TETRA TECH

January 31, 2022

Bradford Billings
Hydrologist/E.Spec.A
District 2 Artesia
1220 South St. Francis Drive
Oil Conservation Division
Santa Fe, NM 87505

Re: Release Characterization and Closure Request
ConocoPhillips
Heritage Concho
RJ Unit 110 Release
Unit Letter P & O, Section 27, Township 17 South, Range 29 East
Eddy County, New Mexico
Incident ID# NMLB1022357667
2RP-427

Mr. Billings:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess two coincident Heritage Concho releases and subsequent remedial actions taken at the RJ Unit 110 and 119 release sites (API Nos. 30-015-03152 and 30-015-03146). The release footprints are located in Public Land Survey System (PLSS) Unit Letter P and O, Section 27, Township 17 South, Range 29 East, in Eddy County, New Mexico (Site). The approximate release point occurred at coordinates 32.800000°, -104.056700°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, a release was discovered originating from an injection line at the RJ Unit 110 on October 23, 2009. According to the initial C-141, the cause was a hole in the injection line. Approximately 100 bbls of produced water were released, of which 400 bbls of produced water (mixed with rainwater) were recovered. The release extent reportedly encompassed a 50-foot by 150-foot area of pasture. The NMOCD approved the initial C-141 on August 11, 2010 and subsequently assigned the release the Incident ID NMLB1022357667 and the remediation permit (RP) number 2RP-427. The initial C-141 forms are included in Appendix A.

Prior to this October 23, 2009 RJ Unit 110 release, a release from the RJ Unit 119 was discovered on May 30, 2009. The release was also caused by a hole in a 2-inch steel injection line. Approximately 200 barrels (bbls) of produced water were reported released, of which approximately 150 bbls were recovered. The release extent was reported as approximately 50-feet by 100-feet of pastureland, the footprint for which coincides with the aforementioned October 23, 2009 release. The NMOCD approved the initial C-141 on August 11, 2010 and subsequently assigned the release the Incident ID NMLB1022356827. A separate report will be submitted to NMOCD addressing the May 30, 2009 release incident.

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

SITE CHARACTERIZATION

A site characterization was performed and no sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, playa lakes, stream bodies, 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 in an area of low karst potential.

There are no water wells listed in the New Mexico Office of the State Engineer (NMOSE database located within approximately ½ mile (800 meters) of the site. According to data from one (1) water well listed in the NMOSE database within approximately 1.55 miles (2,500 meters) of the site, the depth to groundwater is 76 feet below ground surface (bgs). The site characterization data are presented in Appendix B.

REGULATORY FRAMEWORK

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

Based on the site characterization, established depth to groundwater, and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

Constituent	Site RRALs
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg

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

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

INITIAL RESPONSE AND ASSESSMENT ACTIVITIES AND REMEDIATION WORK PLANS

A Work Plan dated August 2, 2010 was developed based on the results of initial response and assessment activities conducted at the Site and submitted to NMOCD for approval. A risk-based evaluation was performed for the Site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills, and Releases, dated August 13, 1993. A copy of the Work Plan is presented in Appendix C. The release extents are presented in Figure 6 of the Work Plan.

Following the May 30, 2009 release, and prior to the second release, Concho excavated between 1 and 2 feet of impacted soils from the release site and hauled it offsite for proper disposal. On June 4, 2009 Tetra Tech was at the Site on behalf of Concho to delineate the release. Tetra Tech installed seven (7) hand auger borings (AH-1 through AH-7) and sent select samples to an approved laboratory to be analyzed for TPH via EPA method 8015M, BTEX via EPA Method 8021B, and chlorides via EPA Method 300.0. Elevated chloride concentrations were detected in all auger holes. Elevated TPH and BTEX concentrations were detected in limited locations as well.

To complete delineation of chlorides, Tetra Tech returned to the Site on June 30, 2009 to supervise the installation of ten (10) boreholes (SB-1 through SB-10) to depths ranging from 15 to 35 feet bgs using an

air rotary rig. Analytical results indicated that the maximum extent of chloride concentrations above 1,000 mg/kg extended to depths ranging from 8 feet to 25 feet bgs.

In January and April 2010, following the second (October 23, 2009) release at the Site, Tetra Tech provided oversight of the installation of eleven (11) additional drilled borings to assess the new release. Boring depths ranged from 20 feet to 70 feet bgs. Select samples were analyzed for TPH via EPA method 8015M, BTEX via EPA Method 8021B, and chlorides via EPA Method 300.0. The analytical results associated with the intervals tested indicated chloride impact exceeding 1,000 mg/kg from varying depths, ranging from 6 feet bgs to 50 feet bgs.

A summary of all of the assessment results is presented in Tables 1 and 2 of the Work Plan in Appendix C. All assessment sampling locations are presented in Figure 6 of the Work Plan in Appendix C.

On June 4, 2010, Tetra Tech met with Mike Bratcher of the NMOCD to discuss the assessment results and concerns regarding a deep excavation plan. Native sand dunes in the release area posed safety concerns for lines, equipment operators, and other onsite personnel. Based on the discussion with NMOCD, Tetra Tech and Concho proposed to excavate the release area to various depths ranging from 6 feet to 15 feet bgs. A 40-mil plastic liner was proposed for placement at 4 feet bgs in select excavation areas with deeper chloride impacts.

The Work Plan was approved by Mike Bratcher of NMOCD via email dated August 12, 2010. Concurrence was granted by the Bureau of Land Management (BLM) in an email dated August 11, 2010. Copies of the NMOCD and BLM correspondence are included as Appendix D.

REMEDIATION ACTIVITIES AND VISUAL SITE INSPECTION

According to information provided by Heritage Concho, remediation activities were conducted at the Site per the approved Work Plan. Although there is no photographic documentation of the excavated areas prior to backfilling, and no confirmation samples were collected, the remedial actions are evident in aerial imagery of the release site taken between August 2009 and June 2011. More recent aerial imagery from March 2016 and December 2019 shows the progression of revegetation of the former release Site. Aerial imagery is presented as Appendix E.

To further evaluate the current Site conditions and establishment of vegetation, Tetra Tech conducted a visual inspection at the Site on behalf of ConocoPhillips on December 23, 2021. The visual inspection area is presented in Figure 3.

Photographic documentation from the visual inspection (with stamped GPS coordinates) is presented as Appendix F. A list of field observations describing the Site follow:

- No staining in the reported release footprint; and
- Established vegetative cover that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels.

CONCLUSION

Based on the remediation activities that occurred at the Site in accordance with the approved Work Plan, and as supported by observations made in the December 2021 visual inspection, ConocoPhillips respectfully requests closure for this release.

The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the soil assessment activities for the Site, please call me at (512) 217-7254 or Christian at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Samantha K. Abbott, P.G.
Project Manager

Christian M, Llull, P.G.
Program Manager

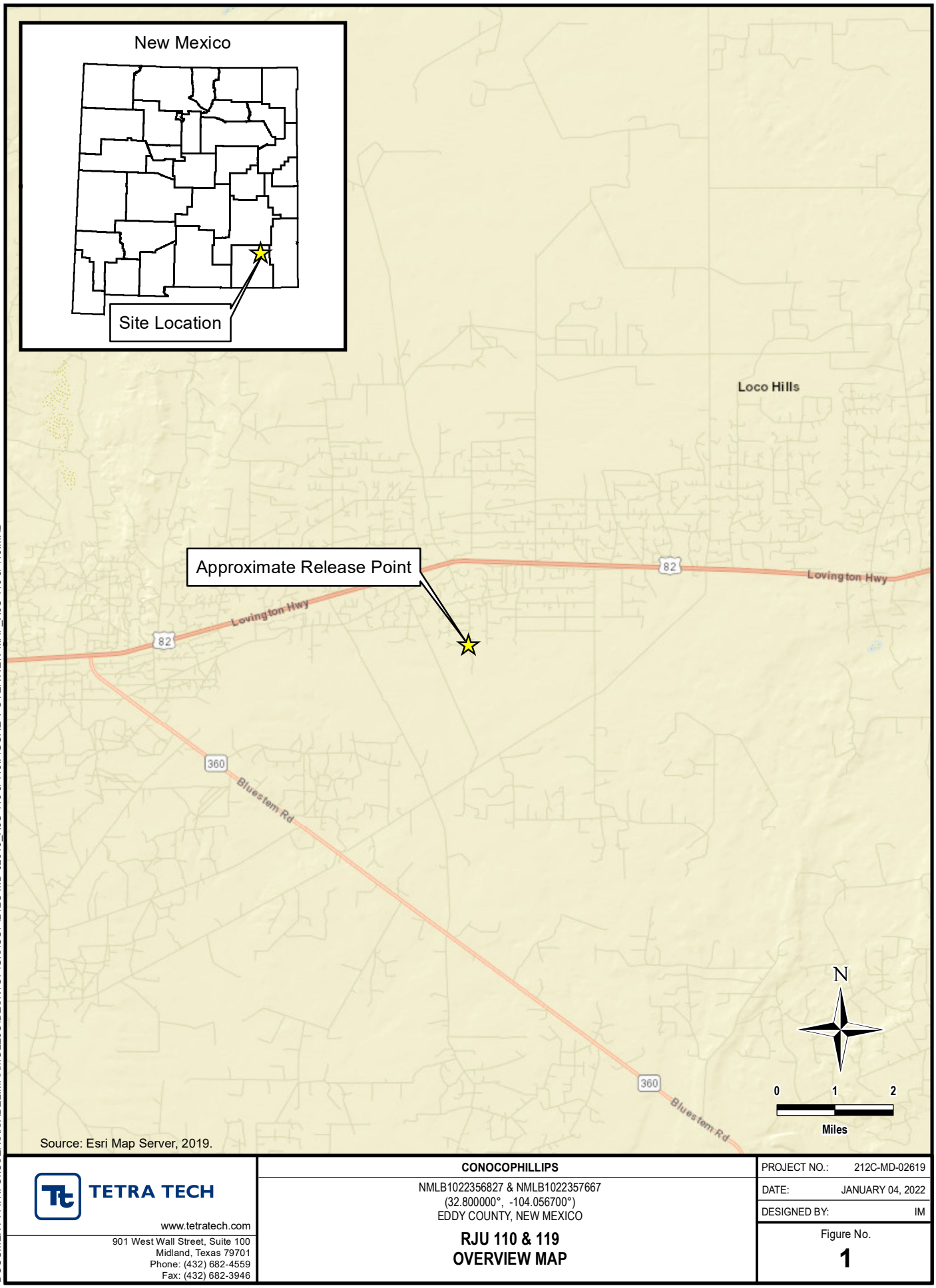
cc:
Mr. Ike Tavarez, RMR – ConocoPhillips
Mr. Charles Beauvais, BU – ConocoPhillips

LIST OF ATTACHMENTS

Figures:

Appendices:

FIGURES



Source: Esri Map Server, 2019.

DOCUMENT PATH: C:\USERS\ISABEL.MARMOLEJO\DESKTOP\GIS\COP\212C-MD-02619_RJU 110 & 119\FIGURE 1 OVERVIEW MAP_RJU 110 & 119.MXD

TETRA TECH
www.tetratech.com
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Midland, Texas 79701
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Fax: (432) 682-3946

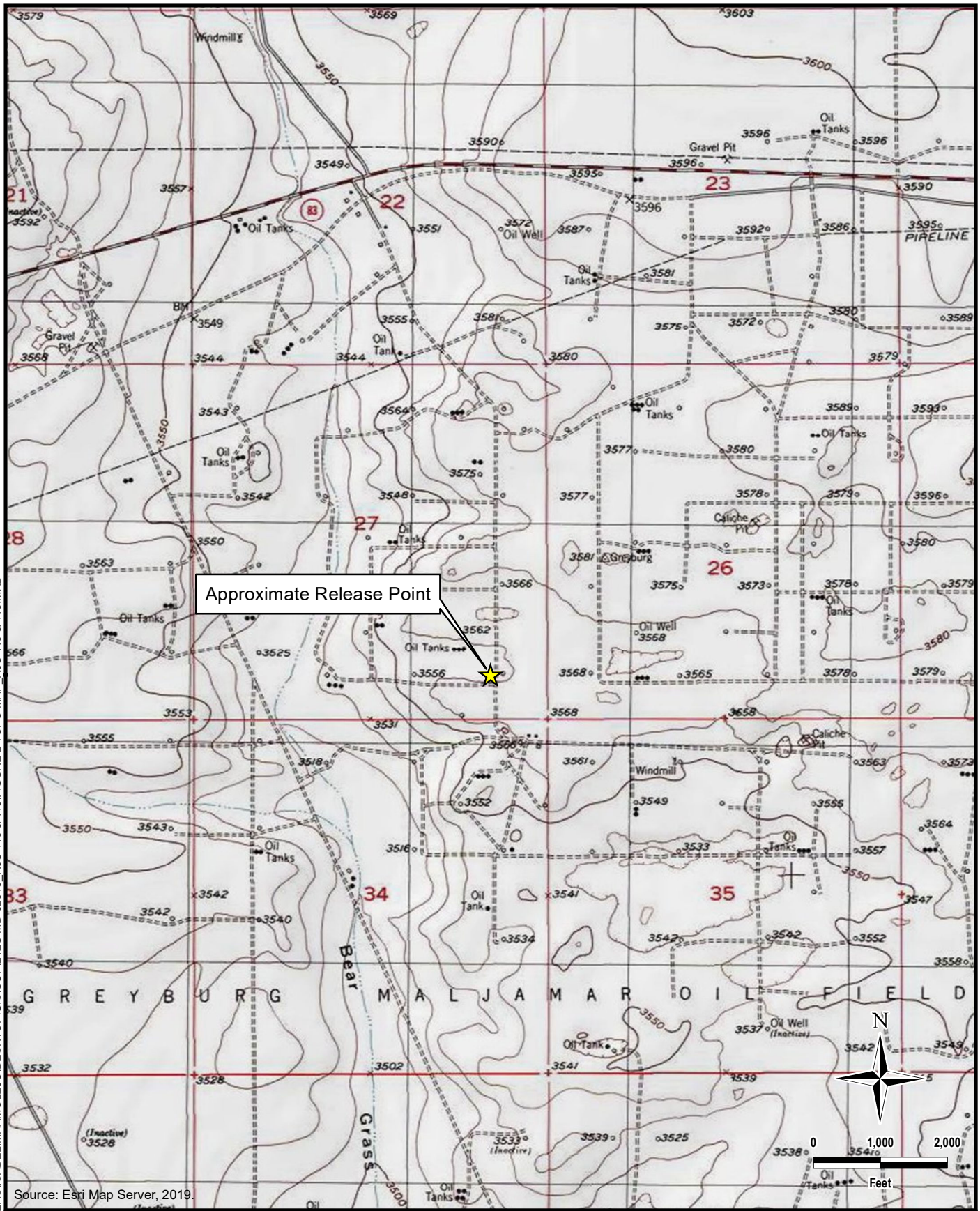
CONOCOPHILLIPS

NMLB1022356827 & NMLB1022357667
(32.800000°, -104.056700°)
EDDY COUNTY, NEW MEXICO

RJU 110 & 119
OVERVIEW MAP

PROJECT NO.:	212C-MD-02619
DATE:	JANUARY 04, 2022
DESIGNED BY:	IM

Figure No.
1



DOCUMENT PATH: C:\USERS\ISABEL.MARMOLEJO\DESKTOP\GIS\COP\212C-MD-02619_RJU 110 & 119\FIGURE 2 TOPO MAP_RJU 110 & 119.MXD

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CONOCOPHILLIPS

NMLB1022356827 & NMLB1022357667
(32.800000°, -104.056700°)
EDDY COUNTY, NEW MEXICO

RJU 110 & 119
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02619
DATE:	JANUARY 04, 2022
DESIGNED BY:	IM

Figure No.
2

DOCUMENT PATH: C:\USERS\ISABEL.MARMOLEJO\DESKTOP\GIS\COP\212C-MD-02619_RJU 110 & 119\FIGURE 3 SITE LOCATION_RJU 110 & 119.MXD

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CONOCOPHILLIPS

NMLB1022356827 & NMLB1022357667
(32.800000°, -104.056700°)
EDDY COUNTY, NEW MEXICO

RJU 110 & 119
VISUAL ASSESSMENT AREA

PROJECT NO.:	212C-MD-02619
DATE:	JANUARY 04, 2022
DESIGNED BY:	IM

Figure No.
3

APPENDIX A
C-141 Forms

REC'D VIA EMAIL 11/11/09

District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

nMLB1022357667

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company COG OPERATING LLC 229137	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 100 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – RJ Unit 110	Facility Type- Injection Line

Surface Owner Federal	Mineral Owner	Lease No. 30-015-03152

LOCATION OF RELEASE

***Across from the RJ Unit #121 (API# 30-015-03142)

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	27	17S	29E	660	South	660	East	Eddy

Latitude N32' 48.00 Longitude W104' 03.402

NATURE OF RELEASE

Type of Release- Produced water	Volume of Release-100bbls	Volume Recovered- 400 bbls prod wtr & rain wtr
Source of Release- Injection Line	Date and Hour of Occurrence- 10/23/09	Date and Hour of Discovery 10/23/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Terry Gregston	
By Whom? Pat Ellis	Date and Hour 10/26/09 2:08pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Hole in injection line, line is shut in.

Describe Area Affected and Cleanup Action Taken.*
Spill occurred across the road from the RJ Unit #121 well, roughly 50x150 area.
Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

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: K. Carrillo

Printed Name. Kanicia Carrillo

Title: Regulatory Analyst

E-mail Address: kcarrillo@conchoresources com

Date: 11/11/09 Phone: 432-685-4332

OIL CONSERVATION DIVISION

Approved by District Supervisor: Signed By Mike Bratcher

Approval Date: AUG 11 2010 Expiration Date:

Conditions of Approval:
REMEDIATION per OCD Rules and Guidelines. SUBMIT REMEDIATION PROPOSAL BY: ~~Proposal Rec'd~~

Attached ☐

2RP-427

* Attach Additional Sheets If Necessary

nMLB1022358013
pMLB1022358091

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:___ _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of 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 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Ashley Maxwell Date: _____

Printed Name: _____ Title: _____

APPENDIX B
Site Characterization Data

OCD Waterbodies

11/30/2021, 11:35:25 AM

OSE Water-bodies

PLJV Probable Playas

OSE Streams

1:9,028

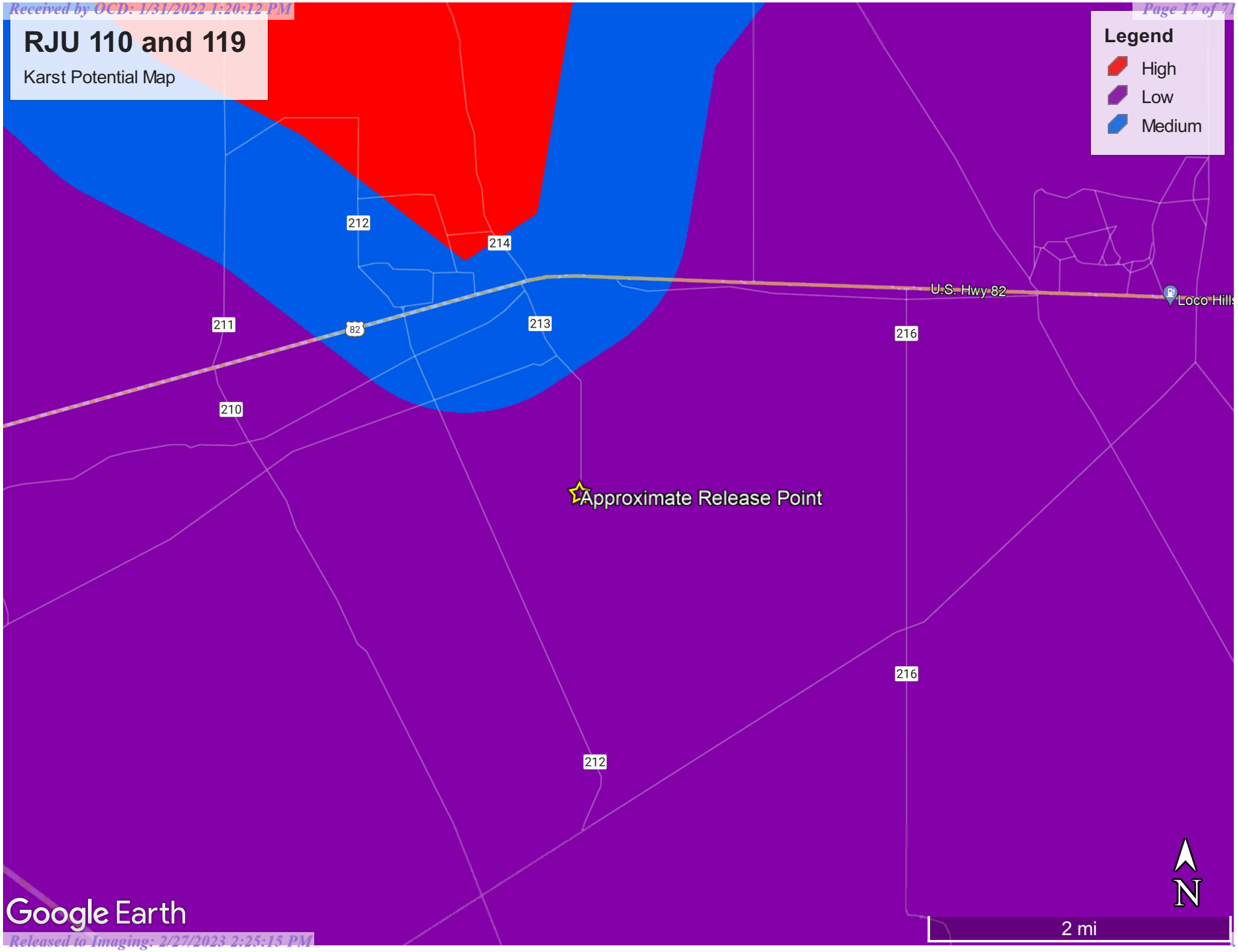
0 0.07 0.15 0.3 mi

0 0.15 0.3 0.6 km

Esri, HERE, Garmin, iPC, Maxar

RJU 110 and 119

Karst Potential Map



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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 11807 POD1	RA	ED	1	2	3	22	17S	29E	587360	3631585	2247	131	76	55

Average Depth to Water: **76 feet**

Minimum Depth: **76 feet**

Maximum Depth: **76 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 588325.23 **Northing (Y):** 3629555.76 **Radius:** 2500

APPENDIX C
Work Plan
(August 2, 2010)

TETRA TECH

August 2, 2010

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, NM 88210

Re: Work Plan for the COG Operating LLC., RJU Unit #119 and RJU #110 (RJU #121), Injection line leaks, Unit P, Section 27, Township 17 South, Range 29 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess the spills from the RJU #119 and RJU #110 (RJU #121) sites located in Unit P, Section 27, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.80042°, W 104.05663°. The site location is shown on Figures 1 and 2.

Background

RJU #119 - May 30, 2009 Release

According to the State of New Mexico C-141 Initial Report, the leak was discovered on May 30, 2009. Approximately 200 barrels of produced water was released from a hole on a 2-inch injection line. The 2 inch poly line was repaired with new connections. Vacuum trucks were utilized to recover 150 barrels of standing fluids. The initial C-141 is enclosed in Appendix A.

RJU # 110 (RJU #121) - October 23, 2009 Release

On October 23, 2009, COG discovered an injection line leak, occurring during a rain storm. Approximately 100 barrels of produced water was released and COG recovered approximately 400 barrels of rainwater mixed with produced water. The release occurred across the road from RJU #121. The majority of the release migrated into the same foot print as the RJU #119 release, which had been investigated an partially excavated. The initial C-141 is enclosed in Appendix A.

Tetra Tech
Tel Fax

TETRA TECH

Groundwater

No water wells were listed within Section 27. An abandoned water well was located in Section 35 and Tetra Tech measured a total depth of 153' (dry). According to the Geology and Groundwater Resources of Eddy County, New Mexico (Report 3), one well is located in Section 22 (Bear Grass Draw) with a depth to water of 79.0' below surface. In addition, a well located in Section 29 was reported at 210 below surface. According to the NMOCD groundwater map the average depth to groundwater in this area is approximately 150' below surface. The Geology and Groundwater Resources of Eddy County, New Mexico (Report 3) well report data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Results

RJU #119 - May 30, 2009 Release

On June 4, 2009, Tetra Tech personnel inspected the spill area, which measured approximately 40' x 205' and 10' x 100', located west of the County Road. Prior to sampling, COG excavated 1.0' to 2.0' of impacted soil and hauled to proper disposal. A total of seven (7) auger holes (AH-1 through AH-7) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1.

Referring to Table 1, AH-1 and AH-2 samples exceeded the TPH RRAL to a depth of 2.0' below surface. In addition, the total BTEX exceeded the RRAL in AH-2. Elevated chloride concentrations were detected in all of the auger holes, with no delineation in any of the auger holes.

In order to complete delineation of the chlorides at the sites, on June 30, 2009, Tetra Tech personnel were onsite to install ten (10) boreholes (SB-1 through SB-10) utilizing an air rotary rig. Some of the borings were installed in the vicinity of the

TETRA TECH

previous auger holes. The boreholes were extended to a maximum depth of 15 to 35 feet bgs with samples collected at 2 to 3 foot intervals for the first 15 feet and 5 foot intervals thereafter and submitted to the laboratory for analysis of chlorides and selected samples for BTEX.

Analytical results indicate the maximum extent of chloride impact greater than 1,000 mg/kg extended from 8 feet (SB-2) to 25 feet (SB-1) bgs. Total BTEX concentrations in the vicinity of SB-4 exceeded the RRAL from surface to approximately 5' below excavation bottom. All samples had chloride concentrations that decreased with depth. The soil boring locations are shown in Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The borehole and auger hole locations are shown on Figure 3.

RJU #110 (RJU #121) - October 23, 2009 Release

On January 20, 2010, Tetra Tech was onsite to supervise the installation of eleven (11) boreholes to assess the spill area. On April 20, 2010, several of the boreholes were deepened to further delineate the chloride impact. The boreholes were installed to depths ranging from 20' to 70' below excavation bottom. The soil boring locations are shown on Figure 4. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The sampling results are summarized in Table 2.

Referring to Table 2, all of the samples selected for TPH and BTEX were below the RRAL. Based on the results, the maximum extent of chloride impact greater than 1,000 mg/kg extended from 6 feet (SB-5, SB-6, SB-10 and SB-11) to 50 feet (SB-3).

Work Plan

On June 4, 2010, Tetra Tech met with Mike Bratcher of the NMOCD to discuss the results and concerns regarding with a deep excavation plan. Since the impacted area is in the native sand dunes, the proposed excavation depths may not be reached due to wall cave ins and safety concerns for lines, equipment operators as well as other onsite personnel. As such, Tetra Tech will excavate the soils to the maximum extent practicable.

Two underground lines are located in the area of spill/excavation. The active line (Conoco) is running east and west through the center of the spill area and an abandoned line (DCP) runs north and south through the spill. These areas will need to be cleared prior to excavating around the lines and may hinder some soil removal around these lines.

Tetra Tech personnel will supervise the removal of impacted soils as shown in attached Table 3 and Figure 6. In addition, selected excavated areas with deeper chloride impact will be capped (lined) with a 40 mil plastic liner. Once the areas are excavated to the appropriate depths, the excavation will be backfilled with clean soil.

TETRA TECH

The liner will be installed at a depth of 4.0' below surface. The liner installation areas are shown on Figure 4.

If you require any additional information or have any questions or comments concerning this report, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez, P.G.
Senior Project Manager

cc: Pat Ellis – COG
Terry Gregston - BLM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repor

Name of Company COG OPERATING LLC	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 100 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – RJ Unit 110	Facility Type- Injection Line

Surface Owner Federal	Mineral Owner	Lease No. 30-015-03152

LOCATION OF RELEASE

***Across from the RJ Unit #121 (API# 30-015-03142)

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	27	17S	29E	660	South	660	East	Eddy

Latitude N32' 48.00 Longitude W104' 03.402

NATURE OF RELEASE

Type of Release- Produced water	Volume of Release-100bbls	Volume Recovered- 400 bbls prod wtr & rain wtr
Source of Release- Injection Line	Date and Hour of Occurrence- 10/23/09	Date and Hour of Discovery 10/23/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Terry Gregston	
By Whom? Pat Ellis	Date and Hour 10/26/09 2:08pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Hole in injection line, line is shut in.

Describe Area Affected and Cleanup Action Taken.*
Spill occurred across the road from the RJ Unit #121 well, roughly 50x150 area.
Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

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: Kanicia Carrillo	Approved by District Supervisor:	
Title: Regulatory Analyst	Approval Date:	Expiration Date.
E-mail Address: kcarrillo@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 11/11/09 Phone: 432-685-4332		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-14
Revised October 10, 200

Submit 2 Copies to appropriat
District Office in accordanc
with Rule 116 on bac
side of for

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Rep

Name of Company COG OPERATING LLC	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 1300 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – RJ Unit #119	Facility Type- Injection Well

Surface Owner	Mineral Owner	Lease No. 30-015-03146

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	27	17S	29E	660	South	1980	East	Eddy

Latitude_____ Longitude_____

NATURE OF RELEASE

Type of Release-Produced Water	Volume of Release-200bbls	Volume Recovered- 150bbls
Source of Release- Hole in 2" injection line	Date and Hour of Occurrence- 5/30/09- 12:00 pm	Date and Hour of Discovery 5/30/09-12:00pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher NMOCD District 2	
By Whom? Kent Greenway	Date and Hour 6/1/09- 9:30 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Hole in a 2" steel injection line. Injection was shut in at this location and the line will be replaced.

Describe Area Affected and Cleanup Action Taken.*
Approximately 50' X 100' area in pasture was affected. All liquid was vacuumed up. The area is being dug out to a 1' depth for testing. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

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: Kanicia Carrillo	Approved by District Supervisor:	
Title: Regulatory Analyst	Approval Date:	Expiration Date:
E-mail Address: kcarrillo@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 6/3/09 Phone: 432-685-4332		

* Attach Additional Sheets If Necessary

Water Well Data
Average Depth to Groundwater (ft)
COG - RJU Unit #119
Eddy County, New Mexico

16 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 61	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 110	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

17 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 79	23	24
30	29	28	27	26	25
31	32	33	34 53	35	36

17 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 80	23	24
30	29 210 208'	28	27 SITE	26	25
31	32	33	34	35 153	36

17 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 65	36

18 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Field water level

143 NMOCD Groundwater map well location

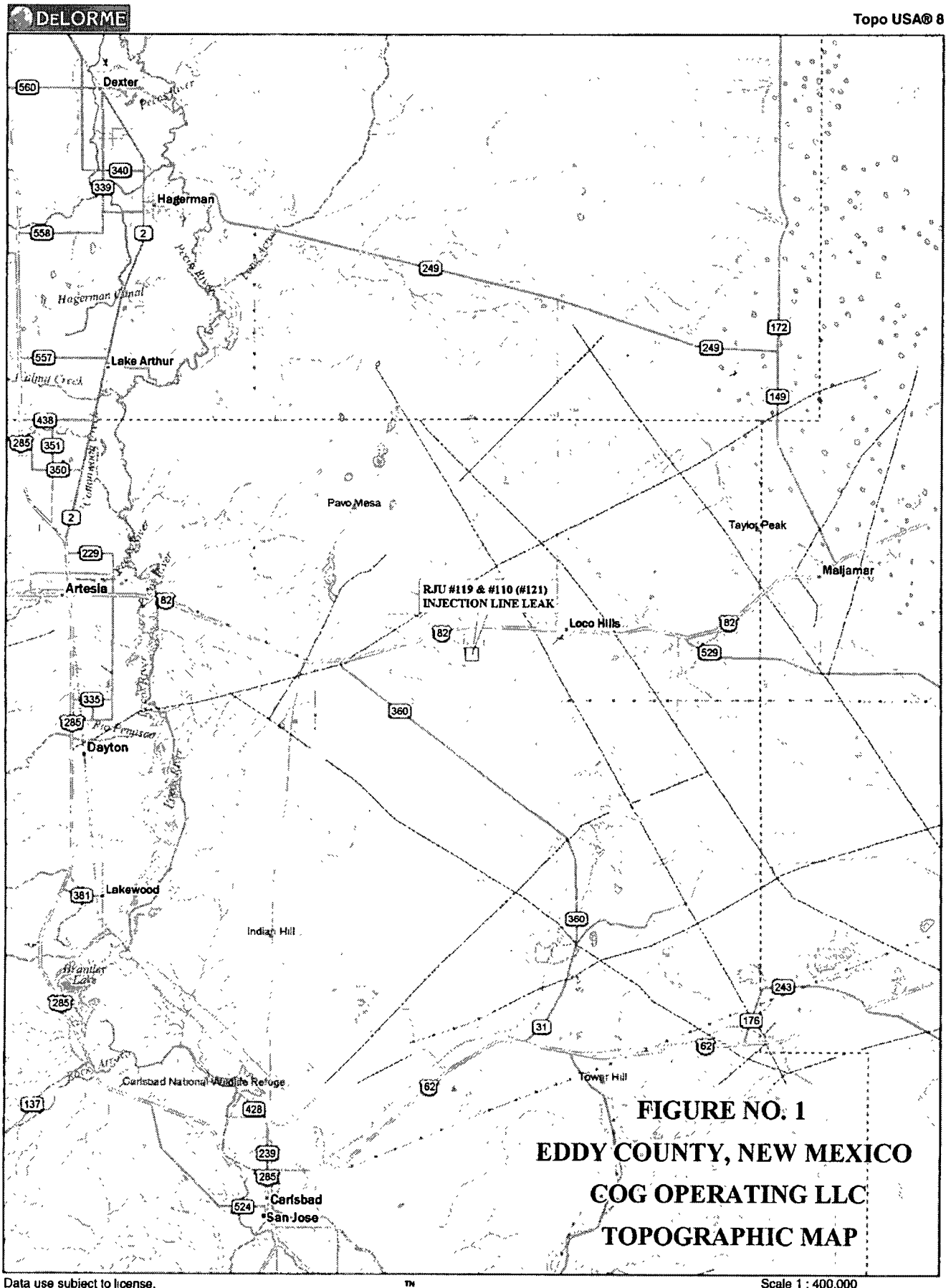


FIGURE NO. 1

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

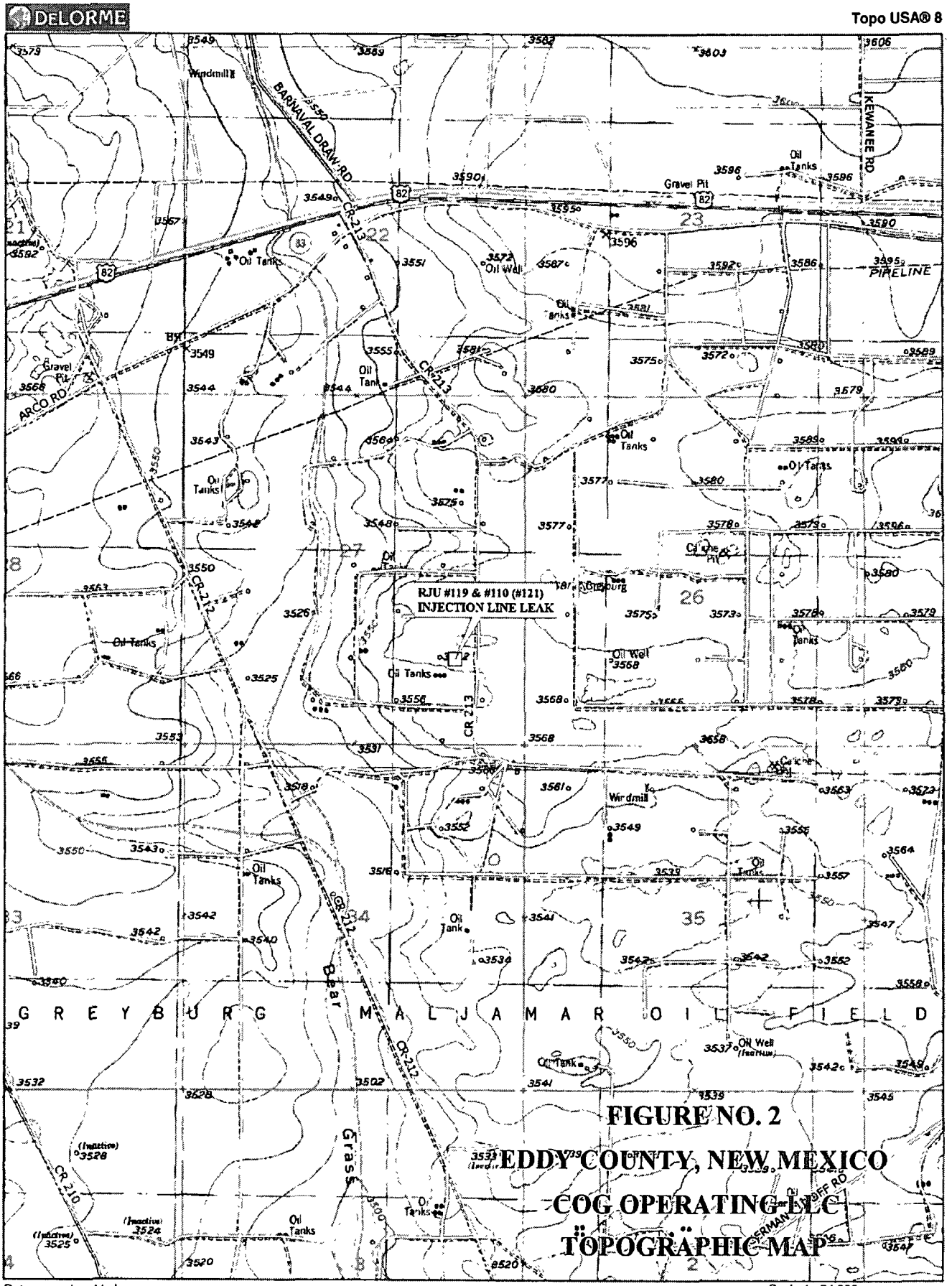


FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

Table 1
COG Operating LLC
RJU #119
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-5	6/4/2009	0-1	X		3200	19.9	3219.9	-	-	-	-	1170
	6/4/2009	1-1.5	X		-	-	-	-	-	-	-	412
	6/4/2009	2-2.5	X		-	-	-	-	-	-	-	535
	6/4/2009	3-3.5	X		-	-	-	-	-	-	-	638
	6/4/2009	4-4.5	X		-	-	-	-	-	-	-	1160
	6/4/2009	5-5.5	X		-	-	-	-	-	-	-	937
	6/4/2009	6-6.5	X		-	-	-	-	-	-	-	927
	6/4/2009	7-7.5	X		-	-	-	-	-	-	-	1380
	6/4/2009	8-8.5	X		-	-	-	-	-	-	-	1100
SB-1	6/30/2009	5-6	X		-	-	-	-	-	-	-	1,190
	6/30/2009	8-9	X		-	-	-	-	-	-	-	1,630
	6/30/2009	11-12	X		-	-	-	-	-	-	-	6,240
	6/30/2009	13-14	X		-	-	-	-	-	-	-	2,760
	6/30/2009	15-16	X		-	-	-	-	-	-	-	4,210
	6/30/2009	20-21	X		-	-	-	-	-	-	-	1,870
	6/30/2009	25-26	X		-	-	-	-	-	-	-	1,290
	6/30/2009	30-31	X		-	-	-	-	-	-	-	706
	6/30/2009	35-36	X		-	-	-	-	-	-	-	406
AH-4	6/4/2009	0-1	X		<50.0	18.1	18.1	-	-	-	-	5390
	6/4/2009	1-1.5	X		-	-	-	-	-	-	-	5570
	6/4/2009	2-2.5	X		-	-	-	-	-	-	-	8120
	6/4/2009	3-3.5	X		-	-	-	-	-	-	-	3280
	6/4/2009	4-4.5	X		-	-	-	-	-	-	-	2740
	6/4/2009	5-5.5	X		-	-	-	-	-	-	-	2710
SB-2	6/30/2009	5-6	X		-	-	-	-	-	-	-	3,990
	6/30/2009	8-9	X		-	-	-	-	-	-	-	3,290
	6/30/2009	11-12	X		-	-	-	-	-	-	-	590
	6/30/2009	13-14	X		-	-	-	-	-	-	-	207
	6/30/2009	15-16	X		-	-	-	-	-	-	-	<200

(-) Not Analyzed

Table 1
COG Operating LLC
RJU #119
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-3	6/4/2009	0-1	X		<50.0	31.6	31.6	-	-	-	-	2330
	6/4/2009	1-1.5	X		-	-	-	-	-	-	-	799
	6/4/2009	2-2.5	X		-	-	-	-	-	-	-	468
	6/4/2009	3-3.5	X		-	-	-	-	-	-	-	1350
	6/4/2009	4-4.5	X		-	-	-	-	-	-	-	2490
	6/4/2009	5-5.5	X		-	-	-	-	-	-	-	3540
	6/4/2009	6-6.5	X		-	-	-	-	-	-	-	4080
SB-3		5-6	X		-	-	-	-	-	-	-	1,430
	6/30/2009	8-9	X		-	-	-	-	-	-	-	2,880
	6/30/2009	11-12	X		-	-	-	-	-	-	-	2,820
	6/30/2009	13-14	X		-	-	-	-	-	-	-	2,250
	6/30/2009	15-16	X		-	-	-	-	-	-	-	1,980
	6/30/2009	20-21	X		-	-	-	-	-	-	-	993
	6/30/2009	25-26	X		-	-	-	-	-	-	-	<200
SB-4	6/30/2009	0-1	X		1160	736	1896	<0.0500	7.52	19.5	43.0	1,070
	6/30/2009	2-3	X		691	817	1508	<0.100	7.19	20.1	37.2	1,520
	6/30/2009	5-6	X		-	-	-	<0.0500	6.06	23.2	34.0	1,390
	6/30/2009	8-9	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	1,860
	6/30/2009	11-12	X		-	-	-	-	-	-	-	1,790
	6/30/2009	13-14	X		-	-	-	-	-	-	-	966
	6/30/2009	15-16	X		-	-	-	-	-	-	-	518
	6/30/2009	20-21	X		-	-	-	-	-	-	-	510
	6/30/2009	25-26	X		-	-	-	-	-	-	-	336

(-) Not Analyzed

Table 1
COG Operating LLC
RJU #119
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-2	6/4/2009	0-1	X		3570	2330	5900	7.55	74.1	72.5	101	1250
	6/4/2009	1-1.5	X		4320	2830	7150	9.86	112	105	129	1670
	6/4/2009	2-2.5	X		1120	2370	3490	4.78	94.4	93.5	118	3250
	6/4/2009	3-3.5	X		-	-	-	-	-	-	-	4760
	6/4/2009	4-4.5	X		-	-	-	-	-	-	-	5240
	6/4/2009	5-5.5	X		-	-	-	-	-	-	-	5740
	6/4/2009	6-6.5	X		-	-	-	-	-	-	-	5270
SB-5	6/30/2009	3-4	X		-	-	-	<0.0100	<0.0100	<0.0100	<0.0100	2,670
	6/30/2009	5-6	X		-	-	-	-	-	-	-	1,790
	6/30/2009	8-9	X		-	-	-	-	-	-	-	2,950
	6/30/2009	11-12	X		-	-	-	-	-	-	-	3,660
	6/30/2009	13-14	X		-	-	-	-	-	-	-	5,090
	6/30/2009	15-16	X		-	-	-	-	-	-	-	5,090
	6/30/2009	20-21	X		-	-	-	-	-	-	-	2,600
	6/30/2009	25-26	X		-	-	-	-	-	-	-	386
SB-6	6/30/2009	0-1	X		-	-	-	-	-	-	-	1,380
	6/30/2009	2-3	X		-	-	-	-	-	-	-	10,200
	6/30/2009	5-6	X		-	-	-	-	-	-	-	5,910
	6/30/2009	8-9	X		-	-	-	-	-	-	-	6,300
	6/30/2009	11-12	X		-	-	-	-	-	-	-	2,430
	6/30/2009	13-14	X		-	-	-	-	-	-	-	1,850
	6/30/2009	15-16	X		-	-	-	-	-	-	-	436
	6/30/2009	20-21	X		-	-	-	-	-	-	-	421
	6/30/2009	25-26	X		-	-	-	-	-	-	-	389
	6/30/2009	30-31	X		-	-	-	-	-	-	-	<200

(-) Not Analyzed

Table 1
COG Operating LLC
RJU #119
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-1	6/4/2009	0-1	X		6910	766	7676	<0.0500	2.80	22.2	34.9	1520
	6/4/2009	1-1.5	X		4140	1130	5270	-	-	-	-	1690
	6/4/2009	2-2.5	X		<50.0	21.0	21.0	-	-	-	-	675
	6/4/2009	3-3.5	X		-	-	-	-	-	-	-	1280
	6/4/2009	4-4.5	X		-	-	-	-	-	-	-	1440
	6/4/2009	5-5.5	X		-	-	-	-	-	-	-	1450
	6/4/2009	6-6.5	X		-	-	-	-	-	-	-	994
SB-7	6/30/2009	5-6	X		-	-	-	-	-	-	-	6,230
	6/30/2009	8-9	X		-	-	-	-	-	-	-	4,100
	6/30/2009	11-12	X		-	-	-	-	-	-	-	3,180
	6/30/2009	13-14	X		-	-	-	-	-	-	-	1,820
	6/30/2009	15-16	X		-	-	-	-	-	-	-	1,590
	6/30/2009	20-21	X		-	-	-	-	-	-	-	1,180
	6/30/2009	25-26	X		-	-	-	-	-	-	-	952
	6/30/2009	30-31	X		-	-	-	-	-	-	-	309
SB-8	6/30/2009	0-1	X		-	-	-	-	-	-	-	10,700
	6/30/2009	2-3	X		-	-	-	-	-	-	-	3,980
	6/30/2009	5-6	X		-	-	-	-	-	-	-	3,120
	6/30/2009	8-9	X		-	-	-	-	-	-	-	3,390
	6/30/2009	11-12	X		-	-	-	-	-	-	-	3,130
	6/30/2009	13-14	X		-	-	-	-	-	-	-	4,020
	6/30/2009	15-16	X		-	-	-	-	-	-	-	5,120
	6/30/2009	20-21	X		-	-	-	-	-	-	-	4,480
	6/30/2009	25-26	X		-	-	-	-	-	-	-	275
	6/30/2009	30-31	X		-	-	-	-	-	-	-	310

(-) Not Analyzed

Table 1
COG Operating LLC
RJU #119
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-6	6/4/2009	0-1	X		<50.0	<1.00	<50.0	-	-	-	-	6750
	6/4/2009	1-1.5	X		-	-	-	-	-	-	-	8750
	6/4/2009	2-2.5	X		-	-	-	-	-	-	-	1180
	6/4/2009	3-3.5	X		-	-	-	-	-	-	-	1120
	6/4/2009	4-4.5	X		-	-	-	-	-	-	-	3710
	6/4/2009	5-5.5	X		-	-	-	-	-	-	-	2850
	6/4/2009	6-6.5	X		-	-	-	-	-	-	-	2540
SB-9	6/30/2009	5-6	X		-	-	-	-	-	-	-	2,080
	6/30/2009	8-9	X		-	-	-	-	-	-	-	3,030
	6/30/2009	11-12	X		-	-	-	-	-	-	-	3,150
	6/30/2009	13-14	X		-	-	-	-	-	-	-	2,370
	6/30/2009	15-16	X		-	-	-	-	-	-	-	2,260
	6/30/2009	20-21	X		-	-	-	-	-	-	-	5,250
	6/30/2009	25-26	X		-	-	-	-	-	-	-	838
	6/30/2009	30-31	X		-	-	-	-	-	-	-	486
SB-10	6/30/2009	0-1	X		-	-	-	-	-	-	-	<200
	6/30/2009	2-3	X		-	-	-	-	-	-	-	527
	6/30/2009	5-6	X		-	-	-	-	-	-	-	1,150
	6/30/2009	8-9	X		-	-	-	-	-	-	-	2,360
	6/30/2009	11-12	X		-	-	-	-	-	-	-	9,190
	6/30/2009	13-14	X		-	-	-	-	-	-	-	7,050
	6/30/2009	15-16	X		-	-	-	-	-	-	-	4,920
	6/30/2009	20-21	X		-	-	-	-	-	-	-	3,620
	6/30/2009	25-26	X		-	-	-	-	-	-	-	2,140
	6/30/2009	30-31	X		-	-	-	-	-	-	-	709
	6/30/2009	35-36	X		-	-	-	-	-	-	-	274

(-) Not Analyzed

Table 1
COG Operating LLC
RJU #119
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
AH-7	6/4/2009	0-1	X		<50.0	6.14	6.14	-	-	-	-	8240
	6/4/2009	1-1.5	X		-	-	-	-	-	-	-	6460
	6/4/2009	2-2.5	X									9000
	6/4/2009	3-3.5	X									9310
SB-11	6/30/2009	5-6	X		-	-	-	-	-	-	-	3,820
	6/30/2009	8-9	X		-	-	-	-	-	-	-	4,030
	6/30/2009	11-12	X		-	-	-	-	-	-	-	9,070
	6/30/2009	13-14	X		-	-	-	-	-	-	-	4,930
	6/30/2009	15-16	X		-	-	-	-	-	-	-	3,750
	6/30/2009	20-21	X		-	-	-	-	-	-	-	1,330
	6/30/2009	25-26	X		-	-	-	-	-	-	-	310
	6/30/2009	30-31	X		-	-	-	-	-	-	-	284

(-) Not Analyzed

Table 2
COG Operating LLC
RJU #121
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride
			In-Situ	Removed	DRO	GRO	Total					
SB-1	1/20/10	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	781
		2-3'	X		-	-	-	-	-	-	-	2,660
		4-5'	X		-	-	-	-	-	-	-	10,700
		6-7'	X		-	-	-	-	-	-	-	9,960
		10-11'	X		-	-	-	-	-	-	-	6,070
		15-16'	X		-	-	-	-	-	-	-	1,860
		20-21'	X		-	-	-	-	-	-	-	1,100
		25-26'	X		-	-	-	-	-	-	-	<200
		30-31'	X		-	-	-	-	-	-	-	<200
SB-2	1/20/10	0-1'	X		332	177	509	<0.0500	0.0509	0.272	2.04	2,780
		2-3'	X		-	-	-	-	-	-	-	1,040
		4-5'	X		-	-	-	-	-	-	-	1,400
		6-7'	X		-	-	-	-	-	-	-	1,210
		10-11'	X		-	-	-	-	-	-	-	3,910
		15-16'	X		-	-	-	-	-	-	-	5,550
		20-21'	X		-	-	-	-	-	-	-	2,580
		25-26'	X		-	-	-	-	-	-	-	968
		30-31'	X		-	-	-	-	-	-	-	718
		40-41'	X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC
RJU #121
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride
			In-Situ	Removed	DRO	GRO	Total					
SB-3	1/20/10	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	2,240
		2-3'	X		-	-	-	-	-	-	-	1,190
		4-5'	X		-	-	-	-	-	-	-	4,570
		6-7'	X		-	-	-	-	-	-	-	6,010
		10-11'	X		-	-	-	-	-	-	-	3,600
		15-16'	X		-	-	-	-	-	-	-	3,790
		20-21'	X		-	-	-	-	-	-	-	1,570
		25-26'	X		-	-	-	-	-	-	-	2,260
		30-31'	X		-	-	-	-	-	-	-	5,310
SB-3	4/20/10	20'	X		-	-	-	-	-	-	-	2,400
		25'	X		-	-	-	-	-	-	-	2,380
		30'	X		-	-	-	-	-	-	-	2,210
		35'	X		-	-	-	-	-	-	-	3,590
		40'	X		-	-	-	-	-	-	-	1,900
		45'	X		-	-	-	-	-	-	-	631
		50'	X		-	-	-	-	-	-	-	1,360
		55'	X		-	-	-	-	-	-	-	336
		60'	X		-	-	-	-	-	-	-	306
		65'	X		-	-	-	-	-	-	-	519
		70'	X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC
RJU #121
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride
			In-Situ	Removed	DRO	GRO	Total					
SB-4	1/20/10	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	6,120
		2-3'	X		-	-	-	-	-	-	-	2,720
		4-5'	X		-	-	-	-	-	-	-	3,840
		6-7'	X		-	-	-	-	-	-	-	3,320
		10-11'	X		-	-	-	-	-	-	-	4,130
		15-16'	X		-	-	-	-	-	-	-	2,330
		20-21'	X		-	-	-	-	-	-	-	2,680
		25-26'	X		-	-	-	-	-	-	-	2,250
		30-31'	X		-	-	-	-	-	-	-	1,850
SB-4	4/20/10	20'	X		-	-	-	-	-	-	-	1,440
		25'	X		-	-	-	-	-	-	-	1,260
		30'	X		-	-	-	-	-	-	-	586
		35'	X		-	-	-	-	-	-	-	631
		40'	X		-	-	-	-	-	-	-	<200
		45'	X		-	-	-	-	-	-	-	<200
SB-5	1/20/10	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	729
		2-3'	X		-	-	-	-	-	-	-	1,290
		4-5'	X		-	-	-	-	-	-	-	2,170
		6-7'	X		-	-	-	-	-	-	-	2,190
		10-11'	X		-	-	-	-	-	-	-	343
		15-16'	X		-	-	-	-	-	-	-	<200
		20-21'	X		-	-	-	-	-	-	-	213

Table 2
COG Operating LLC
RJU #121
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride
			In-Situ	Removed	DRO	GRO	Total					
SB-6	1/20/10	0-1'	X		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	659
		2-3'	X		-	-	-	-	-	-	-	737
		4-5'	X		-	-	-	-	-	-	-	1,870
		6-7'	X		-	-	-	-	-	-	-	1,640
		10-11'	X		-	-	-	-	-	-	-	<200
		15-16'	X		-	-	-	-	-	-	-	222
		20-21'	X		-	-	-	-	-	-	-	202
SB-7	1/20/10	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	716
		2-3'	X		-	-	-	-	-	-	-	1,850
		4-5'	X		-	-	-	-	-	-	-	2,000
		6-7'	X		-	-	-	-	-	-	-	2,050
		10-11'	X		-	-	-	-	-	-	-	2,840
		15-16'	X		-	-	-	-	-	-	-	1,430
		20-21'	X		-	-	-	-	-	-	-	1,150
SB-7	4/20/10	10'	X		-	-	-	-	-	-	-	2,180
		15'	X		-	-	-	-	-	-	-	1,110
		20'	X		-	-	-	-	-	-	-	1,150
		25'	X		-	-	-	-	-	-	-	340
		30'	X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC
RJU #121
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride
			In-Situ	Removed	DRO	GRO	Total					
SB-8	1/20/10	0-1'	X		1510	<5.00	1510	<0.0100	<0.0100	<0.0100	<0.0100	1,610
		2-3'	X		-	-	-	-	-	-	-	3,160
		4-5'	X		-	-	-	-	-	-	-	4,500
		6-7'	X		-	-	-	-	-	-	-	5,390
		10-11'	X		-	-	-	-	-	-	-	4,190
		15-16'	X		-	-	-	-	-	-	-	1,550
		20-21'	X		-	-	-	-	-	-	-	678
SB-9	1/20/10	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	1,540
		2-3'	X		-	-	-	-	-	-	-	1,630
		4-5'	X		-	-	-	-	-	-	-	3,390
		6-7'	X		-	-	-	-	-	-	-	3,600
		10-11'	X		-	-	-	-	-	-	-	2,680
		15-16'	X		-	-	-	-	-	-	-	5,110
		20-21'	X		-	-	-	-	-	-	-	3,430
		25-26'	X		-	-	-	-	-	-	-	682
		30-31'	X		-	-	-	-	-	-	-	941
		40-41'	X		-	-	-	-	-	-	-	1,410
SB-9	4/20/10	30'	X		-	-	-	-	-	-	-	<200
		35'	X		-	-	-	-	-	-	-	<200
		40'	X		-	-	-	-	-	-	-	207
		45'	X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC
RJU #121
EDDY COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride
			In-Situ	Removed	DRO	GRO	Total					
SB-10	1/20/10	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	<200
		2-3'	X		-	-	-	-	-	-	-	<200
		4-5'	X		-	-	-	-	-	-	-	707
		6-7'	X		-	-	-	-	-	-	-	1,700
		10-11'	X		-	-	-	-	-	-	-	759
		15-16'	X		-	-	-	-	-	-	-	258
		20-21'	X		-	-	-	-	-	-	-	253
SB-11	1/20/10	0-1'	X		<50.0	<1.00	<50.0	-	-	-	-	409
		2-3'	X		-	-	-	-	-	-	-	574
		4-5'	X		-	-	-	-	-	-	-	3,910
		6-7'	X		-	-	-	-	-	-	-	8,000
		10-11'	X		-	-	-	-	-	-	-	248
		15-16'	X		-	-	-	-	-	-	-	306
		20-21'	X		-	-	-	-	-	-	-	311

(-) Not Analyzed

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #1 Data - RJU #119						
AREA 1	AH-7	6/4/2009	0-1	X		8240
		6/4/2009	1-1.5	X		6460
		6/4/2009	2-2.5	X		9000
		6/4/2009	3-3.5	X		9310
	SB-11	6/30/2009	5-6	X		3,820
		6/30/2009	8-9	X		4,030
		6/30/2009	11-12	X		9,070
		6/30/2009	13-14	X		4,930
		6/30/2009	15-16	X		3,750
		6/30/2009	20-21	X		1,330
		6/30/2009	25-26	X		310
		6/30/2009	30-31	X		284

(-) Not Analyzed

Propose Excavation Depths

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)		Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
				In-Situ	Removed						
Spill #1 Data - RJU #119								Spill #2 Data - RJU #110) (#121)			
AREA 2	AH-5	6/4/2009	0-1	X		1170		SB-9	1/20/10	0-1'	1,540
		6/4/2009	1-1.5	X		412			1/20/10	2-3'	1,630
		6/4/2009	2-2.5	X		535			1/20/10	4-5'	3,390
		6/4/2009	3-3.5	X		638			1/20/10	6-7'	3,600
		6/4/2009	4-4.5	X		1160			1/20/10	10-11'	2,680
		6/4/2009	5-5.5	X		937			1/20/10	15-16'	5,110
		6/4/2009	6-6.5	X		927			1/20/10	20-21'	3,430
		6/4/2009	7-7.5	X		1380			1/20/10	25-26'	682
		6/4/2009	8-8.5	X		1100			1/20/10	30-31'	941
									1/20/10	40-41'	1,410
	SB-1	6/30/2009	5-6	X		1,190					
		6/30/2009	8-9	X		1,630		SB-9	4/20/10	30'	<200
		6/30/2009	11-12	X		6,240			4/20/10	35'	<200
		6/30/2009	13-14	X		2,760			4/20/10	40'	207
		6/30/2009	15-16	X		4,210			4/20/10	45'	<200
		6/30/2009	20-21	X		1,870					
		6/30/2009	25-26	X		1,290					
		6/30/2009	30-31	X		706					
		6/30/2009	35-36	X		406					

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)		Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
				In-Situ	Removed						
Spill #1 Data - RJU #119								Spill #2 Data - RJU #110) (#121)			
AREA 3	AH-4	6/4/2009	0-1	X		5390		SB-8	1/20/10	0-1'	1,610
		6/4/2009	1-1.5	X		5570			1/20/10	2-3'	3,160
		6/4/2009	2-2.5	X		8120			1/20/10	4-5'	4,500
		6/4/2009	3-3.5	X		3280			1/20/10	6-7'	5,390
		6/4/2009	4-4.5	X		2740			1/20/10	10-11'	4,190
		6/4/2009	5-5.5	X		2710			1/20/10	15-16'	1,550
									1/20/10	20-21'	678
	SB-2	6/30/2009	5-6	X		3,990					
		6/30/2009	8-9	X		3,290					
		6/30/2009	11-12	X		590					
		6/30/2009	13-14	X		207					
		6/30/2009	15-16	X		<200					

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)		Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
				In-Situ	Removed						
Spill #1 Data - RJU #119								Spill #2 Data - RJU #110) (#121)			
AREA 4	AH-3	6/4/2009	0-1	X		2330		SB-7	1/20/10	0-1'	716
		6/4/2009	1-1.5	X		799			1/20/10	2-3'	1,850
		6/4/2009	2-2.5	X		468			1/20/10	4-5'	2,000
		6/4/2009	3-3.5	X		1350			1/20/10	6-7'	2,050
		6/4/2009	4-4.5	X		2490			1/20/10	10-11'	2,840
		6/4/2009	5-5.5	X		3540			1/20/10	15-16'	1,430
		6/4/2009	6-6.5	X		4080			1/20/10	20-21'	1,150
	SB-3	6/30/2009	5-6	X		1,430		SB-7	4/20/10	10'	2,180
		6/30/2009	8-9	X		2,880			4/20/10	15'	1,110
		6/30/2009	11-12	X		2,820			4/20/10	20'	1,150
		6/30/2009	13-14	X		2,250			4/20/10	25'	340
		6/30/2009	15-16	X		1,980			4/20/10	30'	<200
		6/30/2009	20-21	X		993					
		6/30/2009	25-26	X		<200					

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)		Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
				In-Situ	Removed						
Spill #1 Data - RJU #119								Spill #2 Data - RJU #110) (#121)			
AREA 5	SB-6	6/30/2009	0-1	X		1,380		SB-1	1/20/10	0-1'	781
		6/30/2009	2-3	X		10,200			1/20/10	2-3'	2,660
		6/30/2009	5-6	X		5,910			1/20/10	4-5'	10,700
		6/30/2009	8-9	X		6,300			1/20/10	6-7'	9,960
		6/30/2009	11-12	X		2,430			1/20/10	10-11'	6,070
		6/30/2009	13-14	X		1,850			1/20/10	15-16'	1,860
		6/30/2009	15-16	X		436			1/20/10	20-21'	1,100
		6/30/2009	20-21	X		421			1/20/10	25-26'	<200
		6/30/2009	25-26	X		389			1/20/10	30-31'	<200
		6/30/2009	30-31	X		<200					

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)		Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
				In-Situ	Removed						
		Spill #1 Data - RJU #119							Spill #2 Data - RJU #110) (#121)		
AREA 6	AH-2	6/4/2009	0-1	X		1250		SB-2	1/20/10	0-1'	2,780
		6/4/2009	1-1.5	X		1670			1/20/10	2-3'	1,040
		6/4/2009	2-2.5	X		3250	liner		1/20/10	4-5'	1,400
		6/4/2009	3-3.5	X		4760			1/20/10	6-7'	1,210
		6/4/2009	4-4.5	X		5240			1/20/10	10-11'	3,910
		6/4/2009	5-5.5	X		5740			1/20/10	15-16'	5,550
		6/4/2009	6-6.5	X		5270			1/20/10	20-21'	2,580
									1/20/10	25-26'	968
	SB-5	6/30/2009	3-4	X		2,670			1/20/10	30-31'	718
		6/30/2009	5-6	X		1,790			1/20/10	40-41'	<200
		6/30/2009	8-9	X		2,950					
		6/30/2009	11-12	X		3,660					
liner		6/30/2009	13-14	X		5,090					
		6/30/2009	15-16	X		5,090					
		6/30/2009	20-21	X		2,600					
		6/30/2009	25-26	X		386					

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #1 Data - RJU #119						
AREA 7	SB-4	6/30/2009	0-1	X		1,070
		6/30/2009	2-3	X		1,520
		6/30/2009	5-6	X		1,390
		6/30/2009	8-9	X		1,860
		6/30/2009	11-12	X		1,790
		6/30/2009	13-14	X		966
		6/30/2009	15-16	X		518
		6/30/2009	20-21	X		510
		6/30/2009	25-26	X		336

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #121 Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #2 Data - RJU #110) (#121)						
AREA 8	SB-3	1/20/10	0-1'	X		2,240
		1/20/10	2-3'	X		1,190
liner		1/20/10	4-5'	X		4,570
		1/20/10	6-7'	X		6,010
		1/20/10	10-11'	X		3,600
		1/20/10	15-16'	X		3,790
		1/20/10	20-21'	X		1,570
		1/20/10	25-26'	X		2,260
		1/20/10	30-31'	X		5,310
	SB-3	4/20/10	20'	X		2,400
		4/20/10	25'	X		2,380
		4/20/10	30'	X		2,210
		4/20/10	35'	X		3,590
		4/20/10	40'	X		1,900
		4/20/10	45'	X		631
		4/20/10	50'	X		1,360
		4/20/10	55'	X		336
		4/20/10	60'	X		306
		4/20/10	65'	X		519
		4/20/10	70'	X		<200

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)		Sample ID	Date Sampled	Sample Depth (ft)	Chloride (mg/kg)
				In-Situ	Removed						
Spill #1 Data - RJU #119								Spill #2 Data - RJU #110) (#121)			
AREA 9	AH-1	6/4/2009	0-1	X		1520		SB-4	1/20/10	0-1'	6,120
		6/4/2009	1-1.5	X		1690			1/20/10	2-3'	2,720
		6/4/2009	2-2.5	X		675	liner →		1/20/10	4-5'	3,840
		6/4/2009	3-3.5	X		1280			1/20/10	6-7'	3,320
		6/4/2009	4-4.5	X		1440			1/20/10	10-11'	4,130
		6/4/2009	5-5.5	X		1450			1/20/10	15-16'	2,330
		6/4/2009	6-6.5	X		994			1/20/10	20-21'	2,680
									1/20/10	25-26'	2,250
	SB-7	6/30/2009	5-6	X		6,230			1/20/10	30-31'	1,850
		6/30/2009	8-9	X		4,100					
		6/30/2009	11-12	X		3,180		SB-4	4/20/10	20'	1,440
		6/30/2009	13-14	X		1,820			4/20/10	25'	1,260
		6/30/2009	15-16	X		1,590			4/20/10	30'	586
		6/30/2009	20-21	X		1,180			4/20/10	35'	631
		6/30/2009	25-26	X		952			4/20/10	40'	<200
		6/30/2009	30-31	X		309			4/20/10	45'	<200

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #1 Data - RJU #119						
AREA 10	SB-8	6/30/2009	0-1	X		10,700
		6/30/2009	2-3	X		3,980
liner		6/30/2009	5-6	X		3,120
		6/30/2009	8-9	X		3,390
		6/30/2009	11-12	X		3,130
		6/30/2009	13-14	X		4,020
		6/30/2009	15-16	X		5,120
		6/30/2009	20-21	X		4,480
		6/30/2009	25-26	X		275
		6/30/2009	30-31	X		310

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #1 Data - RJU #119						
AREA 11	AH-6	6/4/2009	0-1	X		6750
		6/4/2009	1-1.5	X		8750
		6/4/2009	2-2.5	X		1180
		6/4/2009	3-3.5	X		1120
liner		6/4/2009	4-4.5	X		3710
		6/4/2009	5-5.5	X		2850
		6/4/2009	6-6.5	X		2540
	SB-9	6/30/2009	5-6	X		2,080
		6/30/2009	8-9	X		3,030
		6/30/2009	11-12	X		3,150
		6/30/2009	13-14	X		2,370
		6/30/2009	15-16	X		2,260
		6/30/2009	20-21	X		5,250
		6/30/2009	25-26	X		838
		6/30/2009	30-31	X		486

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #1 Data - RJU #119						
AREA 12	SB-10	6/30/2009	0-1	X		<200
liner		6/30/2009	2-3	X		527
		6/30/2009	5-6	X		1,150
		6/30/2009	8-9	X		2,360
		6/30/2009	11-12	X		9,190
		6/30/2009	13-14	X		7,050
		6/30/2009	15-16	X		4,920
		6/30/2009	20-21	X		3,620
		6/30/2009	25-26	X		2,140
		6/30/2009	30-31	X		709
		6/30/2009	35-36	X		274

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

Table 3
COG Operating LLC
RJU #119 and RJU #110 (#121) Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #2 Data - RJU #110) (#121)						
AREA 13	SB-5	1/20/10	0-1'	X		729
			2-3'	X		1,290
			4-5'	X		2,170
			6-7'	X		2,190
			10-11'	X		343
			15-16'	X		<200
			20-21'	X		213
AREA 14	SB-6	1/20/10	0-1'	X		659
			2-3'	X		737
			4-5'	X		1,870
			6-7'	X		1,640
			10-11'	X		<200
			15-16'	X		222
			20-21'	X		202

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation

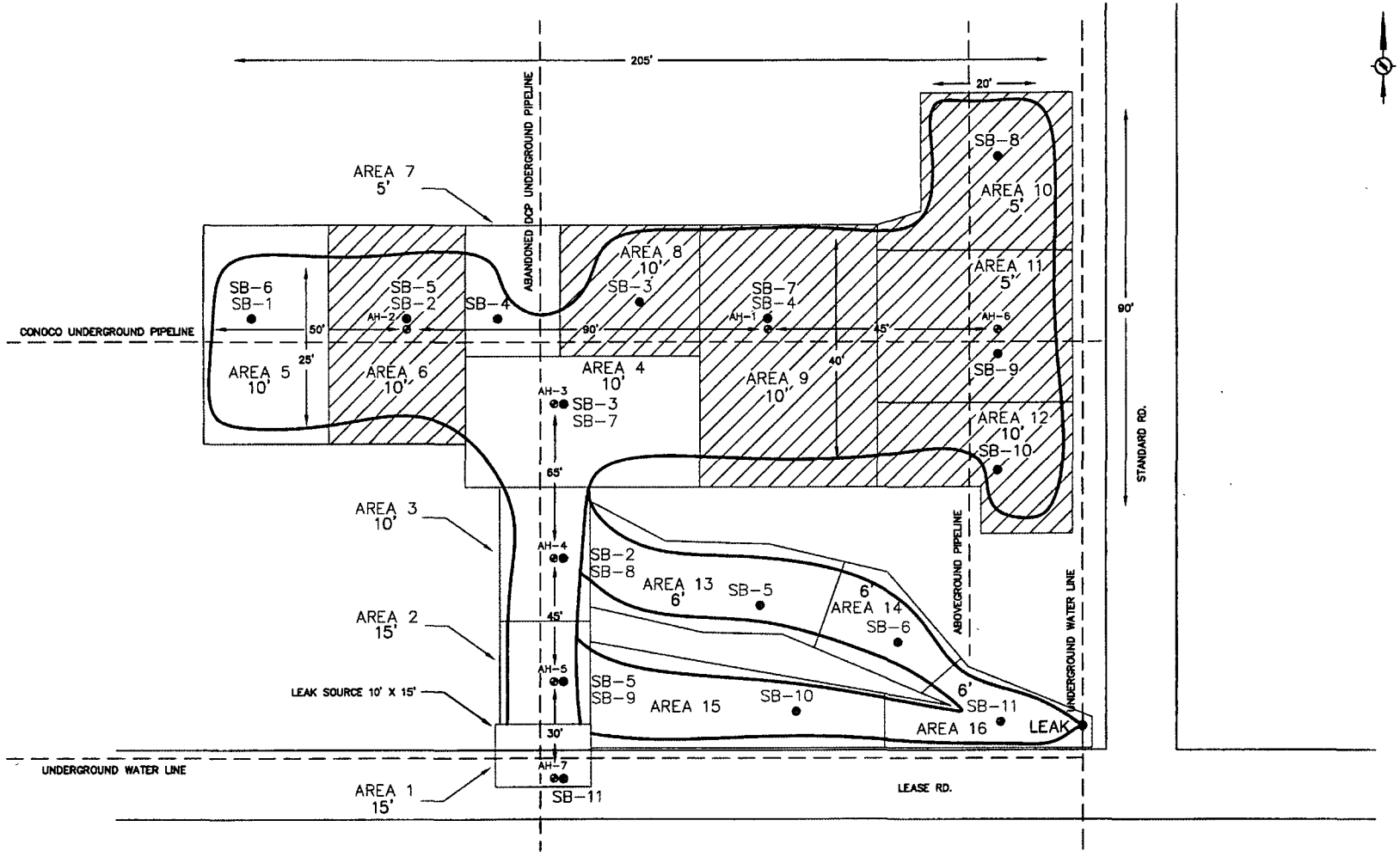
Table 3
COG Operating LLC
RJU #119 and RJU #121 Spill Data
Eddy County, New Mexico

Area	Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
				In-Situ	Removed	
Spill #2 Data - RJU #110) (#121)						
AREA 15	SB-10	1/20/10	0-1'	X		<200
		1/20/10	2-3'	X		<200
		1/20/10	4-5'	X		707
		1/20/10	6-7'	X		1,700
		1/20/10	10-11'	X		759
		1/20/10	15-16'	X		258
		1/20/10	20-21'	X		253
AREA 16	SB-11	1/20/10	0-1'	X		409
		1/20/10	2-3'	X		574
		1/20/10	4-5'	X		3,910
		1/20/10	6-7'	X		8,000
		1/20/10	10-11'	X		248
		1/20/10	15-16'	X		306
		1/20/10	20-21'	X		311

(-) Not Analyzed

Propose Excavation Depths

Propose Liner Installation



15' = PROPOSED EXCAVATION DEPTHS
PROPOSED LINER
SPILL SEGREGATED AREAS
SAMPLE LOCATIONS
SOIL BORING LOCATIONS (6-30-09)
SOIL BORING LOCATIONS (1-20-10 & 4-20-10)

NOT TO SCALE

FIGURE NO. 6

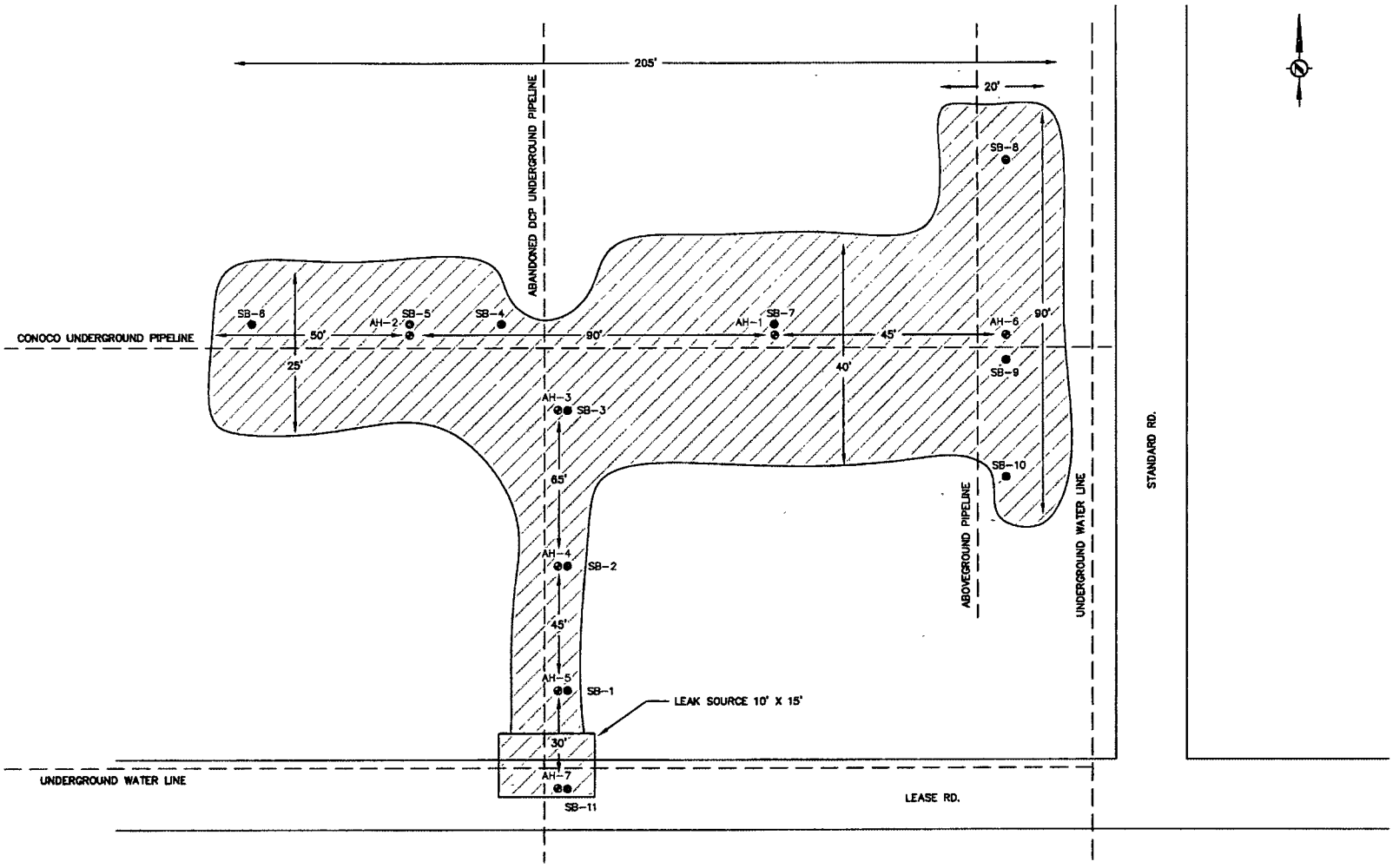
EDDY COUNTY, NEW MEXICO

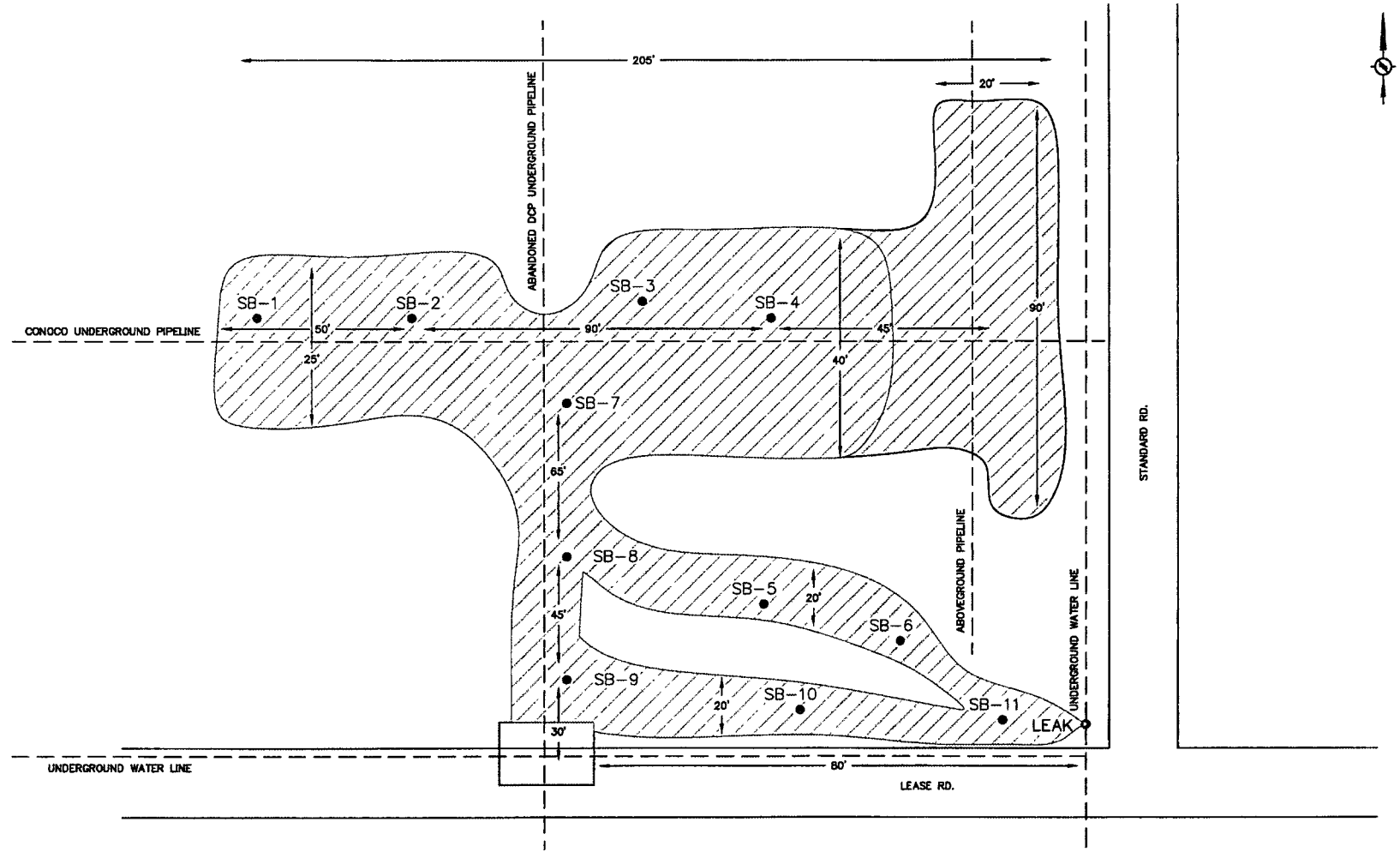
COG OPERATING LLC

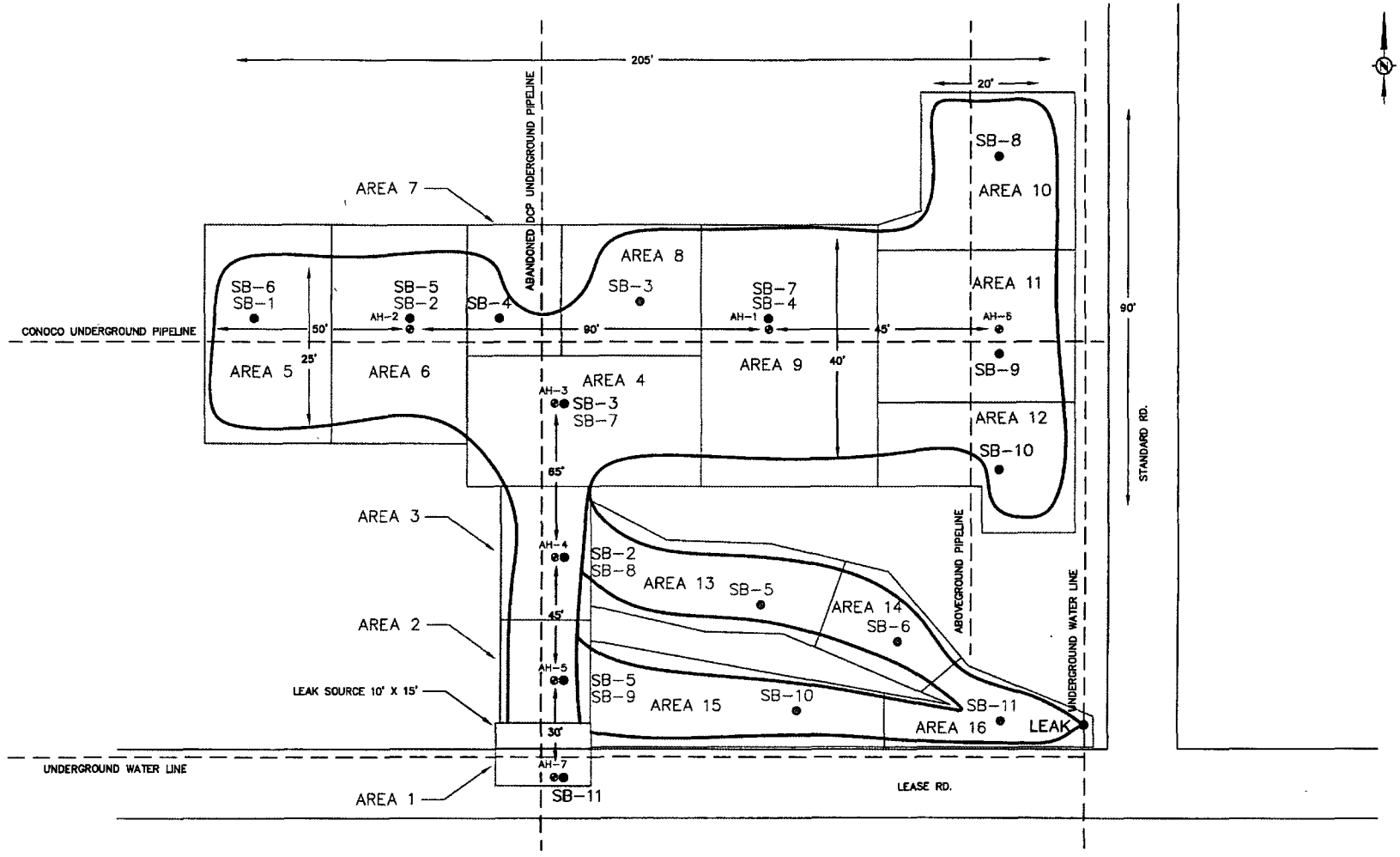
RJU #119 & #110 (#121)
INJECTION LINE LEAK

DATE: 6/12/09
DRWN. BY: JJ
FILE:

TETRA TECH, INC.
MIDLAND, TEXAS


205'
20'
ABANDONED DCP UNDERGROUND PIPELINE
CONOCO UNDERGROUND PIPELINE
SB-6
50'
AH-2
SB-5
SB-4
90'
AH-1
SB-7
45'
AH-6
90'
SB-8
SB-9
SB-10
25'
40'
AH-3
SB-3
65'
AH-4
SB-2
45'
AH-5
SB-1
LEAK SOURCE 10' X 15'
30'
AH-7
SB-11
UNDERGROUND WATER LINE
LEASE RD.
ABOVEGROUND PIPELINE
UNDERGROUND WATER LINE
STANDARD RD.
SPILL AREA
SAMPLE LOCATIONS
SOIL BORING LOCATIONS
1st RELEASE DATE 5/30/10
NOT TO SCALE
FIGURE NO. 3
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
DATE: 6/12/09
DRN. BY: JJ
RJU #119 INJECTION LINE LEAK
TETRA TECH, INC.
MIDLAND, TEXAS


205'
20'
ABANDONED DCP UNDERGROUND PIPELINE
CONOCO UNDERGROUND PIPELINE
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
LEAK
50'
25'
90'
45'
40'
65'
20'
ABOVEGROUND PIPELINE
UNDERGROUND WATER LINE
STANDARD RD.
30'
80'
LEASE RD.
UNDERGROUND WATER LINE
SPILL AREA
2nd RELEASE AREA (10/23/09)
SOIL BORING LOCATIONS
2nd RELEASE DATE 10/23/09
NOT TO SCALE
FIGURE NO. 4
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
DATE: 6/12/09
DWN. BY: JJ
RJU #110 (#121) INJECTION LINE LEAK
TETRA TECH, INC.
MIDLAND, TEXAS



SPILL AREA
SPILL SEGREGATED AREAS
SAMPLE LOCATIONS
SOIL BORING LOCATIONS (6-30-09)
SOIL BORING LOCATIONS (1-20-10 & 4-20-10)

AREA MAP 1st & 2nd SPILL

NOT TO SCALE

FIGURE NO. 5

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

RJU #119 & #110 (#121)
INJECTION LINE LEAK

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 6/12/09
DWN. BY: JJ
FILE: H:\COG\#400230 RJU #119 FLOWLINE

APPENDIX D
NMOCD and BLM Correspondence

Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Thursday, August 12, 2010 10:17 AM
To: 'Tavarez, Ike'; 'Pat Ellis'
Cc: Terry Gregston (terry_gregston@nm.blm.gov)
Subject: RE: COG - Work Plan - RJU #119 and RJU #110(#121)

Reference: COG Operating * RJ Unit 119 * 30-015-03146 * Release date – 5/30/2009
COG Operating * RJ Unit 110 * 30-015-03152 * Release date – 10/23/2009

The remediation proposal for cleanup of produced fluid releases at the above referenced sites is approved with the following conditions:

- Notify OCD District 2 Office 48 hours prior to commencement of remedial activities.
- In the event the project requires further sampling, notify OCD 48 hours prior to obtaining samples where the analyses will be submitted to OCD.
- Notify OCD 48 hours prior to installation of caps/liners.
- Plastic liners should be domed in such a manner as to facilitate run off of any downward migrating fluids.
- No portions of any liner or cap is to be closer than 4' (four feet) to original surface grade. (Minimum 4' cover on top of liners – BLM has requested liners be installed at base of excavations.)
- Submit a Final Report Form C-141 and closure report upon satisfactory completion of project.
- Like approval by BLM as may be applicable.

Be advised that OCD approval of this proposal does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, please contact me.

Mike Bratcher
NMOCD DISTRICT 2
1301 W. GRAND AVE.
ARTESIA, NM 88210
575-748-1283 EXT.108
mike.bratcher@state.nm.us

From: Tavarez, Ike [mailto:Ike.Tavarez@tetratech.com]
Sent: Tuesday, August 10, 2010 12:30 PM
To: Bratcher, Mike, EMNRD
Cc: Terry Gregston (terry_gregston@nm.blm.gov)
Subject: COG - Work Plan - RJU #119 and RJU #110(#121)

Mike,

Here is the work plan for the COG - RJU #119 and RJU #110 located in Eddy County, New Mexico. On June 4, 2010, we met in your office to discuss the results and depths of the proposed work plan. I checked project file and noted the work plan had not been submitted for you final review. Can you review and let me know if you have any questions. On approved, we like to start the remediation as soon as possible. Thanks

Ike Tavarez, PG Senior Project Manager

Main 432 682 4559 | Fax. 432 682 3946 | Cell. 432 425 3878

Ike Tavarez@tetratech.com

Tetra Tech Complex World, Clear Solutions™

1910 North Big Spring Midland, TX 79705 | www tetratech com

Bratcher, Mike, EMNRD

From: Terry_Gregston@blm.gov
Sent: Wednesday, August 11, 2010 2:26 PM
To: Tavarez, Ike
Cc: Bratcher, Mike, EMNRD
Subject: Re: COG - Work Plan - RJU #119 and RJU #110(#121)

Ike,

We have reviewed your work plans and find them suitable for execution with the exception that we spoke about yesterday on the phone. The BLM prefers that the liner is installed as deep as possible. So instead of putting clean fill on top of contaminated soils, then installing a liner, and then putting four feet of clean fill on top of the liner, we would prefer that the liner sits on top of the contaminated soils as a barrier between the contaminated soils and all clean soils above it. The exception to this is in cases where is best to 'level out the liner' in cases where there is too great a step down between different parts of the excavation. In such cases, you can level prior to installation of the liner if necessary. But if level is achieved at 10' or 6', install the liner at 10 feet or six feet below surface, as close to the contamination layer as possible. That way you have a good six to ten feet of clean fill on top of it, which allows for a much greater root zone, soil moisture retention, and erosion protection of the installed liner.

Pending like approval from the OCD, you are authorized to proceed with cleanup as soon as possible.

Terry Gregston
Environmental Protection Specialist
Bureau of Land Management
620 E. Greene St.
Carlsbad, NM 88220
Office (575) 234-5958
Fax (575) 234-5927

"Tavarez, Ike" <Ike.Tavarez@tetratech.com>

08/10/2010 12.30 PM

To "Mike Bratcher (mbratcher@state nm.us)" <mbratcher@state nm us>
cc "Terry Gregston (terry_gregston@nm blm gov)" <terry_gregston@nm blm gov>
Subject COG - Work Plan - RJU #119 and RJU #110(#121)

Mike,

Here is the work plan for the COG - RJU #119 and RJU #110 located in Eddy County, New Mexico. On June 4, 2010, we met in your office to discuss the results and depths of the proposed work plan. I checked project file and noted the work plan had not been submitted for you final review. Can you review and let me know if you have any questions. On approved, we like to start the remediation as soon as possible. Thanks

Ike Tavarez, P.G. Senior Project Manager

Main 432.682.4559 | Fax 432.682.3946 | Cell 432.425.3878

Ike.Tavarez@tetratech.com

Tetra Tech | Complex World | Clear Solutions™

1910 North Big Spring | Midland, TX 79705 | www.tetratech.com

[attachment "COG - RJU Figure 1 and 2.pdf" deleted by Terry G Gregston/CFO/NM/BLM/DOI] [attachment "COG - RJU Table .pdf" deleted by Terry G Gregston/CFO/NM/BLM/DOI] [attachment "COG - RJU Work Plan DOC.pdf" deleted by Terry G Gregston/CFO/NM/BLM/DOI] [attachment "COG - RJU Figures 3,4,5 and 6.pdf" deleted by Terry G Gregston/CFO/NM/BLM/DOI]

APPENDIX E
Aerial Imagery

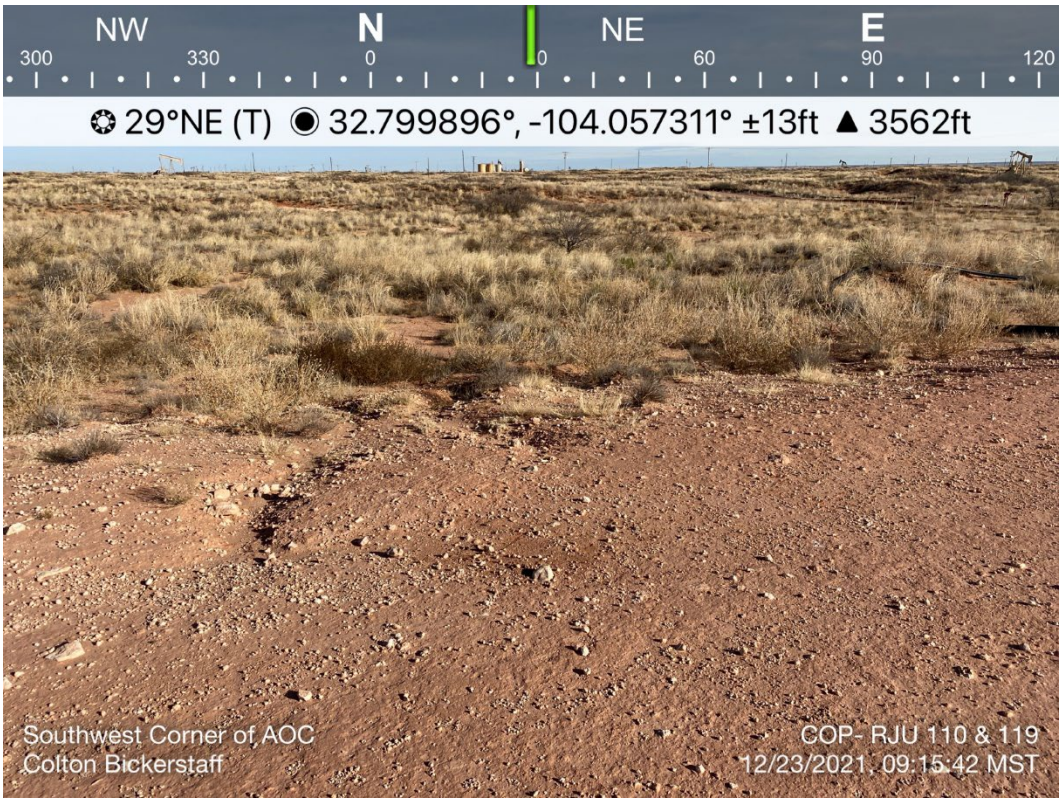
August 2009

June 2011

March 2016

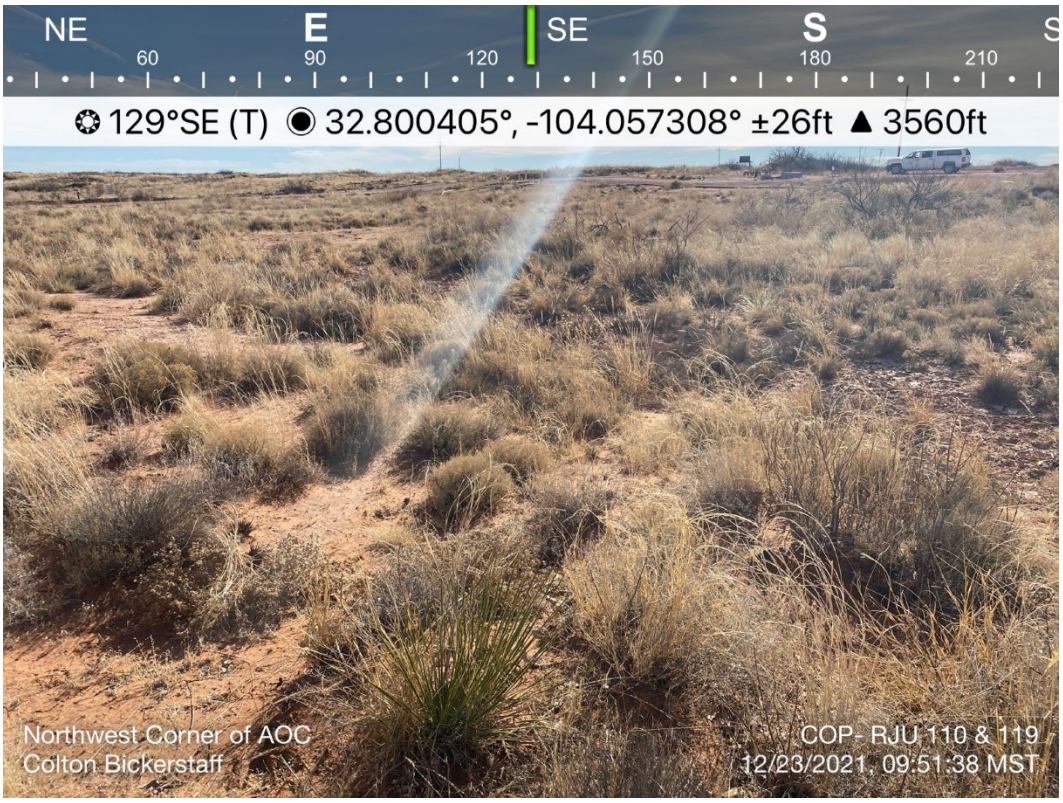
December 2019

APPENDIX F
Photographic Documentation



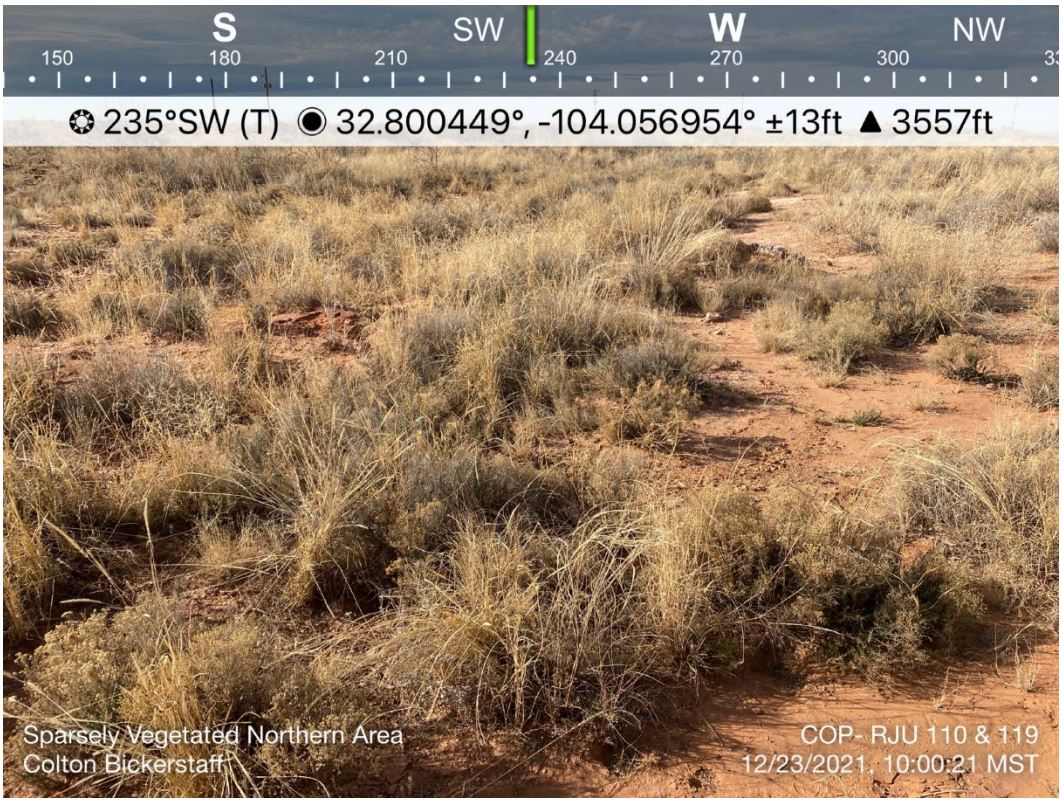
TETRA TECH, INC. PROJECT NO. 212C-MD-02619	DESCRIPTION	View north-northeast of southwest corner of visual inspection area from lease pad.	1
	SITE NAME	ConocoPhillips: RJ Units 110 & 119 Site Visit	12/23/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02619	DESCRIPTION	View south-southwest of northeast corner of visual inspection area from lease road.	2
	SITE NAME	ConocoPhillips: RJ Units 110 & 119 Site Visit	12/23/2021

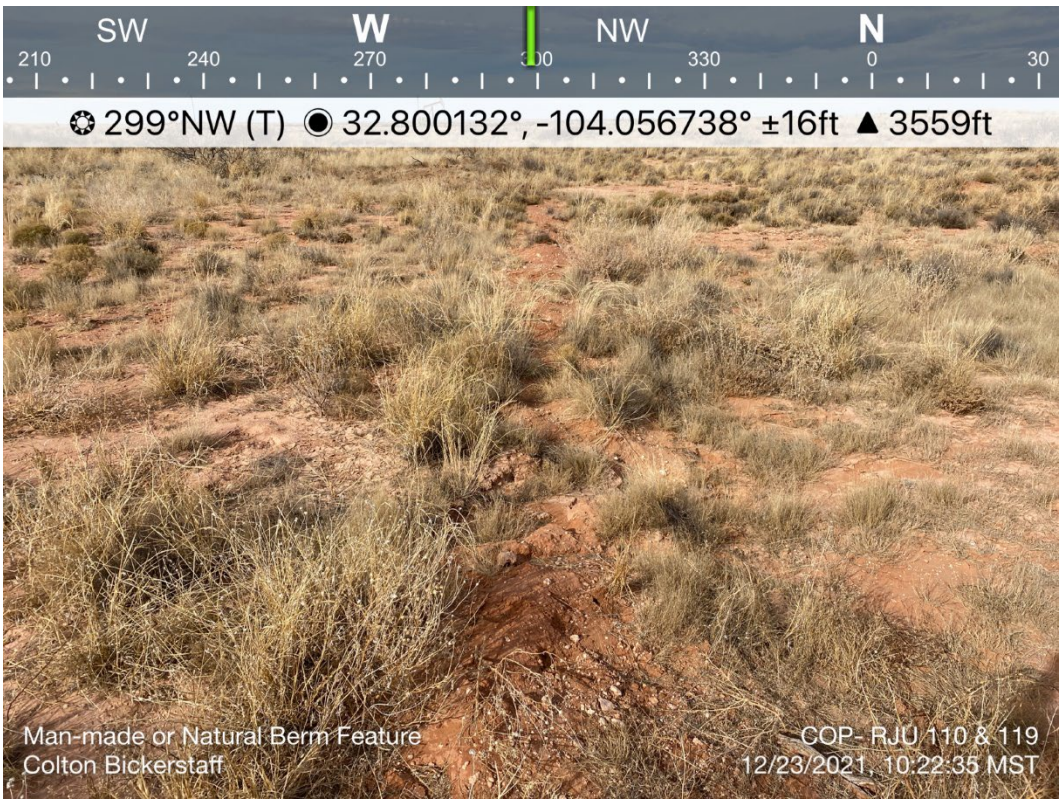


TETRA TECH, INC. PROJECT NO. 212C-MD-02619	DESCRIPTION	View southeast of northwest corner of visual inspection area.	3
	SITE NAME	ConocoPhillips: RJ Units 110 & 119 Site Visit	12/23/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02619	DESCRIPTION	View south of surface flowlines along eastern boundary of visual inspection area.	4
	SITE NAME	ConocoPhillips: RJ Units 110 & 119 Site Visit	12/23/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02619	DESCRIPTION	View southwest of northern portion of the visual inspection area.	5
	SITE NAME	ConocoPhillips: RJ Units 110 & 119 Site Visit	12/23/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02619	DESCRIPTION	View northwest of vegetation and berm feature in visual inspection area.	6
	SITE NAME	ConocoPhillips: RJ Units 110 & 119 Site Visit	12/23/2021

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 76933

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 76933
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	2/27/2023