

SITE INFORMATION

Report Type: Work Plan 2RP-4083

General Site Information:

| | | | | | | |
|-----------------------------|---|---------|-------|---------------|--|--|
| Site: | Burch Keely Unit #933H | | | | | |
| Company: | COG Operating LLC | | | | | |
| Section, Township and Range | Unit E | Sec. 13 | T 17S | R 29E | | |
| Lease Number: | API No. 30-015-40970 | | | | | |
| County: | Eddy County | | | | | |
| GPS: | 32.835019° N | | | 104.035119° W | | |
| Surface Owner: | Federal | | | | | |
| Mineral Owner: | | | | | | |
| Directions: | From the intersection of Hwy 82 (Lovington Hwy) and Kewanee Rd in rural Eddy County, travel north on Kewanee Rd for approximately 1.0 mi, turn east onto the lease road for approximately 330 feet to the location on the south side of the lease road. | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Release Data:

| | | |
|---------------------------------|---------------------------|--|
| Date Released: | 1/16/2017 | |
| Type Release: | Oil & Produced Water | |
| Source of Contamination: | Flowline | |
| Fluid Released: | 2 bbls oil & 3 bbls water | |
| Fluids Recovered: | 1 bbl oil & 0 bbl water | |

Official Communication:

| | | | |
|----------------------|--|--|--|
| Name: | Robert McNeil | | Ike Tavaréz |
| Company: | COG Operating, LLC | | Tetra Tech |
| Address: | One Concho Center | | 4000 N. Big Spring |
| | 600 W. Illinois Ave. | | Ste 401 |
| City: | Midland Texas, 79701 | | Midland, Texas |
| Phone number: | (432) 686-3023 | | (432) 687-8110 |
| Fax: | (432) 684-7137 | | |
| Email: | rmcneil@conchoresources.com | | Ike.Tavaréz@tetrattech.com |

Ranking Criteria

| Depth to Groundwater: | Ranking Score | Site Data |
|---|----------------------|------------------|
| <50 ft | 20 | |
| 50-99 ft | 10 | |
| >100 ft. | 0 | 150'-175' |
| WellHead Protection: | Ranking Score | Site Data |
| Water Source <1,000 ft., Private <200 ft. | 20 | |
| Water Source >1,000 ft., Private >200 ft. | 0 | 0 |
| Surface Body of Water: | Ranking Score | Site Data |
| <200 ft. | 20 | |
| 200 ft - 1,000 ft. | 10 | |
| >1,000 ft. | 0 | 0 |
| Total Ranking Score: | | 0 |

| Acceptable Soil RRAL (mg/kg) | | |
|------------------------------|------------|-------|
| Benzene | Total BTEX | TPH |
| 10 | 50 | 5,000 |



TETRA TECH

April 28, 2017

Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Work Plan for the COG Operating LLC., Burch Keely Unit #933H, Unit E, Section 13, Township 17 South, Range 29 East, Eddy County, New Mexico. 2RP-4083

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC., (COG) to prepare a work plan for the release assessed by COG at the Burch Keely Unit #933H, Unit E, Section 13, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.835019°, W 104.035119°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on January 16, 2017, and released approximately two (2) barrels of oil and three (3) barrels of produced water due to pinhole leaks in a flowline. Approximately one (1) barrel of oil was recovered using a vacuum truck. However, none of the produced water was recovered. The spill is located in the pasture to the southeast of the facility and measures approximately 20' x 90'. The initial C-141 form is included in Appendix A.

Groundwater

No water wells were listed within Section 13 on the New Mexico Office of the State Engineer's database. The nearest well is located in Section 22, approximately 2.15 miles to the southwest of the site, with a reported depth of approximately 76' below surface. This well is located in a draw area with a surface elevation of approximately 3,548' above sea level. The elevation at the site is approximately 3,635' above sea level. Based on the relative elevation, the estimated depth to groundwater at the site is approximately 160' below surface. Additionally, according to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in this area is shown to be between 150' and 175' below surface. The groundwater data is shown in Appendix B.

Tetra Tech

4000 North Big Spring, Suite 401, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



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 Analytical Results

On February 7, 2017, COG personnel were onsite to evaluate and sample the release area. Using a backhoe, two (2) trenches (T-1 and T-2) were installed to a total depths of 5.0' below surface. Selected 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 the laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The trench locations are shown on Figure 3.

Referring to Table 1, the areas of trenches (T-1 and T-2) showed chloride highs of 160 mg/kg and 48.0 mg/kg at 1.0' below surface, respectively, before declining with depth to 16.0 mg/kg (T-1) and <16.0 mg/kg (T-2) at 2.0' below surface. Total TPH and benzene concentrations were below the RRAL's in all collected samples. However, total BTEX concentrations exceeding the RRAL's were detected in the shallow soils with concentrations of 105 mg/kg (T-1) and 122 mg/kg (T-2) at 1.0' below surface. The total BTEX concentrations declined with depth to below the laboratory detection limits at 2.0' below surface at both trench locations.

Work Plan

Based on the laboratory results, COG proposes to remove the impacted material as highlighted (green) in Table 1 and shown on Figure 4. The areas of trenches (T-1 and T-2) will be excavated to a depth of approximately 1.0' below surface to remove the elevated BTEX concentrations in the shallow soils. Once excavated to the appropriate depth, the excavated area will be backfilled with clean material to surface grade. All of the excavated material will be transported offsite for proper disposal.

The proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns for onsite personnel. As such, COG will excavate the impacted soils to the maximum extent practicable.



TETRA TECH

Upon completion, a final report detailing the remediation activities will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Clair Gonzales,
Geologist I

Ike Tavaréz,
Senior Project Manager, P.G.

cc: Robert McNeill – COG
Dakota Neel – COG
Rebecca Haskell - COG
Shelly Tucker – BLM

Figures

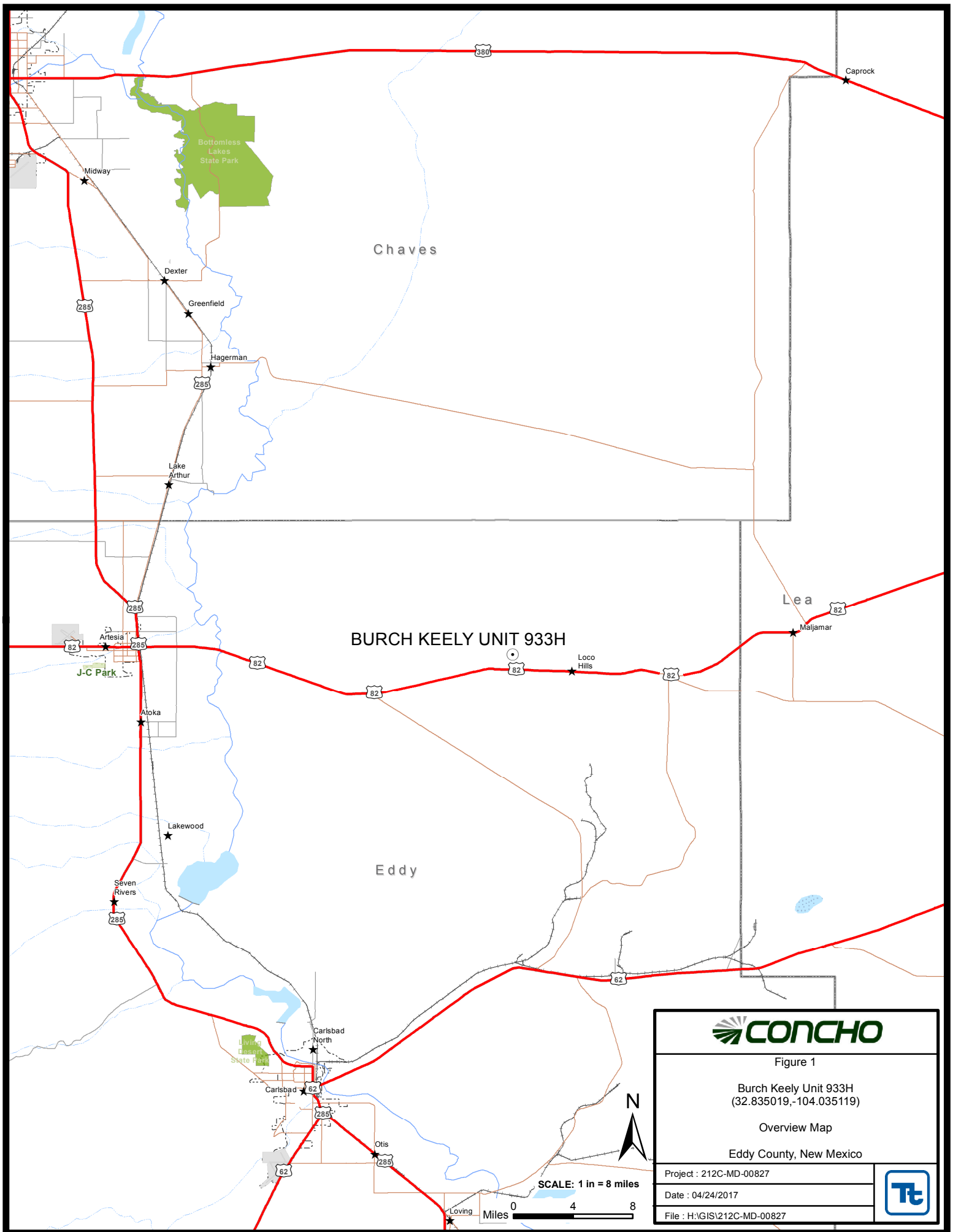


Figure 1

Burch Keely Unit 933H
(32.835019,-104.035119)

Overview Map

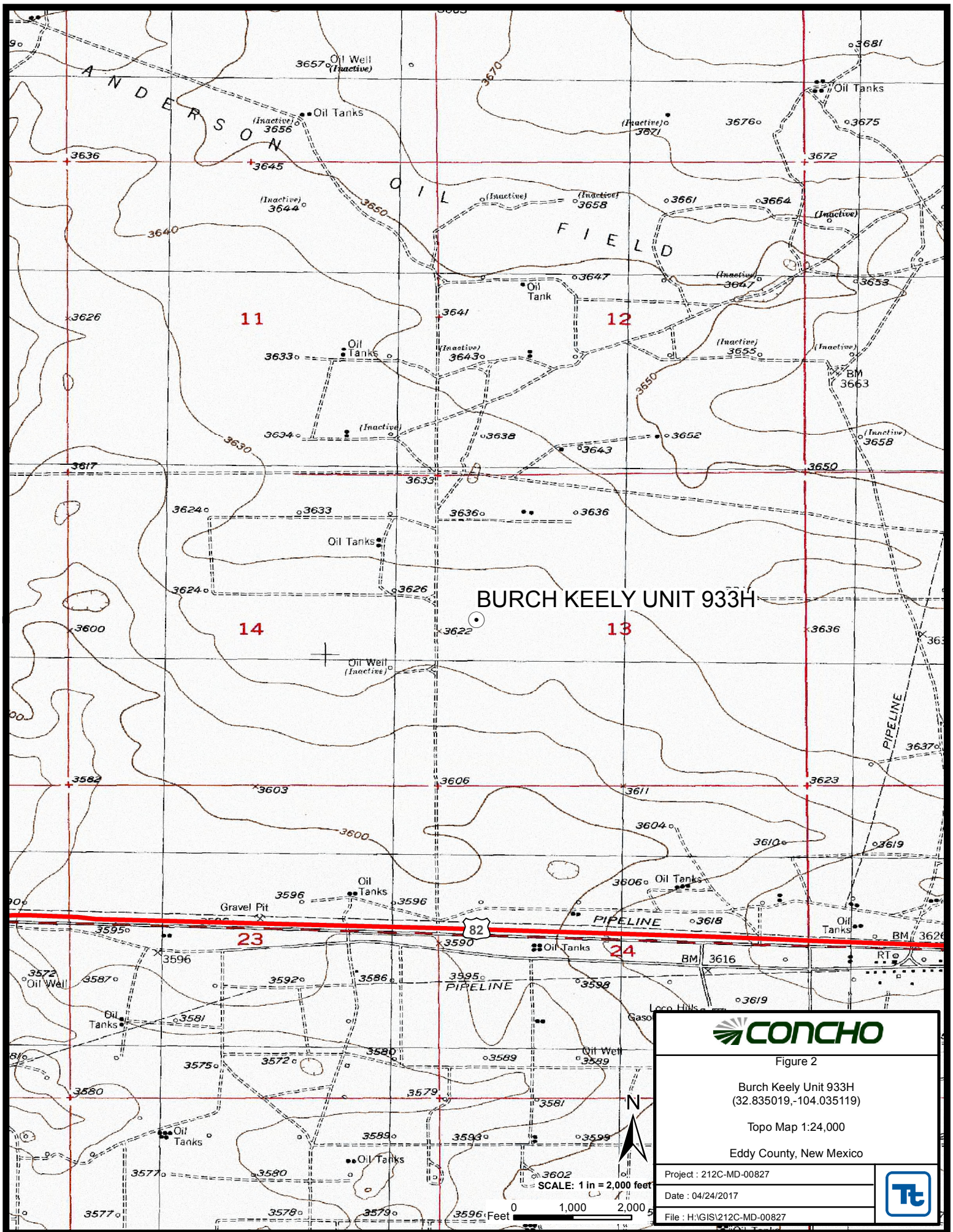
Eddy County, New Mexico

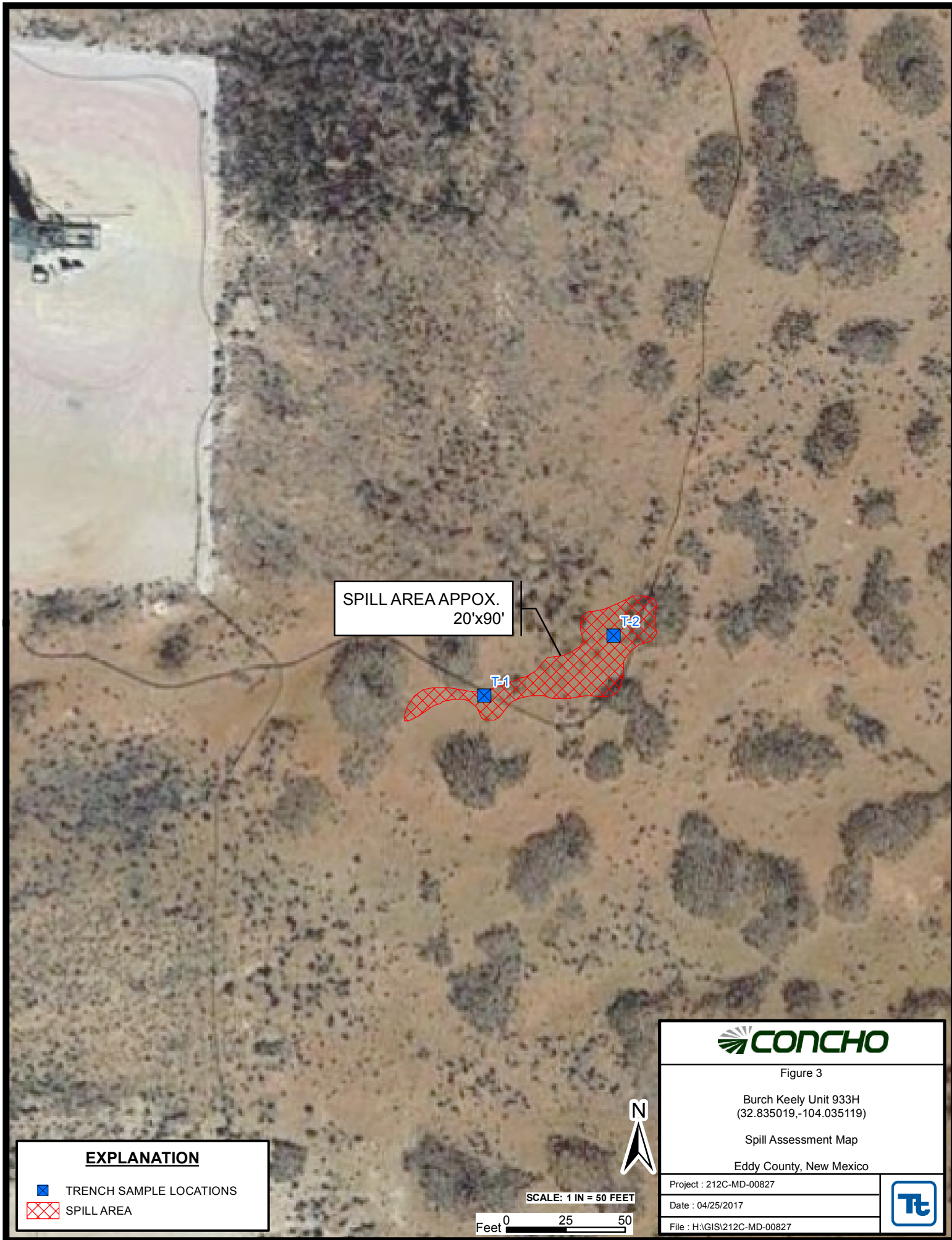
Project : 212C-MD-00827

Date : 04/24/2017

File : H:\GIS\212C-MD-00827







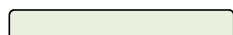


Tables

Table 1
COG Operating LLC.
Burch Keely Unit # 933H
Eddy County, New Mexico

| Sample ID | Sample Date | Sample Depth (ft) | Soil Status | | TPH (mg/kg) | | | Benzene (mg/kg) | Toluene (mg/kg) | Ethlybenzene (mg/kg) | Xylene (mg/kg) | Total BTEX (mg/kg) | Chloride (mg/kg) |
|------------|-------------|-------------------|-------------|---------|-------------|-------|-------|-----------------|-----------------|----------------------|----------------|--------------------|------------------|
| | | | In-Situ | Removed | GRO | DRO | Total | | | | | | |
| T-1 | 2/7/2017 | 1 | X | | 730 | 2,130 | 2,860 | 0.924 | 23.5 | 30.0 | 50.4 | 105 | 160 |
| | " | 2 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |
| | " | 3 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |
| | " | 4 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |
| | " | 5 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| T-2 | 2/7/2017 | 1 | X | | 802 | 2,420 | 3,222 | 0.638 | 27.9 | 35.3 | 57.9 | 122 | 48.0 |
| | " | 2 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <16.0 |
| | " | 3 | X | | <10.0 | 38.2 | 38.2 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 32.0 |
| | " | 4 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <16.0 |
| | " | 5 | X | | <10.0 | <10.0 | <10.0 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 16.0 |

(-) Not Analyzed



Proposed Excavation Depths

Appendix A

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 August 8, 2011

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 | Contact: | Robert McNeill |
| Address: | 600 West Illinois Avenue, Midland TX 79701 | Telephone No. | 432-683-7443 |
| Facility Name: | Burch-Keely Unit #933H | Facility Type: | Flowline |
| Surface Owner: | Federal | Mineral Owner: | API No. 30-015-40970 |

LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| E | 13 | 17S | 29E | 2310 | North | 330 | West | Eddy |

Latitude 32.8355293 Longitude -104.0357742

NATURE OF RELEASE

| | | | | | |
|--|--|---|--------------------------|-----------------------------|-----------------------------------|
| Type of Release: | Oil and Produced Water | Volume of Release: | 2 bbls Oil & 3 bbls PW | Volume Recovered: | 1 bbls Oil & 0 bbls PW |
| Source of Release: | Flowline | Date and Hour of Occurrence: | January 16, 2017 9:20 am | Date and Hour of Discovery: | January 16, 2017 9:20 am |
| Was Immediate Notice Given? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Required | If YES, To Whom? | | | |
| By Whom? | | Date and Hour: | | | |
| Was a Watercourse Reached? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, Volume Impacting the Watercourse. | | | |
| If a Watercourse was Impacted, Describe Fully.* | | | | | |
| Describe Cause of Problem and Remedial Action Taken.* | | | | | |
| Five pinholes were discovered in the polyline. Replaced section of the flowline. | | | | | |
| 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: | <u>OIL CONSERVATION DIVISION</u> | | | | |
| Printed Name: | Rebecca Haskell | Approved by Environmental Specialist: | | | |
| Title: | Senior HSE Coordinator | Approval Date: | Expiration Date: | | |
| E-mail Address: | rhaskell@concho.com | Conditions of Approval: | | | Attached <input type="checkbox"/> |
| Date: | January 17, 2017 | Phone: | 432-683-7443 | | |

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Burch Keely Unit #933H
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 | 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 | 14 220 | 13 |
| 19 | 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 28 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 45 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 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 76 | 23 | 24 |
| 30 | 29 210 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 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 80 | 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 55 | 1 |
| 7 | 8 81 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 80 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

| 18 South | | | 29 East | | |
|----------|----|----|---------|----|----|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 95 | 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 44 | 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 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location



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 | Depth Well | Depth Water | Water Column |
|-------------------------------|--------------|-------|--------|------|------|-----|-----|-----|-----|--------|---------|------------|-------------|--------------|
| RA 11807 POD1 | | | ED | 1 | 2 | 3 | 22 | 17S | 29E | 587360 | 3631585 | 131 | 76 | 55 |

Average Depth to Water: **76 feet**

Minimum Depth: **76 feet**

Maximum Depth: **76 feet**

Record Count: 1

PLSS Search:

Township: 17S

Range: 29E

Appendix C



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

February 22, 2017

AARON LIEB

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: BURCH KEELEY UNIT #933

Enclosed are the results of analyses for samples received by the laboratory on 02/15/17 13:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 02/15/2017
 Reported: 02/22/2017
 Project Name: BURCH KEELEY UNIT #933
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 02/07/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: T 1 - 1 ' (H700394-01)

| BTX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|-----------------------|--------------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | 0.924 | 0.500 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | 23.5 | 0.500 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | 30.0 | 0.500 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | 50.4 | 1.50 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | 105 | 3.00 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.6-140

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 160 | 16.0 | 02/20/2017 | 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 | 730 | 50.0 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | 2130 | 50.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 136 % 35-147

Surrogate: 1-Chlorooctadecane 131 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 1 - 2 ' (H700394-02)

| BTEx 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTEX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.6-140

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 88.9 % 35-147

Surrogate: 1-Chlorooctadecane 99.0 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 1 - 3 ' (H700394-03)

| 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 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.6-140

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 78.7 % 35-147

Surrogate: 1-Chlorooctadecane 95.2 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 1 - 4 ' (H700394-04)

| BTX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.6-140

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 78.4 % 35-147

Surrogate: 1-Chlorooctadecane 89.0 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 1 - 5 ' (H700394-05)

| BTX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.6-140

| 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 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 82.5 % 35-147

Surrogate: 1-Chlorooctadecane 98.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 2 - 1 ' (H700394-06)

| BTEx 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | 0.638 | 0.500 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | 27.9 | 0.500 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | 35.3 | 0.500 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | 57.9 | 1.50 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTEX | 122 | 3.00 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.6-140

| Chloride, SM4500Cl-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 48.0 | 16.0 | 02/20/2017 | 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 | 802 | 50.0 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | 2420 | 50.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 131 % 35-147

Surrogate: 1-Chlorooctadecane 127 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 2 - 2 ' (H700394-07)

| 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 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.6-140

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier | |
| Chloride | <16.0 | 16.0 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 83.3 % 35-147

Surrogate: 1-Chlorooctadecane 89.7 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 2 - 3' (H700394-08)

| 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 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.6-140

| 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 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | 38.2 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 79.7 % 35-147

Surrogate: 1-Chlorooctadecane 91.8 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 2 - 4 ' (H700394-09)

| BTEX 8021B | | mg/kg | | Analyzed By: MS | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTEX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.6-140

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | <16.0 | 16.0 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 81.3 % 35-147

Surrogate: 1-Chlorooctadecane 93.7 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 02/15/2017
Reported: 02/22/2017
Project Name: BURCH KEELEY UNIT #933
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: T 2- 5 ' (H700394-10)

| 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 | 02/18/2017 | ND | 2.18 | 109 | 2.00 | 2.72 | |
| Toluene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.05 | 103 | 2.00 | 2.65 | |
| Ethylbenzene* | <0.050 | 0.050 | 02/18/2017 | ND | 2.07 | 103 | 2.00 | 3.06 | |
| Total Xylenes* | <0.150 | 0.150 | 02/18/2017 | ND | 5.90 | 98.4 | 6.00 | 2.94 | |
| Total BTX | <0.300 | 0.300 | 02/18/2017 | ND | | | | | |

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.6-140

| Chloride, SM4500CI-B | | mg/kg | | Analyzed By: AC | | | | | |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 16.0 | 16.0 | 02/20/2017 | 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 | 02/17/2017 | ND | 187 | 93.5 | 200 | 0.699 | |
| DRO >C10-C28 | <10.0 | 10.0 | 02/17/2017 | ND | 195 | 97.6 | 200 | 1.31 | |

Surrogate: 1-Chlorooctane 84.6 % 35-147

Surrogate: 1-Chlorooctadecane 96.8 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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