	SP4 @ 1'	G	1								6/6/18	11:11 AM	✓	✓	✓										
8	SP4 @ 6'	G	1								6/6/18	11:39 AM	✓	✓	✓										
9	SP5 @ 1'	G	1								6/6/18	11:55 AM	✓	✓	✓										
10	SP5 @ 2'	G	1								6/6/18	12:08 PM	✓	✓	✓										

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Relinquished By: Jeff Ornelas Date: 6/7/18 Time: 5:00pm	Received By: [Signature] Date: 6/13/18 Time: 12:35	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #: REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: -7.8% / -7.85%	Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: [Signature]

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#15



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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[illegible]

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3043

Page 25 of 25

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST											
Project Manager: Cliff Brunson				P.O. #:				<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH EXT</div> </div>											
Address: P.O. Box 805				Company: COG															
City: Hobbs State: NM Zip: 88241				Attn: Becky Haskell															
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:															
Project #: Project Owner: COG				City:															
Project Name: ROY BATTY FED COM #003H (4/21/18)				State: Zip:															
Project Location: LEA COUNTY, NM				Phone #:															
Sampler Name: JEFF ORNELAS				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RAB OR (COMP.) # CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME						
H80D1603																			
21	SP9 @ 1'	G-1			✓				✓			6/7/18	11:22 AM	✓	✓	✓			
22	SP9 @ 3'	G-1			✓				✓			6/7/18	11:50 AM	✓					
23	SP10 @ 1'	G-1			✓				✓			6/7/18	1:20 PM	✓	✓	✓			
24	SP10 @ 4'	G-1			✓				✓			6/7/18	2:11 PM	✓					
25	NORTH @ SURFACE	G-1			✓				✓			6/7/18	2:30 PM	✓					
26	SOUTH @ SURFACE	G-1			✓				✓			6/7/18	3:11 PM	✓					
27	EAST @ SURFACE	G-1			✓				✓			6/7/18	2:40 PM	✓					
28	WEST @ SURFACE	G-1			✓				✓			6/7/18	2:50 PM	✓					
30 6/18/18																			

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Relinquished By: Jeff Ornelas	Date: 6/7/18 Time: 5:00pm	Received By: [Signature]	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By: [Signature]	Date: 6/13/18 Time: 12:35	Received By: [Signature]	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) -7.8°C -7.85°C		Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) [Signature]	
Sampler - UPS - Bus - Other:		REMARKS:		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#75

Dickerson, Ryan

From: Llull, Christian
Sent: Thursday, December 8, 2022 3:18 PM
To: Dickerson, Ryan
Subject: Fwd: The Oil Conservation Division (OCD) has rejected the application, Application ID: 160531

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

To whom it may concern (c/o Christian Llull for COG OPERATING LLC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nOY1811735138, for the following reasons:

- **The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.**
- **1RP-5029 closed. Refer to incident #nOY1811735138 in all future communications.**
- **Base and sidewalls samples will need to be representative of no more than 200 square feet and analyzed for all constituents in Table I.**
- **Please submit a complete report through the OCD Permitting website by 3/3/2023.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 160531.

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

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

Thank you,
Brittany Hall
Projects Environmental Specialist - A
505-517-5333
Brittany.Hall@emnrd.nm.gov

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

APPENDIX C

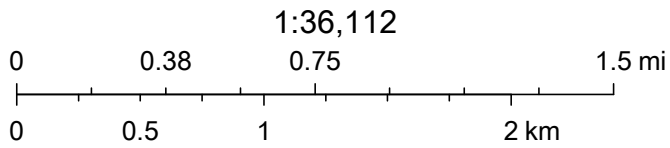
Site Characterization Data

OCD Waterbodies Map



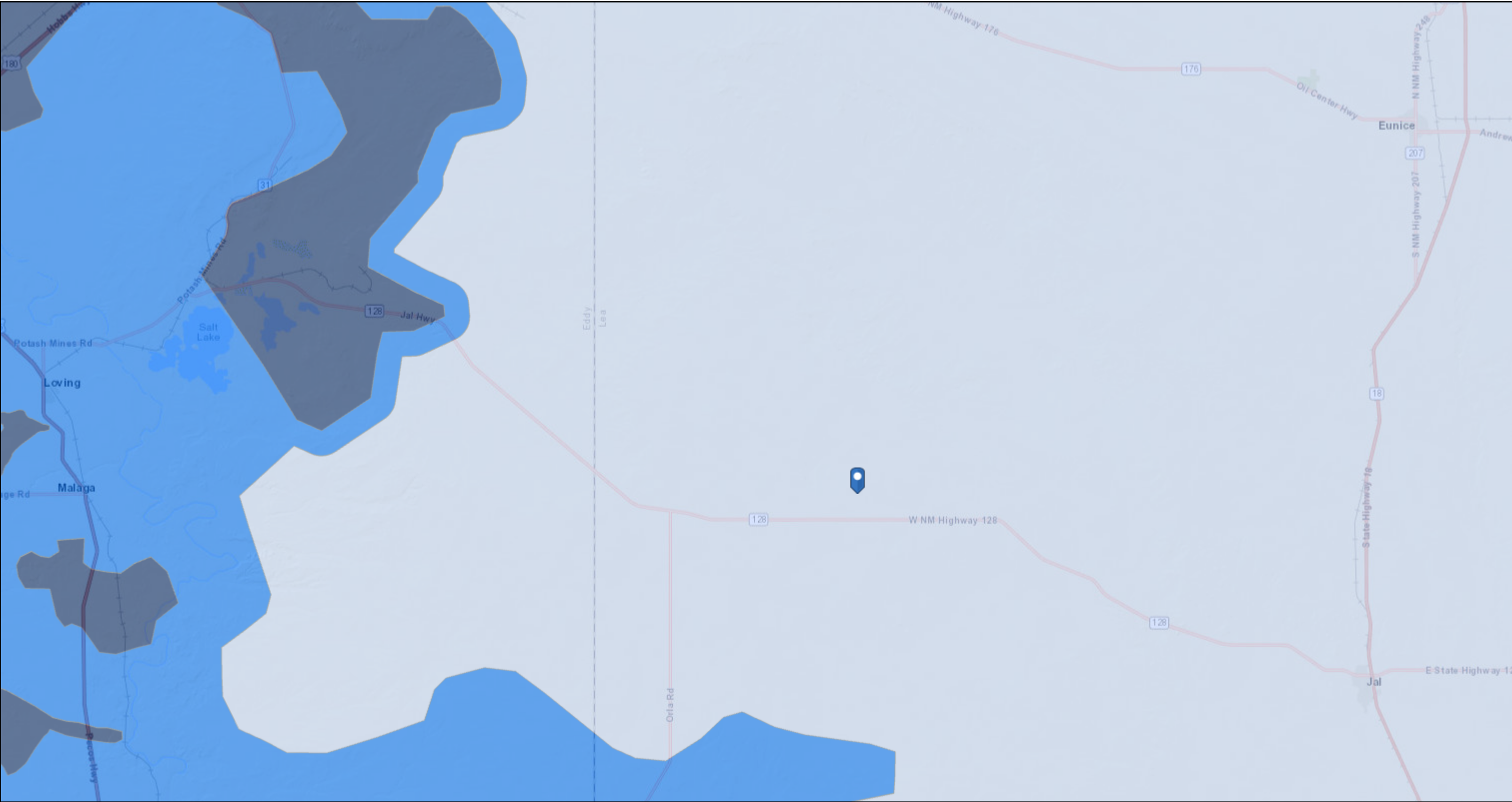
9/20/2022, 9:21:57 AM

- OSW Water Bodys
- OSE Streams



Esri, HERE, Garmin, Maxar, NM OSE

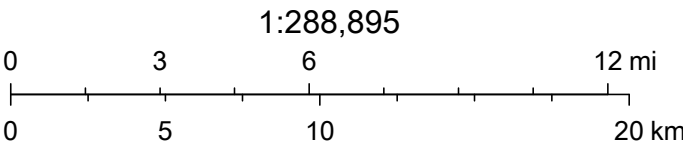
OCD Karst Potential Map



9/20/2022, 9:22:58 AM

Karst Occurrence Potential

- High
- Medium
- Low



BLM, OCD, New Mexico Tech, Bureau of Land Management, Esri, HERE, Garmin, NGA, USGS, NPS



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
C 03917 POD1	C	LE		4	1	3	13	24S	33E	638374	3565212	1535	600	420	180
C 03662 POD1	C	LE		3	1	2	23	24S	33E	637342	3564428	1951	550	110	440
C 04339 POD6	CUB	LE		3	1	2	23	24S	33E	637340	3564386	1992	60		

Average Depth to Water: **265 feet**

Minimum Depth: **110 feet**

Maximum Depth: **420 feet**

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 637376.36

Northing (Y): 3566379.56

Radius: 2000

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.

9/20/22 8:37 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

212C-MD-02847		TETRA TECH		LOG OF BORING DTW			Page 1 of 1							
Project Name: Roy Batty Federal Com #003H Flange Release														
Borehole Location GPS Coordinates: 32.225714°, -103.540550°				Surface Elevation: 3612 ft										
Borehole Number: DTW			Borehole Diameter (in.): 8		Date Started: 7/30/2022		Date Finished: 7/30/2022							
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>∇</u> DRY ft Upon Completion of Drilling <u>∇</u> DRY ft Remarks:		
												MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5											◆◆◆	-- CALICHE: Pale brown to tan, fine- to coarse-grained, hard, dry (Caliche Pad) -SM- SILTY SAND: Light brown, fine- to medium-grained, dense to very dense, dry, with Caliche nodules	1	
10											◆◆◆			
15											◆◆◆	-SM- CALICHE: Light brown to tan, fine- to medium-grained, hard, dry, weakly to moderately cemented	14	
20											◆◆◆			
25											◆◆◆	-SP- SAND: Light brown to brown, fine- to medium-grained, dense, dry, with occasional silt pockets	23	
30											◆◆◆			
35											◆◆◆			
40											◆◆◆			
45											◆◆◆			
50											◆◆◆	-- SHALE: Red, hard, dry	47	
55											◆◆◆			

Bottom of borehole at 55.0 feet.

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample	Acetate Liner Vane Shear Discrete Sample Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary	Hand Auger Air Rotary Direct Push Core Barrel	Notes: Surface elevation is an estimated value based on Google Earth data.
Logger:		Drilling Equipment: Air Rotary		Driller: Scarborough Drilling

APPENDIX D

Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	Site signage and location information; Roy Batty Federal Com CTB.	1
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View south, southwest. Separators located along the western edge of the pad.	2
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View southeast. View from the lease road towards the lease pad.	3
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View west. View from lease road, looking towards the west. Assumed flow path, no visible evidence of impact.	4
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View northeast. North side of lease road. Assumed flow path, no visible evidence of impact.	5
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View southwest. Sparse vegetation along the likely flow path, heading back towards the southwest.	6
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



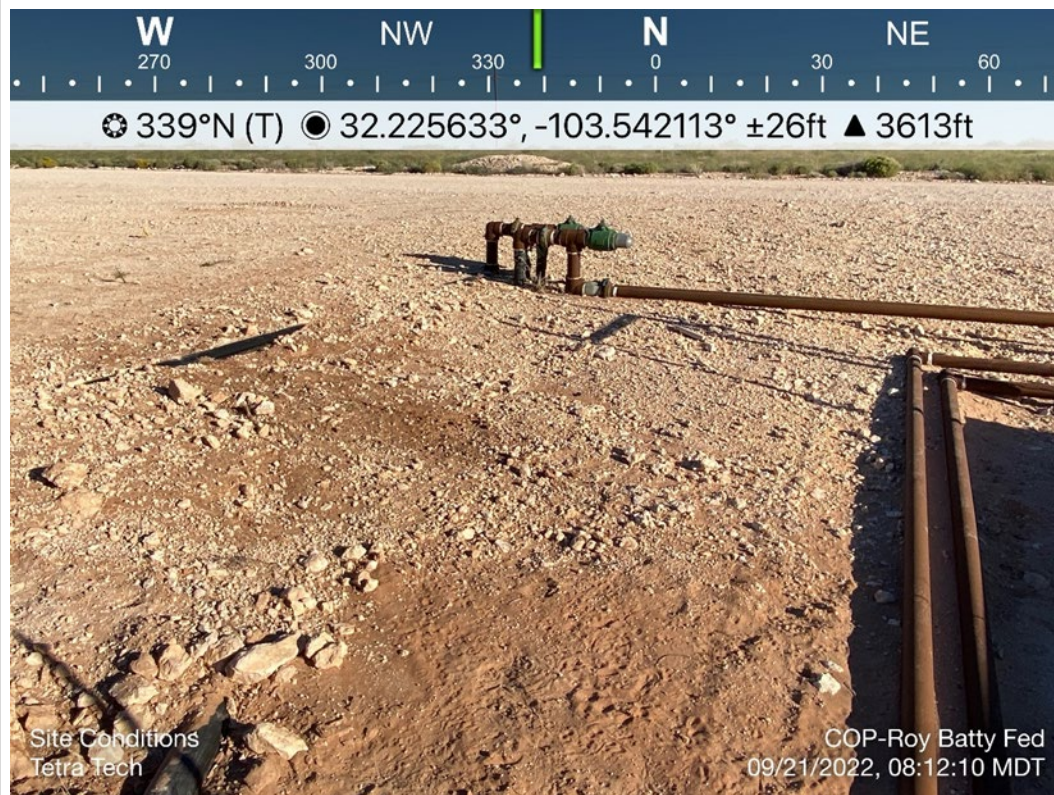
TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View southwest. Approximate release point in the pasture north of the pad, sparse vegetation present.	7
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View southwest. Sparse vegetation east of the approximate release point.	8
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View southwest. No visible evidence of impact.	9
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02847	DESCRIPTION	View north northwest. Southern end of release extent. No visible evidence of impact.	10
	SITE NAME	ConocoPhillips Roy Batty Fed Com #003H	9/21/2022

APPENDIX E

BLM Seed Mixture Details

(27)

BLM Serial #:

Company Reference:

3.2 Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed: Pounds of seed x percent purity x percent germination = pounds pure live seed

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 167824

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 167824
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	12/19/2022