

January 13, 2022

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

Re: Release Characterization and Closure Request ConocoPhillips Heritage Concho GJ West Coop Trunkline Releases Unit Letter B, Section 28, Township 17 South, Range 29 East Eddy County, New Mexico Incident ID# NJMW1228952965

Mr. Billings:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess two Heritage Concho releases and subsequent remedial actions taken at the GJ West Coop Trunkline (Associated API Nos. 30-015-25492 and 30-015-03163). The release footprints are located in Public Land Survey System (PLSS) Unit Letter B, Section 28, Township 17 South, Range 29 East, in Eddy County, New Mexico (Site). The approximate release point for both incidents occurred at coordinates 32.811750°, -104.077340°, as shown on Figures 1 and 2.

## BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) the C-141 Initial Report, the first release at the GJ West Coop trunkline was discovered on September 1, 2012. A second release was discovered in the same vicinity on September 20, 2012, according to the second C-141 Initial Report. The C-141s for both the September 1 and September 20 releases report that the cause was due to a hole developed from corrosion of the line in the GJ West Coop Unit #74 and #125 trunkline. During the first release, approximately 22 barrels (bbls) of produced water escaped, of which approximately 20 bbls of produced water were reported recovered. During the second release, approximately 8 barrels (bbls) of produced water reported recovered.

The NMOCD approved both initial C-141s, the first on October 10, 2012 and the second on October 25, 2012. The releases were given the Incident IDs NJMW1228433415 and NJMW1228952965 for the September 1 and September 20, 2012 releases, respectively. The initial C-141 forms are included in Appendix A.

## SITE CHARACTERIZATION

A site characterization was performed and no sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, playa lakes, stream bodies, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). The Site is in an area of medium karst potential.

Release Characterization and Closure Request January 13, 2022

There are no water wells listed in the New Mexico Office of the State Engineer (NMOSE) database located within approximately ½ mile (800 meters) of the site. According to data from one (1) water well listed in the NMOSE database within approximately 0.93 miles (1,500 meters) of the site, the depth to groundwater is 76 feet below ground surface (bgs). The site characterization data are presented in Appendix B.

## **REGULATORY FRAMEWORK**

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

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

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

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

Constituent	<b>Reclamation Requirements</b>
Chloride	600 mg/kg
ТРН	100 mg/kg
BTEX	50 mg/kg

## INITIAL RESPONSE ACTIVITIES AND CLOSURE REQUEST

Following each release, a temporary clamp was installed on the trunkline and all recoverable fluids were picked up with a vacuum truck. According to information provided by Heritage Concho, the September 1 and September 20 releases occurred from a location on the trunkline that coincided with six (6) incidents that occurred between May 2010 and October 2012 in an area of pasture between the GJ West Coop Unit #194 (API No. 30-015-36285) and the GJ West Coop Unit #170 (API No. 30-015-35777). This information is supported by the location information provided in the initial C-141s for both September 2012 release incidents. A Closure Report dated December 11, 2014 was prepared by Tetra Tech on behalf of Concho for the six (6) releases, detailing the site assessment and remediation actions taken. The September 1 and 20, 2012 releases were inadvertently omitted from this report.

The release area was initially assessed by Tetra Tech on May 24, 2010 and then again on December 6, 2010. Based on the results of the assessment and directives from NMOCD, Tetra Tech supervised remediation activities at the overlapping release site on October 28, 2014. As proposed in a previously approved work plan, a portion of the release extent was excavated to a depth of approximately 3-4 feet bgs and capped with a 40-mil plastic liner. Due to safety concerns, the remainder of the release extent could not be excavated due to multiple surface lines in the area.

Following excavation activities and the placement of the liner, the area was backfilled with clean material to grade. Approximately 2,300 cubic yards of material were hauled offside for appropriate disposal. The remaining impacted soil was deferred due to access and safety issues.

Release Characterization and Closure Request January 13, 2022

The Closure Report was approved by NMOCD in March 2015 and closure granted for the six (6) releases referenced in the report:

- NKMW1107641950 / 2RP-647 (Release date: 5/6/2010)
- NMLB1030938472 / 2RP-462 (Release date: 9/17/2010)
- nMLB1210949851 / 2RP-1097 (Release date: 3/28/2012)
- nJMW1217338587 / 2RP-1182 (Release date: 6/6/2012)
- nJMW1219552251 / 2RP-1227 (Release date: 7/9/2012)
- nJMW1231139384 / 2RP-1387 (Release date: 10/9/2012)

Approval for the six (6) releases listed above are on file with the NMOCD Permitting online system. A copy of the Closure Report, which includes detailed site diagrams, analytical data, and photographic documentation of the excavation and liner prior to backfilling, is included as Appendix C.

## VISUAL SITE INSPECTION SUMMARY

Due to the lack of documentation regarding the September 1 and 20, 2012 releases, Tetra Tech conducted a Visual Site Inspection of the remediated release site on December 23, 2021 to assess current conditions. Since the exact release extents of the September 2012 releases are unknown, the boundaries of the entire release areas indicated in the Closure Report in Appendix C were inspected for stained soils and vegetative growth, as shown on Figure 3.

During the inspection, potential evidence of soils with minor staining were observed in areas that correspond to areas that were approved for deferral in the December 11, 2014 Closure Report. Established vegetation was observed throughout the majority of the inspection area. Photographic documentation of the Visual Site Inspection is included as Appendix D.

#### CONCLUSION

Based on the results of the visual site inspection, in conjunction with the review of the previously-approved Closure Report for six (6) additional release incidents in the former release area, ConocoPhillips respectfully requests closure for the two September 2012 releases addressed in this report. The final C-141 forms are enclosed in Appendix A. If you have any questions concerning this request, please call me at (512) 739-7874.

Sincerely, **Tetra Tech, Inc.** 

Samantha K. Abbott, P.G. Project Manager

cc: Mr. Ike Tavarez, RMR – ConocoPhillips Mr. Charles Beauvais, BU – ConocoPhillips Release Characterization and Closure Request January 13, 2022

ConocoPhillips

## LIST OF ATTACHMENTS

## Figures:

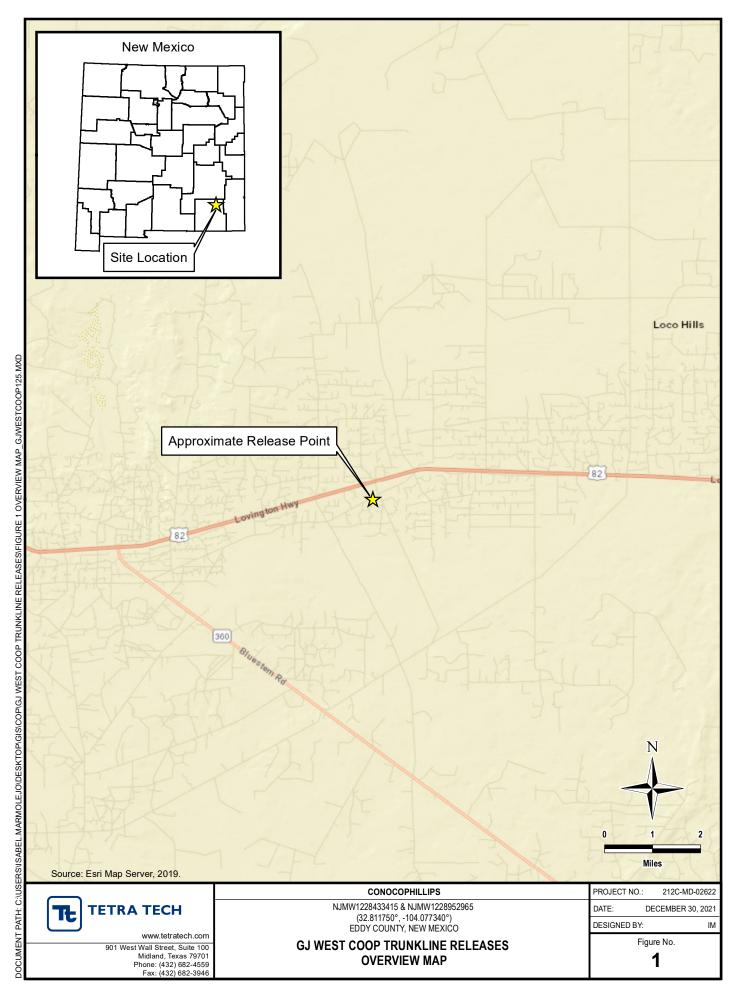
Figure 1 – Overview Map Figure 2 – Topographic Map Figure 3 – Visual Inspection Area

## Appendices:

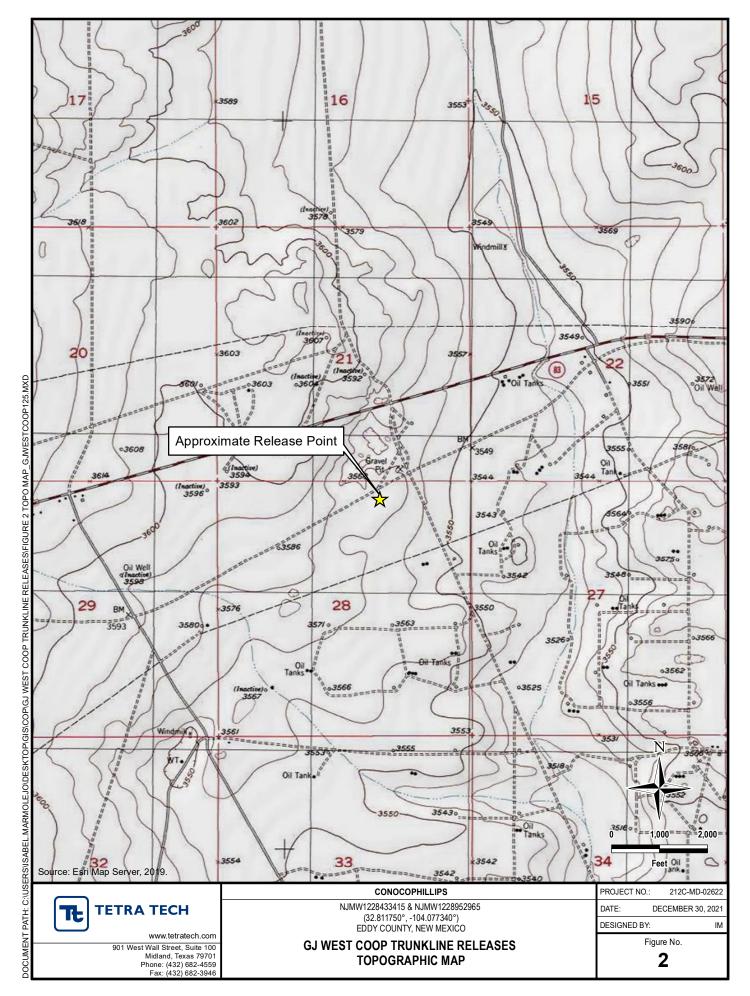
Appendix A – C-141 Forms Appendix B – Site Characterization Data Appendix C – Closure Report (December 11, 2014) Appendix D – Photographic Documentation

**Released to Imaging: 3/4/2022 11:53:10 AM** 

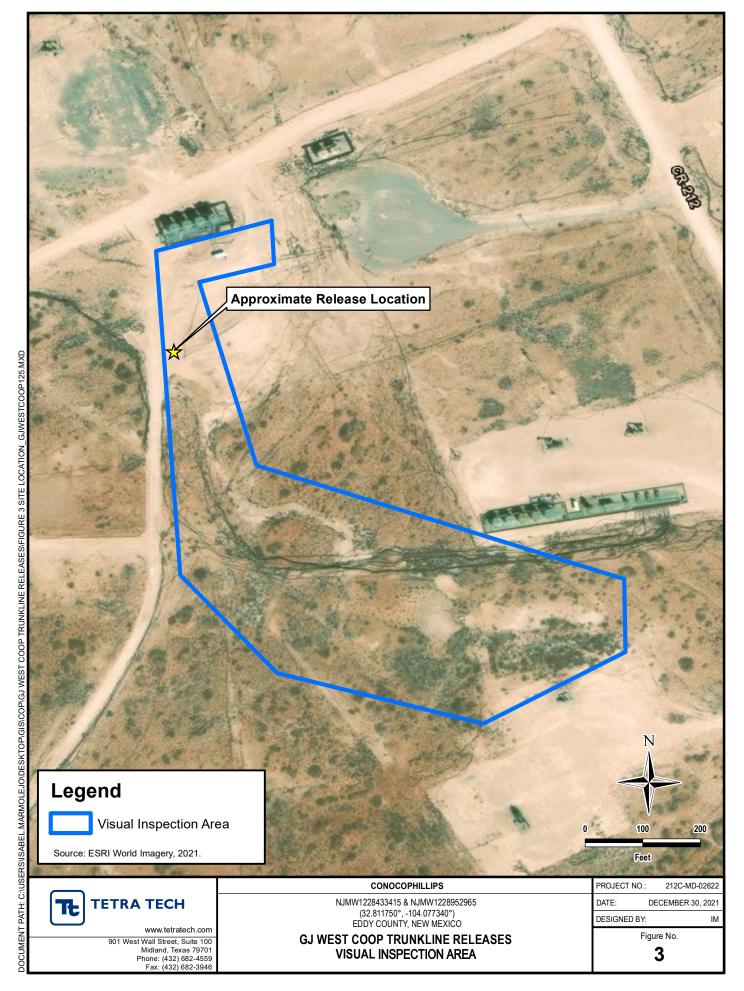
# FIGURES



Released to Imaging: 3/4/2022 11:53:10 AM



Released to Imaging: 3/4/2022 11:53:10 AM



.

# APPENDIX A C-141 Forms

eived by OCD: 1/14/2022 10:49:17 AM		DE	CEIVE	Page 10 of
1625 N. French Dr., Hobbs, NM 88240       Energy Mineral         District III       Energy Mineral         1301 W. Grand Avenue, Artesia, NM 88210       Oil Cons         District III       001 Cons         1000 Ruo Brazos Road, Aztec, NM 87410       1220 Sou	of New Mexic Is and Natural I ervation Divis th St. Francis	o SE Rescurces sion <b>NMO</b>	EP <b>27</b> 2017	2 Form C-141 Revised October 10, 2003 ESIA mit 2 Copies to appropriate District Office in accordance with Rule 116 on back
1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa	Fe, NM 8750	5		side of form
Release Notification	on and Cor	rective A	ction	
n MW1228952965	OPERAT			nitial Report 🔲 Final Report
Name of Company COG OPERATING LLC 229/37 Address 550 W. Texas, Suite 100, Midland, TX 79701	Contact Telephone No		at Ellis 230-0077	
Facility Name GJ West Coop Trunkline	Facility Type		unkline	
Surface Owner State Mineral Owne	r		Leas	se No. (API#) 30-015-25492
				s tied into trunkline 30-015-03163
LOCATI	ON OF RELI	EASE		
		Feet from the	East/West Lir	ne County Eddy
Latitude 32 48.51	2 Longitud	le 104 04.600	1	
NATUR	E OF RELE	ASE		
Type of Release Produced water w/ skim oil Source of Release Trunkline	Volume of R			ne Recovered 5bbls and Hour of Discovery
Source of Release Trunkline	09/20/2012	ur of Occurrenc		/2012 11.00 a.m.
Was Immediate Notice Given?	If YES, To V	Vhom?		
By Whom?	Date and Ho		,	
Was a Watercourse Reached?	If YES, Volu	ime Impacting	the Watercourse	е.
If a Watercourse was Impacted, Describe Fully.*		-		
•				
Describe Cause of Problem and Remedial Action Taken * Corrosion caused a hole to develop in our GJ West Coop Unit #74 and to replace it.	125 trunkline. A t	emporary clam	p has been adde	ed to this trunkline until we are able
Describe Area Affected and Cleanup Action Taken.*			······	
Initially 8bbls were released from the corroded trunkline and we were a this trunkline until we are able to replace it. Tetra Tech will sample the present a remediation work plan to the NMOCD for approval prior to a I hereby certify that the information given above is true and complete t	spill site area to d ny significant rem	lelineate any po lediation work. nowledge and u	ssible contamir	nation from the release and we will pursuant to NMOCD rules and
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 remed or the environment In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	the NMOCD mar liate contamination	ked as "Final R n that pose a thr the operator of	eport" does not reat to ground v responsibility f	t relieve the operator of hability vater, surface water, human health for compliance with any other
10 -		<u>OIL CON</u>		ON DIVISION
Signature 1 Printed Name: Josh Russo	Approved by D	District Supervis	sor: Signe	ed By Mile Benne
Title: HSE Coordinator	Approval Date	15201	2 Expirat	tion Date.
E-mail Address jrusso@conchoresources.com	_ Conditions of A	Approval:		Attached
Date. 09/27/2012 Phone: 432-212-2399				
	Remediati Guidelines. SU PROPOSAL NC Nov. 15,	OT LATER TH	DIATION	2RP-1322

.

Received by OCD: 1/14/2022 10:49:17 AM Form C-141 State of New Mexico

Oil Conservation Division

	Page 11 of 111
Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

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

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

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

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
Field data
Data table of soil contaminant concentration data
Depth to water determination
Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
Boring or excavation logs
Photographs including date and GIS information
Topographic/Aerial maps

Laboratory data including chain of custody

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

<b>Received by OCD: 1/14/2</b> Form C-141 Page 4	022 10:49:17 AM State of New Mexico Oil Conservation Division	Page 12 of 111Incident IDDistrict RPFacility IDApplication ID
regulations all operators ar public health or the environ failed to adequately investi	re required to report and/or file certain release notifica nment. The acceptance of a C-141 report by the OCE igate and remediate contamination that pose a threat to	st of my knowledge and understand that pursuant to OCD rules and eations and perform corrective actions for releases which may endanger D does not relieve the operator of liability should their operations have to groundwater, surface water, human health or the environment. In sponsibility for compliance with any other federal, state, or local laws
Printed Name:	Ti	Fitle:
Signature:	B D	Date:
email:	Te	Selephone:
OCD Only		
Received by:		Date:

Page 6

Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

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

<b><u>Closure Report Attachment Checklist</u>:</b> Each of the following it	tems must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rem human health or the environment. In addition, OCD acceptance of a compliance with any other federal, state, or local laws and/or regula restore, reclaim, and re-vegetate the impacted surface area to the con accordance with 19.15.29.13 NMAC including notification to the O	nediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in
Signature: _ /4 7	Date:
email:	Telephone:
	·
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by: <u>Bradford Billings</u>	Date:
Printed Name:	Title:

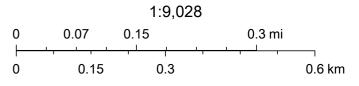
# APPENDIX B Site Characterization Data

# **OCD** Waterbodies

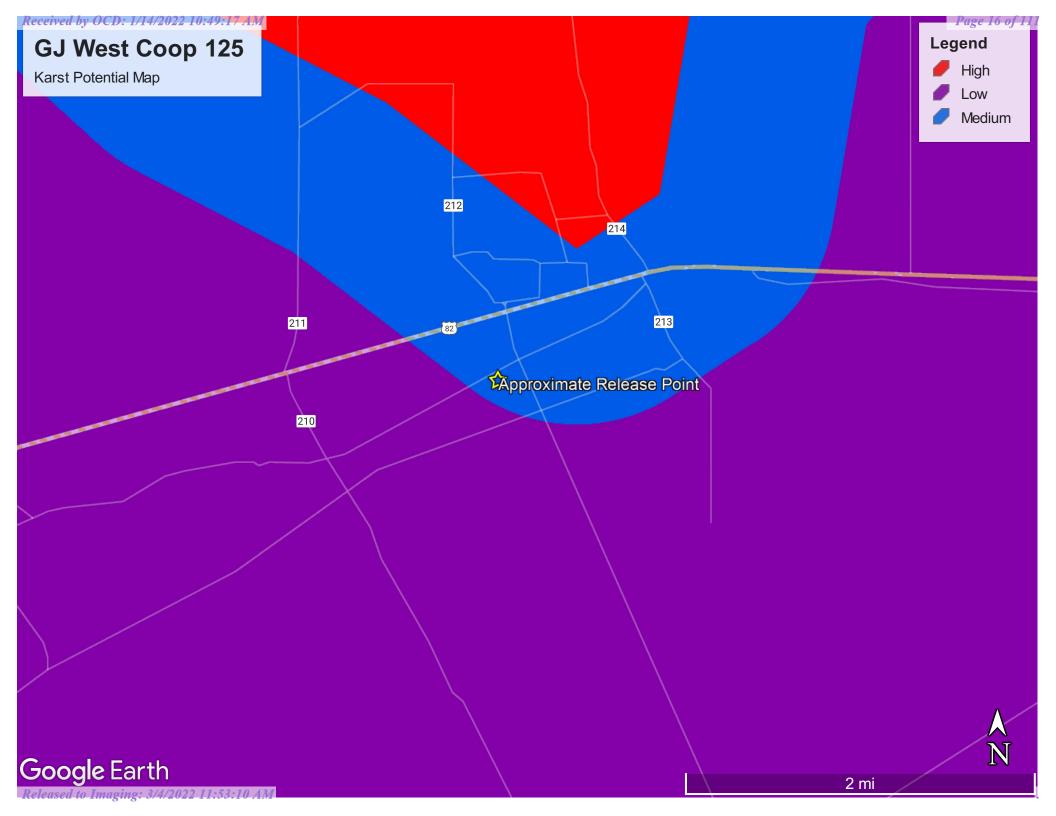


## 11/30/2021, 11:38:50 AM

- OSE Water-bodies
- PLJV Probable Playas
- OSE Streams



Esri, HERE, Garmin, iPC, Maxar





(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)	<b>N</b>	e 1=NW 2=NE 3= e smallest to large	,	3 UTM in mete	ers)	(In feet)
POD Number	POD Sub- Code basin Cou	Q Q Q Inty 64 16 4 S	Sec Tws Rng	x	Y	-	h Depth Water Il Water Column
RA 11807 POD1	RA EI	-	22 17S 29E	587360 3	631585 🌍	1262 13	1 76 55
					Average	e Depth to Wate	r: <b>76 feet</b>
						Minimum Dept	n: <b>76 feet</b>
					I	Maximum Deptl	n: <b>76 feet</b>
Pocord Count: 1							

#### Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 586375.18

Northing (Y): 3630794.73

Radius: 1500

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

## APPENDIX C Closure Report (December 11, 2014)

## SITE INFORMATION

111 fo 61 -

## Report Type: Closure Report

ormation:	GJ West Coop			
	COG Operating	TLLC		
hip and Range	Unit B	Sec 23	T17S	R29E
· ·	Eddy County			
		32.81175° N		104.07734° W
,	State			
				5 miles down Hwy 82, turn left on CR 212
	Spill One	11 C 0	Spill Two	Spill Three
	5/6/2010		9/17/2010	3/28/2012
			Produced Water	Produced Water
mination:			Injection Line	Manifold Coupling
				50 bbls
d:				25 bbls
	Spill Four		Spill Five	Spill Six
	6/6/2012		7/9/2012	10/9/2012
	and the second se		Produced Water	
mination:				Steel Line
4				7 bbls
	12 DDIS		2 bbis	5 bbls
nication:			and the second	
Robert McNeil				lke Tavarez
COG Operating, LLC	0			Tetra Tech
One Concho Center				4000 N. Big Spring St
600 W. Illinois Ave.				Ste 401
Midland, Texas 797	01			Midland, Texas 79705
				(432)687-8110
				ike.tavarez@tetratech.com
	esources.com			ike.tavarez@tetratecn.com
wator		Ranking Sco		Site Data
Valei.				She Dala
		0		0
				Site Data
				0
<u>500 π., Phvate &gt;200 π</u> .		0		0
Water:		Ranking Scor		Site Data
		20		
		10		
		0		0
otal Ranking Score	9:	0		
	Benzene			
	10	50	5,000	1
				16.12
	mination: d: mination: d: mination: d: nication: Robert McNeil COG Operating, LLC One Concho Center 600 W. Illinois Ave. Midland, Texas 7970 (432) 686-3023 (432) 686-3023 (432) 684-7137 rmcneil@conchore a water: ion: 000 ft., Private <200 ft. 000 ft., Private >200 ft. Water:	Eddy County         State         From the intersect travel 0.2 miles, to         Spill One         5/6/2010         Produced Wate         mination:         Transfrer Pump         100 bbls         d:         10 bbls         d:         10 bbls         d:         10 bbls         d:         10 bbls         fold:         10 bbls         d:         11 bbls         ground Wate         mination:         Hole in Casing         15 bbls         d:         12 bbls         mication:         Robert McNeil         COG Operating, LLC         One Concho Center         600 W. Illinois Ave.         Midland, Texas 79701         (432) 686-3023         (432) 684-7137         rmcneil@conchoresources.com         a         water:         tion:         000 ft., Private <200 ft.	Eddy County         32.81175° N         State         From the intersection of CR 219 au         travel 0.2 miles, tum right and trav         Spill One         5/6/2010         Produced Water         mination:         Transfrer Pump         100 bbls         d:       10 bbls         Spill Four         6/6/2012         Produced Water         mination:       Hole in Casing         15 bbls       12 bbls         d:       12 bbls         nication:       Hole in Casing         Robert McNeil       COG Operating, LLC         One Concho Center       600 W. Illinois Ave.         Midland, Texas 79701       (432) 686-3023         (432) 686-3023       (432) 684-7137         rmcneil @ conchoresources.com       20         10       0         vater:       Ranking Score         200       0         110       0         0       0         Water:       Ranking Score         20       0         10       0         Water:       Ranking Score         0<	Eddy County         32.81175° N         State         From the intersection of CR 219 and Hwy 82, travel 5.         From the intersection of CR 219 and Hwy 82, travel 5.         travel 0.2 miles, turn right and travel 0.1 miles to site.         Spill One       Spill Two         5/6/2010       9/17/2010         Produced Water       Produced Water         mination:       Transfrer Pump       Injection Line         100 bbls       100 bbls       100 bbls         diagonality of the produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produced Water         Produ



Page 20 of 111

December 11, 2014

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

## Re: Closure Request for the COG Operating LLC., GJ West Coop, Unit B, Section 28, 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 a spill from the GJ West Coop located in Unit B, Section 28, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.81169°, W 104.07727°. The site location is shown on Figures 1 and 2.

## Background

According to the State of New Mexico C-141 Initial Reports, COG had six (6) produced water spills in the same area between May 2010 and October 2012. The spills are summarized below. All of the initial C-141 forms are enclosed in Appendix A.

## Spill 1

The first release was discovered on May 6, 2010, and released approximately one hundred (100) barrels of produced water from a transfer pump. To alleviate the problem, COG personnel repaired the transfer pump. Ten (10) barrels of standing fluids were recovered. The spill initiated on the pad and traveled south parallel to the lease road for 230' by 25' wide.

#### Spill 2

Received by OCD: 1/14/2022 10:49:17 AM

The second release was discovered on September 17, 2010, and released approximately one hundred (100) barrels of produced water from the nipple on an injection line. To alleviate the problem, COG personnel replaced the old fittings with Page 21 of 11.

new fittings. Fifty (50) barrels of standing fluids were recovered. The spill initiated on the pad and traveled south parallel to the lease road for 230' by 25' wide, it continued off the pad into the pasture for 610' by 30' which grew to 150' wide.

## Spill 3

The third release was discovered on March 28, 2012 and released approximately fifty (50) bbls of produced water from a failed injection manifold coupling. To alleviate the problem the injection manifold was replaced. Twenty five (25) bbls of produced water were recovered. The spill traveled into the pasture and pooled in an area approximately 15' x 50' in size.

## Spill 4

The fourth release was discovered on June 6, 2012 and released approximately fifteen (15) bbls of produced water from the casing, which developed a hole. To alleviate the problem a clamp was placed on the casing until it was repaired. Twelve (12) bbls of standing fluid were recovered.

## Spill 5

The fifth release was discovered on July 9, 2012 and released approximately ten (10) bbls of produced water with some skim oil from a corroded trunk line. To alleviate the problem the steel flowline was replaced. Two (2) bbls of standing fluids were recovered.

#### Spill 6

The sixth release was discovered on October 9, 2012 and released approximately seven (7) bbls of produced water with some skim oil from a corroded steel line. To alleviate the problem a temporary clamp was installed on the line until it was replaced.

## Groundwater

No water wells were listed within Section 21. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 150' below surface. The groundwater information is shown in Appendix B.

## Regulatory

Received by OCD: 1/14/2022 10:49:17 AM

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

Page 22 of 111

Received by OCD: 1/14/2022 10:49:17 AM

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**

## Auger holes

On May 24, 2010, Tetra Tech personnel inspected and sampled the first spill area. A total of four (4) auger holes (AH-1 through AH-4) were installed using a stainless steel hand auger to assess the impacted soils. On September 4, 2010, Tetra Tech personnel inspected and sampled the second spill area. A total of six (6) auger holes (AH-1 through AH-6) 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.

All of the samples were below the RRAL's for BTEX and TPH, except for the area of AH-2, AH-4 and AH-6. Theses area showed shallow TPH impact above the RRAL, but were vertically defined. Elevated chloride concentrations were detected at AH-1 and AH-4 for the 1<sup>st</sup> spill and AH-1, AH-3 and AH-5 for the 2<sup>nd</sup> spill. In order to define extents, boreholes were installed to assess the impacted areas.

## **Boreholes**

On December 6, 2010, Tetra Tech personnel were onsite to supervise the installation of the boreholes to evaluate the impacted areas and install bore holes. Utilizing an air rotary drilling rig, Tetra Tech personnel supervised and collected samples. A total of twelve (12) bore holes (BH-1 through BH-12) were installed. The borehole results are summarized in Table 1. Due to numerous surface flow lines in the area, the drilling rig did have access issue at some the impacted areas.

Referring to Table 1, borehole (BH-11) showed a decline of 15,600 mg/kg (10') to 2,230 mg/kg (20'). BH-10 showed a decline of 9,310 mg/kg (0-1') to 2,660 mg/kg at 25' and BH-7 showed a decline of 9,200 mg/kg to 4,580 mg/kg at 15'. Additionally, elevated chloride concentrations for BH-8 showed a significant decline from 10,800 mg/kg (20') to 3,490 mg/kg (25'), BH-6 showed a decline of 9,640 mg/kg (15') to 3,100 mg/kg at 20', BH-4 showed a decline of 11,800 mg/kg (15') to 3,000 at 25', BH-3 showed a decline of 8,340 (7') mg/kg to 3,510 mg/kg.

Page 23 of 111

## **Onsite Meeting**

On May 16, 2014, COG and Tetra Tech met with Mike Bratcher with the NMOCD onsite to discuss the spills and access issues at the site. Multiple releases had occurred at the site that migrated and overlapped south into the pasture where the area is congested with multiple surface flow lines.

As discussed in the field, proper excavation cannot be completed at the site due to all the surface flow lines in the area. Due to safety concerns, COG recommended deferring the spill area. However, Mr. Bratcher stated that some excavation would be required in the areas of AH-4, AH-5 and AH-6 that are somewhat accessible and the additional areas with some hydrocarbon staining could be worked in-situ. The remaining impacted areas not accessible would then be deferred.

## Site Remediation

In October 28, 2014, Tetra Tech supervised the removal of impacted soil. As proposed in the work plan, the excavated areas are as highlighted (green) in Table 1 and shown on Figure 4. Due to the limited area and access issues, the areas of AH-4 and AH-5 were excavated to a depth of approximately 3.0' to 4.0' below surface and capped with a 40 mil plastic liner. Due to safety concerns, the area of AH-6, southeast of the SWD, could be excavated due to the multiple surface lines in the area.

Once the areas were excavated to the appropriate depths, the excavation was lined and backfilled with clean soil. Approximately 2,300 cubic yards of material was hauled to proper disposal.

Based on the limited remediation performed, COG request closure of the site. The remaining impacted soil will be deferred due to the surface lines and limited access to the soil. A Final C-141's are included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

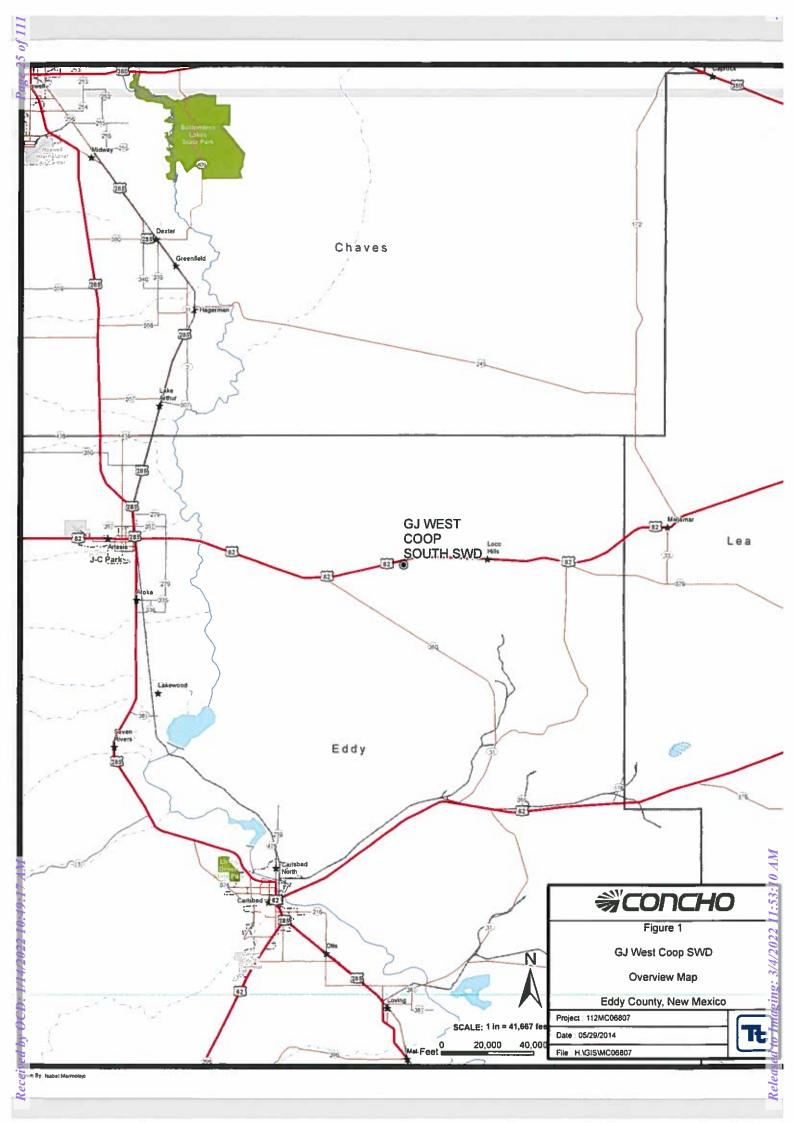
Respectfully submitted, TETRA TECH

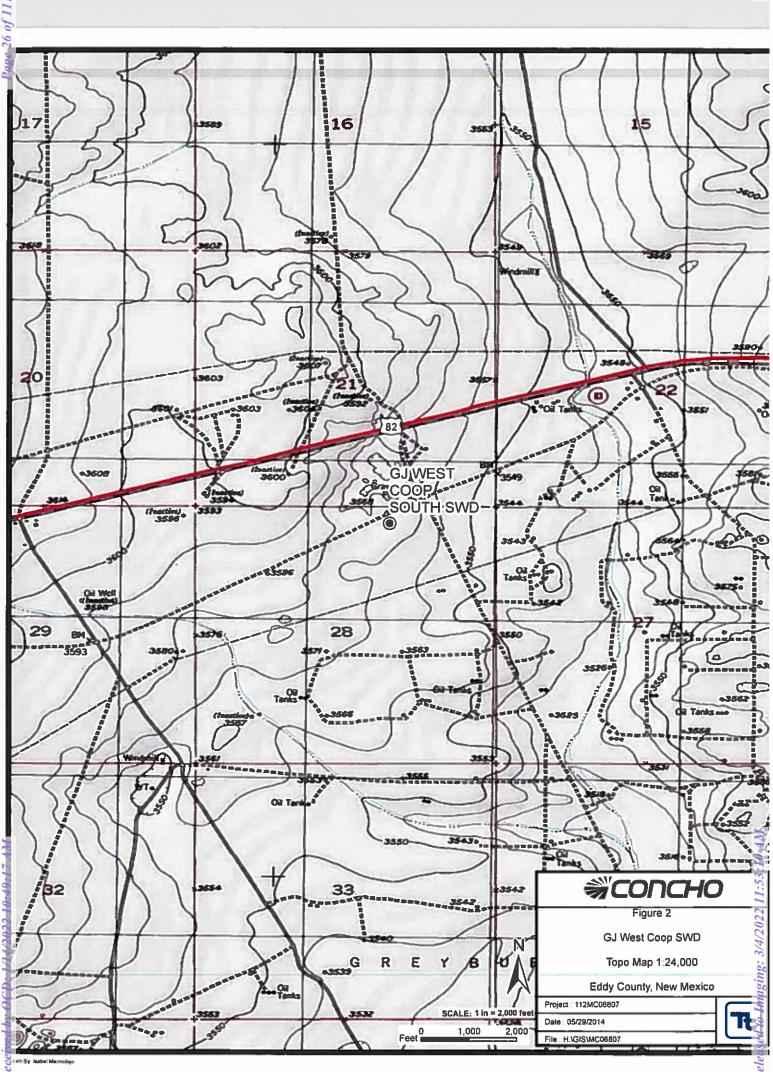
Ike Tavarez, PG Senior Project Manager

cc: Robert McNeil - COG

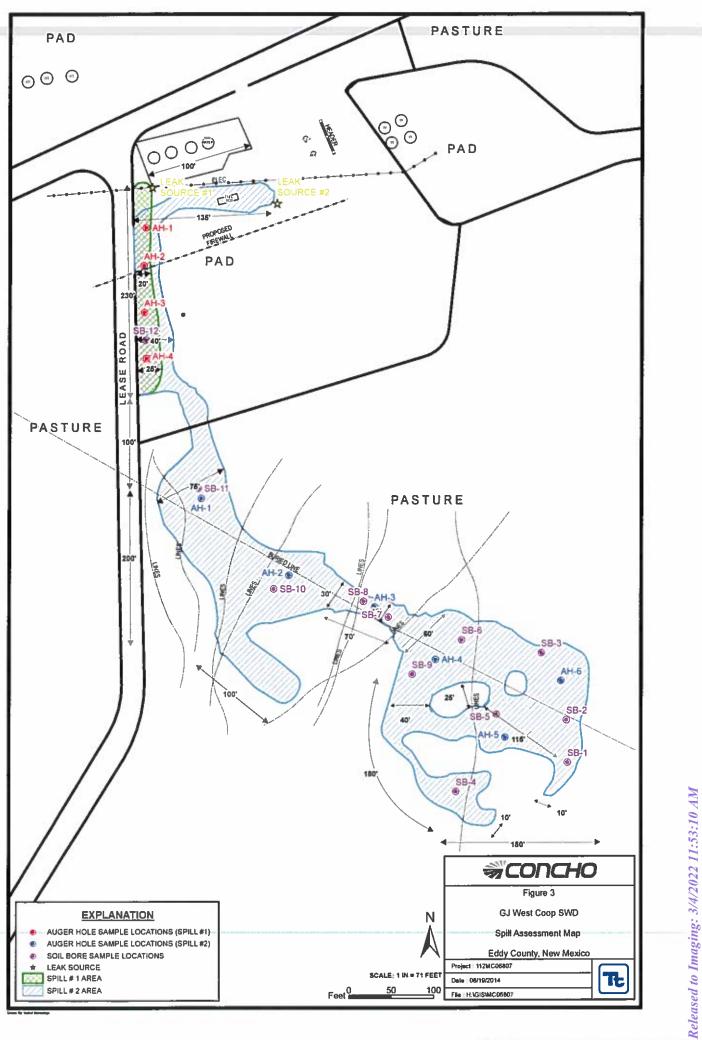
Received by OCD: 1/14/2022 10:49:17 AM

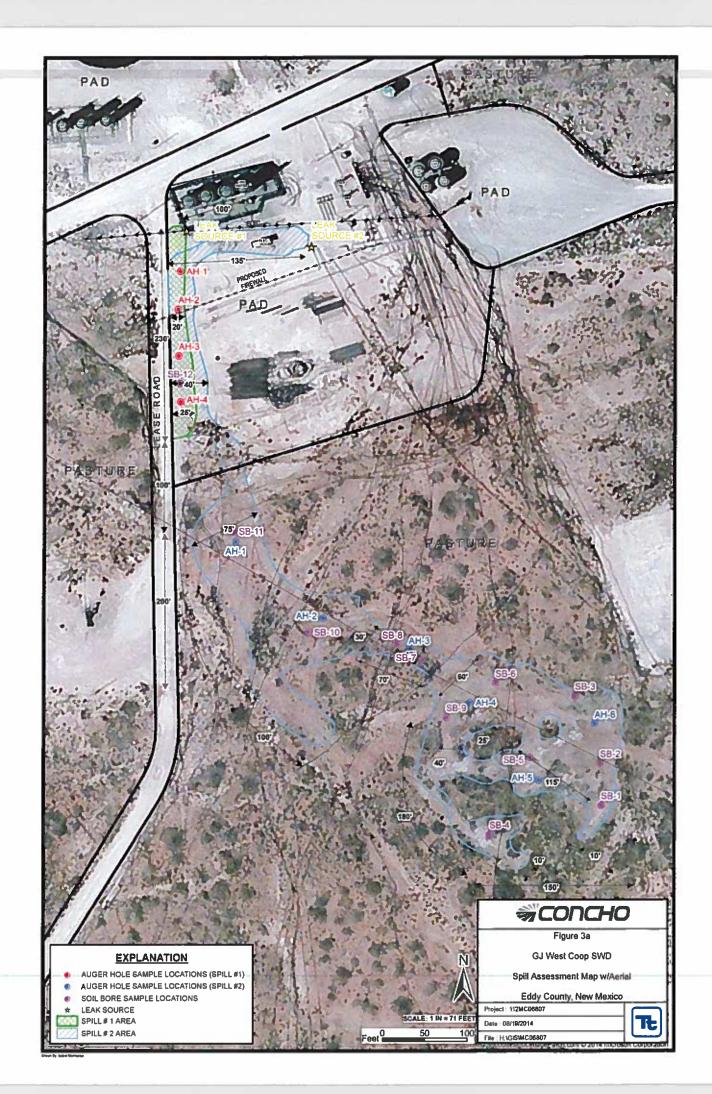
# FIGURES





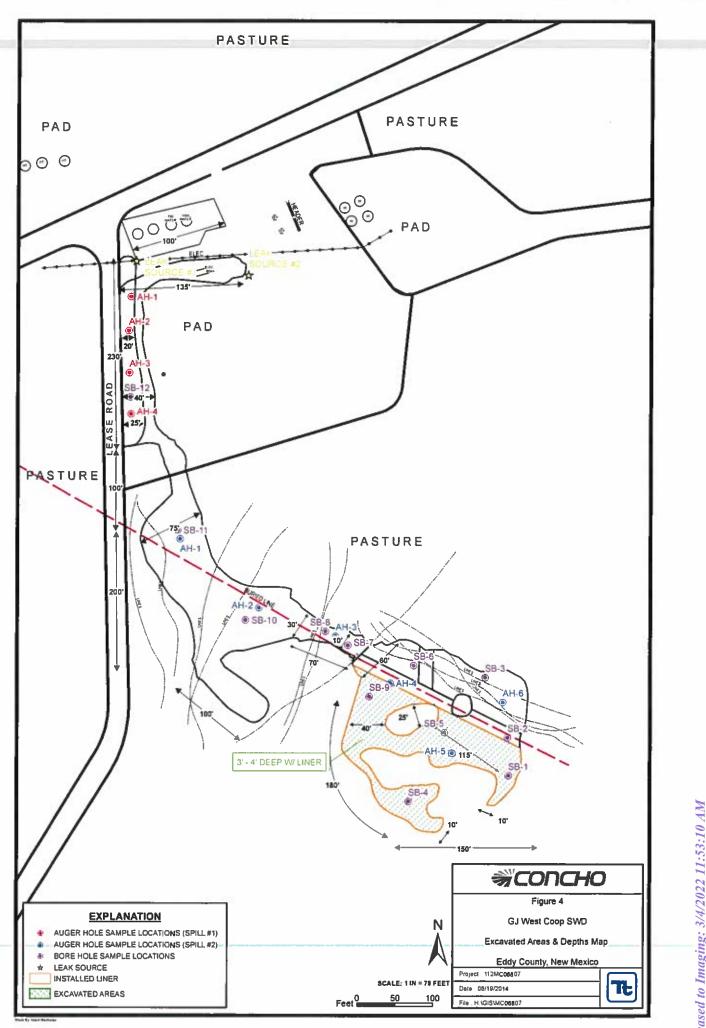
Page 27 of 111





Page 28 of 111

Page 29 of 111



Received by OCD: 1/14/2022 10:49:17 AM

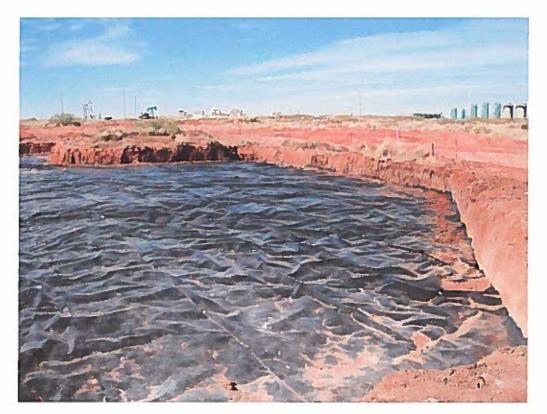
Page 30 of 111

PHOTOGRAPHS

Released to Imaging: 3/4/2022 11:53:10 AM

Page 31 of 111

Received by OCD: 1/14/2022 10:49:17 AM



View West - Along COG buried water line at SB-1 and SB-5



View North– Area of SB-9

Page 32 of 111

Received by OCD: 1/14/2022 10:49:17 AM



View South - SB-9 and SB-4



View North West - SB-4

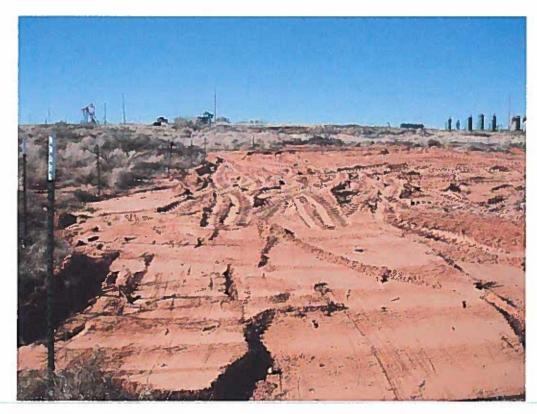
COG Operating LLC GJ West Coop Eddy County, New Mexico

Page 33 of 111

Received by OCD: 1/14/2022 10:49:17 AM



View North - Backfill area of SB-1 and SB-5



View West - Backfill area of AH-5 and SB-5

COG Operating LLC GJ West Coop Eddy County, New Mexico

Page 34 of 111

Received by OCD: 1/14/2022 10:49:17 AM



View West - Backfilled area of SB-1 and SB-5



View South- Backfilled area of SB-9 and SB-4

**TETRA TECH** 



TABLES

\*

5.

Released to Imaging: 3/4/2022 11:53:10 AM

Received by OCD: 1/14/2022 10:49:17 AM

Table 1

Page 36 of 111

# COG Operating LLC. GJ West CO-OP South Water Distribution/Injection Line

1st and 2nd Spill EDDY COUNTY, NEW MEXICO

		Sample	Depth	Soil	Soil Status		TPH (mg/kg)		Benzene	Toluene	Ethlyhanzena	Xviane	Chlorida
sample ID	Sample ID Sample Date	~	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-1	5/24/2010	0-1'		×		<1.00	<50.0	<50.0	1	•	•		7,520
1st Spill		1-1.5'		×		•	-	-				•	2,950
		2-2.5'		×		•	,	•	•			•	4,830
		3-3.5		×		•		•	•		•	•	5,670
		4-4.5'		×		'	,	•	•	•		•	5,290
		5-5.5		×		•	•	1	,	'		•	5,560
		6-6.5'		×			•	•	•			7. <b>'</b>	6,040
		7-7.5		×		•	•	4		,	9	•	6,410
		8-8.5'		×		•	•	•		•	ı		6,000
		9-9.5'		×		,		-	•			•	6,300
1.													
AH-2	5/24/2010	0-1-		×		17.20	77.30	94.50	I		•	-	11,100
1st Spill		1-1.5'		×		•			•		1	•	11,000
		2-2.5'	_	×		•	-	•		•	•	,	3,220
		3-3.5'		×		,		•	•		,	ł	3,490
		4-4.5'		×		'	•	1	•	•		•	4,610
		5-5.5'		×		,	•	•	•	•	ŧ	•	4,520
		6-6.5'		×		'	. 1	1	•	•		•	4,310
		7-7.5		×		'	•	1	1	'	1	•	2,290
		8-8.5		×		'	,	•	•	•	•	•	2,570
		9-9.5		×		'		-	•	-	•	•	3,150
AH-3	5/24/2010	0-1-		×		5.93	66.00	71.93	•		3	,	18,300

Released to Imaging: 3/4/2022 11:53:10 AM

Table 1

Page 37 of 111

# COG Operating LLC. GJ West CO-OP South Water Distribution/Injection Line

1st and 2nd Spill EDDY COUNTY, NEW MEXICO

Cample ID	Sample Date	_	Depth	Soil	Soil Status		TPH (mg/kg)	-	Benzene	Toluene	Ethlybenzene	Xylene	Chloride	
	_	Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	_
-														
AH-4	5/24/2010	0-1'		×		<1.00	<50.0	<50.0	4		a		15,700	
1st Spill		1-1.5'		×		•	•	1	•	ì	•		4,250	-
		2-2.5'		×		•	•	1	•	-	•	•	5,250	
		3-3.5'		×		•	•	1		•	-		5,990	
		4-4,5'		×		ı	•	•	,	•	-	•	8,990	
		5-5.5'		×		•	•	1	•		•		8,240	
		6-6.5'		×		•	•	•	•	-	•	•	7,470	
		7-7.5		×		1		-	ı		I	1	6,750	
		8-8.5'		×			•		•	•	•	•	5,170	1
		9-9.5'		×		•	-	-		•	-	-	4,850	
-														1.0
SB-12	12/9/2010	0-1-		×		66.7	1,040	1,107	<0.100	<0.100	<0.100	<0.100	3,510	-
		3		×		1	•	-	•	ı	-	•	4,710	
		ى		×			•	-	•	•	•		3,140	10000
		7'		×		٠	•	ø		Ð	-	•	3,500	
		10'		×		ı	•	•	•	•	-	•	3,930	-
		15'		×		1	•	-	•	•	•	•	3,690	
		20'		×		1	٠	-	-	•	-	•	929	-
		25'		×		•	1	1	•	•	1	•	303	1000 C
		30'		×		ı	•	•	•	1	•	•	522	1000
										,	2			1

Table 1

# GJ West CO-OP South Water Distribution/Injection Line COG Operating LLC.

# 1st and 2nd Spill EDDY COUNTY, NEW MEXICO

-													
Completo	Corrado Data	Sample	Depth	Soil	Soil Status		TPH (mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Chloride
		Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
-													
AH-1	10/4/2010	0-1.		×		<1.00	<50.0	<50.0	ŧ	ł		,	5,280
2nd Spill		1-1.5'		×		•	•	•	•		•	•	3,820
		2-2.5'		×		ı	,		•	•			3,940
		3-3.5'		×		•			•	-	•		4,860
-													
SB-11	12/9/2010	0-1		×		<2.00	<50.0	<50.0	-	,	ŀ	•	366
		3,		×		•				•	ł	,	292
		СÎ		×		t	100	•	-			•	1,610
		7'		×		•	•	1	•	1	•		8,650
		10'		×		•	•	•					15,600
		15'		×		ı	•	1	•			•	5,800
		20'		×		ı	•	1		,	•	•	2,230
		25'		×		•	-	•		1	-	,	606
		30'		×		ı	•	ŧ	1		-	•	949
		40'		×		4	1	•	1	•	1	•	860
		50'		×		ı	1	ı	1	-	•	•	1,050
		60'		×		¢		£5			•		711

Table 1

Page 39 of 111

# COG Operating LLC. GJ West CO-OP South Water Distribution/Injection Line

## est CO-OF South water Distribution/Injection 1st and 2nd Spill

EDDY COUNTY, NEW MEXICO

Removed         GHO         DRO         Total         ( $10^4 M_{\odot}$ )         ( $10^4 M_{\odot}$ )        ( $10^4 M_{\odot}$	Sample ID Sample Date Sa	Sa		Soil	Soil Status		TPH (mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Chloride
104 $6,410$ $6,514$ $<0.200$ $0.233$ $<0.200$ $0.612$ $<$ $<1.00$ $<50.0$ $<50.0$ $<50.0$ $<50.0$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ $<$ <	nepm (m) (BEB)	(939)		In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	10/4/2010 0-1'	0-1		×		104	6,410	6,514	<0.200	0.293	<0.200	0.612	4,040
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1-1.5'	1-1.5'		×		<1.00	<50.0	<50.0			1		2,580
$ \left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	2-2.5'	2-2.5'		 ×		<1.00	96	96	-	•	•		1,160
	3-3.5'	3-3.5'		×		•	•	•	•	•	,	-	1,370
	4-4.5'	4-4.5'		×			,		•	•			1,000
$ \left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	5-5.5'	5-5.5'		×		•	•	•	'	•	1	   	913
$ \left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	6-6.5'	6-6.5'		×		1	•	1	ŀ				226
$ \left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	7-7.5	7-7.5'		×		1	•		-		•		1,120
	8-8.5'	8-8.5'		×		'	•	1	1	,	t		2,100
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	9-9.5	9-9.5'		×		•	-		1	•	I	-	3,810
	12/0/2010 0-1	1.1				0.00	0200	0.020	00001	0000	0000	0000	0100
	╞	5 7		;   ;	T	2.2	2	1	00400		~~~~	202	010'2
.	ci.	G.		×			-		'	1	•	-	8,260
	ດຳ	ນີ		×		,		,	'	•	•	•	6,770
	7	7:	_	×		'	•	1	•	•	•	-	4,150
	10'	10'		 ×		•	•	I	•	ı	•	•	3,290
	15'	15'		 ×		•	•	::•	1	•	•		3,030
	20'	20'		 ×		•	1	ı	•	1	·	•	7,180
	25'	25'		 ×		•	•	1	•	•	4	-	2,660
	30,	30,		 ×		1	•	I	1	,	•		2,460
	40	40'		×		•		1	1	,	•	•	1,280
	50'	50°		×		ı	•	1	1	•	,	•	252
	60'	60'		×		ı	•	•	•				272

Table 1

Page 40 of 111

# COG Operating LLC.

# GJ West CO-OP South Water Distribution/Injection Line

## 1st and 2nd Spill EDDY COUNTY, NEW MEXICO

Samela ID Samela Date	Sample	Depth	Soil	Soil Status		TPH (mg/kg)	(	Benzene	Toluene	Ethiybenzene	Xvlene	Chloride
nat a	Depth (ft)		In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
10/4/2010	0-1'		×		<1.00	88.10	88.10	•	I			279
	1-1.5'		×			•	•	•		·	•	<200
	2-2.5'		×		•	-	•	•	,			694
	3-3.5'		×		•	•	•	•	•			1,260
	4-4.5'		×		•	,	•	•				3,240
	5-5.5'		×			•		•	1		•	8,300
	6-6.5'		×		•		1	•	1	•		8,830
	7-7.5'		×					•	Ŧ			10,900
	8-8.5'		×			•	-	•				9,460
	9-9.5'		×		•	•	•	•		•	-	8,750
10/0/010	14.0		>		Leo L	0077	1 600	0 400	007.0	0 100		
	5 7	Ť	; ;		200	07	000-		001.02	>0,400	2.2	0,000
	'n		×			,	£	•	1	-		3,140
	ົ້		×			3		•	1	20. -	•	2,590
	7.		×		•	ı	•	•	•	•	,	7,810
	10'		×		8	•	1				•	9,200
	15		×		•	•	a	•		,	•	4,580
	20'		×		•	•	8	•	ł		•	4,410
	25'		×		*	ı	-	•			•	1,060
	30'		×		1	•	•	•		t	•	271
	40'		×		•	•	1	•	-		,	<200
	50'		×		1	•	•	•	•			290
	60'		×		0		-	•				271

Table 1

Page 41 of 111

## COG Operating LLC. GJ West CO-OP South Water Distribution/Injection Line 1st and 2nd Spill

# EDDY COUNTY, NEW MEXICO

Ray (mg/kg)         Total         (mg/kg)         (mg/kg)           2.56         307         309.56         <0.0200         <0.0200           2.5         307         309.56         <0.0200         <0.0200           2.5         307         309.56         <0.0200         <0.0200           2.5         5         5              2.5         5         5              2.5         5         5               2.5         5         5                430         8,060         9,490                  430         8,060         9,490	Removed         GRO           2:56         -           -         -           -         -		
307       309.56       <0.0200         -       -       -	2:56	×	
·       ·		×	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	• · · · · · · · · · ·	×	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		×	
·       ·		×	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	• • • • • •	×	
-       -	, , , , , ,	×	
-       -	· · · ·	×	
·       ·	• • •	×	
•       •	E 1	×	
8,060     9,490     <0.200	•	×	
8,060     9,490     <0.200       <250		×	>
<250     590       151     151       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -	1,430		×
151     151       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -       -     -	590	×	×
	<1.00	×	×
		×	×
1 1 1	•	×	×
• •	1		×
	1		×
	-		×
•	•		×
•	•		×

Table 1

Page 42 of 111

# GJ West CO-OP South Water Distribution/Injection Line COG Operating LLC.

# 1st and 2nd Spill EDDY COUNTY, NEW MEXICO

			:	li o o	Coll Ctature								
Sample ID	Sample Date	Denth (ft)	(BFB)		chino					I oluene	Ethlybenzene	Xylene	Chloride
			_	In-Situ	Removed	GRO	DRO	Total	(Ry/Rin)	(UIIG/KG)	(Ex/Gill)	(mg/kg)	(mg/kg)
SB-6	12/7/2010	0-1-		×		<2.00	62.1	62.1	<0.0200	<0.0200	<0.0200	<0.0200	821
(AH-4)		3		×					ı				936
		ũ		×		-		٠	•				8,190
		7.		×		1	÷	•	ı				3,950
		10'		×		•	,	-	•				9,110
		15'		×			•	•	•		1	•	9,640
		20'		×		,	•	-		-			3,100
		25'		×		•	1	1		•	•		3,490
		30'		×		1	,	•					992
		40'		×		,	-	-	1	•		,	<200
		50'		×		•	•	•			1	,	<200
		60'		×			-		•			,	<200
		70,		×		•	: 1	1	•			•	386
-													
88-9 SB-9	12/8/2010				×	587	3830	4,417	<1.00	<1.00	<1.00	5.47	5,220
(AH-4)		ð			×	•		•	-				4,780
		ى		×			•	•	ſ	1	1	ı	2,290
		7		×		'	ı	•		1	•		3,550
		10'		×			'	ı	1	ł	•	,	1,780
		15		×			'	,		ı	1	1	2,310
		20'		×			'			1	1	•	2,580
		25'		×							•	•	3,800
		30'		×		'	,		•	-	ŧ.	•	800
		40'		×		• 1			•		ø	3	255
		20,		×		'			ſ	ı	1	•	1,320
		-09		×		'	•		•	1	1	-	568

Table 1

Page 43 of 111

# COG Operating LLC. GJ West CO-OP South Water Distribution/Injection Line

# 1st and 2nd Spill EDDY COUNTY, NEW MEXICO

		-				-	-	1				1	-			-	-							4000
Chloride	(mg/kg)	5,970	2,770	3,380	5,110	6,210	8,390	8,360	6,580	6,410	6,030		1,210	3,040	2,780	1,310	616	1,080	538	921	5,230	1,620	2,700	641
Xvlene	(mg/kg)	0.358	•			8		8	•		ı			1	¢	•		1			1	•	1	
Ethlvbenzene	(mg/kg)	0.304			•		1		•		ı		-		•	,	•	•	1	•	·		P	
Toluene	(mg/kg)	<0.0500		1			•	,	1		1			•			1	•		•	- 1		ı	1
Benzene	(mg/kg)	<0.0500	1	-	•	•	•	•	5	1	,			-		•	1		•	•	ı	-		•
	Total	162.4	r		-	-	1	-	,	•	•		57.1			ı	-	•		,	•	•		•
TPH (mg/kg)	DRO	71.10		-	3	3	•	1		-	ı		57.1	-	1		1	1	1	1	1	1	ı	•
	GRO	91.30	-	-		-	,	-	,		1		<2.00	The end	T	J				4	8	-	•	۰.
Soil Status	Removed	×	×	×	X	×							×	×					4					
Soi	In-Situ						×	х	х	×	×				×	×	X	×	×	×	×	×	×	×
Depth	(BEB)					i i i																		
Sample	Depth (ft)	0-1-	1-1.5'	2-2.5'	3-3.5'	4-4.5'	5-5.5'	6-6.5'	7-7.5'	8-8.5'	9-9.5'		0-1-	Q,	Ω	7'	10'	15'	20'	25'	30'	40'	50'	60'
	sample Uate	10/4/2010											12/6/2010											
		AH-5	2nd Spill									-	SB-1	(AH-5)						-				

Table 1

Page 44 of 111

# COG Operating LLC. GJ West CO-OP South Water Distribution/Injection Line

# 1st and 2nd Spill EDDY COUNTY, NEW MEXICO

		-	T		T	-				Ē		-	1						1.111	1							
Chloride	(mg/kg)	7.040	5 420	4 430		7,040	5,850	11,800	7,120	3,000	2,790	956	480		3,540	3,360	2,420	2,050	2,970	3,280	9,500	4,220	609	2,710	3,360	754	1,840
Xvlene	(mg/kg)		-			,	•	,	•		•		•		<0.100	10 mm	•		-		-	F		,	•	,	•
Ethlybenzene	(mg/kg)					•	T	•		,	•	•	ı		<0.100		ı	ı	1	ŧ	1	•	1	,		ø	•
Toluene	(mg/kg)			-			•	•		-			•		<0.100			•	•	ı	•	•	•	,	1		
Benzene	(mg/kg)					1	1	Ð	•	•	•	•	1		<0.100	•		1	•	•	•		-		ŧ	•	3
()	Total	<50.0		•			•	1	-	•	I	1			426			ı	1	ı	1		•		-	-	5
TPH (mg/kg)	DRO	<50.0	,			•	a	-	-		ı		•		426		1	•	•	•	1	ı	•		3	-	,
	GRO	<2.00		,		'	r	Þ	•	1	•	•	r		<10.0	•	1	1	ı	•	•	1	F	•		,	
Soil Status	Removed	×	×												X	×											
Soil	In-Situ			×	,	×	×	×	×	×	×	×	×				×	×	×	×	×	×	×	×	×	×	×
Depth	(BEB)																										
Sample	Depth (ft)	0-1-	ŝ	în	ī	~	10'	15'	20'	25'	30'	40'	50'		0-1'	ю	Ω,	7'	10'	15°	20'	25'	30'	40'	50'	60'	-02
	sample uate	12/7/2010													12/7/2010												
_	sample in	SB-4	(AH-5)						-					~~	SB-5	(AH-5)				100-00-01							

Table 1 COG Operating LLC.

Page 45 of 111

# GJ West CO-OP South Water Distribution/Injection Line

## 1st and 2nd Spill EDDY COUNTY, NEW MEXICO

	Depth (BEB)	
-Situ Removed GRO	In-Situ Removed	Removed
X 1,320		
X 5,820		
X 11,100		
X 1,560		
X 3,260		
X 2,050		
X 1,500		
X 926		
X 1,040		
X 917		
X < <10.0		
- ×		
· ·		
×	×	×
×	×	×
×	×	×
×	×	×
×		
- ×		
×	×	×
- - -		
>		

## Table 1

Page 46 of 111

# GJ West CO-OP South Water Distribution/Injection Line COG Operating LLC.

## EDDY COUNTY, NEW MEXICO 1st and 2nd Spill

Comple ID	Comolo Dato	Sample	Depth	Soil	Soil Status		TPH (mg/kg)		Benzene		Ethlybenzene	Xvlene	Chloride
		Depth (ft) (BEB)	(868)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
-						İ							
SB-3	12/7/2010	0-1'		×		<2.00	<50.0	<50.0			•	•	<200
(AH-6)		3		×		r	•		ı	J	•	•	341
Permitte		5		×		•			•			•	6,520
		7'		×		ı	•			•	1	•	8,340
		10'		×		•	•	٠		,		1	6,810
		15'		×		1	•	•	•		•	•	3,510
		20'		×		ı	•	1	,			•	1,040
		25'		×		•	•	1	•		•	•	3,180
		30'		×		ı	•	1	•	ŧ	1		1,140
	1	40'		×		1	1	1					361
- en al rest		50'		×		ı	٠	1	,	•	-	•	<200
		60'		×		'	•	1	,	•	-	•	<200

Below Excavation Bottom BEB Ĵ

Not Analyzed

Liner installation Excavation

Page 47 of 111 **APPENDIX A** Released to Imaging: 3/4/2022 11:53:10 AM Received by OCD: 1/14/2022 10:49:17 AM

of 111		
48 0)		155:44
	f New Mexico	03-7
	s and Natural Resources	Form C-14 Revised October 10, 200.
1301 W. Grand Avenue, Artesia, NM 88210 District III Oil Conse	ervation Division	Submit 2 Copies to appropriate District Office in accordance
1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 Sou	th St. Francis Dr.	with Rule 116 on back
1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa I	Fe, NM 87505	side of form
Release Notification	on and Corrective Actio	n
	OPERATOR	🖂 Initial Report 🚺 Final Repo
Name of Company COG OPERATING LLC Address 550 W. Texas, Suite 100, Midland, TX 79701	Contact Pat Elli Telephone No. 432-230-0	
Address 550 W. Texas, Suite 100, Midland, TX 79701 Facility Name GJ West Coop South Water Distribution Site	Facility Type Tank Batt	
Surface Owner State Mineral Owner		Lease No.
	IN OF RELEASE	
		/West Line   County
B 23 17S 29E		Eddy
Latitude 32.812		
Type of Release Produced Water NATUR	Volume of Release 100bbls	Volume Recovered 10bbls
Source of Release Transfer Pump	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given'	05/06/2010	05/06/2010 4:00 p.m.
Yes No Not Require		Bratcher - OCD
By Whom? Josh Russo	Date and Hour 05/07/2010	9:25 a.m.
Was a Watercourse Reached?	If YES. Volume Impacting the Wa	nercourse.
If a Watercourse was Impacted, Describe Fully,*		
Describe Cause of Problem and Remedial Action Taken.*		
A swedge broke off of the water transfer pump. The swedge has been re-	paired and the pump has been put hac	k in service.
Describe Area Affected and Cleanup Action Taken.*		
Initially 100bbls of produced water was released from the water transfer		
10°. Tetra Tech will sample the spill site area to delineate any possible OCD for approval prior to any significant remediation work.	contamination from the release and we	will present a remediation work plan to the
I hereby certify that the information given above is true and complete to	the best of my knowledge and underst	and that pursuant to NMOCD rules and
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	notifications and perform corrective a	ctions for releases which may endanger
should their operations have fuiled to adequately investigate and remedi	ate contamination that pose a threat to	ground water, surface water, human health
or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	does not relieve the operator of respor	
	OIL CONSER	VATION DIVISION
Signature:		01:3
	Approved by District Supervisor:	1:53
		52
Title: HSE Coordinator	Approval Date:	Expiration Date:
Title:         HSE Coordinator           E-mail Address:         jrusso @conchoresources.com	Conditions of Approval.	VATION DIVISION  Expiration Date:  Attached
		sii.
Attach Additional Sheets If Necessary		Ţma,
Date: 05/07/2010 Phone: 432-212-2399 Attach Additional Sheets If Necessary		Ito
eive.		asea
Rec		Rele

111						
49 of					0671	
Page 49 of 111	District I 1625 N. French Dr., Hubbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210		f New Mexico s and Natural Resources			rm C-14 ber 10, 200
	District III 1000 Rio Brazos Road, Aztec, NM 87410		ervation Division		Submit 2 Copies to a District Office in a	appropria accordanc
	District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505		th St. Francis Dr. Fe, NM 87505		with Rule 1	16 on bac ide of for
(	)		on and Corrective Acti	on		
			OPERATOR		al Report 🔲 F	inal Rep
		ATING LLC 00, Midland, TX 79701	Contact Pat E Telephone No. 432-230		· · · · · · · · · · · · · · · · · · ·	
	Facility Name GJ West Coop Unit So		Facility Type Injection			
	Surface Owner State	Mineral Owner	• •	Lease N	lo.	
			ON OF RELEASE			
		tange Feet from the Nort 29E	th/South Line Feet from the Ea	st/West Line	County Eddy	
		Latitude 32 48.65:	5 Longitude 104 04.555			
		NATURI	E OF RELEASE			
	Type of Release Produced water Source of Release Nipple off of injectic	on line 90	Volume of Release 100hbls Date and Hour of Occurrence	Date and I	ecovered 50bbls Hour of Discovery	
	Was Immediate Notice Given?		09/17/2010 If YES, To Whom?	09/17/201	0 2·00 pm	
	By Whom? Josh Russo	es 🔲 No 🗋 Not Require	d Mik Date and Hour 09/17/2010 5::	e Bratcher—O	CD	
	Was a Watercourse Reached?		If YES, Volume Impacting the V			
	If a Watercourse was impacted. Describe	res 🖾 Na				
1	The ordered with influence, bearing	·				
9	Bescribe Cause of Problem and Remedial	I Action Taken.*				
	A nipple came loose off of the 90 on the i	injection line. All old futings v	vere replaced with new fittings.			
	Describe Area Affected and Cleanup Acti	ion Taken.*				-
	Initially 100bbls of produced water was re- truck. The spill area has the dimensions of Sec.28-T17S-R29E, 565' FNL 1330' FEL contamination from the release and we with	of 10° x 600° in the pasture. (T L, Eddy Co., NM, AP1# 30-015	he closest well location to the release -35777). Tetra Tech will sample the	is the GJ West spill site area t	i Coop Unit #170, Un o delineate any possil	it B. ble
	I hereby certify that the information giver regulations all operators are required to re- public health or the environment. The ac- should their operations have failed to ade or the environment. In addition, NMOCE federal, state, or local laws and/or regulat	eport and/or file certain release ceptance of a C-141 report by t quately investigate and remedia D acceptance of a C-141 report	notifications and perform corrective he NMOCD marked as "Final Report ate contamination that pose a threat to	actions for relea " does not relic o ground water.	ases which may enda eve the operator of lia surface water, huma	nger bility n health
	Signature:	7.5-	OIL CONSER	VATION I	DIVISION	M
WY 11	Printed Name: Josh Ru	1550	Approved by District Supervisor:	T		Released to Imaging: 3/4/2022 11:53:10 AM
0:49.	Title: HSE Coord	dinator	Approval Date:	Expiration D	Date.	11:5
922 1	E-mail Address: jrussota conchor	resources.com	Conditions of Approval:		Attached	2022
Received by OCD: 4/14/2022 10:49:17	Date: 09/20/2010 Phone: Tach Additional Sheets If Necessary	432-212-2399				3: 3/4/
D: 1	Jach Adunional Sheets in Necessary					aging
y 00						o Im
ved b						sed to
lecei						elea
×						×

Report Date: Octo	ober 22, 2010	Work Order: 10100715	Pag	ge Number: 6 of 9
Sample: 246942	- AH-4 0-1'			
Param	Flag	Result	Units	RL
Chloride		6710	mg/Kg	4.00
Sample: 246943	- AH-4 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		2530	mg/Kg	4.00
Sample: 246944	- AH-4 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		2040	mg/Kg	4.00
Sample: 246945 Param Chloride	- AH-4 3-3.5' Flag	Result 1790	Units mg/Kg	RL 4.00
Sample: 246946	- AH-4 4-4.5'			
Param	Flag	Result	Units	RL
Chloride		1720	mg/Kg	4.00
Sample: 246947	- AH-4 5-5.5'			
Param	Flag	Result	Units	RL
Chloride		2690	mg/Kg	4.00
Sample: 246948	- AH-4 6-6.5'			
Param	Flag	Result	Units	RL
		4290	mg/Kg	4.00
Chloride				
	- AH-4 7-7.5'			
Chloride Sample: 246949 Param	- AH-4 7-7.5' Flag	Result	Units	RL

Received by OCD: 1/14/2022 10:49:17 AM

Page 50 of 111

Report Date: Octo	ber 22, 2010	Work Order: 10100715	Page	Number: 7 of 9
Sample: 246950	- AH-4 8-8.5'			
Param	Flag	Result	Units	RL
Chloride	0	3980	mg/Kg	4.00
Sample: 246951	- AH-4 9-9.5'			
Param	Flag	Result	Units	RL
Chloride		3430	mg/Kg	4.00
Sample: 246952	- AH-5 0-1'			
Param	Flag	Result	Units	RL
Chloride		5970	mg/Kg	4.00
Sample: 246953				
Param	Flag	Result	Units	RL
Chloride		2770	mg/Kg	4.00
Sample: 246954 -				
Param	Flag	Result	Units	RL
Chloride		3380	mg/Kg	4.00
Sample: 246955 -	AH-5 3-3.5'			
Param	Flag	Result	Units	RL
Chloride		5110	mg/Kg	4.00
Sample: 246956 -	AH-5 4-4.5'			
Param	Flag	Result	Units	RL
Chloride		6210	mg/Kg	4.00
Sample: 246957 -	AH-5 5-5.5'			
Param	Flag	Result	Units	RL
Chloride		8390	mg/Kg	4.00

Received by OCD: 1/14/2022 10:49:17 AM

Page 51 of 111

Report Date: Octo	ober 22, 2010	Work Order: 10100715	F	Page Number: 8 of 9
Sample: 246958	- AH-5 6-6.5'			
Param	Flag	Result	Units	RL
Chloride		8360	mg/Kg	4.00
Sample: 246959	- AH-5 7-7.5'			
Param	Flag	Result	Units	RL
Chloride		6580	mg/Kg	4.00
Sample: 246960	- AH-5 8-8.5'			
Param	Flag	Result	Units	RL
Chloride		6410	mg/Kg	4.00
Sample: 246961	- AH-5 9-9.5'			
Param	Flag	Result	Units	RL
Chloride	· · · · · · · · · · · · · · · · · · ·	6030	mg/Kg	4.00
Sample: 246962 Param Chloride	- AH-6 0-1' Flag	Result 2710	Units mg/Kg	
Sample: 246963	- AH-6 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		983	mg/Kg	4.00
Sample: 246964	- AH-6 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		3320	mg/Kg	4.00
Sample: 246965	- AH-6 3-3.5'			
	[7]	Result	Units	RL
Param	Flag	readic	w	2.4

Page 52 of 111

Report Date: Octo	ober 22, 2010	Work Order: 10100715	Pa	age Number: 9 of 9
Sample: 246966	- AH-6 4-4.5'			
Param	Flag	Result	Units	RL
Chloride		3710	mg/Kg	4.00
Sample: 246967	- AH-6 5-5.5'			÷
Param	Flag	Result	Units	RL
Chloride		3830	mg/Kg	4.00
Sample: 246968	- AH-6 6-6.5'			
Param	Flag	Result	Units	RL
Chloride		1710	mg/Kg	4.00
Sample: 246969	- AH-6 7-7.5'			
Param	Flag	Result	Units	RL
Chloride		4080	mg/Kg	4.00
Sample: 246970	- AH-6 8-8.5'			
Param	Flag	Result	Units	$\mathbf{RL}$
Chloride		2320	mg/Kg	4.00
Sample: 246971	- AH-6 9-9.5'			
Param	Flag	Result	Units	RL
	0		17.5	4.00

Chloride

Page 53 of 111

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

6280

mg/Kg

4.00

Report Date: December 22, 2010

Page 54 of 111

Work Order: 10121028

Page Number: 1 of 12

## **Summary Report**

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

Report Date: December 22, 2010

## Work Order: 10121028

Project Location:	Eddy Co., NM
Project Name:	COG/GJ Co-op SWD
Project Number:	114-6400524

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
252965	SB-1 0-1'	soil	2010-12-06	00:00	2010-12-10
252966	SB-1 3'	soil	2010-12-06	00:00	2010-12-10
252967	SB-1 5'	soil	2010-12-06	00:00	2010-12-10
252968	SB-1 7'	soil	2010-12-06	00:00	2010-12-10
252969	SB-1 10'	soil	2010-12-06	00:00	2010-12-10
252970	SB-1 15'	soil	2010-12-06	00:00	2010-12-10
252971	SB-1 20'	soil	2010-12-06	00:00	2010-12-10
252972	SB-1 25'	soil	2010-12-06	00:00	2010-12-10
252973	SB-1 30'	soil	2010-12-06	00:00	2010-12-10
252974	SB-1 40 <sup>*</sup>	soil	2010-12-06	00:00	2010-12-10
252975	SB-1 50'	soil	2010-12-06	00:00	2010-12-10
252976	SB-1 60'	soil	2010-12-06	00:00	2010-12-10
252977	SB-2 0-1'	soil	2010-12-06	00:00	2010-12-10
252978	SB-2 3'	soil	2010-12-06	00:00	2010-12-10
252979	SB-2 5'	soil	2010-12-06	00:00	2010-12-10
252980	SB-2 7'	soil	2010-12-06	00:00	2010-12-10
252981	SB-2 10'	soil	2010-12-06	00:00	2010-12-10
252982	SB-2 15'	soil	2010-12-06	00:00	2010-12-10
252983	SB-2 20'	soil	2010-12-06	00:00	2010-12-10
252984	SB-2 25'	soil	2010-12-06	00:00	2010-12-10
252985	SB-2 30'	soil	2010-12-06	00:00	2010-12-10
252986	SB-2 40'	soil	2010-12-06	00:00	2010-12-10
252987	SB-2 50'	soil	2010-12-06	00:00	2010-12-10
252988	SB-2 60'	soil	2010-12-06	00:00	2010-12-10
252989	SB-3 0-1'	soil	2010-12-07	00:00	2010-12-10
252990	SB-3 3	soil	2010-12-07	00:00	2010-12-10
252991	SB-3 5'	soil	2010-12-07	00:00	2010-12-10
252992	SB-3 7'	soil	2010-12-07	00:00	2010-12-10
252993	SB-3 10'	soil	2010-12-07	00:00	2010-12-10
252994	SB-3 15'	soil	2010-12-07	00:00	2010-12-10

TraceAnalysis, Inc. • 6701 Aberdeen Avc., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Received by OCD: 1/14/2022 10:49:17 AM

## Report Date: December 22, 2010

Page 55 of 111

Work Order: 10121028

Page Number: 2 of 12

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
252995	SB-3 20'	soil	2010-12-07	00:00	2010-12-10
252996	SB-3 25	soil	2010-12-07	00:00	2010-12-10
252997	SB-3 30'	soil	2010-12-07	00:00	2010-12-10
252998	SB-3 40'	soil	2010-12-07	00:00	2010-12-10
252999	SB-3 50 <sup>3</sup>	soil	2010-12-07	00:00	2010-12-10
253000	SB-3 60'	soil	2010-12-07	00:00	2010-12-10
253001	SB-4 0-1'	soil	2010-12-07	00:00	2010-12-10
253002	SB-4 3'	soil	2010-12-07	00:00	2010-12-10
253003	SB-4 5'	soil	2010-12-07	00:00	2010-12-10
253004	SB-4 7'	soil	2010-12-07	00:00	2010-12-10
253005	SB-4 10	soil	2010-12-07	00:00	2010-12-10
253006	SB-4 15 <sup>1</sup>	soil	2010-12-07	00:00	2010-12-10
253007	SB-4 20'	soil	2010-12-07	00:00	2010-12-10
253008	SB-4 25'	soil	2010-12-07	00:00	2010-12-10
253009	SB-4 30'	soil	2010-12-07	00:00	2010-12-10
253010	SB-4 40*	soil	2010-12-07	00:00	2010-12-10
253011	SB-4 50'	soil	2010-12-07	00:00	2010-12-10
253012	SB-5 0-1'	soil	2010-12-07	00:00	2010-12-10
253013	SB-5 31	soil	2010-12-07	00:00	2010-12-10
253014	SB-5 5'	soil	2010-12-07	00:00	2010-12-10
253015	SB-5 7'	soil	2010-12-07	00:00	2010-12-10
253016	SB-5 10'	soil	2010-12-07	00:00	2010-12-10
253017	$SB-5 \ 15^{+}$	soil	2010-12-07	00:00	2010-12-10
253018	SB-5 20'	soil	2010-12-07	00:00	2010-12-10
253019	SB-5 25'	soil	2010-12-07	00:00	2010-12-10
253020	SB-5 30'	soil	2010-12-07	00:00	2010-12-10
253021	SB-5 40"	soil	2010-12-07	00:00	2010-12-10
253022	SB-5 50*	soil	2010-12-07	00:00	2010-12-10
253023	SB-5 60*	soil	2010-12-07	00:00	2010-12-10
253024	SB-5 70'	soil	2010-12-07	00:00	2010-12-10
253025	SB-6 0-1'	soil	2010-12-07	00:00	2010-12-10
253026	SB-6 3*	soil	2010-12-07	00:00	2010-12-10
253027	SB-6 5'	soil	2010-12-07	00:00	2010-12-10
253028	SB-6 7'	soil	2010-12-07	00:00	2010-12-10
253029	SB-6 10 <sup>10</sup>	soil	2010-12-07	00:00	2010-12-10
253030	SB-6 15 <sup>10</sup>	soil	2010-12-07	00:00	2010-12-10
253031	SB-6 20'	soil	2010-12-07	00:00	2010-12-10
253032	SB-6 25'	soil	2010-12-07	00:00	2010-12-10
253033	SB-6 30 <sup>1</sup>	soil	2010-12-07	00:00	2010-12-10
253034	SB-6 40*	soil	2010-12-07	00:00	2010-12-10
253035	SB-6 50'	soil	2010-12-07	00:00	2010-12-10
253036	SB-6 60'	soil	2010-12-07	00:00	2010-12-10
253037	SB-6 70'	soil	2010-12-07	00:00	2010-12-10

	BTEX			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)
252965 - SB-1 0-1'					57.1	<2.00
				I		continued

continued ...

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

## Report Date: December 22, 2010

Work Order: 10121028

Page Number: 3 of 12

... continued

Page 56 of 111

	BTEX			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)
252977 - SB-2 0-1'	<0.100	< 0.100	< 0.100	< 0.100	437	<10.0
252989 - SB-3 0-1'					<50.0	<2.00
253001 - SB-4 0-1'					< 50.0	<2.00
253012 - SB-5 0-1'	<0.100	< 0.100	<0.100	<0.100	426	<10.0
253025 - SB-6 0-1'	<0.0200	< 0.0200	<0.0200	<0.0200	62.1	<2.00

### Sample: 252965 - SB-1 0-1'

I ULUIII	 	Quinco	×+++
Chloride	1210	mg/Kg	4.00

### Sample: 252966 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		3040	mg/Kg	4.00

## Sample: 252967 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		2780	mg/Kg	4.00

### Sample: 252968 - SB-1 7

Param	Flag	Result	Units	RL
Chloride		1310	mg/Kg	4.00

## Sample: 252969 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		616	mg/Kg	4.00

## Sample: 252970 - SB-1 15'

Param	Flag	Result	Units	RL
Chloride		1080	mg/Kg	4.00

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: Dece	ember 22, 2010	Work Order: 10121028	Page N	umber: 4 of 12
Sample: 252971	- SB-1 20'			
Param	Flag	Result	Units	RL
Chloride	· · · · · · · · · · · · · · · · · · ·	538	mg/Kg	4.00
Sample: 252972	- SB-1 25'			
Param	Flag	Result	Units	RL
Chloride		921	mg/Kg	4.00
Sample: 252973	- SB-1 30'			
Param	Flag	Result	Units	RL
Chloride		5230	mg/Kg	4.00
Sample: 252974	- SB-1 40'			
Param	Flag	Result	Units	RL
Chloride		1620	mg/Kg	4.00
Sample: 252975	- SB-1 50'			
Param	Flag	Result	Units	RL
Chloride		2700	mg/Kg	4.00
Sample: 252976	- SB-1 60'			
Param	Flag	Result	Units	RL
Chloride		641	mg/Kg	4.00
Sample: 252977	- SB-2 0-1'			
Param	Flag	Result	Units	RL
Chloride		6990	mg/Kg	4.00
Sample: 252978	- SB-2 3'			
Param	$\mathbf{Flag}$	Result	Units	RL
Chloride		2810	mg/Kg	4.00

Page 57 of 111

Report Date: Dece	mber 22, 2010	Work Order: 10121028	Page ?	Sumber: 5 of 12
Sample: 252979	- SB-2 5'			
Param	Flag	Result	Units	RL
Chloride		1300	mg/Kg	4.00
Sample: 252980	- SB-2 7'			
Param	Flag	Result	Units	RL
Chloride		2260	mg/Kg	4.00
Sample: 252981	- SB-2 10'			
Param	Flag	Result	Units	RL
Chloride		2540	mg/Kg	4.00
Sample: 252982	- SB-2 15'			
Param	Flag	Result	Units	RL
Chloride		2270	mg/Kg	4.00
Sample: 252983 - Param Chloride	- SB-2 20' Flag	Result 4600	Units mg/Kg	RL 4.00
Sample: 252984 -	· SB-2 25'			
Param	Flag	Result	Units	RL
Chloride		2480	mg/Kg	4.00
Sample: 252985 -				
Param	Flag	Result	Units	RL
Chloride		289	mg/Kg	4.00
	SB-2 40'			
Sample: 252986 -				
Sample: 252986 - Param	Flag	Result	Units	RL 4.00

Page 58 of 111

Report Date: Dece	ember 22, 2010	Work Order: 10121028	Page	Number: 6 of 12
Sample: 252987	- SB-2 50'			
Param	Flag	Result	Units	RI
Chloride		217	mg/Kg	4.00
Sample: 252988	- SB-2 60'			
Param	Flag	Result	Units	RI
Chloride		754	mg/Kg	4.00
Sample: 252989	- SB-3 0-1'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 252990	- SB-3 3'			
Param	Flag	Result	Units	RI
Chloride		341	mg/Kg	4.00
Sample: 252991	- SB-3 5'			
Param	Flag	Result	Units	RL
Chloride		6520	mg/Kg	4.00
Sample: 252992	- SB-3 7'			
Param	Flag	Result	Units	RI
Chloride		8340	mg/Kg	4.00
Sample: 252993	- SB-3 10'			
Param	Flag	Result	Units	RI
Chloride		6810	mg/Kg	4.00
Sample: 252994	- SB-3 15'			
Parani	Flag	Result	Units	RL
alam		3510	mg/Kg	4.00

Received by OCD: 1/14/2022 10:49:17 AM

Page 59 of 111

Report Date: Dece	ember 22, 2010	Work Order: 10121028		Page Number: 7 of 12
Sample: 252995	- SB-3 20'			
Param	Flag	Result	Units	RI
Chloride		1040	mg/Kg	4.00
Sample: 252996	- SB-3 25'			
Param	Flag	Result	Units	RL
Chloride		3180	mg/Kg	4.00
Sample: 252997	- SB-3 30'			
Param	Flag	Result	Units	RL
Chloride		1140	mg/Kg	4.00
Sample: 252998	- SB-3 40'			
Param	Flag	Result	Units	RL
Chloride		361	mg/Kg	4.00
Sample: 252999	- SB-3 50'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 253000 -	- SB-3 60'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 253001	- SB-4 0-1'			
Param	Flag	Result	Units	RL
Chloride		7040	mg/Kg	4.00
Sample: 253002 -	- SB-4 3'			
Param	Flag	Result	Units	RL
Chloride		5420	mg/Kg	4.00

Released to Imaging: 3/4/2022 11:53:10 AM

Page 60 of 111

Report Date: Dece	mber 22, 2010	Work Order: 10121028	Page N	umber: 8 of 12
Sample: 253003	- SB-4 5'			
Param	Flag	Result	Units	RL
Chloride		4430	mg/Kg	4.00
Sample: 253004	- SB-4 7'			
Param	Flag	Result	Units	RL
Chloride		7040	mg/Kg	4.00
Sample: 253005	- SB-4 10'			
Param	Flag	Result	Units	$\mathbf{RL}$
Chloride		5850	mg/Kg	4.00
Sample: 253006 Param Chloride	- SB-4 15' Flag	Result 11800	Units mg/Kg	RL 4.00
Sample: 253007 -	- SB-4 20' Flag	Result	Units	RL
Chloride		7120	mg/Kg	4.00
Sample: 253008 -	- SB-4 25'			
Param	Flag	Result	Units	RL
Chloride	· · · ·	3000	mg/Kg	4.00
Sample: 253009 -	- SB-4 30'			
Param	Flag	Result	Units	RL
Chloride		2790	mg/Kg	4.00
Sample: 253010 -	- SB-4 40'			
Sample: 253010 - Param	- SB-4 40' Flag	Result	Units	RL 4.00

Page 61 of 111

Report Date: Dece	mber 22, 2010	Work Order: 10121028	Page N	umber: 9 of 12
Sample: 253011	- SB-4 50'			
Param	Flag	Result	Units	RL
Chloride		480	mg/Kg	4.00
Sample: 253012	- SB-5 0-1'			
Param	Flag	Result	Units	RL
Chloride		3540	mg/Kg	4.00
Sample: 253013 -	- SB-5 3'			
Param	Flag	Result	Units	RL
Chloride		3360	mg/Kg	4.00
Sample: 253014 -	- SB-5 5'			
Param	Flag	Result	Units	RL
Chloride		2420	mg/Kg	4.00
Sample: 253015 ·	- SB-5 7'			
Param	Flag	Result	Units	RL
Chloride		2050	mg/Kg	4.00
Sample: 253016 -	· SB-5 10'			
Param	Flag	Result	Units	RL
Chloride		2970	mg/Kg	4.00
Sample: 253017 -	· SB-5 15'			
Param	Flag	Result	Units	RL
Chloride		3280	mg/Kg	4.00
Sample: 253018 -	SB-5 20'			
Param	Flag	Result	Units	RL
Chloride		9500	mg/Kg	4.00

Received by OCD: 1/14/2022 10:49:17 AM

Report Date: Dece	mber 22, 2010	Work Order: 10121028	Page Nu	10 of 12
Sample: 253019	- SB-5 25'			
Param	Flag	Result	Units	RL
Chloride		4220	mg/Kg	4.00
Sample: 253020	- SB-5 30'			
Param	Flag	Result	Units	RL
Chloride		609	mg/Kg	4.00
Sample: 253021	- SB-5 40'			
Param	Flag	Result	Units	RL
Chloride		2710	mg/Kg	4.00
Sample: 253022 · Param Chloride Sample: 253023 ·	Flag	Result 3360	Units mg/Kg	RL 4.00
Param	Flag	Result	Units	$\mathbf{RL}$
Chloride		754	mg/Kg	4.00
Sample: 253024 -	- SB-5 70'			
Param	Flag	Result	Units	RL
Chloride		1840	mg/Kg	4.00
Sample: 253025 -	- SB-6 0-1'			
Param	Flag	Result	Units	RL
Chloride		821	mg/Kg	4.00
Sample: 253026 -	- SB-6 3'			
Param	Flag	Result	Units	RL

Page 63 of 111

Report Date: Dece	mber 22, 2010	Work Order: 10121028	Page Nu	mber: 11 of 1
Sample: 253027	- SB-6 5'			
Param	Flag	Result	Units	RI
Chloride		8190	mg/Kg	4.00
Sample: 253028	- SB-6 7'			
-			<b>I *</b> * 4	DI
Param Chloride	Flag	Result 3950	Units mg/Kg	RI 4.00
Sample: 253029	- SB-6 10'			
Param	Flag	Result	Units	RL
Chloride		9110	mg/Kg	4.00
Sample: 253030 ·	- SB-6 15'			
Param Chloride	Flag	Result 9640	Units mg/Kg	RI 4.00
Sample: 253031 ·	- <b>SB-6 20'</b> Flag	Result	Units	RL
Chloride		3100	mg/Kg	4.00
Sample: 253032 - <sup>S</sup> aram	Flag	Result	Units	RL
Chloride	* ***8	3490	mg/Kg	4.00
ample: 253033 -	· SB-6 30'			
Param	Flag	Result	Units	RL
Chloride		992	mg/Kg	4.00
ample: 253034 -	SB-6 40'			
Param	Flag	Result	Units	RI
Chloride		<200	mg/Kg	4.00

Page 64 of 111

Keport Date: Deco	ember 22, 2010	Work Order: 10121028	Page	Number: 12 of 12
Sample: 253035	- SB-6 50'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 253036		Result	Unite	RL
Sample: 253036 Param Chloride	- SB-6 60' Flag	Result <200	Units mg/Kg	RL 4.00
Param	Flag			
Param Chloride	Flag			

TraceAnalysis, Inc. •	6701 Aberdeen Ave.	, Suite 9 🔹	Lubbock, TX 79424-	1515 • (806) 794-1296
This is only a sum	mary. Please, refer to	o the comple	te report package for (	quality control data.

Page 65 of 111

Page 66 of 111

Work Order: 10121029

Page Number: 1 of 11

## Summary Report

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

Report Date: December 30, 2010

## Work Order: 10121029

Project Location:	Eddy Co., NM
Project Name:	COG/GJ Co-op SWD
Project Number:	114-6400524

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
253038	SB-7 0-1'	soil	2010-12-08	00:00	2010-12-10
253039	SB-7 3'	soil	2010-12-08	00:00	2010-12-10
253040	SB-7 5'	soil	2010-12-08	00:00	2010-12-10
253041	SB-7 7*	soil	2010-12-08	00:00	2010-12-10
253042	SB-7 10'	soil	2010-12-08	00:00	2010-12-10
253043	SB-7 15'	soil	2010-12-08	00:00	2010-12-10
253044	SB-7 20'	soil	2010-12-08	00:00	2010-12-10
253045	SB-7 25'	soil	2010-12-08	00:00	2010-12-10
253046	SB-7 30'	soil	2010-12-08	00:00	2010-12-10
253047	SB-7 40 <sup>+</sup>	soil	2010-12-08	00:00	2010-12-10
253048	SB-7 50 <sup>3</sup>	soil	2010-12-08	00:00	2010-12-10
253049	SB-7 60'	soil	2010-12-08	00:00	2010-12-10
253050	SB-8 0-1'	soil	2010-12-08	00:00	2010-12-10
253051	SB-8 3'	soil	2010-12-08	00:00	2010-12-10
253052	SB-8 5'	soil	2010-12-08	00:00	2010-12-10
253053	SB-8 7'	soil	2010-12-08	00:00	2010-12-10
253054	SB-8 10'	soil	2010-12-08	00:00	2010-12-10
253055	SB-8 15'	soil	2010-12-08	00:00	2010-12-10
253056	SB-8 20'	soil	2010-12-08	00:00	2010-12-10
253057	SB-8 25'	soil	2010-12-08	00:00	2010-12-10
253058	SB-8 301	soil	2010-12-08	00:00	2010-12-10
253059	SB-8 401	soil	2010-12-08	00:00	2010-12-10
253060	SB-8 50'	soil	2010-12-08	00:00	2010-12-10
253061	SB-9 0-1'	soil	2010-12-08	00:00	2010-12-10
253062	SB-9 3'	soil	2010-12-08	00:00	2010-12-10
253063	SB-9 5'	soil	2010-12-08	00:00	2010-12-10
253064	SB-9 7'	soil	2010-12-08	00:00	2010-12-10
253065	SB-9 10'	soil	2010-12-08	00:00	2010-12-10
253066	SB-9 15'	soil	2010-12-08	00:00	2010-12-10
253067	SB-9 20'	soil	2010-12-08	00:00	2010-12-10
Trace	Analysis Inc. • 6701	Aberdeen Ave Suit	e 9 • Lubbock TX 79	424-1515 • (806)	794-1296

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

## Report Date: December 30, 2010

Page 67 of 111

Work Order: 10121029

Page Number: 2 of 11

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
253068	SB-9 25'	soil	2010-12-08	00:00	2010-12-10
253069	SB-9 30 <sup>*</sup>	soil	2010-12-08	00:00	2010-12-10
253070	SB-9 40 <sup>*</sup>	soil	2010-12-08	00:00	2010-12-10
253071	SB-9 50'	soil	2010-12-08	00:00	2010-12-10
253072	SB-9 60 <sup>+</sup>	soil	2010-12-08	00:00	2010-12-10
253073	SB-10 0-1'	soil	2010-12-09	00:00	2010-12-10
253074	SB-10 31	soil	2010-12-09	00:00	2010-12-10
253075	SB-10 5'	soil	2010-12-09	00:00	2010-12-10
253076	SB-10 7 <sup>1</sup>	soil	2010-12-09	00:00	2010-12-10
253077	SB-10 10'	soil	2010-12-09	00:00	2010-12-10
253078	SB-10 15 <sup>+</sup>	soil	2010-12-09	00:00	2010-12-10
253079	SB-10 20 <sup>*</sup>	soil	2010-12-09	00:00	2010-12-10
253080	SB-10 25 <sup>*</sup>	soil	2010-12-09	00:00	2010-12-10
253081	SB-10 30'	soil	2010-12-09	00:00	2010-12-10
253082	SB-10 40'	soil	2010-12-09	00:00	2010-12-10
253083	SB-10 50'	soil	2010-12-09	00:00	2010-12-10
253084	SB-10 60 <sup>3</sup>	soil	2010-12-09	00:00	2010-12-10
253085	SB-11 0-1'	soil	2010-12-09	00:00	2010-12-10
253086	SB-11 3*	soil	2010-12-09	00:00	2010-12-10
253087	SB-11 5'	soil	2010-12-09	00:00	2010-12-10
253088	SB-11 7'	soil	2010-12-09	00:00	2010-12-10
253089	SB-11 10"	soil	2010-12-09	00:00	2010-12-10
253090	SB-11 15'	soil	2010-12-09	00:00	2010-12-10
253091	$SB-11 \ 20^{+}$	soil	2010-12-09	00:00	2010-12-10
253092	SB-11 25'	soil	2010-12-09	00:00	2010-12-10
253093	SB-11 30'	soil	2010-12-09	00:00	2010-12-10
253094	SB-11 40'	soil	2010-12-09	00:00	2010-12-10
253095	SB-11 50'	soil	2010-12-09	00:00	2010-12-10
253096	SB-11 60'	soil	2010-12-09	00:00	2010-12-10
253097	SB-12 0-1'	soil	2010-12-09	00:00	2010-12-10
253098	SB-12 3'	soil	2010-12-09	00:00	2010-12-10
253099	SB-12 5'	soil	2010-12-09	00:00	2010-12-10
253100	SB-12 7'	soil	2010-12-09	00:00	2010-12-10
253101	SB-12 10'	soil	2010-12-09	00:00	2010-12-10
253102	SB-12 15'	soil	2010-12-09	00:00	2010-12-10
253103	SB-12 20'	soil	2010-12-09	00:00	2010-12-10
253104	SB-12 25'	soil	2010-12-09	00:00	2010-12-10
253105	SB-12 30'	soil	2010-12-09	00:00	2010-12-10

	BTEX				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)
253038 - SB-7 0-1'	< 0.400	<0.400	< 0.400	2.20	1120	560
253050 - SB-8 0-1'	< 0.0200	< 0.0200	< 0.0200	<0.0200	307	2.56
253061 - SB-9 0-1'	<1.00	<1.00	<1.00	5.47	3830	587
253073 - SB-10 0-1'	< 0.200	< 0.200	< 0.200	<0.200	2270	<20.0
253085 - SB-11 0-1'					<50.0	<2.00
253097 - SB-12 0-1'	< 0.100	< 0.100	< 0.100	<0.100	1040	66.7

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Received by OCD: 1/14/2022 10:49:17 AM

Report Date: December 30, 2010		Work Order: 10121029	Page	e Number: 3 of 11
Sample: 253038	- SB-7 0-1'			
Param	Flag	Result	Units	RL
Chloride		6360	mg/Kg	4.00
Sample: 253039	- SB-7 3'			
Param	Flag	Result	Units	RL
Chloride	5	3140	mg/Kg	4.00
Sample: 253040	- SB-7 5'			
Param	Flag	Result	Units	RL
Chloride		2590	mg/Kg	4.00
Sample: 253041	- SB-7 7'			
Param	Flag	Result	Units	RL
Chloride		7810	mg/Kg	4.00
Sample: 253042	- SB-7 10'			
Param	Flag	Result	Units	RL
Chłoride		9200	mg/Kg	4.00
Sample: 253043	- SB-7 15'			
Param	- SB-7 15' Flag	Result	Units	RL
Param		Result 4580	Units mg/Kg	
Sample: 253043 Param Chloride Sample: 253044	Flag			
Param Chloride Sample: 253044	Flag			RL 4.00 RL
Param Chloride Sample: 253044 Param	Flag - SB-7 20'	4580	mg/Kg	4.00
Param Chloride	Flag - SB-7 20' Flag	4580 Result	mg/Kg Units	4.00 RL
Param Chloride Sample: 253044 Param Chloride	Flag - SB-7 20' Flag	4580 Result	mg/Kg Units	4.00 RL

Released to Imaging: 3/4/2022 11:53:10 AM

Page 68 of 111

Report Date: Dece	ember 30, 2010	Work Order: 10121029	Pag	ge Number: 4 of 11
Sample: 253046	- SB-7 30'			
Param	Flag	Result	Units	RL
Chloride		271	mg/Kg	4.00
Sample: 253047	- SB-7 40'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 253048	- SB-7 50'			
Param	Flag	Result	Units	RL
Chloride		290	mg/Kg	4.00
Sample: 253049				
Param	Flag	Result	Units	RL
Chloride		271	mg/Kg	4.00
Sample: 253050	- SB-8 0-1'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 253051	- SB-8 3'			
	0200			
Param	Flag	Result	Units	RL
Param Chloride		Result 261	Units mg/Kg	RL 4.00
	Flag			
Chloride Sample: 253052	Flag - SB-8 5'	261	mg/Kg	4.00
Chloride Sample: 253052 Param	Flag			4.00 RL
Chloride	Flag - SB-8 5' Flag	261 Result	mg/Kg Units	4.00 RL
Chloride Sample: 253052 Param Chloride	Flag - SB-8 5' Flag	261 Result	mg/Kg Units	4.00

Page 69 of 111

Report Date: Dece	mber 30, 2010	Work Order: 10121029	Page N	umber: 5 of 1
Sample: 253054	- SB-8 10'			
Param	Flag	Result	Units	RI
Chloride		3180	mg/Kg	4.0
Sample: 253055	- SB-8 15'			
Param	Flag	Result	Units	R
Chloride		9800	mg/Kg	4.0
Sample: 253056	- SB-8 20'			
Param	Flag	Result	Units	RI
Chloride		10800	mg/Kg	4.0
5ample: 253057				
Param Chiloride	Flag	Result 3490	Units mg/Kg	R 4.0
Sample: 253058 Param Chloride	- SB-8 30' Flag	Result 3180	Units mg/Kg	RI 4.00
Sample: 253059	- SB-8 40'			
-	- SB-8 40' Flag	Result	Units	R
Param		Result 2680	Units mg/Kg	
Sample: 253059 Param Chloride Sample: 253060	Flag			RI 4.00
aram hloride ample: 253060	Flag			
Param Chloride Sample: 253060 Param	Flag - SB-8 50'	2680	mg/Kg	4.0 R1
Param Chloride	Flag - SB-8 50' Flag	2680 Result	mg/Kg Units	4.0
Param Chloride Sample: 253060 Param Chloride	Flag - SB-8 50' Flag	2680 Result	mg/Kg Units	4.0

Page 70 of 111

Report Date: December 30, 2010		Work Order: 10121029	Page	Number: 6 of 11
Sample: 253062	- SB-9 3'			
Param	Flag	Result	Units	RI
Chloride		4780	mg/Kg	4.00
Sample: 253063	- SB-9 5'			
Param	Flag	Result	Units	RI
Chloride		2290	mg/Kg	4.00
Sample: 253064	- SB-9 7'			
Param	Flag	Result	Units	RL
Chloride		3550	mg/Kg	4.00
Sample: 253065	- SB-9 10'			
Param	Flag	Result	Units	RI
Chloride		1780	mg/Kg	4.00
Sample: 253066 · Param Chloride	- SB-9 15' Flag	Result 2310	Units mg/Kg	RL 4.00
Sample: 253067 ·	- SB-9 20'			
-		Result	Units	RL
Param	- SB-9 20' Flag	Result 2580	Units mg/Kg	
Sample: 253067 - Param Chloride Sample: 253068 -	Flag		and the second se	
Param Chloride	Flag		and the second se	RL 4.00 RL
Param Chloride Sample: 253068 - Param	Flag - SB-9 25'	2580	mg/Kg	4.00 RL
Param Chloride Sample: 253068 -	Flag - SB-9 25' Flag	2580 Result	mg/Kg Units	4.00
Param Chloride Sample: 253068 - Param Chloride	Flag - SB-9 25' Flag	2580 Result	mg/Kg Units	4.00 RL

Page 71 of 111

Report Date: Dece	ember 30, 2010	Work Order: 10121029	Page N	umber: 7 of 11
Sample: 253070	- SB-9 40'			
Param	Flag	Result	Units	RL
Chloride		255	mg/Kg	4.00
Sample: 253071	- SB-9 50'			
Param	Flag	Result	Units	RL
Chloride		1320	mg/Kg	4.00
Sample: 253072	- SB-9 60'			
Param	Flag	Result	Units	RL
Chloride		568	mg/Kg	4.00
Sample: 253073	- SB-10 0-1'			
Param	Flag	Result	Units	RL
Chloride		9310	mg/Kg	4.00
Sample: 253074 Param Chloride	- SB-10 3' Flag	Result 8260	Units mg/Kg	RL 4.00
Sample: 253075	- SB-10 5'			
Param	Flag	Result	Units	RL
Chloride		6770	mg/Kg	4.00
Sample: 253076	- SB-10 7'			
Param	Flag	Result	Units	RL
Chloride		4150	mg/Kg	4.00
Sample: 253077				
Param Chloride	Flag	Result	Units	RL
"Intorneto		3290	mg/Kg	4.00

Page 72 of 111

	ember 30, 2010	Work Order: 10121029	Page 1	Number: 8 of 1
Sample: 253078	- SB-10 15'			
Param	Flag	Result	Units	R
Chloride	* ***Đ	3030	mg/Kg	4.0
			·	
Sample: 253079	- SB-10 20'			
Param	Flag	Result	Units	R
Chloride		7180	mg/Kg	4.0
Sample: 253080	- SB-10 25'			
Param	Flag	Result	Units	R
Chloride		2660	mg/Kg	4.0
Param Chloride	Flag	Result 2460	Units mg/Kg	R 4.0
1 1 050000				
Sample: 253082	- SB-10 40'			
-		Result	Units	R
Param Chloride	- SB-10 40' Flag	Result 1280	Units mg/Kg	and the second se
Param Chloride	Flag			and the second se
Param Chloride Sample: 253083	Flag			4.0
Param Chloride Sample: 253083 Param	Flag - SB-10 50'	1280	mg/Kg	4.0 R.
Param	Flag - SB-10 50' Flag	1280 Result	mg/Kg Units	4.0 RJ
Param Chloride Sample: 253083 Param Chloride Sample: 253084	Flag - SB-10 50' Flag	1280 Result	mg/Kg Units	R. 4.0 R. 4.0 R.
Param Chloride Sample: 253083 Param Chloride	Flag - SB-10 50' Flag - SB-10 60'	1280 Result 252	mg/Kg Units mg/Kg	4.0 R. 4.0 R.
Param Chloride Sample: 253083 Param Chloride Sample: 253084 Param Chloride	Flag - SB-10 50' Flag - SB-10 60' Flag	1280 Result 252 Result	mg/Kg Units mg/Kg Units	4.0 R. 4.0 R.
Param Chloride Sample: 253083 Param Chloride Sample: 253084 Param	Flag - SB-10 50' Flag - SB-10 60' Flag	1280 Result 252 Result	mg/Kg Units mg/Kg Units	4.0 R. 4.0

Received by OCD: 1/14/2022 10:49:17 AM

Page 73 of 111

Report Date: December 30, 2010		Work Order: 10121029	Page N	Sumber: 9 of 11
Sample: 253086	- SB-11 3'			
Param	Flag	Result	Units	RL
Chloride		292	mg/Kg	4.00
Sample: 253087	- SB-11 5'			
Param	Flag	Result	Units	RI
Chloride		1610	mg/Kg	4.00
Sample: 253088	- SB-11 7'			
Param	Flag	Result	Units	RL
Chloride		8650	mg/Kg	4.00
Sample: 253089	- SB-11 10'			
Param	Flag	Result	Units	RI
Chloride		15600	mg/Kg	4.00
Sample: 253090 Param Chloride	- SB-11 15' Flag	Result 5800	Units mg/Kg	
Sample: 253091	- SB-11 20'			<u></u>
- Param	Flag	Result	Units	RL
Chloride	t tag	2230	mg/Kg	4.00
Sample: 253092	- SB-11 25'			
Param	Flag	$\mathbf{Result}$	Units	RL
		909	mg/Kg	4.00
			· · · · · ·	
Chloride				
Chloride Sample: 253093			87	
Chloride	- SB-11 30' Flag	Result 949	Units mg/Kg	RL 4.00

Page 74 of 111

Report Date: Dece	ember 30, 2010	Work Order: 10121029	Pa	ge Number: 10 of 1
Sample: 253094	- SB-11 40'			
Param	Flag	Result	Units	R
Chloride		860	mg/Kg	4.0
Sample: 253095	- SB-11 50'			
Param	Flag	Result	Units	R
Chloride		1050	mg/Kg	4.0
Sample: 253096	- SB-11 60'			
Param	Flag	Result	Units	RI
Chloride		711	mg/Kg	4.0
Sample: 253097	- SB-12 0-1'			
Param	Flag	Result	Units	RI
Chloride		3510	mg/Kg	4.0
Sample: 253098	- SB-12 3'			
Param	Flag	Result	Units	RI
Chloride		4710	mg/Kg	4.00
Sample: 253099	- SB-12 5'			
Param	Flag	Result	Units	RI
Chloride		3140	mg/Kg	4.0
Sample: 253100 -	- SB-12 7'			
Param	Flag	Result	Units	RI
Chloride		3500	mg/Kg	4.0
Sample: 253101 -	- SB-12 10'			
Param	Flag	Result	Units	RI
Chloride		3930	mg/Kg	4.0

Page 75 of 111

Report Date: December 30, 2010		Work Order: 10121029	Page	e Number: 11 of 11
Sample: 253102	- SB-12 15'			
Param	Flag	Result	Units	RL
Chloride		3690	mg/Kg	4.00
Sample: 253103	- SB-12 20'			
Param	Flag	Result	Units	RL
Chloride		929	mg/Kg	4.00
Sample: 253104	- SB-12 25'			
Param	Flag	Result	Units	$\mathbf{RL}$
Chloride		303	mg/Kg	4.00
Sample: 253105	- SB-12 30'			
Param	Flag	Result	Units	RL
Chloride		522	mg/Kg	4.00

Received by OCD: 1/14/2022 10:49:17 AM

Page 76 of 111

1562

District 1 1625 N. French Dr., Hobbs, NM 88240 District II [30] W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rosd, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

age 77 of 111

## State of New Mexico **Energy Minerals and Natural Resources**

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

Form C-141 Revised October 10, 2003

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

## **Release Notification and Corrective Action**

		OPERATOR	X	Initial Report	Final Report
Name of Company COG OPERAT	ING LLC	Contact	Pat Ellis		
Address 550 W. Texas, Suite 100, 1	Midland, TX 79701	Telephone No.	432-230-0077		
Facility Name GJ South Water		Facility Type	Water Station		
Surface Owner State	Mineral Own	er		case No. (API#) losest well locat	5-10756

#### LOCATION OF RELEASE

Unit Letter		Township	Range 29E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy	
В	28	1/5	275			_			

Latitude 32 48.382 Longitude 104 04.653

#### NATURE OF RELEASE

Type of Release Produced water	Volume of Release 50bbls	Volume Recovered 256615			
Source of Release Injection manifold 2" coupling	Date and Hour of Occurrence         Date and Hour of Discovery           03/28/2012         03/28/2012				
Was Immediate Notice Given?	If YES, To Whom? Mike	Bratcher-OCD			
By Whom? Josh Russo	Date and Hour 03/28/2012 11:46 t	.m.			
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	ercourse.			
If a Watercourse was impacted, Describe Fully.*					

Describe Cause of Problem and Remedial Action Taken.\*

The injection manifold 2" coupling blew odd of the line causing the release. The injection manifold has been replaced.

Describe Area Affected and Cleanup Action Taken.\*

Initially 50bbls were released and we were able to recover 25bbls with a vacuum truck. The release area traveled from the location and streamed into the nearby pasture to a pooling area measuring roughly 15' x 50'. All free fluids have been recovered and the location has been scraped. Tetra Tech will sample the spill site area to delineste any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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

:17 AM	Signature: Printed Name: Josh Russo	Approved by District Supervisor:	RVATION DIVISION
10:49:17	Title: HSE Coordinator	Approval Date:	Expiration Date:
14/2022 1	E-mail Address: jrusso(g)conchoresources.com	Conditions of Approval:	Attached
	Date: 04/05/2012 Phone: 432-212-2399 Attach Additional Sheets If Necessary		

		[	RECE	IVED
16/2 N. FIEDEL LIT., HODBL, NM BEZAU	New Mex	1	JUN 1	1
District II Energy Minerals 101 W. Grand Avenue, Artesia, NW 88210		I Kesources		Refised October 10, 20
District III Oil Conset		rision L		ARTEDIA Copies to appropria District Office in accordant with Rule 116 on bac
Xistrict IV 1220 South 220 S. St. Francis Dr., Santa Fe, NM 87505				with Rule 116 on bas side of for
Release Notification	e, NM 875		A	
TAW 1217.338587				
	OPERA'		Pat Ellús	nitial Report 🚺 Final Rep
Address 550 W. Texas, Suite 100, Midland, TX 79701	Telephone M	lo. 432	-230-0077	
Facility Name GJ West Coop Unit #074	Facility Typ	e	Well	
Surface Owner State Mineral Owner			Lea	se No. (API#) 30-015-25492
LOCATIO	N OF REI	LEASE		
	South Line	Feet from the	East/West Lit	ne County Eddy
Latitude 32 48.400	Longitu	de 104 04_52	1	
NATURE				
Type of Release Produced water Source of Release casing		Release 15 bb our of Occurrent		ne Recovered 12 bbls
	06/06/2012			/2012 8:30 a.m.
Was Immediate Notice Given?	If YES, To	Whom?		
By Whom?	Date and H	our		
Wes a Watercourse Reached?	If YES, Vo	kune Impacting	the Watercourse	<b>b</b>
	<u> </u>			
If a Watercourse was Impacted, Describe Fully.*				
Describe Cause of Problem and Remedial Action Taken.*				
The well developed a hole in the casing, allowing water flow from injection repair.	n wells. A ci	amp has been p	laced on the casi	ng the well has been turned in for
Describe Area Affected and Cleanup Action Taken.*				
15 bbls of produced water was released from the hole in the casing and we acution and the location has been scraped. Tetra Tech will sample the spine will present a remediation work plan to the NMOCD for approval prior	ill area on the	pad to delineate	any possible co	
hereby certify that the information given above is true and complete to the	e best of my	knowledge and	understand that p	rursuant to NMOCD rules and
egulations all operators are required to report and/or file certain release as public health or the environment. The acceptance of a C-141 report by the	stifications an	d perform corre	ctive actions for	releases which may endanger
hould their operations have failed to adequately investigate and remediate	contaminatio	in that pose a th	rest to ground w	ater, surface water, human health
r the environment. In addition, NMOCD acceptance of a C-143 report du ederal, state, or local laws and/or regulations.	oes not relieve	the operator of	responsibility fo	r compliance with any other
~ ~		OIL CON	SERVATIO	N DIVISION
				1.1 .
Signature: or 1/5				(A/Y #
ilgnature: 15	Approved by 1	District Supervi	Signed By	MIKI DEMOULOR
Printed Name: Josh Russo	Approved by I		2012	on Date:
Printed Name: Josh Russo Title: HSE Coordinator	Approval Date	JUN 21	2012	on Date:
rinted Name: Josh Russo itle: HSE Coordinator / / mail Address: jrusso@conchoresources.com (		JUN 21	2012	
Printed Name:     Josh Russo       Title:     HSE Coordinator       Finail Address:     jrusso@conchoresources.com       Date:     06/19/2012       Phone:     432-212-2399	Approval Date	JUN 21	2012	Attached
Printed Name: Josh Russo Fitle: HSE Coordinator / E-mail Address: jrusso@conchoresaurces.com ( Date: 06/19/2012 Phone: 432-212-2399 Ittach Additional Sheets If Necessary	Approval Date	JUN 21	2012	on Date:
Printed Name: Josh Russo Fitle: HSE Coordinator / E-mail Address: jrusso@conchoresources.com Date: 06/19/2012 Phone: 432-212-2399 Attach Additional Sheets If Necessary Remediation per C	Approval Date Conditions of OCD Rules &	JUN 21 Approval:	2012	Attached
HSE Coordinator     //       E-mail Address:     jrusso@conchoresources.com     0       Date:     06/19/2012     Phone:     432-212-2399       Additional Sheets If Necessary     0	Approval Date Conditions of DCD Rules & EMEDIATIC	JUN 21 Approval:	2012	Attached
Printed Name: Josh Russo Fitle: HSE Coordinator / E-mail Address: jrusso@conchoresources.com ( Date: 06/19/2012 Phone: 432-212-2399 Ittach Additional Sheets If Necessary Remediation per C Guidelines. SUBMIT R	Approval Date Conditions of DCD Rules & EMEDIATIC	JUN 21 Approval:	2012	Attached

Page 78 of 111

District 1 1625 N. French Dr., Hobbs, NM 88240 District 11 1301 W. Grand Avenue, Anesia, NM 88210 <u>District 111</u> 1000 Rin Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. SL Francis Dr., Sonta Fe, NM 87505

Page 79 of 111

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

# 1362

## **Release Notification and Corrective Action**

						OPERA"	FOR		🛛 Initia	al Report		Final Report
Name of Co		COG OP				Contact		t Ellis				
Address				dland, TX 7970		Telephone 1		230-007	7			
Facility Nat	ne	GJ West C	Coop Tru	nkline	[]	Facility Typ	e Trur	kline				
Surface Ow	ner State	:		Mineral O	wner				Lease N Wells th	lo. (API#) ed into trunk		0-015-25492 0-015-03163
				LOCA	TION	I OF REI	LEASE					
Unit Letter B						South Line	Feet from the	East W	est Line	County	iddy	
Latitude 32 48.700 Longitude 104 04.642 NATURE OF RELEASE												
				NAT	URE		Release 10bbls	<u> </u>	V-luma f	tecovered 2	1.1.	
Source of Re	ase Produc	ced water w/ s	KIM OIL				nelease 100015			Hour of Disc		
Source of Re		CERTING .				07/09/2012				2 3:20 p.m.	01415	
Was Immedia	ate Notice C		Yes 🛛	No 🖾 Not Re	quired	IFYES, To	Whom?					
By Whom?						Date and H	lour		_			
Was a Walen	ourse Read					If YES, Vo	lume Impacting (	he Water	соигзе.			
			Yes 🛛	No								
If a Watercou	rse was Imj	pacted, Descri	be Fully.*			·····						
Describe Cau	se of Proble	and Remed	tial Action	Taken.*								
Corrasion cas	ised a hole (	o develop in (	our GJ We	st Coop Unit #74	and #12	15 trunkline.	We are in the pro	cess of re	eplacing t	he corroded s	teel fle	owline.
Describe Are	Affected a	ind Cleanup A	ction Tak	cn.*								
Initially appro spill site area any significan	to delineate	any possible	ease from contamina	the corroded flow ition from the rele	line and ase and	I we were abl we will press	le to recover 2661 ent a remediation	s with va work pla	cuum truc n to the N	k. Tetra Tech MOCD for a	n will s pprova	ample the il prior to
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 cenain 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 "Finat 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 caceptance 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.											
		71	7.				OIL CONS	SERVA	<u>TION</u>	DIVISIO	N	
Signature:			(		^	pproved by	District Supervise	17				
Printed Name		Josh	Russo								_	
Title:		HSE Co	ordinator		A	pproval Date		E	piration I	Date:		
E-mail Addres	55:	jrusso@conch	oresource	s.com	C	anditions of	Approval:			Attached	۵	
Date: 07/12 Attach Addit	2/2012 ional Shee	Phone: ts If Necessa		2-2399						1		

								-
							RECEIV	/ED
District 1 1625 N. French	Dr., Hobbs,	NM 88240			e of New Mo		OCT 252	2012 Form
District II 1301 W. Grand District III	Avenue, Art	csia, NM 88210	1		erals and Natu Inservation D			Revised October I TEGMA2 Copies to appn District Office in acco
1000 Rio Brazo District IV 1220 S. St. Fran		-	2	1220 5	South St. Fran	icis Dr.		District Office in acco with Rule 116 o side o
1220 3. 31. 1 (4).		a re, com a /30.		San San	ta Fe, NM 87		otion	
nJML	1231	13939			OPERA			ial Report Final
Name of Co Address	mpany	COG OP	ERATIN	G LLC 229/ dland, TX 79701	37 Contact Telephone		at Ellis 230-0077	
Facility Nat		GJ West (			Facility T		Flowline	·····
Surface Ow	ner State			Mineral Ow	mer			No. (API#) 30-015-2 ed into trunkline 30-015-4
l lait 1 attac	Caston	Tauaht	Denet		TION OF RE		E-March 1-	Courte
Unit Letter B	Section 28	Township 17S	Range 29E	reet from the 1	North/South Line	Fect from the	East/West Line	County Eddy
		<u>.                                    </u>		Latitude 32.8	101 Longi	tude 104.0761	I	<u> </u>
				NATU	RE OF REI	EASE		
Type of Relea		ed water w/ sl line	cim oil		Date and	f Release 7bbls Hour of Occurrenc		Recovered Sbbls Hour of Discovery
Was Immedia	te Notice G					2 o Whom?		12 11:30 a m.
Du WA			Yes 🛛	No 🛛 Nat Requ	ired			
By Whom? Was a Watero	ourse Reac		Yes 🕅	Na	Date and If YES, V	olume Impacting t	he Watercourse.	
If a Watercou	se was line					· · ·		<u> </u>
Describe Cau								
					ease of fluid. A to	mporary clamp has	s been installed on	the clamp until the line car
Due to corrosi	on, a noi <b>c</b> c	-		-				
replaced.								
replaced. Describe Area	Affected a	-						
replaced. Describe Area Initially 7bbls spill site area (	Affected a of produce o delineate	d fluids were r any possible o	eleased fr	om the corroded lin	e and we were ab e and we will pre	le to recover 5bbls sent a remediation s	with a vacuum tru work plan to the N	ck. Tetra Tech will sample MOCD for approval prior (
replaced. Describe Area Initially 7bbls spill site area t any significan	Affected a of produce o delineate remediation	d fluids were r any possible o n work.	eleased fr containing	om the corroded lin tion from the releas	e and we will pre	sent a remediation	work plan to the N	MOCD for approval prior
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certif regulations all	Affected a of produce o delineate remediation y that the in operators a	d fluids were r any possible on work. Iformation giv	eleased fr contamina en above report and	om the corroded lin tion from the releas is true and complete for file certain relea	e and we will pre	sent a remediation knowledge and un nd perform correct	work plan to the N iderstand that purs ive actions for rele	MOCD for approval prior
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certif regulations all public health o should their op	Affected a of produce o delineate remediation y that the in operators a r the enviro erations ha	d fluids were r any possible of ne work. Mormation giv are required to conment. The s we failed to ad	eleased fr containing en above report and comptance lequately i	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nvestigate and remo	e and we will pre to the best of my use notifications a by the NMOCD m ediate contaminat	sent a remediation knowledge and un nd perform correct arked as "Final Re ion that pose a three	work plan to the N iderstand that pursy ive actions for rele port" does not reliv at to ground water.	MOCD for approval prior want to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heal
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certif regulations all public health o should their op	Affected a of produce o delineate remediation y that the in operators a r the envirt erations ha next. In ad	d fluids were r any possible of ne work. Mormation giv are required to comment. The s we failed to ad Idition, NMOO	eleased fr containing en above report and comptance equately i D accepta	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nvestigate and remo	e and we will pre to the best of my use notifications a by the NMOCD m ediate contaminat	sent a remediation knowledge and un nd perform correct parked as "Final Re- ion that pose a threa- ion that pose a threa- ion that pose a threa-	work plan to the N iderstand that pursi ive actions for rele port" does not reliv at to ground water, isponsibility for co	MOCD for approval prior want to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human heat impliance with any other
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certifi regulations all public health o should their op or the environe federal, state, o	Affected a of produce o delineate remediation y that the in operators a r the envirt erations ha next. In ad	d fluids were r any possible of ne work. Mormation giv are required to comment. The s we failed to ad Idition, NMOO	eleased fr containing en above report and comptance equately i D accepta	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nvestigate and remo	e and we will pre to the best of my use notifications a by the NMOCD m ediate contaminat	sent a remediation knowledge and un nd perform correct parked as "Final Re- ion that pose a threa- ion that pose a threa- ion that pose a threa-	work plan to the N iderstand that pursy ive actions for rele port" does not reliv at to ground water.	MOCD for approval prior want to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human heat impliance with any other
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certifi regulations all public health of public health of should their op or the environe federal, state, of Signature:	Affected a of produce o delineate remediation y that the in operators a r the envirt erations ha next. In ad	d fluids were r any possible on work. Marmation giv re required to barment. The a love failed to ad ddition, NMOO <u>s and/or regula</u>	eleased fr containing en above report and company equately in CD acceptor mians	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nvestigate and remo	e and we will pre to the best of my use notifications a by the NMOCD m ediate contaminat out does not reliev	sent a remediation knowledge and un nd perform correct parked as "Final Re- ion that pose a threa- ion that pose a threa- ion that pose a threa-	work plan to the N iderstand that pursi- ive actions for rele port <sup>a</sup> does not relid at to ground water, esponsibility for co ERVATION	MOCD for approval prior uant to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human heal umpliance with any other DIVISION
replaced. Describe Area Initially 7bbls spill site area t any significan I hereby certif regulations all public health o should their op or the environe federal, state, o Signature: Printed Name:	Affected a of produce o delineate remediation y that the in operators a r the envirt erations ha next. In ad	d fluids were r any possible of ne work. Mormation giv are required to comment. The s we failed to ad Idition, NMOO	eleased fr containing en above report and corptance incorptance in an an corptance in a corptance in a corptanc	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nvestigate and remo	e and we will pre to the best of my use notifications a by the NMOCD m ediate contaminat ort does not reliev Approved by	sent a remediation knowledge and un nd perform correct parked as "Final Re ion that pose a thre te the operator of re OIL CONS	work plan to the N iderstand that pursi ive actions for rele port" does not reliv at to ground water, sponsibility for co <u>ERVATION</u>	MOCD for approval prior l want to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heat impliance with any other DIVISION
replaced. Describe Area Initially 7bbls spill site area t any significan I hereby certif regulations all public heather op or the environe federal, state, of Signature: Printed Name: Title:	Affected a of produce o delineate remediation y that the in operators a r the environ erations ha nent. In ad <u>r local law</u>	d fluids were r any possible on work. formation giv re required to onment. The a dition, NMOO s and/or regul:	eleased fr contamina en above report and corptance indicator tusso	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nice of a C-141 report ince of a C-141 repo	e and we will pre to the best of my use notifications a ty the NMOCD me diate contaminat ort does not reliev Approved by	sent a remediation knowledge and un nd perform correct iarked as "Final Re- ion that pose a thre- ie the operator of re- <u>OIL CONS</u> District Supervisor <u>V: 0 6 2012</u>	work plan to the N iderstand that pursi- ive actions for rele port <sup>a</sup> does not relid at to ground water, esponsibility for co ERVATION	MOCD for approval prior uant to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heat impliance with any other DIVISION
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certif regulations all public health o should their op or the environ federal, state, o Signature: <u>Signature:</u> <u>Title:</u> <u>E-mail Addres</u>	Affected a of produce o delineate remediation y that the im operators a r the environ erations ha ment. In ad ir local law	d fluids were r any possible on work. Mormation giv re required to soment. The s ver failed to ad dition, NMOO s and/or regul: 1 Josh R HSE Coo irusso@cunch	eleased fr contamina en above report and comptones equately in the second comptones interval comptones equately in the second comptones equately in the second compto	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nice of a C-141 report ince of a C-141 repo	e and we will pre to the best of my use notifications a by the NMOCD m ediate contaminat ort does not reliev Approved by	sent a remediation knowledge and un nd perform correct iarked as "Final Re- ion that pose a thre- ie the operator of re- <u>OIL CONS</u> District Supervisor <u>V: 0 6 2012</u>	work plan to the N iderstand that pursi ive actions for rele port" does not reliv at to ground water, sponsibility for co <u>ERVATION</u>	MOCD for approval prior l want to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heat impliance with any other DIVISION
replaced. Describe Area Initially 7bbls spill site area t any significan I hereby certif regulations all public health o should their op or the environe federal, state, o Signature: <u>Printed Name:</u> <u>Fritte:</u> <u>E-mail Addres</u>	Affected a of produce o delineate remediation y that the im operators a r the environ erations ha ment. In ad ir local law	d fluids were r any possible on work. Mormation giv re required to soment. The s ver failed to ad dition, NMOO s and/or regul: 1 Josh R HSE Coo irusso@cunch	eleased fr contamina en above report and comptones equately in the second comptones interval comptones equately in the second comptones equately in the second compto	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nice of a C-141 report ance of a C-141 report conce of a C-141 report	e and we will pre to the best of my ise notifications a by the NMOCD me cliate contaminat ort does not reliev Approved by Approved by Conditions of	sent a remediation knowledge and un nd perform correct parked as "Final Re- ion that pose a thre- ion thre- ion that pose a thre- ion	work plan to the N iderstand that pursi ive actions for rele port" does not relid at to ground water, sponsibility for co <u>ERVATION</u> <u>Signed By</u> <u>Expiration D</u>	MOCD for approval prior uant to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heat impliance with any other DIVISION
replaced. Describe Area Initially 7bbls spill site area ( any significan I hereby certif regulations all public health o should their op or the environe ederal, state, o Signature: <u>Printed Nome:</u> <u>Fitte:</u> <u>E-mail Addres</u>	Affected a of produce o delineate remediation y that the im operators a r the environ erations ha ment. In ad ir local law	d fluids were r any possible on work. Mormation giv re required to soment. The s ver failed to ad dition, NMOO s and/or regul: 1 Josh R HSE Coo irusso@cunch	eleased fr contamina en above report and comptones equately in the second comptones interval comptones equately in the second comptones equately in the second compto	om the corroded lin tion from the releas is true and complete for file certain relea of a C-141 report to nice of a C-141 report ance of a C-141 report conce of a C-141 report	e and we will pre to the best of my ise notifications a by the NMOCD me diate contaminat ort does not reliev Approved by Approved by Conditions of Remet Guidelines	sent a remediation knowledge and un nd perform correct iarked as "Final Re- ion that pose a thre- ie the operator of re- <u>OIL CONS</u> District Supervisor <u>V: 0 6 2012</u>	work plan to the N iderstand that pursi ive actions for rele port" does not reliv at to ground water, isponsibility for co <u>ERVATION</u> <u>Expiration E</u> <u>Expiration E</u> CRUIES & EDIATION	MOCD for approval prior in uant to NMOCD rules and cases which may endanger eve the operator of liability surface water, human heat impliance with any other DIVISION

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 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Page 81 of 111

#### State of New Mexico **Energy Minerals and Natural Resources**

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

Form C-141 Revised October 10, 2003

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

### **Release Notification and Corrective Action**

	OPERATOR	Initial Report	Final Repor
Name of Company COG Operating LLC	Contact Robert McNeil		
Address 600 West Illinois Avenue, Midland, Texas 79701	Telephone No. (432) 230-0077		
Facility Name GJ West Coop South Water Distribution Site	Facility Type Tank Battery		

Surface Owner: State	Mineral Owner	Lease No.

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County	
В	23	175	29E						Eddy
				85					

Latitude N 32.81225 Longitude W 104.0774

#### NATURE OF RELEASE

Type of Release: Produced water	Volume of Release 100 bbls	Volume R	ecovered 10 bbls			
Source of Release Transfer Pump	Date and Hour of Occurrence 05-06-2010		lour of Discovery 0 4:00p.m.			
Was Immediate Notice Given?	If YES, To Whom?					
X Yes No Not Required	Mike Bratcher-OCD					
By Whom? Josh Russo	Date and Hour 05-07-2010 9:25 a					
Was a Watercourse Reached?	If YES, Volume Impacting the Wa N/A	ttercourse.				
If a Watercourse was Impacted, Describe Fully.*						
N/A						
Describe Cause of Problem and Remedial Action Taken.*						
A swedge broke off the water transfer pump. The swedge has been repaired and the pump has been put back in service.						
Describe Area Affected and Cleanup Action Taken.*						
Tetra Tech inspected site and collected samples to define spills extent. Se proper disposal if accessible. Liners were installed according to the work Tech prepared closure report and submitted to NMOCD for review.						
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release in public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remediate or the environment. In addition, NMOCD acceptance of a C-141 report defederal, state, or local aws and/or regulations.	otifications and perform corrective ac e NMOCD marked as "Final Report" e contamination that pose a threat to	tions for relea does not relie ground water,	ases which may endanger ve the operator of liability surface water, human health mpliance with any other			
1,90	OIL CONSER	VATION	DIVISION			
Signature:			33:1			
	Approved by District Supervisor:		DIVISION Date: Attached			
Title: Project Manager, P.G.	Approval Date:	Expiration D	ate:			
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:		Attached			
Date: 12/1/11/ Phone: (432) 687-8110						
Attach Additional Sheets If Necessary			Im			
			1 to			
			ISEC			
			stea			
			×			

1/14/2022 10:49:17 AM

Received by QCD:

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	

Page 82 of 111

## State of New Mexico **Energy Minerals and Natural Resources Oil Conservation Division** 1220 South St. Francis Dr.

Form C-141 Revised October 10, 2003

Released

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

## **Release Notification and Corrective Action**

Santa Fe, NM 87505

	OPERATOR	Initial Report	Final Repor
Name of Company COG Operating LLC	Contact Robert McNeil		
Address 600 West Illinois Avenue, Midland, Texas 79701	Telephone No. (432) 230-0077		
Facility Name GJ West Coop Unit South Water Distribution	Facility Type Injection Line		
Site			<u> </u>

Surface Owner: State	Mineral Owner	Lease No. 30-015-10756

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County	
В	28	175	29Ē			Ξ.			Eddy

#### Latitude N 32 48.655 Longitude W 104 04.555

#### NATURE OF RELEASE

Type of Release: Produced water	Volume of Release 100 bbls	Volume Recovered 50 bbls					
Source of Release Nipple off of injection line 90	Date and Hour of Occurrence 09-17-2010	Date and Hour of Discovery 09-17-2010 2:00p.m.					
Was Immediate Notice Given?	If YES, To Whom?						
🛛 Yes 🗌 No 🗌 Not Required	Mike Bratcher-OCD						
By Whom? Josh Russo	Date and Hour 09-17-2010 5:57 p						
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	itercourse.					
🗌 Yes 🖾 No	N/A						
If a Watercourse was Impacted, Describe Fully.*							
N/A							
S							
Describe Cause of Problem and Remedial Action Taken.*							
A nipple came loose off of the 90 on the injection line. All old fittings w	A nipple came loose off of the 90 on the injection line. All old fittings were replaced with new fittings						
Describe Area Affected and Cleanup Action Taken.*							
Tetra Tech inspected site and collected samples to define spills extent. Se	looted arone with coils that avoaded l	DDAL were removed and bauled away for					
proper disposal if accessible. Liners were installed according to the work	plan. Site was then brought up to sur	face grade with clean backfill material. Tetra					
Tech prepared closure report and submitted to NMOCD for review.	plan, She was then brought up to sun	ace grade with clean backfill material. Teda					
I hereby certify that the information given above is true and complete to	the best of my knowledge and underst	and that pursuant to NMOCD rules and					
regulations all operators are required to report and/or file certain release r	notifications and perform corrective ac	ctions for releases which may endanger					
public health or the environment. The acceptance of a C-141 report by the	ne NMOCD marked as "Final Report"	does not relieve the operator of liability					
should their operations have failed to adequately investigate and remedia	te contamination that pose a threat to	ground water, surface water, numan health					
or the environment. In addition, NMOCD acceptance of a C-141 report of federal, state, or local laws and/or regulations.	ides not reneve the operator of respon	sibility for compliance with any other					
rederal, state, or local taws and/or regulations.	OIL CONSER	VATION DIVISION					
	<u>OIL CONSER</u>	VATION DIVISION					
Signature:		······································					
	Approved by District Supervisor:	21					
Printed Name: Ike Tavarez (Agut fu COC)							
Title: Project Manager, P.G.	Approval Date:	VATION DIVISION       01:00000000000000000000000000000000000					
		0.0					
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached 🔲					
Date: 12/11/14 Phone: (432) 687-8110							
Date: 10/11/19 Phone: (432) 687-8110		<u></u>					

Received by OCD: 1/14/2022 10:49:17 AM

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

Page 83 of 11.

## State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

### **Release Notification and Corrective Action**

OPERATOR	Initial Report	Final Repor
Contact Robert McNeil		
Telephone No. (432) 230-0077		
Facility Type Water Station		
	Contact Robert McNeil Telephone No. (432) 230-0077	Contact Robert McNeil Telephone No. (432) 230-0077

Surface Owner: State Mineral Owner

Lease No. 30-015-10756

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County	3
В	28	175	29E						Eddy
	1								

Latitude N 32 48.382 Longitude W 104 04.653

#### NATURE OF RELEASE Volume of Release 50 bbls Volume Recovered 25 bbls Type of Release: Produced water Source of Release Injection manifold 2" coupling Date and Hour of Occurrence Date and Hour of Discovery 03-28-2012 03-28-2012 8:00a.m. Was Immediate Notice Given? If YES, To Whom? 🛛 Yes 🔲 No 🗌 Not Required **Mike Bratcher-OCD** By Whom? Josh Russo Date and Hour 03-28-2012 11:46 a.m. Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. 🗌 Yes 🖾 No N/A If a Watercourse was Impacted, Describe Fully.\* N/A Describe Cause of Problem and Remedial Action Taken.\* The injection manifold 2" coupling blew odd of the line causing the release. The injection manifold was replaced. Describe Area Affected and Cleanup Action Taken.\* Tetra Tech inspected site and collected samples to define spills extent. Selected areas with soils that exceeded RRAL were removed and hauled away for proper disposal if accessible. Liners were installed according to the work plan. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review. 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 N. federal, state, or local laws and/or regulations.

-	rederar, state, or local gives and/or regulations.			_ ~
17 AN	Signature: M	OIL CONSER	VATION DIVISION	3:10 A
10:49.	Printed Name: Ike Tavarez Aggar In COG	Approved by District Supervisor:		2 11:5
2022	Title: Project Manager, P.G.	Approval Date:	Expiration Date:	4/202
1/14/	E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached	ng: 3/
ä	Date: 12/11/14 Phone: (432) 687-8110			agi
0	Attach Additional Sheets If Necessary			Im
6				to
vea				sea
cei				lea
Rei				Re

District I State o			
	f New Mexico		Form C-1
1301 W. Grand Avenue, Artesia, NM 88210	s and Natural Resources		Revised October 10, 2
1000 Rio Brazos Road, Aztec, NM 87410	ervation Division th St. Francis Dr.		Submit 2 Copies to appropr District Office in accorda with Rule 116 on b
	Fe, NM 87505		side of fo
Release Notification	on and Corrective Act	ion	
	OPERATOR	🔲 Initia	l Report 🛛 Final Re
Name of Company         COG Operating LLC           Address         600 West Illinois Avenue, Midland, Texas 79701	Contact Robert McNeil Telephone No. (432) 230-007	7	
Facility Name GJ West Coop Unit #074	Facility Type Well		
Surface Owner: State Mineral Owner		Lease N 30-015-	o. 30-015-25492 03163
LOCATIO	N OF RELEASE		
Unit LetterSectionTownshipRangeFeet from theNorH2817S29E	th/South Line Feet from the E	ast/West Line	County Eddy
Latitude N 32.8122	5° Longitude W 104.0774°		· · · · · · · · · · · · · · · · · · ·
NATURI	E OF RELEASE		
Type of Release: Produced water w/skim oil	Volume of Release 15 bbls	Volume R	ecovered 12 bbls
Source of Release casing	Date and Hour of Occurrence		lour of Discovery
Was Immediate Notice Given?	06-06-2012 If YES, To Whom?	00-00-201	2 8:30a.m.
By Whom?	Date and Hour	170211.000	
Was a Watercourse Reached?	If YES, Volume Impacting the V	Watercourse.	
If a Watercourse was Impacted, Describe Fully.*			
N/A			
Describe Cause of Problem and Remedial Action Taken.*			
The well developed a hole in the casing, allowing water flow from inject	tion wells. A clamp was placed on t	he casing and th	e well was turned in for repa
Describe Area Affected and Cleanup Action Taken.*			
Tetra Tech inspected site and collected samples to define spills extent. S proper disposal if accessible. Liners were installed according to the work Tech prepared closure report and submitted to NMOCD for review.			
I hereby certify that the information given above is true and complete to 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 the second s	notifications and perform corrective he NMOCD marked as "Final Repo	actions for release rt" does not relie	ases which may endanger eve the operator of liability
should their operations have failed to adequately investigate and remedia or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local hws and/or regulations.			
Signature:	OIL CONSE	RVATION	DIVISION
Printed Name: Ike Tavarez (Agent Su COG)	Approved by District Supervisor:		
Title: Project Manager, P.G.	Approval Date:	Expiration D	Date:
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:		Attached
Date: Date: Phone: (432) 687-8110 Attach Additional Sheets If Necessary			
Attach Additional Sneets If Necessary			
	M		

5
82
90 · · · · · · · · · · · · · · · · · · ·
$\tilde{\boldsymbol{o}}$
Sector District
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico **Energy Minerals and Natural Resources**

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

Form C-141 Revised October 10, 2003

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

## **Release Notification and Corrective Action**

	OPERATOR	Initial Report	$\boxtimes$	Final Repo
Name of Company COG Operating LLC	Contact Robert McNeil			
Address 600 West Illinois Avenue, Midland, Texas 79701	Telephone No. (432) 230-0077			
Facility Name GJ West Coop Trunkline	Facility Type Trunkline			

Surface Owner: State	Mineral Owner	Lease No. 30-015-25492
		30-015-03163

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County	
В	28	17S	29E					E	ddy
	!							ĺ	

Latitude N 32.81225° Longitude W 104.0774°

#### NATURE OF RELEASE

Type of Release: Produced water w/skim oil	Volume of Release 10 bbls	Volume Recovered 2 bbls				
Source of Release Trunkline	Date and Hour of Occurrence 07-09-2012	Date and Hour of Discovery 07-09-2012 3:20a.m.				
Was Immediate Notice Given?	If YES, To Whom?					
By Whom?	Date and Hour 8-15-2013 10.03am					
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	ercourse.				
Yes No	N/A					
If a Watercourse was Impacted, Describe Fully.*						
N/A	<i>8</i> 3					
Describe Cause of Problem and Remedial Action Taken.*						
Corrosion caused a hole to develop in our GJ West Coop Unit #74 and #12	25 trunkline. We are in the process of	f replacing the corroded steel flowline.				
Describe Area Affected and Cleanup Action Taken.*	0.0					
Tetra Tech inspected site and collected samples to define spills extent. Selected areas with soils that exceeded RRAL were removed and hauled away for proper disposal if accessible. Liners were installed according to the work plan. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.						
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remediate or the environment. In addition, NMOCD acceptance of a C-141 report do federal, state, or local Jaws and/or regulations.	otifications and perform corrective active active active active NMOCD marked as "Final Report" e contamination that pose a threat to g	tions for releases which may endanger does not relieve the operator of liability round water, surface water, human health				
Signature: MM	OIL CONSERV	ATION DIVISION         Expiration Date:         Attached				
	Approved by District Supervisor:	2022 1				
Title: Project Manager, P.G.	Approval Date:	Expiration Date:				
		0.6				
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached 🔲				
Date: /2/11/14 Phone: (432) 687-8110		Ima				
Attach Additional Sheets If Necessary		1 to				
		Sec				
N		lea				
		Re				

Received by OCD: 1/14/2022 10:49:17 AM

District I 1605 NJ Emersh Dr. Hobbs, NM 88240 State of			
80 0			
	New Mexico	Form C-141	
District II Energy Minerals 1301 W. Grand Avenue, Artesia, NM 88210	and Natural Resources	Revised October 10, 2003	
1000 Rio Brazos Road, Aztec, NM 87410	rvation Division h St. Francis Dr.	Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back	
	Fe, NM 87505	side of form	
Release Notificatio	n and Corrective Action	n	
	OPERATOR	🔲 Initial Report 🛛 Final Repor	
Name of Company         COG Operating LLC           Address         600 West Illinois Avenue, Midland, Texas 79701	Contact Robert McNeil Telephone No. (432) 230-0077		
Facility Name GJ West Coop Trunkline	Facility Type Steel Flowline		
Surface Owner: State Mineral Owner		Lease No. 30-015-25492 30-015-03163	
	N OF RELEASE		
Unit Letter         Section         Township         Range         Feet from the         North           B         28         17S         29E         17S         17	h/South Line Feet from the East/	West Line County Eddy	
Latitude N 32.8122	5° Longitude W 104.0774°		
	OF RELEASE	9	
Type of Release: Produced water w/skim oil	Volume of Release 7 bbls	Volume Recovered 5 bbls	
Source of Release Steel line	Date and Hour of Occurrence 10-09-2012	Date and Hour of Discovery 10-09-2012 11:00a.m.	
Was Immediate Notice Given?	If YES, To Whom?		
By Whom? Was a Watercourse Reached?	Date and Hour 8-15-2013 10.03am If YES, Volume Impacting the Watercourse.		
Yes X No	N/A		
If a Watercourse was Impacted, Describe Fully.*			
N/A			
Describe Cause of Problem and Remedial Action Taken.*			
Due to corrosion, a hole developed in a steel flowline causing the release replaced.	of fluid. A temporary clamp has been	installed on the clamp until the line can be	
Describe Area Affected and Cleanup Action Taken.*			
Tetra Tech inspected site and collected samples to define spills extent. Se	elected areas with soils that exceeded R	RAL were removed and hauled away for	
proper disposal if accessible. Liners were installed according to the work Tech prepared closure report and submitted to NMOCD for review.	plan. Site was then brought up to surfa	ace grade with clean backfill material. Tetra	
I hereby certify that the information given above is true and complete to tregulations all operators are required to report and/or file certain release republic health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remedia or the environment. In addition, NMOCD acceptance of a C-141 report of federal, state, or local laws and/or regulations.	notifications and perform corrective ac ne NMOCD marked as "Final Report" te contamination that pose a threat to g	tions for releases which may endanger does not relieve the operator of liability round water, surface water, human health	
	OIL CONSERV	ATION DIVISION	
Signature: M		2 11	
Printed Name: Ike Tavarez (Agart In COG)	Approved by District Supervisor:	ATION DIVISION	
Title: Project Manager, P.G.	Approval Date:	Expiration Date:	
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached	
Date: 2/11/19 Phone: (432) 687-8110		101	
Received		Expiration Date:	

Page 87 of 111

# APPENDIX B

#### Water Well Data Average Depth to Groundwater (ft) COG - GJ West Coop Eddy County, New Mexico

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

	17	South	:	28 Eas	t
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	26	27	26	25
31	32	33	34	35	36

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

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

	16 South			16 South 30 East			30 East
6	5	4	3	2			
7	8	9	10	11			
18	17	16	15	14			
19	20	21	22	23			
30	29	28	27	26			
31	32	33	34	35			

	17	South	:	30 East
6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22	23
30	29	28	27	26
31	32	33	34	35

t

	18 Se	outh	28	East	
5	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

Ν	1
ι	1
e	1
N	11

Page 88 of 111

	18 S	outh	:	29 East	t
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

34

35

32

33

31

New Mexico State Engineers Well Reports
USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

MOCD - Groundwater Data

# **APPENDIX C**

Report Date: June 9, 2010

Page 90 of 111

Work Order: 10052814

Page Number: 1 of 6

## **Summary Report**

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

Report Date: June 9, 2010

## Work Order: 10052814

Project Location: Eddy County, NM

Project Name: COG/GJ West Co-op South Water Distribution Project Number: 114-6400524

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
233113	AH-1 0-1'	soil	2010-05-24	00:00	2010-05-27
233114	AH-1 1-1.5 <sup>2</sup>	soil	2010-05-24	00:00	2010-05-27
233115	AH-1 2-2.5'	soil	2010-05-24	00:00	2010-05-27
233116	AH-1 3-3.5'	soil	2010-05-24	00:00	2010-05-27
233117	AH-1 4-4.5'	soil	2010-05-24	00:00	2010-05-27
233118	AH-1 5-5.5'	soil	2010-05-24	00:00	2010-05-27
233119	AH-1 6-6.5'	soil	2010-05-24	00:00	2010-05-27
233120	AH-1 7-7.5'	soil	2010-05-24	00:00	2010-05-27
233121	AH-1 8-8.5'	soil	2010-05-24	00:00	2010-05-27
233122	AH-1 9-9.5°	soil	2010-05-24	00:00	2010-05-27
233123	AH-2 0-1'	soil	2010-05-24	00:00	2010-05-27
233124	AH-2 1-1.5'	soil	2010-05-24	00:00	2010-05-27
233125	AH-2 2-2.5	soil	2010-05-24	00:00	2010-05-27
233126	AH-2 3-3.5'	soil	2010-05-24	00:00	2010-05-27
233127	AH-2 4-4.5'	soil	2010-05-24	00:00	2010-05-27
233128	AH-2 5-5.5'	soil	2010-05-24	00:00	2010-05-27
233129	AH-2 6-6.5 <sup>*</sup>	soil	2010-05-24	00:00	2010-05-27
233130	AH-2 7-7.5'	soil	2010-05-24	00:00	2010-05-27
233131	AH-2 8-8.5'	soil	2010-05-24	00:00	2010-05-27
233132	AH-2 9-9.5'	soil	2010-05-24	00:00	2010-05-27
233133	AH-3 0-1 <sup>3</sup>	soil	2010-05-24	00:00	2010-05-27
233134	AH-4 0-1'	soil	2010-05-24	00:00	2010-05-27
233135	AH-4 1-1.5'	soil	2010-05-24	00:00	2010-05-27
233136	AH-4 2-2.5'	soil	2010-05-24	00:00	2010-05-27
233137	AH-4 3-3.5'	soil	2010-05-24	00:00	2010-05-27
233138	AH-4 4-4.5'	soil	2010-05-24	00:00	2010-05-27
233139	AH-4 5-5.5'	soil	2010-05-24	00:00	2010-05-27
233140	AH-4 6-6.5'	soil	2010-05-24	00:00	2010-05-27
233141	AH-4 7-7.5'	soil	2010-05-24	00:00	2010-05-27
233142	AH-4 8-8.5°	soil	2010-05-24	00:00	2010-05-27
Trace	Analysis Inc • 6701	Abordoon Avo Suit	a 9 • Lubbock TX 79	494,1515	704-1906

	June 9, 2010	Work (	Drder: 10052814	Pag	ge Number: 2 of (
			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
233143	AH-4 9-9.5'	soil	2010-05-24	00:00	2010-05-23
		Т	PH DRO - NEW		TPH GRO
			DRO		GRO
Sample - Field	l Code		(mg/Kg)		(mg/Kg)
233113 - AH			<50.0		<1.00
233123 - AH	[-2 0-1'		77.3		17.2
233133 - AH			66.0		5.93
233134 - AH	[-4 0-1'		<50.0		<1.00
Sample: 233	113 - AH-1 0-1'				
Param	Flag	R	lesult	Units	RL
Chloride			7520	mg/Kg	4.00
Chloride			2950	mg/Kg	4.00
Sample: 233 Param	115 - AH-1 2-2.5' Flag	R	esult 4830	Units mg/Kg	RL 4.00
Sample: 233 Param Chloride Sample: 233 Param		R		Units	RL 4.00 RL
Sample: 233 Param Chloride Sample: 233 Param Chloride Sample: 233	Flag 116 - AH-1 3-3.5' Flag 117 - AH-1 4-4.5'	R	4830 esult 5670	Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00
ample: 233 Param Phloride ample: 233 Param Phloride ample: 233 aram	Flag 116 - AH-1 3-3.5' Flag	R	4830 esult 5670 esult	Units mg/Kg Units mg/Kg Units	RL 4.00 RL 4.00
Sample: 233 Param Chloride Sample: 233 Param Chloride Sample: 233 Param Chloride	Flag 116 - AH-1 3-3.5' Flag 117 - AH-1 4-4.5' Flag	R	4830 esult 5670	Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00
Sample: 233 Param Chloride Sample: 233 Param Chloride Sample: 233 Param Chloride	Flag 116 - AH-1 3-3.5' Flag 117 - AH-1 4-4.5' Flag 118 - AH-1 5-5.5'	R 	4830 esult 5670 esult 5290	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 4.00
Sample: 233 Param Chloride Sample: 233 Param Chloride Sample: 233 Param Chloride Chloride	Flag 116 - AH-1 3-3.5' Flag 117 - AH-1 4-4.5' Flag	R R S R	4830 esult 5670 esult	Units mg/Kg Units mg/Kg Units	RL 4.00 RL 4.00

Page 91 of 111

Report Date: June	e 9, 2010	Work Order: 10052814	Page	Number: 3 of 6
Sample: 233119	- AH-1 6-6.5'			
Param	Flag	Result	Units	RL
Chloride		6040	mg/Kg	4.00
Sample: 233120	- AH-1 7-7.5'			
Param	Flag	Result	Units	RL
Chloride		6410	mg/Kg	4.00
Sample: 233121	- AH-1 8-8.5'			
Param	Flag	Result	Units	RL
Chloride		6000	mg/Kg	4.00
Sample: 233123		Deck	Units	
	Flag	Result		RL (1.00)
Param Chloride Sample: 233124		11100	mg/Kg	4.00
Chloride Sample: 233124	- AH-2 1-1.5'	11100	mg/Kg	4.00
Chloride				
Chloride Sample: 233124 Param	- AH-2 1-1.5' Flag	11100 Result	mg/Kg Units	4.00 RL
Chloride Sample: 233124 Param Chloride Sample: 233125 Param	- AH-2 1-1.5' Flag	11100 Result 11000 Result	mg/Kg Units	4.00 RL 4.00 RL
Chloride Sample: 233124 Param Chloride Sample: 233125	- AH-2 1-1.5' Flag - AH-2 2-2.5'	11100 Result 11000	mg/Kg Units mg/Kg	4.00 RL 4.00
Chloride Sample: 233124 Param Chloride Sample: 233125 Param	- AH-2 1-1.5' Flag - AH-2 2-2.5' Flag	11100 Result 11000 Result	mg/Kg Units mg/Kg Units	4.00 RL 4.00 RL
Chloride Sample: 233124 Param Chloride Sample: 233125 Param Chloride	- AH-2 1-1.5' Flag - AH-2 2-2.5' Flag	11100 Result 11000 Result	mg/Kg Units mg/Kg Units	4.00 RL 4.00 RL

Page 92 of 111

Report Date: June 9, 2010		Work Order: 10052814	Pag	e Number: 4 of 6
Sample: 233127	- AH-2 4-4.5'			
Param	Flag	Result	Units	RL
Chloride		4610	mg/Kg	4.00
Sample: 233128	- AH-2 5-5.5'			
Param	Flag	Result	Units	RL
Chloride		4520	mg/Kg	4.00
Sample: 233129	- AH-2 6-6.5'			
Param	Flag	Result	Units	RL
Chloride		4310	mg/Kg	4.00
Sample: 233130	- AH-2 7-7.5'			2
Param	Flag	Result	Units	RL
Chloride		2290	mg/Kg	4.00
Sample: 233131		Result	Units	RL
Param Chloride	Flag	2570	mg/Kg	4.00
Sample: 233132 -				
Param	Flag	Result	Units	RL
Chloride		3150	mg/Kg	4.00
Sample: 233133 -	- AH-3 0-1'			
Param	Flag	Result	Units	RL
Chloride		18300	mg/Kg	4.00
Sample: 233134 -	• AH-4 0-1'			
Param	Flag	Result	Units	RL
Chloride		15700	mg/Kg	4.00

Page 93 of 111

Report Date: June 9, 2010		Work Order: 10052814	Pa	ge Number: 5 of 6
Sample: 233135 -	AH-4 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		4250	mg/Kg	4.00
Sample: 233136 -	AH-4 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		5250	mg/Kg	4.00
Sample: 233137 -	AH-4 3-3.5'			
Param	Flag	Result	Units	RL
Chloride		5990	mg/Kg	4.00
Sample: 233138 -	AH-4 4-4.5'			
Param	Flag	Result	Units	RL
Chloride		8990	mg/Kg	4.00
C1 000100	ATT 4 P P P1			
Sample: 233139 -				
Param Chloride	Flag	Result 8240	Units mg/Kg	RL 4.00
		0240	<u>ть/ ть</u>	-1.00
Sample: 233140 - Param		Result	Units	RL
Chloride	Flag	7470	mg/Kg	4.00
Sample: 233141 -	AH-4 7-7.5'			
Param	Flag	Result	Units	RL
Chloride		6750	mg/Kg	4.00
Sample: 233142 -	AH-4 8-8.5'			
Param	Flag	Result	Units	RL
Chloride		5170	mg/Kg	4.00

Page 94 of 111

Report Date: June	9, 2010	Work Order: 10052814	I	Page Number: 6 of 6
Sample: 233143	- AH-4 9-9.5'			
Param	Flag	Result	Units	RL
Chloride		4850	mg/Kg	4.00

Page 95 of 111

Received by OCD: 1/14/2022 10:49:17 AM

Work Order: 10100715

Page Number: 1 of 9

## **Summary Report**

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

Report Date: October 22, 2010

## Work Order: 10100715

Project Location:	Eddy County, NM
Project Name:	COG/GJ West Co-op Inj. Line
Project Number:	114-6400691

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
246918	AH-1 0-1'	soil	2010-10-04	00:00	2010-10-07
246919	AH-1 1-1.5'	soil	2010-10-04	00:00	2010-10-07
246920	AH-1 2-2.5*	soil	2010-10-04	00:00	2010-10-07
246921	AH-1 3-3.5'	soil	2010-10-04	00:00	2010-10-07
246922	AH-2 0-1'	soil	2010-10-04	00:00	2010-10-07
246923	AH-2 1-1.5'	soil	2010-10-04	00:00	2010-10-07
246924	AH-2 2-2.5'	soil	2010-10-04	00:00	2010-10-07
246925	AH-2 3-3.5'	soil	2010-10-04	00:00	2010-10-07
246926	AH-2 4-4.5'	soil	2010-10-04	00:00	2010-10-07
246927	AH-2 5-5.5'	soil	2010-10-04	00:00	2010-10-07
246928	AH-2 6-6.5'	soil	2010-10-04	00:00	2010-10-07
246929	AH-2 7-7.5'	soil	2010-10-04	00:00	2010-10-07
246930	AH-2 8-8.5	soil	2010-10-04	00:00	2010-10-07
246931	AH-2 9-9.5'	soil	2010-10-04	00:00	2010-10-07
246932	AH-3 0-1'	soil	2010-10-04	00:00	2010-10-07
246933	AH-3 1-1.5'	soil	2010-10-04	00:00	2010-10-07
246934	AH-3 2-2.5 <sup>3</sup>	soil	2010-10-04	00:00	2010-10-07
246935	AH-3 3-3.5'	soil	2010-10-04	00:00	2010-10-07
246936	AH-3 4-4.5'	soil	2010-10-04	00:00	2010-10-07
246937	AH-3 5-5.5'	soil	2010-10-04	00:00	2010-10-07
246938	AH-3 6-6.51	soil	2010-10-04	00:00	2010-10-07
246939	AH-3 7-7.51	soil	2010-10-04	00:00	2010-10-07
246940	AH-3 8-8.5'	soil	2010-10-04	00:00	2010-10-07
246941	AH-3 9-9.5'	soil	2010-10-04	00:00	2010-10-07
246942	AH-4 0-1'	soil	2010-10-04	00:00	2010-10-07
246943	AH-4 1-1.5 <sup>1</sup>	soil	2010-10-04	00:00	2010-10-07
246944	AH-4 2-2.5'	soil	2010-10-04	00:00	2010-10-07
246945	AH-4 3-3.5'	soil	2010-10-04	00:00	2010-10-07
246946	AH-4 4-4.5 <sup>2</sup>	soil	2010-10-04	00:00	2010-10-07
246947	AH-4 5-5.5'	soil	2010-10-04	00:00	2010-10-07
These	advalucia Ing. a 6701	Landson Aug Suit	a 0 a Lubboah TV 70	M94-1515 • (806)	704 1206

#### Report Date: October 22, 2010

Page 97 of 111

Work Order: 10100715

Page Number: 2 of 9

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
246948	AH-4 6-6.5'	soil	2010-10-04	00:00	2010-10-07
246949	AH-4 7-7.5'	soil	2010-10-04	00:00	2010-10-07
246950	AH-4 8-8.5'	soil	2010-10-04	00:00	2010-10-07
246951	AH-4 9-9.5 <sup>7</sup>	soil	2010-10-04	00:00	2010-10-07
246952	AH-5 0-11	soil	2010-10-04	00:00	2010-10-07
246953	AH=5 1-1.5'	soil	2010-10-04	00:00	2010-10-07
246954	AH-5 2-2.5'	soil	2010-10-04	00:00	2010-10-07
246955	AH-5 3-3.5 <sup>1</sup>	soil	2010-10-04	00:00	2010-10-07
246956	AH-5 4-4.5'	soil	2010-10-04	00:00	2010-10-07
246957	AH=5 5-5.5 <sup>3</sup>	soil	2010-10-04	00:00	2010-10-07
246958	AH-5 6-6.5'	soil	2010-10-04	00:00	2010-10-07
246959	AH-5 7-7.5'	soil	2010-10-04	00:00	2010-10-07
246960	AH-5 8-8.5'	soil	2010-10-04	00:00	2010-10-07
246961	AH-5 9-9.5'	soil	2010-10-04	00:00	2010-10-07
246962	AH-6 0-1'	soil	2010-10-04	00:00	2010-10-07
246963	AH-6 1-1.5'	soil	2010-10-04	00:00	2010-10-07
246964	AH-6 2-2.5'	soil	2010-10-04	00:00	2010-10-07
246965	AH-6 3-3.5 <sup>1</sup>	soil	2010-10-04	00:00	2010-10-07
246966	AH-6 4-4.5 <sup>3</sup>	soil	2010-10-04	00:00	2010-10-07
246967	AH-6 5-5.5'	soil	2010-10-04	00:00	2010-10-07
246968	AH-6 6-6.5'	soil	2010-10-04	00:00	2010-10-07
246969	AH-6 7-7.5'	soil	2010-10-04	00:00	2010-10-07
246970	AH-6 8-8.5'	soil	2010-10-04	00:00	2010-10-07
246971	AH-6 9-9.5'	soil	2010-10-04	00:00	2010-10-07

		I	BTEX		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)
246918 - AH-1 0-1'					<50.0	<1.00
246922 - AH-2 0-1'	< 0.200	0.293	< 0.200	0.612	6410	104
246923 - AH-2 1-1.5'					<50.0	<1.00
246924 - AH-2 2-2.5'					96.0	<1.00
246932 - AH-3 0-1'					88.1	<1.00
246942 - AH-4 0-1'	<0.200	1.78	4.87	12.7	8060	1430
246943 - AH-4 1-1.5'					<250	590
246944 - AH-4 2-2.5'					151	<1.00
246952 - AH-5 0-1'	< 0.0500	< 0.0500	0.304	0.358	71.1	91.3
246962 - AH-6 0-1'	< 0.500	0.701	14.4	13.9	4400	1320
246963 - AH-6 1-1.5'					1830	5820
246964 - AH-6 2-2.5'					2150	11100
246965 - AH-6 3-3.5'					2160	1560
246966 - AH-6 4-4.5'					2380	3260
246967 - AH-6 5-5.5'					2320	2050
246968 - AH-6 6-6.5'					929	1500
246969 - AH-6 7-7.5'					1950	926
246970 - AH-6 8-8.5'					2080	1040
246971 - AH-6 9-9.5'					3690	917

#### Sample: 246918 - AH-1 0-1'

Report Date: Octo	ober 22, 2010	Work Order: 10100715	Page	e Number: 3 of 9
Param	Flag	Result	Units	RL
Chloride		5280	mg/Kg	4.00
Sample: 246919	- AH-1 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		3820	mg/Kg	4.00
Sample: 246920	- AH-1 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		3940	mg/Kg	4.00
Sample: 246921			<b>T</b> T <b>1</b> .	br
Param Chloride	Flag	Result 4860	Units mg/Kg	RL 4.00
Sample: 246922 Param Chloride	- AH-2 0-1' Flag	Result 4040	Units mg/Kg	RL 4.00
Sample: 246923	- AH-2 1-1.5'	3030	mg/ Kg	1.00
Param	Flag	Result	Units	RL
Chloride		2580	mg/Kg	4.00
Sample: 246924	- AH-2 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		1160	mg/Kg	4.00
Sample: 246925	- AH-2 3-3.5'			
	Flag	Result	Units	RL
Param Chloride	Flag	1370	mg/Kg	4.00

Page 98 of 111

Report Date: October 22, 2010		Work Order: 10100715	Page	Page Number: 4 of 9	
Sample: 246926	- AH-2 4-4.5'				
Param	Flag	Result	Units	RI	
Chloride		1000	mg/Kg	4.00	
Sample: 246927	- AH-2 5-5.5'				
Param	Flag	Result	Units	RI	
Chloride		913	mg/Kg	4.00	
Sample: 246928	- AH-2 6-6.5'				
Param	Flag	Result	Units	RI	
Chloride		977	mg/Kg	4.00	
Sample: 246929	- AH-2 7-7.5'				
Param	Flag	Result	Units	RI	
Chloride	95-95- <sup></sup>	1120	mg/Kg	4.00	
Sample: 246930	- AH-2 8-8.5'				
Param	Flag	Result	Units	RL	
Chloride		2100	mg/Kg	4.00	
Sample: 246931	- AH-2 9-9.5'				
Param	Flag	Result	Units	RL	
Chloride		3810	mg/Kg	4.00	
Sample: 246932	- AH-3 0-1'				
Param	Flag	Result	Units	RL	
Chloride		279	mg/Kg	4.00	
Sample: 246933	- AH-3 1-1.5'				
Param	Flag	Result	Units	RL	
Chloride		<200	mg/Kg	4.00	

Received by OCD: 1/14/2022 10:49:17 AM

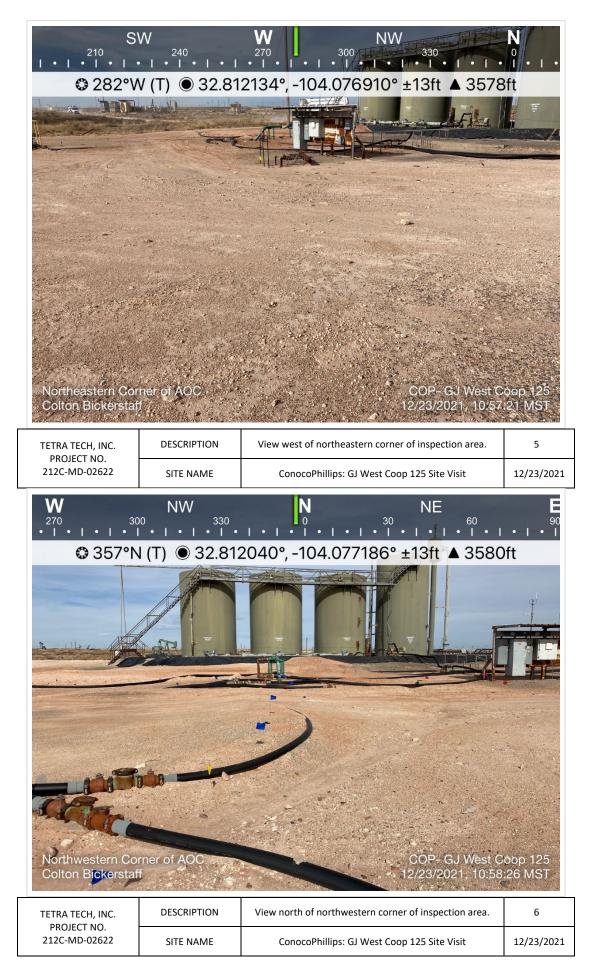
Page 99 of 111

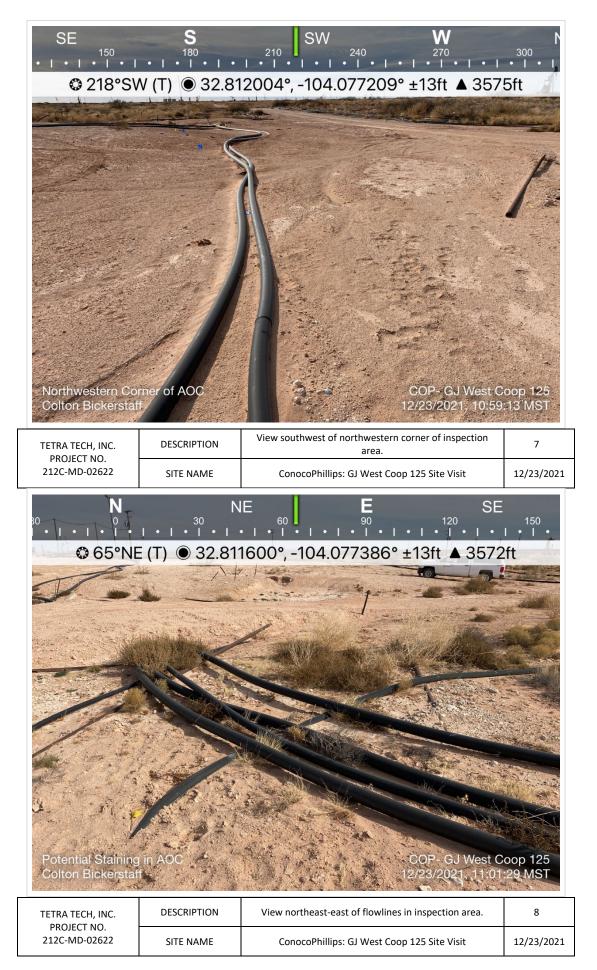
Report Date: October 22, 2010		Work Order: 10100715		Page Number: 5 of 9
Sample: 246934 - AH-3 2-2	.5'			
Param I	Flag	Result	Units	RL
Chloride		694	mg/Kg	4.00
Sample: 246935 - AH-3 3-3	.5'			
Param H	Flag	Result	Units	RL
Chloride		1260	mg/Kg	4.00
Sample: 246936 - AH-3 4-4	.5'			
Param F	Flag	Result	Units	RL
Chloride		3240	mg/Kg	4.00
Chloride	lag	Result 8300	Units mg/Kg	RL 4.00
Sample: 246938 - AH-3 6-6 Param F	.5' 'lag	Result	Units	RL
Chloride	iug.	8830	mg/Kg	4.00
Sample: 246939 - AH-3 7-7 Param F Chloride	.5' Îlag	Result 10900	Units mg/Kg	RL 4.00
Sample: 246940 - AH-3 8-8	.5'			
	lag	Result	Units	RL
Chloride		9460	mg/Kg	4.00
	51			
Sample: 246941 - AH-3 9-9	.0			
Sample: 246941 - AH-3 9-9 Param F Chloride	lag	Result 8750	Units mg/Kg	RL 4.00

## APPENDIX D Photographic Documentation

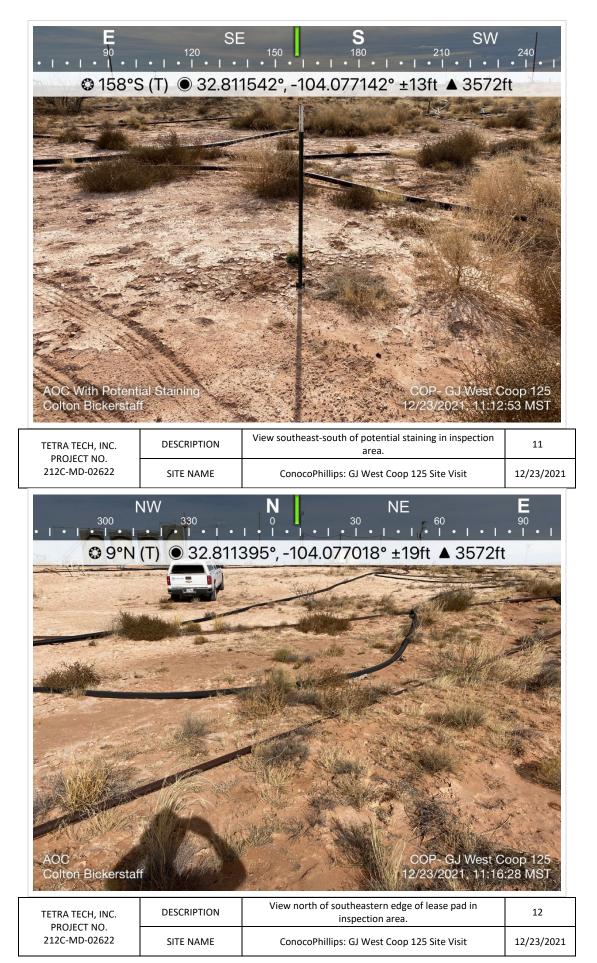


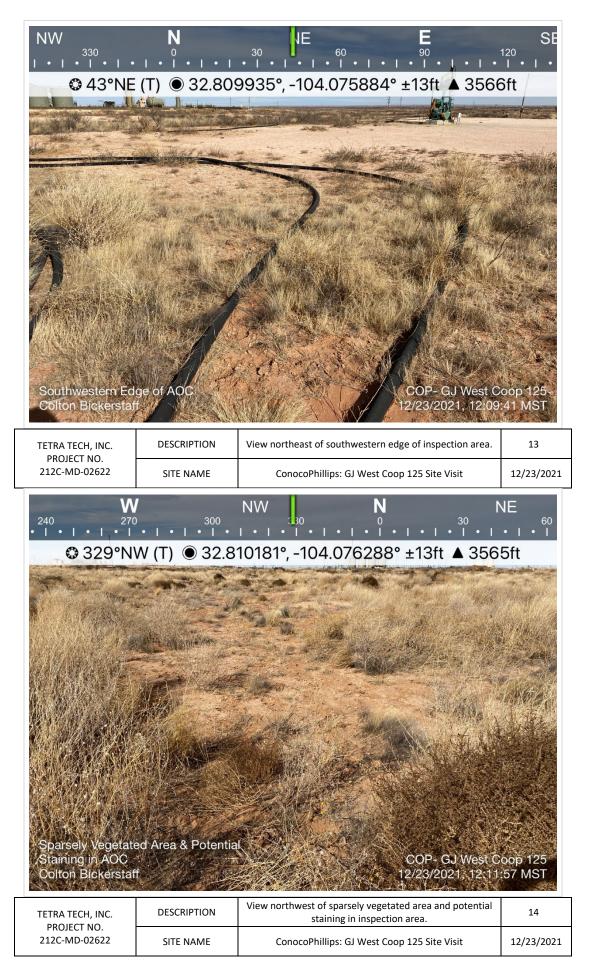


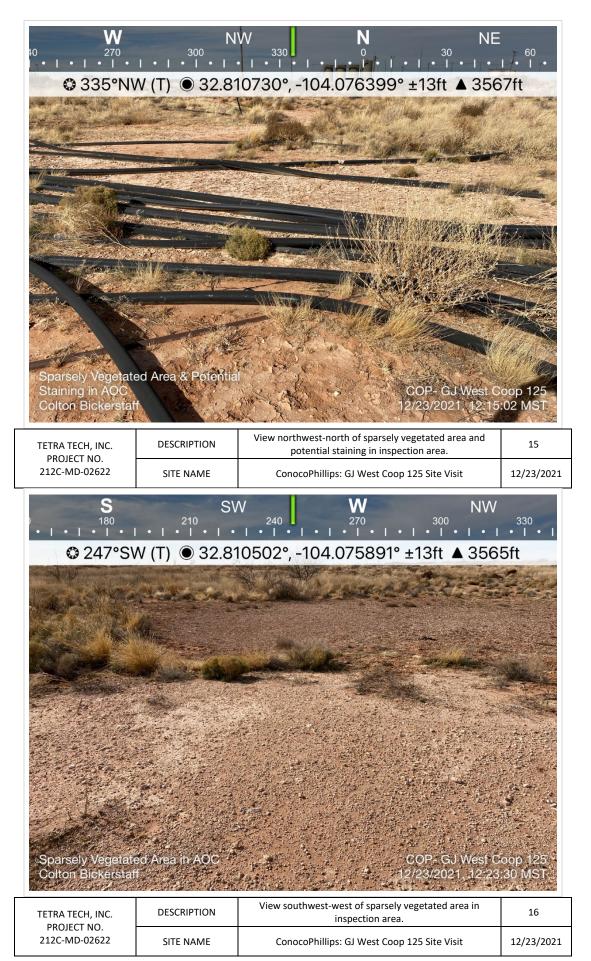


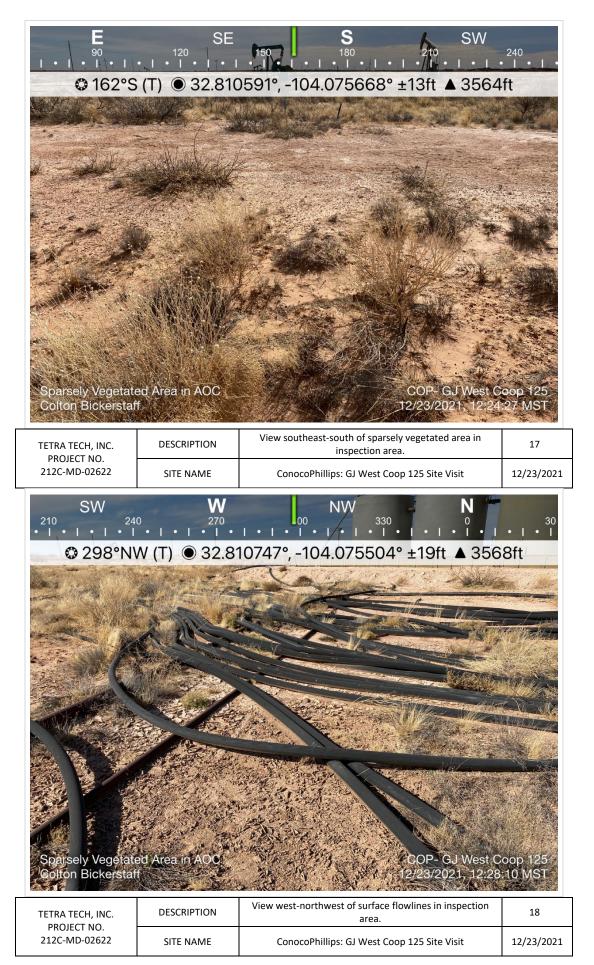












District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	72513
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
bbillings	Approved for this incident alone. Other deferrals on location apply still. Section 13 will come in to play at decommission. Better DTW assessment will need to occur at that time.	3/4/2022

Action 72513