| | | 5 | SITE INFORMA | TION | | | | | | |
|------------------|-------------------|--|---|----------------|--|---|--|--|--|--|
| | | Repo | rt Type: Clos | ure Report | ere (green en egeneen en en en egeneen en en | | | | | |
| General Site Inf | ormation: | | | 1 , 1 | | ya ya sa a sa | | | | |
| Site: | | Empire Federal S | SWD #3 | | | | | | | |
| Company: | | COG Operating L | LC | · · | | | | | | |
| Section, Towns | hip and Range | Unit K | Sec 10 | T17S | R29E | | | | | |
| Lease Number: | | API-30-015-3783 | | | | | | | | |
| County: | | Eddy County | | | | | | | | |
| GPS: | | | 32.84720° N | | 104.06 | 456° W | | | | |
| Surface Owner: | | Federa | | | | | | | | |
| Mineral Owner: | | · · · · · · · · · · · · · · · · · · · | | | | | | | | |
| Directions: | | | at the intersection of Hy and travel 0.1 miles, to | | | rth on CR 214 for | | | | |
| | | , , | • | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Release Data: | | 1st Spill | | | 4th Spill | Harris Company | | | | |
| Date Released: | | 11/25/2012 | 12/12/2012 | 12/14/2012 | 12/18/2012 | | | | | |
| Type Release: | | Produced Water | Produced Water | Produced Water | Produced Water | | | | | |
| Source of Contai | mination: | Load Line | Load Line | Load Line | Load Line | | | | | |
| Fluid Released: | | 25 bbis | 15 bbls | 15 bbls | 15 bbls | | | | | |
| Fluids Recovered | | 20 bbls | 12 bbls | 12 bbls | 12 bbls | | | | | |
| Official Commu | nication: | The state of the s | | | | | | | | |
| Name: | Robert McNeill | · <u>-</u> · · · · · · · · · · · · · · · · · · · | | <u>.</u> | lke Tavarez | | | | | |
| Company: | COG Operating, | LLC | | | Tetra Tech | | | | | |
| Address: | One Concho Ce | nter | | | 1910 N. Big Spring | | | | | |
| | 600 W. Illinois A | ve. | _ | | | | | | | |
| City: | Midland Texas, | 79701 | | | Midland, Texas | | | | | |
| Phone number: | (432) 686-3023 | | | | (432) 682-4559 | | | | | |
| Fax: | (432) 684-7137 | | | | | | | | | |
| Email: | rmcneill@conc | ho.com | | | ike.tavarez@tetrate | ech.com | | | | |
| | | | ar of the control of the | | | | | | | |

| Depth to Groundwater: | Ranking Score | | Site Data |
|---|---------------------------|-------|------------------|
| <50 ft | 20 | | |
| 50-99 ft | 10 | | 10 |
| >100 ft. | 0 | | |
| 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: | C. C. 44 E. C. 10 TERNEY. | | RECEIVED |
| | Acceptable Soil RRAL (m | g/kg) | JAN 94 2014 |
| Benzen | e Total BTEX | TPH | i i |
| 10 | 50 | 1,000 | King OOD DOLLECT |



August 30, 2013

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

Re: Closure Report for the COG Operating LLC., Empire Federal SWD #3 Releases, Unit K, Section 10, 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 four (4) spills from the Empire Federal SWD #3 located in Unit K, Section 10, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.84720°, W 104.06456°. The site location is shown on Figures 1 and 2.

Background

1st Spill 11/25/12

According to the State of New Mexico C-141 Initial Report, the leak was discovered on November 25, 2012, and released approximately twenty five (25) barrels of produced water from the SWD load line, due to it being left open. To alleviate the problem, COG personnel closed the valve on the load line. Twenty (20) barrels of standing fluids were recovered. The spill initiated at the load line and stayed on the pad affecting an area 40' X 40' around the well head. The initial C-141 form is enclosed in Appendix A.

2nd Spill 12/12/12

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 12, 2012, and released approximately fifteen (15) barrels of produced water from the SWD load line, due to it being left open. To alleviate the problem, COG personnel closed the valve on the load line. Twelve (12) barrels of standing fluids were recovered. The spill initiated at the load line and stayed on the



pad. The initial C-141 form is enclosed in Appendix A.

3rd Spill 12/14/12

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 14, 2012, and released approximately fifteen (15) barrels of produced water from the SWD load line, due to it being left open. To alleviate the problem, COG personnel closed the valve on the load line. Twelve (12) barrels of standing fluids were recovered. The spill initiated at the load line and stayed on the pad. The initial C-141 form is enclosed in Appendix A.

4th Spill 12/18/12

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 18, 2012, and released approximately fifteen (15) barrels of produced water from the SWD load line, due to it being left open. To alleviate the problem, COG personnel closed the valve on the load line. Twelve (12) barrels of standing fluids were recovered. The spill initiated at the load line and stayed on the pad. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 10. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 75' to 100' below surface. The groundwater 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 1,000 mg/kg.

Soil Assessment and Analytical Results

On January 23, 2013, Tetra Tech personnel inspected and sampled the spill area. Five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. 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 laboratory analysis and chain-of-custody



documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the RRAL for TPH and BTEX. A shallow chloride impact was detected in the areas of AH-1, AH-2 and AH-4, with concentrations at 0-1' of 4,910 mg/kg, 10,700 mg/kg and 3,990 mg/kg, respectively. The deeper samples significantly declined with depth at 1-1.5' below surface and were all vertically defined. The areas of AH-3 and AH-5 showed a deeper impact to the soils. Auger hole (AH-3) detected elevated chlorides from surface to 3.0' below surface and declined to 624 mg/kg at 4.0' below surface. However, AH-5 was not vertically defined, with a bottom auger hole sample of 2,360 mg/kg at 3-3.5' below surface.

Site Remediation and Conclusion

On June 19, 2013, Tetra Tech personnel supervised the excavation of the impacted soils. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. In order to remove the chloride impacts, the excavation depths ranged from 1.0' to 5.0' below surface. Once excavated, Tetra Tech collected confirmation samples from the excavation sidewalls and bottoms. The sampling results are shown in Table 1.

Referring to Table 1, the confirmation samples did not show any elevated remaining chlorides in the soils, except for the areas of AH-1 and AH-2 (south sidewalls) showed chlorides of 2,810 mg/kg and 5,120 mg/kg, respectively. These areas were not excavated due to facility or lines in the area. In addition, AH-1 (north sidewall) did show a chloride concentrations slightly above are target level of 1,000 mg/kg.

Approximately 490 cubic yards³ of soil were removed and transported to R360 facility for proper disposal. Once approved by the BLM, the site was then backfilled with clean material to surface grade.

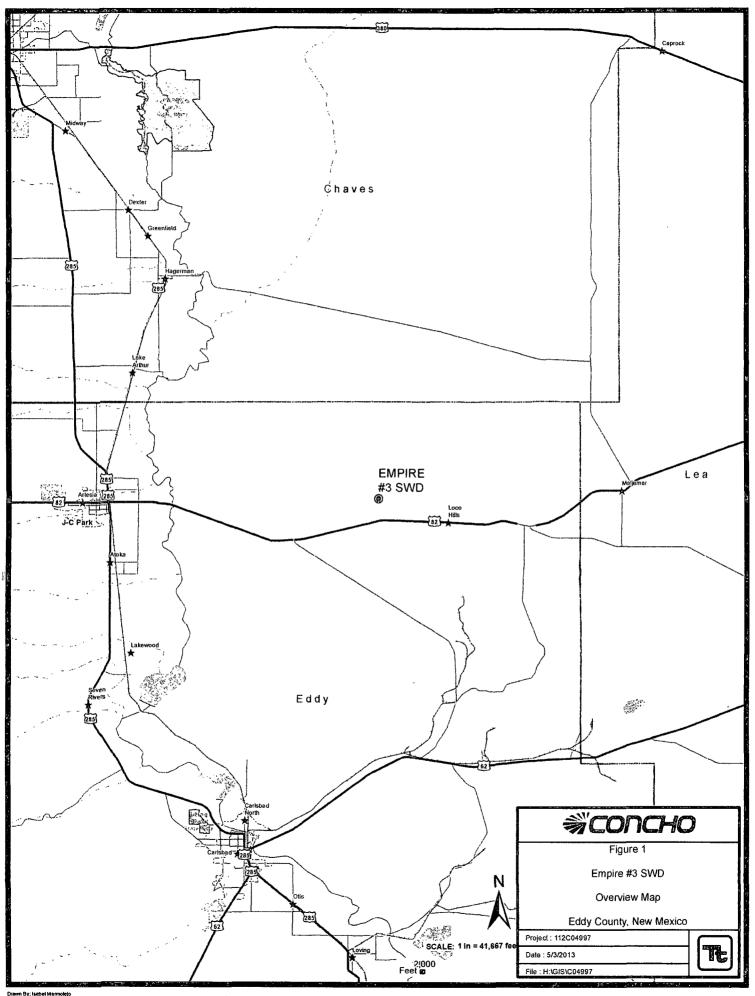
Based on the remediation activities performed at this location, COG requests closure for this site. The C-141's (Finals) are included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

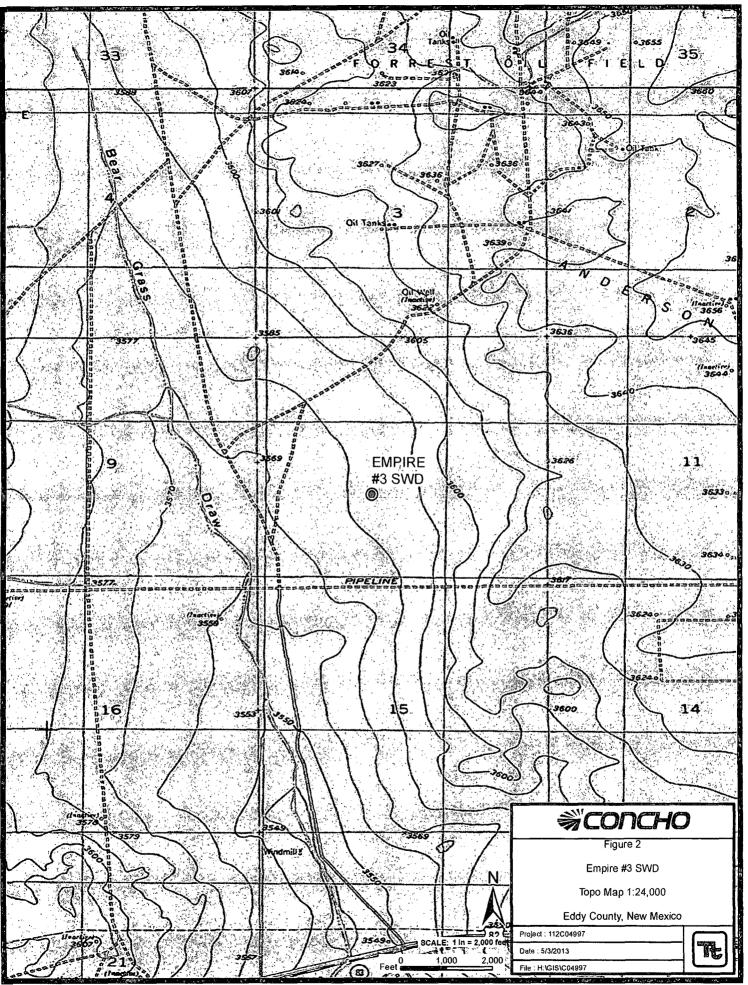
Respectfully submitted,

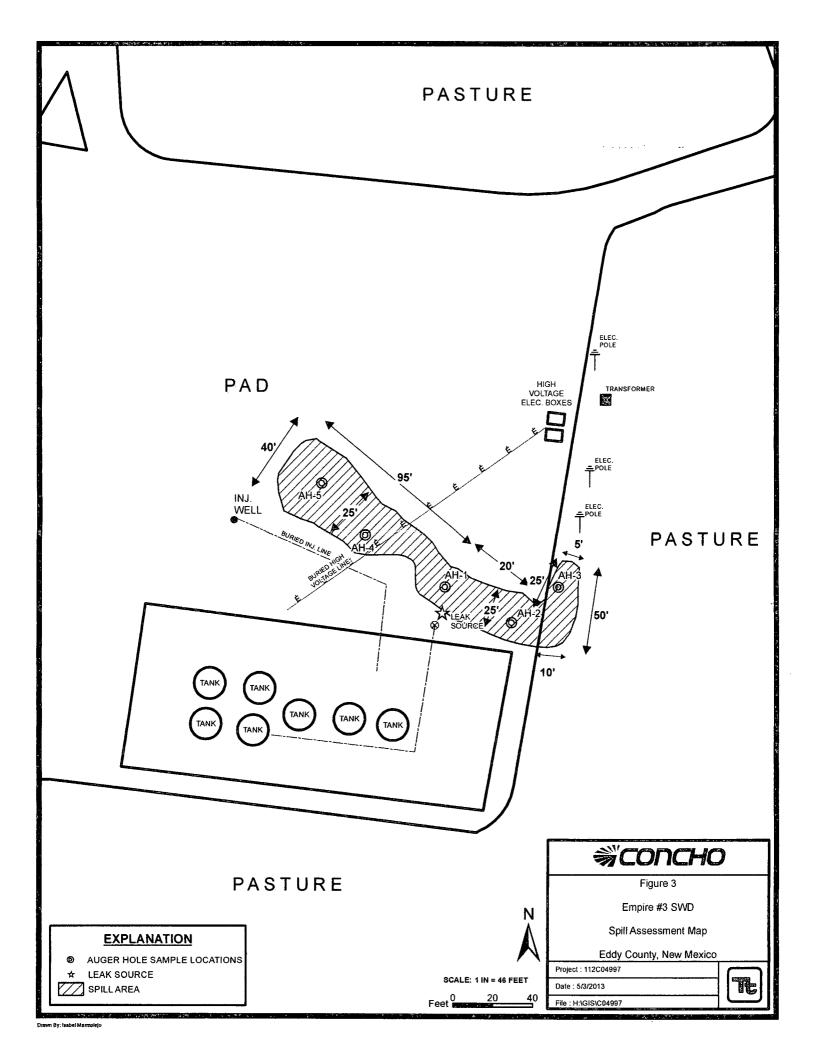
Ike Tavarez PG

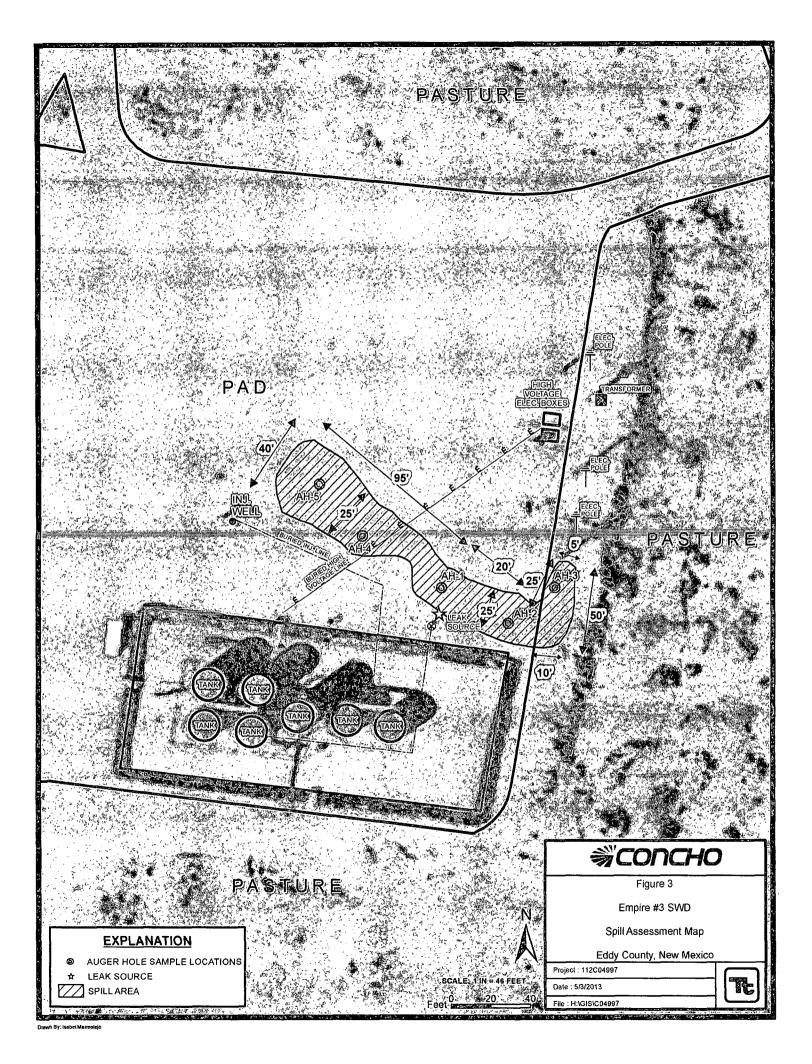
Senior Project Manager

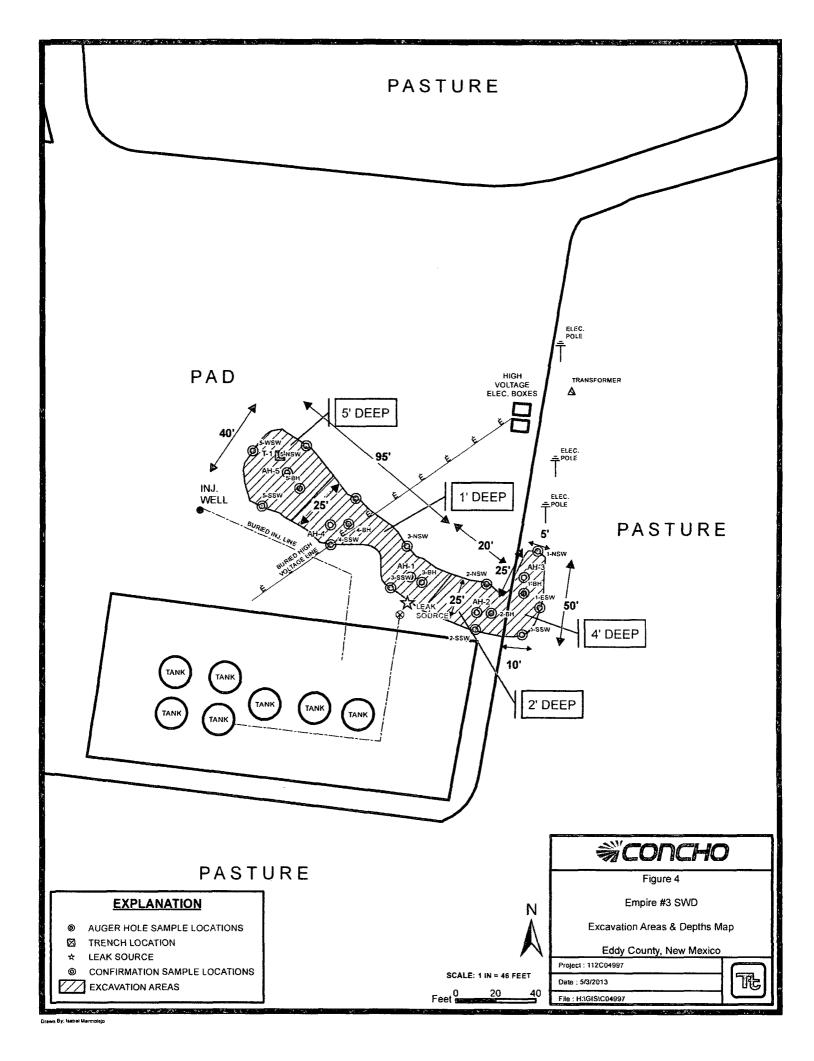
Figures











Tables

Table 1
COG Operating LLC.
Empire Federal Salt Water Disposal #3
Eddy County, New Mexico

| | Sample | Sample | Soil | Status | , 7 | ΓPH (mg/k | g) | Benzene | Toluene | Ethlybenzene | Xylene | Total | Chloride |
|------------------|-----------|------------|---------|------------------|--------------------|-----------|----------------|--------------|---------|----------------|---------|-----------------|----------|
| Sample ID | Date | Depth (ft) | In-Situ | Removed | GRO | DRO | Total | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | BTEX (mg/kg) | (mg/kg) |
| AH-1 | 1/23/2013 | **. 0-1 | 15.0 | w X | ₹ <4 :00 | <50.0 | ÷<50.0 | ″<0:0200″ | <0.0200 | <0.0200 | <0.0200 | <0:0200 | 4,910 |
| | н | 1-1.5 | Х | | - | - | - | <u>-</u> | - | - | • | - | <20.0 |
| | н | 2-2.5 | Х | | - | - | - | - | - | - | - | • | <20.0 |
| | 13 | 3-3.5 | Х | | - | - | - | - | - | - | - | - | <20.0 |
| | 11 | 4-4.5 | Х | | - | - | _ | - | - | - | - | _ | 36.8 |
| CS-3 NSW | 6/25/2013 | 1 | х | | - | - | - | - | - | - | - | - | 1,670 |
| CS-3 SSW | " | 1 | Х | | - | - | - | - | - | - | - | - | 2,810 |
| CS-3 Bottom Hole | н | 1 | Х | | - | - | - | - | - | - | - | - | 49.4 |
| AH-2 | 1/23/2013 | 0-1. | | X | <4.00 | <50.0 | <50.0 <i>*</i> | ≤0.0200 | <0.0200 | ്<0.0200- ∑ | <0.0200 | <0.0200 | 10,700 |
| | " | 1-1.5 | F. 6 | X | | | | | | | | | 308.0 |
| | " | 2-2.5 | Х | | - | - | - - | - | - | - | - | - | 152 |
| | H | 3-3.5 | Х | | - | - | - | - | - | - | - | - | <20.0 |
| CS-2 NSW | 6/25/2013 | 2 | х |] | - | - | - | - | - | _ | - | - | <20.0 |
| CS-2 SSW | 11 | 2 | Х | | - | - | _ | - | - | - | - | - | 5,120 |
| CS-2 Bottom Hole | 11 | 2 | Х | | - | - | - | - | - | - | - | - | 202 |
| AH-3 | 1/23/2013 | 0-1 | | X | <4.00 | <50.0 | ≨ <50:0 | <0.0200 | <0.0200 | √ <0:0200 - | <0.0200 | <0:0200 | 4,200 |
| | " | 1-1.5 | | .⊬ X -∠.: | | (上) (基礎 | | | | | | | 13,900 |
| | 16 | *- 2-2.5 | West. | X | | | | | 為學士 | | | | £10,900 |
| | 11 | 3-3.5 | | - X | | | | | | | | | 5,450 |
| | " | 4-4.5 | Х | | - | - | - | - | - | - | - | - | 624 |
| | ,1 | 5-5.5 | Х | | - | - | _ | - | - | - | - | - | 213 |
| · | 11 | 6-6.5 | Х | | | - | - | - | - | - | | - | <20.0 |
| CS-1 NSW | 6/25/2013 | 4 | Х | | - | - | - | _ | - | - | - | - | 104 |
| CS-1 NSW | 17 | 4 | Х | | - | - | - | - | - | _ | - | - | <20.0 |
| CS-1 ESW | 19 | 4 | Х | | - | - | - | - | - | _ | - | - | <20.0 |
| CS-1 SSW | 11 | 4 | Х | | ~ | - | - | - | - | - | - | - | 404 |
| CS-1 Bottom Hole | 18 | 4 | Х | | - | - | - | - | - | - | - | - | 537 |

Table 1 COG Operating LLC. **Empire Federal Salt Water Disposal #3 Eddy County, New Mexico**

| | Sample | Sample | Soil : | Status | • | ΓΡΗ (mg/k | g) | Benzene | Toluene | Ethlybenzene | Xylene | Total BTEX | Chloride |
|------------------|-----------|------------|--|----------------|---------|------------------|-----------|------------|------------------|-------------------|-----------------|------------------------|---------------------|
| Sample ID | Date | Depth (ft) | In-Situ | Removed | GRO | DRO | Total | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) |
| AH-4 | 1/23/2013 | ~ 0-11st | | X | *<4.00* | ₹50:0 | <50 O. | <0:0200 | * <0.0200 | <0.0200 | <0.0200 | <0.0200 | 3,990 |
| | ** | 1-1.5 | Х | | - | - | - | - | - | - | - | | 795 |
| | 11 | 2-2.5 | Х | | _ | - | - | - | - | - | - | - | <20.0 |
| CS-4 NSW | 6/25/2013 | 1 | Х | | - | - | - | - | - | - | - | - | 765 |
| CS-4 SSW | 11 | 1 | Х | | - | - | - | - | - | - | - | - | 1,070 |
| CS-4 Bottom Hole | " | 1 | Х | | - | - | | - | - | - | | | 479 |
| AH-5 | 1/23/2013 | 0-1: | | . X | ><4:00 | \$ 50.0\s | ≨≤50.0√ | . ≤0:0200÷ | <0:0200i | ~<0.0200 | \$0.0200 | \$<0:0200 ₃ | 7,990 |
| | и | 1-1.5 | | . X | | 1. | \$27 A TO | | | | | | - 5,520 |
| | 11 | 2-2.5 | | × | | | 发 | | | | | | <4,090 |
| | | ∌. 3-3.5 ↔ | | ∵. X ~. | | 4 - FV 4 | 额量的 | | | | 到() | X + X | 2,360 |
| T-1 | 6/25/2013 | √; ₹0. | ا المنافظ ال | , X-> | | . S S. M | 74 | | 10 A 10 40 | 3 A. 7 - 10 - 2 T | | | 3,740 |
| | " | . 52 | ر مين الله الله الله الله الله الله الله الل | ु X ः | | 4 | | 14.45 A.M | 3 | | | | 7,580 |
| | H | 4 | En Charles | X | | | | | | | | | √1,370 _− |
| | " | 6 | Х | | - | - | - | - | - | - | - | - | <20.0 |
| | 11 | 8 | Х | | - | - | - | - | _ | - | - | _ | <20.0 |
| | 11 | 10 | Х | | - | - | - | - | - | - | - | - | <20.0 |
| _ | ti . | 12 | Х | | - | - | - | - | - | | - | | 55.3 |
| CS-5 NSW | 6/25/2013 | 5 | Х | | - | - | - | - | - | - | | | <20.0 |
| CS-5 SSW | ** | 5 | Х | | - | - | - | - | - | _ | - | - | 104 |
| CS-5 WSW | " | 5 | X | | - | - | - | - | - | - | - | - | 168 |
| CS-5 Bottom Hole | 11 | 5 | Х | | - | - | - | - | - | - | | - | 158 |

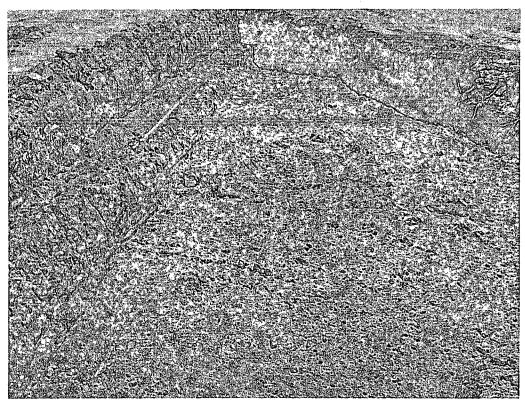
Not Analyzed (-) Excavated Depths

200

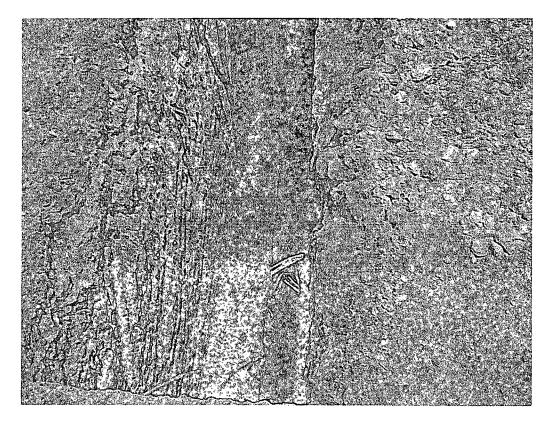
Photos

COG Operating LLC Empire Federal SWD #3 Eddy County, New Mexico





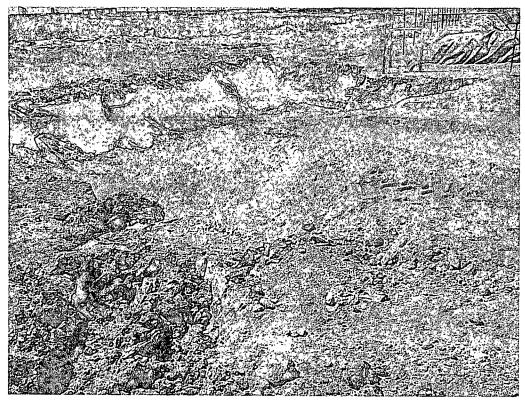
View West - Area of AH-5.



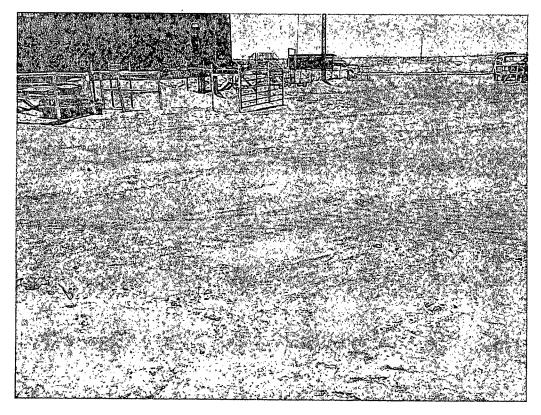
Area of Trench-1 in AH-5.

COG Operating LLC Empire Federal SWD #3 Eddy County, New Mexico





View Southeast- Backfill



View West - Backfill

Appendix A

<u>District 1</u> 1625 N. French Dr., Hobbs, NM 88240 1625 N. French Dr., Hobbs, NM 88240

District II

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

| | | | | | | OPERA | IUK | | | al Report | Ш | Final Repor |
|--|---|---|---|--|-------------------------------|---|--|---------------------------------------|--|---|----------------------------|--|
| Name of Company COG OPERATING LLC Contact Pat Ellis | | | | | | | | | | | | |
| Address | | st Illinois Av | enue, M | idland, TX 7970 | 1 | Telephone l | No. 432- | 230-00 | 77 | | | |
| Facility Nar | | Empire F | | | | Facility Typ | | SWD | | | | |
| | | | | | | | | | | | | |
| Surface Ow | ner Fedei | ral | | Mineral O | wner | | | | Lease N | lo. (API#) | 30-0 | 15-37831 |
| | | | | LOCA | TIO | N OF RE | LEASE | | | | | |
| Unit Letter | Section | Township | Range | Feet from the | North | /South Line | Feet from the | East/V | Vest Line | County | | |
| K | 10 | 17S | 29E | | | | | 1 | | ۱ . | Eddy | |
| | | | | Latitude 32.8 | 34736 | Longitu | | 1 | | | | - |
| | | | | NAT | URE | OF REL | EASE | | | | | |
| Type of Rele | ase Produ | ced water | | | | | Release 25bbls | | Volume F | Recovered 2 | 20bbls | |
| | | valve on truck | ing load l | ine | | | lour of Occurrent | ce | | Hour of Dis | | |
| | | | | | | 11/25/2013 | 2 | | | 2 12:30 p. | | |
| Was Immedia | ate Notice (| Given? | | | | If YES, To | Whom? | | | | | |
| | | \boxtimes | Yes [| No 🔲 Not Re | quired | ł | | Mike F | Bratcher-O | CD | | |
| By Whom? | Michelle M | Inlline | | | | Date and h | lour 11/26/2012 | 4·27 p | m | | | · · · · · · · · · · · · · · · · · · · |
| Was a Water | | | | | · | | olume Impacting | | | | | |
| | | | Yes 🗵 | No | | , | | | | | | |
| If a Watercou | If a Watercourse was Impacted, Describe Fully.* | | | | | | | | | | | |
| Describe Cau | Describe Cause of Problem and Remedial Action Taken.* | | | | | | | | | | | |
| The ball valv | e on the loa | d line was par | tially left | open causing a rel | ease of | produced wa | ter. The ball valv | e has be | en closed. | | | |
| Describe Are | a Affected | and Cleanup A | Action Tak | cen.* | | | | | | | | |
| release remai | ned on the to disposal. | pad location a Tetra Tech w | nd measui ill sample | from the ball valved and area of 40' the spill site area significant remedia | x 40' to delin | around the we neate any poss | ellhead. The loca | tion has | been scrap | ed and conta | minat | ed caliche has |
| regulations a public health should their o or the environ | Il operators or the envi- operations h nment. In a | are required to ronment. The save failed to a | o report as acceptant adequately ICD accep | e is true and completed in the certain rece of a C-141 report investigate and restance of a C-141 report investigate and restance of a C-141 received. | elease not by the conceditate | otifications a le NMOCD m te contaminat | nd perform correct parked as "Final Riction that pose a thr | ctive acti leport" d reat to gr | ons for rele oes not reli ound water | eases which leve the oper r, surface wa | may e ator o ter, hu | ndanger f liability ıman health |
| | | <u> </u> | // | | | | OIL CON | SERV | ATION | DIVISIO | N | |
| Signature: | | _ 1 | سيحيب | | | | • | | | | | |
| Printed Name | e: / | Josh | Russo | | | Approved by | District Supervis | ior: | | | | |
| Title: | 1 | Senior Enviro | nmental C | oordinator | | Approval Da | te: |] | Expiration | Date: | | |
| E-mail Addre | ess: | jrusso@c | oncho.co | m | | Conditions o | f Approval: | | | Attached | | |
| Date: | 2/06/2012 | Phone | 432- | 212-2399 | | | | | | Attached | ليا | |
| Attach Addi | | | | | | | | | · · · · · · · · · · · · · · · · · · · | | | ************************************** |

Name of Company

Type of Release: Produced Water

Was Immediate Notice Given?

Source of Release: Ball Valve on trucking load line.

Address

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

Volume Recovered 20 bbls

Date and Hour of Discovery 11/25/2012 4:27 p.m.

NMOCD ARTES!

Release Notification and Corrective Action OPERATOR Initial Report Final Report Coany COG Operating LLC Contact Pat Ellis 600 West Illinois Avenue, Midland, TX 79701 Telephone No. (432) 230-0077

Facility Name Empire Federal SWD #3 Facility Type SWD

Surface Owner: Federal Mineral Owner Lease No. (API#)30-015-37831

LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| K | 10 | 17S | 29E | | | | | Eddy |
| | | | | | | | | |

Latitude N32.84736° Longitude W104.06480°

NATURE OF RELEASE

11/25/2012

If YES, To Whom?

Volume of Release 25 bbls

Date and Hour of Occurrence

| By Whom? Michelle Mullins | Date and Hour 11/26/2012 4:2 | 27 p.m. |
|---|---|--|
| Was a Watercourse Reached? | If YES, Volume Impacting the | Watercourse. |
| ☐ Yes ☒ No | N/A | |
| If a Watercourse was Impacted, Describe Fully.* | | |
| Describe Cause of Problem and Remedial Action Taken.* | | |
| The ball valve on the load line was partially left open causing a release | of produced water. The ball valve h | as been closed. |
| Describe Area Affected and Cleanup Action Taken.* | | |
| Tetra Tech personnel inspected the site and collected samples to define proper disposal. The site was then brought up to surface grade with cle NMOCD for review. | e the spill extents. Soil that exceeded an backfill material. Tetra Tech prepare | the RRAL was removed and hauled away for ared a closure report and submitted it to |
| I hereby certify that the information given above is true and complete t regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remed or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations. | e notifications and perform corrective the NMOCD marked as "Final Repo liate contamination that pose a threat | e actions for releases which may endanger ort" does not relieve the operator of liability to ground water, surface water, human health |
| Signature: | OIL CONSE | RVATION DIVISION |
| Printed Name: Ike Tavarez (agent for COG) | Approved by District Supervisor: | |
| Title: Project Manager | Approval Date: | Expiration Date: |
| E-mail Address: Ike Tavarez@tetratech.com Date: 8/30//3 Phone: (432) 682-4559 | Conditions of Approval: | Attached |
| Attach Additional Sheets If Necessary | \[\bar{\bar{\bar{\bar{\bar{\bar{\bar{ | RECEIVED |

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

| | | | | | | OPERA? | ror | | | al Report | | Final Repor |
|--|--|--|--|---|------------------------------------|--|---|--|---|--|---|--------------------------------------|
| Name of Co | | COG OP | | | | Contact | | at Ellis | | | | |
| Address | | | | idland, TX 7970 | | Telephone l | | 230-00 | 77 | | | |
| Facility Nar | ne | Empire F | ederal S | WD #3 |]] | Facility Typ | <u>e :</u> | SWD | | | | |
| Surface Ow | ner Feder | al | | Mineral O | wner | | | | Lease N | No. (API# |) 30-01 | 15-37831 |
| | | | | | | OF RE | LEASE | ···· | | | | |
| Unit Letter K | Section 10 | Township 17S | Range 29E | Feet from the | North/ | South Line | Feet from the | East/V | Vest Line | County | Eddy | |
| | | | | Latitude 32.8 | 84736 | Longit | ide 104.06480 | | | | | |
| | · · · · · · · · · · · · · · · · · · · | | | NAT | URE | OF REL | | | | | | |
| Type of Rele | | | | 1. | | | Release 15bbls | | | Recovered | | |
| Source of Re | | | ing load l | line | | 12/12/2012 | | e | | Hour of Di 12 7:00 a | | |
| Was Immedi | ate Notice C | | Yes 🔀 | No 🔀 Not Re | quired | If YES, To | Whom? | | | | | |
| By Whom? | | | | | | Date and I | | | | | | |
| Was a Water | course Reac | | Yes 🗵 |] No | | If YES, Vo | olume Impacting t | the Wate | ercourse. | | | |
| If a Watercou | irse was Im | pacted, Descr | ibe Fully. | * | | | | | | · · · · · · · · · · · · · · · · · · · | | |
| Describe Cau | se of Proble | em and Reme | dial Actio | n Taken.* | | | | | · · · · · · · · · · · · · · · · · · · | | | |
| The ball valv | e on the loa | d line was pai | tially left | open causing a rel | ease of | produced wa | ter. The ball valve | e has be | en closed. | | | |
| Describe Are | a Affected a | and Cleanup A | Action Tal | cen.* | | | | | | | | |
| has been scra | ped and cor | taminated cal | iche has t | from the ball valveen hauled to dispose to the NMOCD/I | osal. T | etra Tech wi | ll sample the spill | site are | a to delinea | ate any pos | | |
| regulations a public health should their o | I operators or the envir operations h nment. In a | are required to conment. The ave failed to a ddition, NMC | o report an acceptant adequately CD accep | e is true and compl nd/or file certain re ce of a C-141 repo v investigate and re otance of a C-141 r | elease no rt by the emediate | otifications a NMOCD m contaminati | nd perform correct arked as "Final R on that pose a three the operator of | etive act eport" d eat to gr responsi | ons for release not release ound water bility for c | eases which ieve the op r, surface wo ompliance | n may er erator of ater, hu with any | ndanger f liability man health |
| | | 7 | | | | | OIL CON | SERV | ATION | DIVISI | <u>ON</u> | |
| Signature: | - / | /an T | (| 5 | | | | | | | | |
| Printed Name | | Josh | Russo | | | Approved by | District Supervis | or: | | | | |
| Title: | 2 | Senior Enviro | nmental C | Coordinator | | Approval Da | te: | | Expiration | Date: | | |
| E-mail Addre | ess: | jrusso@c | oncho.co | m | Conditions of Approval: Attached | | | | | | | |
| Date: 1 Attach Addi | 2/27/2012 tional Shee | Phone: | | 212-2399 | | | | | | <u></u> | | |

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

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with Rule 116 on back
side of form

JAN 24 2014

NMOCD ARTESIA

| | | | | | | OPERA | ГOR | | ☐ Initia | al Report | \boxtimes | Final Repo |
|---|---|--|--|--|------------------------------|--|--|---------------------------------------|---|---|---|-------------------------------------|
| Name of Co | | | Operati | | | Contact | | Pat Elli | | | | |
| Address | | | | Midland, TX 79 | 701 | Telephone I | | 230-0 | 077 | | | |
| Facility Nar | ne | Em | pire Fede | eral SWD #3 | | Facility Typ | e SW | <u>D</u> | | | | |
| Surface Ow | ner: Feder | al | | Mineral O | wner | | | | Lease N | lo. (API#) | 30-015 | 5-37831 |
| | | | | LOCA | TIO | N OF REI | LEASE | | | | | |
| Unit Letter | Section | Township | Range | Feet from the | | /South Line | Feet from the | East/ | West Line | County | | |
| K | 10 | 17S | 29E | | | | | | | | Edd | y |
| | | | | Latitude N32.8 | 4736 | ° Longitud | e W 104.0648 | 80° | | | | |
| | | | | NAT | URE | OF REL | EASE | | | | | |
| Type of Rele | ase: Produc | ed Water | | | | Volume of | Release 15 bb | ls | Volume F | Recovered | 12 bbl | S |
| Source of Re | ease: Ball | Valve on truc | king load | line. | | Date and H | our of Occurre | nce | | Hour of Dis | | |
| Was Immedia | te Notice C | | | | | If YES, To | | | 12/12/201 | .∠ 7.00 a.III | la . | |
| | | | Yes 🛚 | No 🛛 Not Rea | quired | | | 1.00 | | | | |
| By Whom? | | | | | | Date and H | | | | | | |
| Was a Water | course Reac | | Yes 🛚 |] No | | N/A | lume Impacting | the Wat | ercourse. | | | |
| If a Watercou | rse was Im | pacted, Descri | ibe Fully.* | : | | <u> </u> | | | | | | |
| Describe Cau | se of Proble | em and Remed | dial Action | n Taken.* | | | 11.1.20.40.4. | | | | • · · · · · · · · · · · · · · · · · · · | |
| The ball valve | e on the loa | d line was par | tially left | open causing a rele | ease of | produced was | er. The ball va | lve has b | een closed. | | | |
| Describe Are | a Affected a | and Cleanup A | Action Tak | en.* | | | | | | | | |
| Tetra Tech pe proper dispos NMOCD for | al. The site | pected the site was then brou | e and colle | ected samples to de surface grade with | fine th | e spill extents backfill mater | . Soil that exce ial. Tetra Tech | eded the prepared | RRAL was a closure re | removed ar port and su | d haule bmitted | ed away for lit to |
| regulations al public health should their o or the environ | l operators or the envir perations h iment. In a | are required to ronment. The ave failed to a | report an acceptance dequately ICD accep | is true and comple id/or file certain re e of a C-141 repor investigate and re tance of a C-141 re | lease r t by th mediat | otifications ar e NMOCD ma e contamination | d perform corrections at the correction of the c | ective act Report" or reat to g | ions for rele does not reli round water | eases which eve the ope s, surface wa | may er rator of ater, hu | ndanger Tliability man health |
| | | Me | 7 | ろ | | | OIL CON | SERV | ATION | DIVISIO | <u>N</u> | |
| Signature: | | | | / | | | | | | | | |
| Printed Name | : Ike Tavar | ez (agent for (| COG) | | | Approved by | District Superv | sor: | | | | |
| Title: Project | Manager | | | | | Approval Dat | e: | | Expiration I | Date: | | |
| E-mail Addre | ss: Ike Tav | 1 2 | | (432) 682-4559 | | Conditions of | Approval: | | | Attached | | |
| Attach Addit | ional Shee | ets If Necessa | ary | | | | | IR | ECE | VED | | |

State of New Mexico Energy Minerals and Natural Resources

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

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

Form C-141

Revised October 10, 2003

| | | | | | | OPERA | TOR | | | l Report | | Final Report |
|------------------|---|-----------------|--------------|---------------------------------------|-----------|----------------------------------|---------------------------------------|---|---------------|--------------|----------|--------------|
| Name of Co | mpany | COG OP | ERATIN | G LLC | (| Contact | Pa | at Ellis | | | | |
| Address | | | | idland, TX 7970 | | relephone l | | 230-00 | 77 | | | |
| Facility Nan | ne | Empire F | ederal S | WD #3 | J | Facility Typ | e S | SWD | | | | |
| Surface Ow | ner Feder | ral | | Mineral O | wner | | · · · · · · · · · · · · · · · · · · · | | Lease N | lo. (API#) | 30-01 | 15-37831 |
| | | | | LOCA | TION | OF RE | LEASE | | | | | |
| Unit Letter K | Section 10 | Township 17S | Range 29E | Feet from the | North/ | South Line | Feet from the | East/V | Vest Line | County | Eddy | |
| | | | | Latitude 32.8 | 84736 | Longitu | ıde 104.06480 | | | | | |
| | | | | NAT | URE | OF REL | | | | | | |
| Type of Relea | | ced water | | | | | Release 15bbls | | | Recovered | | |
| Source of Rel | lease Ball | valve on truck | ing load l | ine | | I . | lour of Occurrenc | e | | Hour of Dis | | , |
| Was Immedia | te Notice (| Siven? | | | | 12/14/2012 If YES, To | | | 12/14/201 | 2 7:00 a.i | n. | |
| Was minicale | iic rionice c | | Yes 🔯 | No 🔀 Not Re | quired | li TES, Te | WHOIII: | | | | | |
| By Whom? | | | | | | Date and I | lour | *************************************** | | | | |
| Was a Watero | course Read | hed? | | | | If YES, Vo | olume Impacting t | he Wate | ercourse. | | | |
| | | | Yes 🛚 |] No | | | | | | | | |
| If a Watercou | If a Watercourse was Impacted, Describe Fully.* | | | | | | | | | | | |
| Describe Cau | se of Proble | em and Remed | lial Actio | n Taken.* | | | | | | | | |
| The ball valve | e on the loa | d line was par | tially left | open causing a rel | ease of | produced wa | ter. The ball valve | e has be | en closed. | | | |
| Describe Are | a Affected | and Cleanup A | ction Tal | cen.* | | | | | | | | |
| Initially 15hh | ds of produc | ced water wer | e released | from the ball valv | e at the | load line and | l we were able to | recover | 12bbls witi | h a vacuum | truck | The location |
| | | | | een hauled to disp | | | | | | | | |
| from the relea | ase and we | will present a | work plan | to the NMOCD/I | 3LM for | approval pri | or to any significa | ant reme | diation wo | rk. | | |
| I hereby certi | fy that the i | nformation gi | ven above | is true and compl | ete to th | e best of my | knowledge and u | nderstar | nd that purs | uant to NM | OCD r | ules and |
| regulations al | loperators | are required to | report ar | nd/or file certain re | elease no | otifications a | nd perform correc | tive acti | ions for rel | eases which | may e | ndanger |
| public health | or the envir | ronment. The | acceptant | e of a C-141 repo | rt by the | NMOCD m | arked as "Final R | eport" d | loes not reli | ieve the ope | rator of | f liability |
| should their o | perations h | ave tailed to a | dequately | investigate and restance of a C-141 i | mediate | contaminati | on that pose a thr | eat to gr | ound water | r, surface w | ater, hu | man health |
| federal, state, | or local lav | vs and/or regu | lations. | nance of a C-141 i | cport ut | es not renev | e the operator of | respons | ionity for c | omphance v | with any | y onici |
| | | | 7 | | | | OIL CON | SERV | ATION | DIVISIO | ON | |
| S: | | _/ (| | | | | | | | | | |
| Signature: | | | (| | | | | | | | | |
| Printed Name | <u>: </u> | Josh | Russo | | | Approved by District Supervisor: | | | | | | |
| Title: | Ş | Senior Enviror | mental C | oordinator | | Approval Da | te: | | Expiration | Date: | | |
| E-mail Addre | | | oncho.co | | | Conditions o | | | | Attached | ı 🗆 | |
| Data: 1 | 2/27/2012 | Phonor | 422 | 212 2200 | - 1 | | | | | | | 1 |

^{*} 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-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

| | | | | | | OPERA' | ΓOR | | | 🔲 Initia | al Report | \boxtimes | Final Repor |
|--|--|---|---|--|-----------------------------------|--|--|------------------------------------|-------------------------------------|--|--|-------------------------------|-----------------------------------|
| Name of Co | mpany | COG | Operati | ng LLC | (| Contact | | Pa | it Ellis | | | | |
| Address | 600 W | est Illinois A | venue, N | Midland, TX 7970 |)1 | Telephone N | No. | (432) 2 | 230-007 | 77 | | | |
| Facility Nan | ne | Emj | oire Fede | eral SWD #3 | 1 | Facility Typ | e | SWD | | | | | |
| Surface Ow | ner: Feder | al | | Mineral Ow | ner | | | | | Lease N | lo. (API#)3 | 0-015 | -37831 |
| | | | | LOCAT | 'IOI | OF REI | LEASE | · | | | | | |
| Unit Letter K | Section 10 | Township 17S | Range 29E | Feet from the | North/ | South Line | Feet fro | m the | East/W | est Line | County | Eddy | , |
| | | | | Latitude N32.84 | 736° | Longitud | e W 104. | 06480 | 0 | | | | |
| | | | | NATU | RE | OF RELI | EASE | | | | | | |
| Type of Relea | ase: Produc | ed Water | | | | Volume of | Release | 15 bbls | | Volume R | Recovered | 12 bbls | |
| Source of Rel | ease: Ball | Valve on truc | king load | line. | | Date and H | | currence | e | | Hour of Disc 2 7:00 a.m. | | |
| Was Immedia | ite Notice C | | | | | If YES, To | | | | 12/1 // 201 | 2 7.00 u.m. | | |
| | | | Yes 🗵 | No 🛛 Not Requ | ired | | | | | | | | - |
| By Whom? N | | | | | | Date and H | | | | | | | |
| Was a Watero | ourse Reac | nea? | Yes 🛚 | No | | If YES, Vo | иште ипр | acting ti | ne water | course. | | | |
| If a Watercou | rse was Imp | oacted, Descri | be Fully.* | (| | | | | | | | | |
| Describe Cau | se of Proble | em and Remed | dial Action | ı Taken.* | | | | | | | | | |
| The ball valve | e on the load | d line was par | tially left | open causing a relea | se of p | produced wa | ter. The b | all valve | e has bee | en closed. | | | |
| Describe Area | Affected a | ind Cleanup A | ction Tak | en.* | , | | | | | | | | |
| proper dispos NMOCD for | al. The site review. | was then brou | ight up to | cted samples to defi surface grade with c | lean b | oackfill mater | ial. Tetra | Tech pro | epared a | closure re | port and sub | mitted | it to |
| regulations all public health should their o | l operators a or the envir perations ha ment. In ac | are required to onment. The ave failed to a ddition, NMO | report an acceptanc dequately CD accep | is true and complete d/or file certain rele e of a C-141 report investigate and rem tance of a C-141 rep | ase no by the ediate | otifications ar NMOCD ma contamination | nd perform arked as "l on that pos | n correct Final Re se a thre | ive action port" do at to gro | ons for rele es not reli- ound water | eases which a eve the oper surface war | may end ator of er, hun | danger liability nan health |
| | | n/ | | | | | OIL (| CONS | SERV. | ATION | DIVISIO | N | |
| Signature: | 61 | 00 | 7/ | | | | | | | | | | |
| Printed Name | : Ike Tavare | ez (agent for (| COG) | | A | Approved by | District Su | uperviso | r: | | | | |
| Title: Project | Manager | | | | A | Approval Dat | e: | | Е | xpiration I | Date: | | |
| E-mail Addre | ss: Ike Tava | arez@tetratecl | n.com | | Conditions of Approval: Attached | | | | | | | | |
| Date: \geq | 3-30 | -13 | Phone: | (432) 682-4559 | | | | | | | , macrou | | |

* Attach Additional Sheets If Necessary

RECEIVED
JAN 2 4 2014

NMOCD ARTESIA

State of New Mexico Energy Minerals and Natural Resources

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

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

Form C-141 Revised October 10, 2003

Final Report

Release Notification and Corrective Action

OPERATOR

| Name of Company COG OPERATING LLC | Contact Pat Ellis | | | | |
|--|---|--|---|---|--|
| Address 600 West Illinois Avenue, Midland, TX 79701 | Telephone | | 230-0077 | | |
| Facility Name Empire Federal SWD #3 | Facility Ty | pe : | SWD | | |
| Surface Owner Federal Mineral Owner | er | | Lease | No. (API#) 30-015-37831 | |
| LOCATI | ON OF RE | LEASE | | | |
| Unit Letter Section Township Range Feet from the No. 10 17S 29E | orth/South Line | Feet from the | East/West Line | County Eddy | |
| Latitude 32.847 | 36 Longit | ude 104.06480 | | | |
| NATUF | RE OF REL | EASE | | | |
| Type of Release Produced water | | f Release 15bbls | | Recovered 12bbls | |
| Source of Release Ball valve on trucking load line | 12/18/201 | | 1 | d Hour of Discovery 012 7:00 a.m. | |
| Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Requir | red If YES, T | o Whom? | | | |
| By Whom? | Date and | Hour | | | |
| Was a Watercourse Reached? ☐ Yes ☑ No | If YES, V | olume Impacting | the Watercourse. | | |
| If a Watercourse was Impacted, Describe Fully.* | | | | | |
| Describe Cause of Problem and Remedial Action Taken.* The ball valve on the load line was partially left open causing a release | e of produced w | ater. The ball valv | e has been closed | | |
| Describe Area Affected and Cleanup Action Taken.* | | | | | |
| Initially 15bbls of produced water were released from the ball valve at has been scraped and contaminated caliche has been hauled to disposa from the release and we will present a work plan to the NMOCD/BLM | il. Tetra Tech w | ill sample the spill | l site area to delin | eate any possible contamination | |
| I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain releas public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remore the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations. | se notifications a y the NMOCD n diate contaminat | and perform correct narked as "Final R ion that pose a thr | ctive actions for re eport" does not re eat to ground wat | eleases which may endanger elieve the operator of liability er, surface water, human health | |
| 773- | | OIL CON | SERVATION | N DIVISION | |
| Signature: | | | | | |
| Printed Name: Josh Russo | Approved by | District Supervis | or: | | |
| Title: Senior Environmental Coordinator | Approval Da | te: | Expiration | n Date: | |
| E-mail Address: jrusso@concho.com | Conditions of Approval: | | | Attached | |
| Date: 12/27/2012 Phone: 432-212-2399 Attach Additional Sheets If Necessary | | | | | |

State of New Mexico Energy Minerals and Natural Resources

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

Revised October 10, 2003

Form C-141

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JAN 24 2014

NMOCD ARTESIA

| | | | | | | OPERA? | FOR | | Initi | al Report | \boxtimes | Final Report |
|--|--|-----------------|-------------|--|---------|---|----------------|-------------|---------------|-------------|-------------|--------------|
| Name of Co | mpany | COG | Operati | ng LLC | (| Contact | | Pat Ellis | 3 | | | |
| Address | 600 W | est Illinois A | venue, N | Aidland, TX 797 | 701 | Telephone N | No. (43 | 32) 230-00 |)77 | | | |
| Facility Nar | ne | Emj | pire Fede | eral SWD #3 | I | Facility Typ | e SV | VD | | | | |
| Surface Ow | ner: Feder | al | | Mineral Ov | vner | - | | , | Lease N | No. (API#): | 30-015 | -37831 |
| | | | | LOCA | TIAN | OF RE | EACE | | | | | • |
| Unit Letter | Section | Township | Range | | | South Line | Feet from the | No. Fact/ | West Line | County | | |
| K | 10 | 17S | 29E | reet from the | 14OLUI/ | South Line | reet Hom ti | le Lasu | West Line | County | Eddy | , |
| | L | | | Latitude N32.84 | 4736° | Longitud | e W 104.064 | 180° | | ' | | |
| | | | | NATI | URE | OF REL | EASE | | | | | |
| Type of Relea | ase: Produc | ed Water | | | | ~ ····· | Release 151 | obls | Volume I | Recovered | 12 bbls | |
| Source of Re | lease: Ball | Valve on truc | king load | line. | | Date and H | our of Occuri | ence | | Hour of Dis | | |
| Was Immedia | ite Notice (| Given? | | | | If YES, To | | ··· | 12/10/20 | 12 7.00 a.m | • | |
| | | | Yes 🏻 | No 🛛 Not Req | uired | | | | | | | |
| By Whom? N | Michelle M | ıllins | | | | Date and F | our | | | | | |
| Was a Watero | course Reac | | | | | If YES, Volume Impacting the Watercourse. | | | | | | |
| ☐ Yes ☒ No | | | | N/A | | | | | | | | |
| If a Watercou | rse was Im | oacted, Descri | be Fully.* | : | | | | | | | | |
| Describe Cau | se of Proble | em and Remed | dial Action | ı Taken.* | | | | | | | | |
| The ball valve | e on the loa | d line was par | tially left | open causing a rele | ease of | produced wa | ter. The ball | alve has b | een closed. | | | |
| Describe Area | a Affected a | and Cleanup A | action Tak | en.* | | | | | | | | |
| | al. The site | | | cted samples to de surface grade with | | | | | | | | |
| regulations all public health should their o or the environ | 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. | | | | | | | | | | | |
| | | 1 | / | | | | OIL CO | NSERV | <u>'ATION</u> | DIVISIO | <u>N</u> | |
| Signature: | 6/ | | |) ^ | | | | | | | | |
| Printed Name | : Ike Tavar | ez (agent for G | OG) | | A | Approved by | District Super | visor: | | | | |
| Title: Project | | | | | | Approval Dat | e: | | Expiration | Date: | | |
| E-mail Addre | ss: Ike Tava | nrez@tetratecl | n.com | | | Conditions of | Approval: | | | Attached | П | |
| Date: < | 8-30 | 17 | Phone: | (432) 682-4559 | | | | | | | | |
| Attach Addit | ional Shee | ts If Necessa | arv | | | | | | 1 RF | | | |

Appendix B

Water Well Data Average Depth to Groundwater (ft) COG-Empire Federal SWD #3 Eddy County, New Mexico

| 16 9 | South | | 28 East | | | 16 S | outh | 29 | East | | | 16 | South | ; | 30 East | |
|----------|--|---|-----------------|---|---|------------|--|---|--|--|----------|----|-------|-------------|---------|---------|
| 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 |
| 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 12 |
| 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 220 | 13 | 18 | 17 | 16 | 15 | 14 | 13 |
| | | | | | | | | | dry | | | | | | | |
| 20 | J. | 22 | 23 | 24 | | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 24 |
| 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 2: |
| 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 36 |
| 17.5 | South | | 28 East | · | | 17 Se | outh | 29 | East | <u> </u> | | 17 | South | | 30 East | |
| 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 |
| 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 1: |
| 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 1: |
| 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 2 |
| 29 | 28 | 79 27 | 26 | 25 | 30 | | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 2 |
| 32 | 33 | 34 | 35 258 | 36 | 31 | 208' 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 30 |
| | | | | | | | | | 153 | | | | _L | | | \perp |
| 18 5 | South | : | 28 East | | | 18 Se | outh | 29 | East | | | 18 | South | | 30 East | |
| 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 |
| 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 95 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 12 |
| 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 1: |
| 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 2. |
| <u> </u> | 226 | | | | | | | | | | <u> </u> | | | | | 1 |
| 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 2 |
| 32 | 33 | 34 | 35 65 | 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 3 |
| | 5 8 17 20 29 32 17 5 8 69 17 20 29 29 29 29 29 29 29 | 8 9 17 16 20 21 61 29 28 32 33 17 South 5 4 8 9 17 16 20 21 29 28 32 33 18 South 5 4 108 8 9 69 17 16 20 21 226 29 28 | 5 | 5 4 3 2 8 9 10 11 17 16 15 14 20 21 22 23 61 29 28 27 26 32 33 34 35 17 South 28 East 5 4 3 2 8 9 10 11 17 16 15 14 20 21 22 23 79 28 27 26 32 33 34 35 258 18 South 28 East 5 4 3 2 18 South 28 East 258 17 16 15 14 20 21 22 23 29 28 27 26 | 5 4 3 2 1 8 9 10 11 12 17 16 15 14 13 20 21 22 23 24 61 29 28 27 26 25 32 33 34 35 36 17 South 28 East 5 4 3 2 1 8 9 10 11 12 17 16 15 14 13 20 21 22 23 24 79 26 25 32 33 34 35 258 32 33 34 35 258 36 18 South 28 East 5 4 3 2 1 108 9 10 11 12 69 17 16 15 14 13 20 21 22 23 24 29 <td> 5</td> <td>5 4 3 2 1 6 5 8 9 10 11 12 7 8 17 16 15 14 13 18 17 20 21 22 23 24 19 20 61 22 23 24 19 20 32 33 34 35 36 31 32 17 South 28 East 17 South 28 East 17 South 5 4 3 2 1 6 5 8 9 10 11 12 7 8 17 17 16 15 14 13 18 17 19 20 29 28 27 26 25 30 29 210 20e* 31 32 18 South 28 East 18 So 6 5 5 6 5 5 10 So</td> <td>5 4 3 2 1 6 5 4 8 9 10 11 12 7 8 9 17 16 15 14 13 18 17 16 20 21 22 23 24 19 20 21 29 28 27 26 25 30 29 28 32 33 34 35 36 31 32 33 17 South 28 East 17 South 5 4 3 2 1 6 5 4 8 9 10 11 12 7 8 9 17 16 15 14 13 18 17 16 29 28 27 26 25 30 29 210 28 32 33 34 35 258 36 31 32 33 18 South 28 East 1 1 6 <t< td=""><td>5 4 3 2 1 8 9 10 11 12 7 8 9 10 17 16 15 14 13 18 17 16 15 20 21 22 23 24 19 20 21 22 61 29 28 27 26 25 30 29 28 27 32 33 34 35 36 31 32 33 34 17 South 28 East 17 South 28 29 28 27 17 16 15 14 13 18 17 16 15 17 16 15 14 13 18 17 16 15 17 16 15 14 13 18 17 16 15 29 28 27 26 25 30 30 29 210 28 27 32 33 34 35 <t< td=""><td>5 4 3 2 1 6 5 4 3 2 8 9 10 11 12 7 8 9 10 11 17 16 15 14 13 18 17 16 15 14 220 4dry 20 21 22 23 24 19 20 21 22 23 24 19 20 21 22 23 24 110 30 29 28 27 26 25 30 29 28 27 26 23 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 31 32</td><td> S</td><td> 5</td><td> S</td><td> S</td><td> S</td><td> S</td></t<></td></t<></td> | 5 | 5 4 3 2 1 6 5 8 9 10 11 12 7 8 17 16 15 14 13 18 17 20 21 22 23 24 19 20 61 22 23 24 19 20 32 33 34 35 36 31 32 17 South 28 East 17 South 28 East 17 South 5 4 3 2 1 6 5 8 9 10 11 12 7 8 17 17 16 15 14 13 18 17 19 20 29 28 27 26 25 30 29 210 20e* 31 32 18 South 28 East 18 So 6 5 5 6 5 5 10 So | 5 4 3 2 1 6 5 4 8 9 10 11 12 7 8 9 17 16 15 14 13 18 17 16 20 21 22 23 24 19 20 21 29 28 27 26 25 30 29 28 32 33 34 35 36 31 32 33 17 South 28 East 17 South 5 4 3 2 1 6 5 4 8 9 10 11 12 7 8 9 17 16 15 14 13 18 17 16 29 28 27 26 25 30 29 210 28 32 33 34 35 258 36 31 32 33 18 South 28 East 1 1 6 <t< td=""><td>5 4 3 2 1 8 9 10 11 12 7 8 9 10 17 16 15 14 13 18 17 16 15 20 21 22 23 24 19 20 21 22 61 29 28 27 26 25 30 29 28 27 32 33 34 35 36 31 32 33 34 17 South 28 East 17 South 28 29 28 27 17 16 15 14 13 18 17 16 15 17 16 15 14 13 18 17 16 15 17 16 15 14 13 18 17 16 15 29 28 27 26 25 30 30 29 210 28 27 32 33 34 35 <t< td=""><td>5 4 3 2 1 6 5 4 3 2 8 9 10 11 12 7 8 9 10 11 17 16 15 14 13 18 17 16 15 14 220 4dry 20 21 22 23 24 19 20 21 22 23 24 19 20 21 22 23 24 110 30 29 28 27 26 25 30 29 28 27 26 23 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 31 32</td><td> S</td><td> 5</td><td> S</td><td> S</td><td> S</td><td> S</td></t<></td></t<> | 5 4 3 2 1 8 9 10 11 12 7 8 9 10 17 16 15 14 13 18 17 16 15 20 21 22 23 24 19 20 21 22 61 29 28 27 26 25 30 29 28 27 32 33 34 35 36 31 32 33 34 17 South 28 East 17 South 28 29 28 27 17 16 15 14 13 18 17 16 15 17 16 15 14 13 18 17 16 15 17 16 15 14 13 18 17 16 15 29 28 27 26 25 30 30 29 210 28 27 32 33 34 35 <t< td=""><td>5 4 3 2 1 6 5 4 3 2 8 9 10 11 12 7 8 9 10 11 17 16 15 14 13 18 17 16 15 14 220 4dry 20 21 22 23 24 19 20 21 22 23 24 19 20 21 22 23 24 110 30 29 28 27 26 25 30 29 28 27 26 23 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 31 32</td><td> S</td><td> 5</td><td> S</td><td> S</td><td> S</td><td> S</td></t<> | 5 4 3 2 1 6 5 4 3 2 8 9 10 11 12 7 8 9 10 11 17 16 15 14 13 18 17 16 15 14 220 4dry 20 21 22 23 24 19 20 21 22 23 24 19 20 21 22 23 24 110 30 29 28 27 26 25 30 29 28 27 26 23 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 33 34 35 36 31 32 31 32 | S | 5 | S | S | S | S |

| New | Mexico | State | Engineers | Well | Reports |
|-----|--------|-------|-----------|------|---------|
| | | | | | |

USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

NMOCD - Groundwater Data

Field water level

New Mexico Water and Infrastructure Data System

Appendix C

Report Date: February 11, 2013 Work Order: 13012803 Page Number: 1 of 5

Summary Report

(Corrected Report)

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

Report Date: February 11, 2013

Work Order: 13012803

Project Location: Eddy Co., NM

Project Name: COG/Empire Fed SWD #3

Project Number: 112C04997

| | | | Date | Time | Date |
|--------|-------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 319460 | AH-1 0-1' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319461 | AH-1 1-1.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319462 | AH-1 2-2.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319463 | AH-1 3-3.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319464 | AH-1 4-4.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319466 | AH-2 0-1' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319467 | AH-2 1-1.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319468 | AH-2 2-2.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319469 | AH-2 3-3.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319471 | AH-3 0-1' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319472 | AH-3 1-1.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319473 | AH-3 2-2.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319474 | AH-3 3-3.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319475 | AH-3 4-4.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319476 | AH-3 5-5.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319477 | AH-3 6-6.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319479 | AH-4 0-1' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319480 | AH-4 1-1.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319481 | AH-4 2-2.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319483 | AH-5 0-1' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319484 | AH-5 1-1.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319485 | AH-5 2-2.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |
| 319486 | AH-5 3-3.5' | soil | 2013-01-23 | 00:00 | 2013-01-25 |

| | | ВТ | EX | | TPH DRO - NEW | TPH GRO |
|--|------------------------|-----------------------|--|-----------------------|----------------|------------------------|
| | Benzene | Toluene | Ethylbenzene | Xylene | DRO | GRO |
| Sample - Field Code | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) |
| 319460 - AH-1 0-1' | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <0.0200 Qr,Qs | < 50.0 | $<4.00~_{\mathrm{Qs}}$ |
| 319466 - AH-2 0-1' | $< 0.0200 \; _{Qr,Qs}$ | $< 0.0200 \;_{Qr,Qs}$ | $< 0.0200 \;_{Qr,Qs}$ | $< 0.0200 \;_{Qr,Qs}$ | < 50.0 | < 4.00 Qs |
| 319471 - AH-3 0-1' | $< 0.0200 \;_{Qr,Qs}$ | <0.0200 Qr,Qs | $< 0.0200 \; _{\mathbf{Qr},\mathbf{Qs}}$ | $< 0.0200 \;_{Qr,Qs}$ | < 50.0 | <4.00 Qs |
| 319479 - AH-4 0-1' | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <0.0200 Qr,Qs | < 50.0 | <4.00 Qs |
| 319483 - AH-5 0-1' | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <0.0200 Qr,Qs | <50.0 | <4.00 Qs |
| Sample: 319460 - A | H-1 0-1' | | | | | |
| Param | Flag | | Result | | Units | m RL |
| Chloride | | | 4910 | | mg/Kg | 4 |
| C 1 010401 A1 | TT 1 1 1 1 1 1 | | | | | |
| Sample: 319461 - Al | | | | | | |
| Param Param | Flag | | Result | | Units | RL |
| Chloride | | | <20.0 | | mg/Kg | 4 |
| Sample: 319462 - Al Param Chloride | H-1 2-2.5' | · | Result <20.0 | | Units mg/Kg | RL 4 |
| Sample: 319463 - Al | H-1 3-3.5' | | | | | |
| Param | Flag | | Result | | Units | RL |
| Chloride | | | <20.0 | | mg/Kg | 4 |
| Sample: 319464 - Al | H-1 4-4.5' Flag | | Result | | Units | RL |

Sample: 319467 - AH-2 1-1.5'

Sample: 319466 - AH-2 0-1'

Param

Chloride

Result

10700

Units

mg/Kg

RL

| Report Date: Febru | ary 11, 2013 | Work Order: 13012803 | Page | Page Number: 3 of 5 | | |
|--------------------|-----------------------|----------------------|-------|---------------------|--|--|
| Param | Flag | Result | Units | m RL | | |
| Chloride | | 308 | mg/Kg | 4 | | |
| Sample: 319468 - | AH-2 2-2.5' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | 152 | mg/Kg | 4 | | |
| Sample: 319469 - | AH-2 3-3.5' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | <20.0 | mg/Kg | 4 | | |
| Sample: 319471 - | AH-3 0-1' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | 4200 | mg/Kg | 4 | | |
| Sample: 319472 - | AH-3 1-1.5' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | 13900 | mg/Kg | 4 | | |
| Sample: 319473 - | AH-3 2-2.5' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | 10900 | mg/Kg | 4 | | |
| Sample: 319474 - | AH-3 3-3.5' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | 5450 | mg/Kg | 4 | | |
| Sample: 319475 - | AH-3 4-4.5' | | | | | |
| Param | Flag | Result | Units | RL | | |
| Chloride | | 624 | mg/Kg | 4 | | |

| Report Date: Febru | ary 11, 2013 | Work Order: 13012803 | Page | Page Number: 4 of 5 | |
|--------------------|-----------------|----------------------|-------|---------------------|--|
| Sample: 319476 - | AH-3 5-5.5' | | | | |
| Param | \mathbf{Flag} | Result | Units | RL | |
| Chloride | | 213 | mg/Kg | 4 | |
| Sample: 319477 - | AH-3 6-6.5' | | | | |
| Param | Flag | Result | Units | RL | |
| Chloride | | <20.0 | mg/Kg | 4 | |
| Sample: 319479 - | AH-4 0-1' | | | | |
| Param | Flag | Result | Units | RL | |
| Chloride | | 3990 | mg/Kg | 4 | |
| Sample: 319480 - | AH-4 1-1.5' | | | | |
| Param | \mathbf{Flag} | Result | Units | RL | |
| Chloride | | 795 | mg/Kg | 4 | |
| Sample: 319481 - | AH-4 2-2.5' | | | | |
| Param | Flag | Result | Units | RL | |
| Chloride | | <20.0 | mg/Kg | 4 | |
| Sample: 319483 - | AH-5 0-1' | | | | |
| Param | Flag | Result | Units | RL | |
| Chloride | | 7990 | mg/Kg | 4 | |
| Sample: 319484 - | AH-5 1-1.5' | | | | |
| Param | Flag | Result | Units | RL | |
| Chloride | | 5520 | mg/Kg | 4 | |
| Sample: 319485 - | AH-5 2-2.5' | | | | |
| Param | Flag | Result | Units | RL | |
| Chloride | | 4090 | mg/Kg | 4 | |

Report Date: February 11, 2013 Work Order: 13012803 Page Number: 5 of 5

Sample: 319486 - AH-5 3-3.5'

| Param | Flag | Result | Units | RL |
|----------|------|--------|-------|----|
| Chloride | | 2360 | mg/Kg | 4 |

Report Date: July 5, 2013 Work Order: 13062644 Page Number: 1 of 5

Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

Report Date: July 5, 2013

Work Order: 13062644

Project Location: Eddy Co., NM

Project Name: COG/Empire Fed. SWD #3

Project Number: 112C04997

| | | | Date | Time | Date |
|--------|--------------------|--------|------------|------------------------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 333411 | CS 1 (AH-3) 3' NSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333412 | CS 1 (AH-3) 3' ESW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333413 | CS 1 (AH-3) 3' SSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333414 | CS 1 (AH-3) 4' BH | soil · | 2013-06-25 | 00:00 | 2013-06-26 |
| 333415 | CS 2 (AH-2) 2' NSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333416 | CS 2 (AH-2) 2' SSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333417 | CS 2 (AH-2) 2' BH | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333418 | CS 3 (AH-1) 1' NSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333419 | CS 3 (AH-1) 1' SSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333420 | CS 3 (AH-1) 1' BH | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333421 | CS 4 (AH-4) 1' NSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333422 | CS 4 (AH-4) 1' SSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333423 | CS 4 (AH-4) 1' BH | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333424 | CS 5 (AH-5) NSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333425 | CS 5 (AH-5) SSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333426 | CS 5 (AH-5) WSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333427 | CS 5 (AH-5) BH | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333428 | T1 (AH-5) 0' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333429 | T1 (AH-5) 2' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333430 | T1 (AH-5) 4' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333431 | T1 (AH-5) 6' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333432 | T1 (AH-5) 8' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333433 | T1 (AH-5) 10' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333434 | T1 (AH-5) 12' | soil | 2013-06-25 | 00:00 | 2013-06-26 |
| 333435 | CS 1 (AH-3) 4' NSW | soil | 2013-06-25 | 00:00 | 2013-06-26 |

| Report Date: July ! | 5, 2013 | Work Order: 13062644 | Page 1 | Number: 2 of 5 |
|---------------------|----------------------|----------------------|--------|----------------|
| Param | Flag | Result | Units | RL |
| Chloride | | 104 | mg/Kg | 4 |
| Sample: 333412 - | - CS 1 (AH-3) 3' ESW | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | <20.0 | mg/Kg | 4 |
| Sample: 333413 - | - CS 1 (AH-3) 3' SSW | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | 404 | mg/Kg | 4 |
| Sample: 333414 - | · CS 1 (AH-3) 4' BH | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | 537 | mg/Kg | 4 |
| Sample: 333415 - | · CS 2 (AH-2) 2' NSW | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | <20.0 | mg/Kg | 4 |
| Sample: 333416 - | CS 2 (AH-2) 2' SSW | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | 5120 | mg/Kg | 4 |
| Sample: 333417 - | CS 2 (AH-2) 2' BH | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | 202 | mg/Kg | 4 |
| Sample: 333418 - | CS 3 (AH-1) 1' NSW | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | 1670 | mg/Kg | 4 |

| Chloride 2810 ng/Kg 4 Sample: 333420 - CS 3 (AH-1) 1' BH Param Flag Result Units RL Chloride 49.4 ng/Kg 4 Sample: 333421 - CS 4 (AH-4) 1' NSW Param Flag Result Units RL Chloride 765 mg/Kg 4 Sample: 333422 - CS 4 (AH-4) 1' SSW Param Flag Result Units RL | Report Date: July 5, 2013 | Work Order: 13062644 | Page I | Number: 3 of 5 |
|---|---------------------------------|----------------------|--------|----------------|
| Chloride 2810 mg/Kg 4 | Sample: 333419 - CS 3 (AH-1) 1' | SSW | | |
| Sample: 333420 - CS 3 (AH-1) 1' BH | Param Flag | Result | Units | RL |
| Param Flag Result Units RL Chloride 49.4 mg/Kg 4 Sample: 333421 - CS 4 (AH-4) 1' NSW Param Flag Result Units RL Chloride 1070 mg/Kg 4 Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | | 2810 | mg/Kg | 4 |
| Chloride 49.4 mg/Kg 4 Sample: 333421 - CS 4 (AH-4) 1' NSW Param Flag Result Units RL Chloride Topics of the control of the | Sample: 333420 - CS 3 (AH-1) 1' | вн | | |
| Sample: 333421 - CS 4 (AH-4) 1' NSW Param Flag Result Units RL Chloride 765 ng/Kg 4 Sample: 333422 - CS 4 (AH-4) 1' SSW Param Flag Result Units RL Chloride 1070 ng/Kg 4 Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 ng/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Param Flag | Result | Units | RL |
| Param Flag Result Units RL Chloride 765 mg/Kg 4 Sample: 333422 - CS 4 (AH-4) 1' SSW Param Flag Result Units RL Chloride 1070 mg/Kg 4 Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Chloride | 49.4 | mg/Kg | 4 |
| Chloride | Sample: 333421 - CS 4 (AH-4) 1' | NSW | | |
| Sample: 333422 - CS 4 (AH-4) 1' SSW Param Flag Result Units RL Chloride 1070 mg/Kg 4 Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Param Flag | Result | Units | RL |
| Param Flag Result Units RL Chloride 1070 mg/Kg 4 Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Chloride | 765 | mg/Kg | 4 |
| Chloride 1070 mg/Kg 4 Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Sample: 333422 - CS 4 (AH-4) 1' | ssw | | |
| Sample: 333423 - CS 4 (AH-4) 1' BH Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Param Flag | Result | Units | RL |
| Param Flag Result Units RL Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Param Flag Result Units RL Chloride <20.0 | Chloride | 1070 | mg/Kg | 4 |
| Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Result Units RL Chloride <20.0 | Sample: 333423 - CS 4 (AH-4) 1' | вн | | |
| Chloride 479 mg/Kg 4 Sample: 333424 - CS 5 (AH-5) NSW Result Units RL Chloride <20.0 | Param Flag | Result | Units | RL |
| Param Flag Result Units RL Chloride <20.0 | | | mg/Kg | |
| Chloride <20.0 mg/Kg 4 Sample: 333425 - CS 5 (AH-5) SSW Param Flag Result Units RL Chloride 104 mg/Kg 4 Sample: 333426 - CS 5 (AH-5) WSW Param Flag Result Units RL | Sample: 333424 - CS 5 (AH-5) NS | SW | | |
| Sample: 333425 - CS 5 (AH-5) SSW Param Flag Result Units RL Chloride 104 mg/Kg 4 Sample: 333426 - CS 5 (AH-5) WSW Param Flag Result Units RL | Param Flag | Result | | RL |
| Param Flag Result Units RL Chloride 104 mg/Kg 4 Sample: 333426 - CS 5 (AH-5) WSW Param Flag Result Units RL | Chloride | <20.0 | mg/Kg | 4 |
| Chloride 104 mg/Kg 4 Sample: 333426 - CS 5 (AH-5) WSW Param Flag Result Units RL | Sample: 333425 - CS 5 (AH-5) SS | w | | |
| Chloride 104 mg/Kg 4 Sample: 333426 - CS 5 (AH-5) WSW Param Flag Result Units RL | Param Flag | Result | Units | RL |
| Param Flag Result Units RL | | | | |
| · · · · · · · · · · · · · · · · · · · | Sample: 333426 - CS 5 (AH-5) W | sw | | |
| · · · · · · · · · · · · · · · · · · · | Param Flag | Result | Units | RL |
| | | | | |

| Report Date: July 5, 2013 | Work Order: 13062644 | Page 1 | Number: 4 of 5 |
|---------------------------------|----------------------|--------|----------------|
| Sample: 333427 - CS 5 (AH-5) BH | I | | |
| Param Flag | Result | Units | RL |
| Chloride | 158 | mg/Kg | 4 |
| Sample: 333428 - T1 (AH-5) 0' | | | |
| Param Flag | Result | Units | RL |
| Chloride | 3740 | mg/Kg | 4 |
| Sample: 333429 - T1 (AH-5) 2' | | | |
| Param Flag | Result | Units | RL |
| Chloride | 7580 | mg/Kg | 4 |
| Sample: 333430 - T1 (AH-5) 4' | | | |
| Param Flag | Result | Units | RL |
| Chloride | 1370 | mg/Kg | 4 |
| Sample: 333431 - T1 (AH-5) 6' | | • | |
| Param Flag | Result | Units | RL |
| Chloride | <20.0 | mg/Kg | 4 |
| Sample: 333432 - T1 (AH-5) 8' | | | |
| Param Flag | Result | Units | RL |
| Chloride | <20.0 | mg/Kg | 4 |
| Sample: 333433 - T1 (AH-5) 10' | | | |
| Param Flag | Result | Units | RL |
| Chloride | <20.0 | mg/Kg | 4 |
| Sample: 333434 - T1 (AH-5) 12' | | | |
| Param Flag | Result | Units | RL |
| Chloride | 55.3 | mg/Kg | 4 |

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Sample: 333435 - CS 1 (AH-3) 4' NSW

| Param | Flag | Result | Units | RL |
|----------|-----------------------|--------|--------|----|
| Chloride | | <20.0 | nig/Kg | 4 |