

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Pronghorn SWD Facility		
Company:	COG Operating LLC		
Section, Township and Range	Unit B	Sec 24	T19S R32E
Lease Number:	API 30-025-32735		
County:	Lea County		
GPS:	32.65218° N	103.71698° W	
Surface Owner:	Federal		
Mineral Owner:			
Directions:	From the intersection of 529 and CR-126, travel south on 126 for 9.9 miles, turn left and travel 4.5 miles, turn right (at tin horn) and travel 0.6 miles to location		

Release Data:	Spill #1	Spill #2	Spill #3
Date Released:	10/15/2009	11/20/2009	7/20/2011
Type Release:	Produced Water	Produced Water	Produced Water
Source of Contamination:	Pressure Gauge	1x4 Swedge	Check Valve
Fluid Released:	60bbbls	1500bbbls	100bbbls
Fluids Recovered:	45bbbls	1300bbbls	95bbbls

Official Communication:

Name:	Robert McNeill	Ike Tavarez
Company:	COG Operating, LLC	Tetra Tech
Address:	One Concho Center 600 W. Illinois Ave.	4000 N. Big Spring Suite 401
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 686-3023	(432) 682-4559
Fax:	(432) 684-7137	
Email:	rmcneill@conchoresources.com	ike.tavarez@tetrattech.com

Ranking Criteria

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

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



September 12, 2014

Mr. Geoffrey Leking
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Closure Report for the COG Operating LLC, Pronghorn SWD Facility Spills, Unit B, Section 24, Township 19 South, Range 32 East, Lea County, New Mexico.

Dear Mr. Leking:

Tetra Tech was contacted by COG Operating LLC (COG) to assess spills from the Pronghorn SWD Facility located in Unit B, Section 24 Township 19 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.65218°, W 103.71698°. The site location is shown on Figures 1 and 2.

Background

Spill #1

According to the State of New Mexico C-141 Initial Report, the leak was discovered on October 15, 2009, and released approximately 60 barrels of produced water when a pressure gauge failed and broke off. Vacuum trucks were used to pick up standing fluids and recovered 45 barrels. The spill released on the pad and migrated off the pad to the west and south of the facility. The initial C-141 is enclosed in Appendix A. The spill area is shown on Figure 3.

Spill #2

According to the State of New Mexico C-141 Initial Report, the leak was discovered on November 20, 2009 and released approximately 1,500 barrels of produced water. A 1" x 4" swedge broke off the discharge of the pump going to the Pronghorn well. Vacuum trucks were used to pick up standing fluids and recovered 1,300 barrels. The spill area also released to the west and south of the facility into the pasture.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



Spill #3

According to the State of New Mexico C-141 Initial Report, the leak was discovered on July 20, 2011 and released approximately 100 barrels of produced water. The check valve on the transfer pump failed, the standing fluid has been removed and 95 bbls were recovered. The spill area released to the south of the facility and covered an area over the second spill. The spill area is shown in Figure 4. The initial C-141 is enclosed in Appendix A.

Groundwater

The United States Geological Survey (USGS) database did not show any well in Section 24. The closest wells are located in Section 17 and 18, Township 19 South, Range 33 East, with reported depth to water of 116' and 340', respectively. The New Mexico State Engineer Well Reports showed two wells in Section 19 with reported depths of 102' and 345'. On July 14, 2009, Tetra Tech supervised the installation of a temporary well located in Section 24, Township 19 South, Range 32 East to establish depth to water from a previous spill. The well was drilled to a total depth of 141' below surface and found no groundwater in the well (dry). The well log, USGS water well reports and State Engineer Reports are shown in Appendix B.

Regulatory

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

Soil Assessment and Results

As discussed, the second spill (11/20/09) encompasses the first release to the west and south for the SWD facility. The second spill area measured approximately 100' x 115' to the west of the facility. The south spill area measured approximately 95' x 180'. Prior to assessing the impacted soils, COG removed approximately 1.0' to 2.0' of impacted soil and transported to CRI for proper disposal.

Once completed, Tetra Tech supervised the installation of boreholes using an air rotary rig on January 11, 2010. A total of thirteen (13) soil borings were installed at the Site. Nine (9) soil borings were installed south of the facility to assess the soils. A total of four (4) soil borings were installed west of the facility. Additional soil boring



could not be installed in the west area due to overhead power lines. The soil boring locations are shown on Figure 3. The boring logs are shown in Appendix C. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1.

On August 23, 2011, Tetra Tech personnel supervised the installation of soil borings using an air rotary drilling rig. A total of three (3) soil borings were installed in the area of the third spill which is west of the facility pad in the pasture. The soil boring locations are shown on Figure 4. 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 D. The results of the sampling are summarized in Table 2.

TPH and BTEX

Referring to Table 1 and 2, all of the samples selected for TPH and BTEX analysis were below the RRAL's

Chloride

Referring to Table 1, analytical results indicate the maximum extent of chloride impact greater than 1,000 mg/kg extending to 1.0' to 30.0' below the excavated bottom. All the soil borings had chloride concentrations that decreased with depth. On the south spill area, majority of the soil borings (SB-3, SB-7 and SB-8) showed a shallow impact to the soils to approximately 2.0 to 4.0'. The area of SB-6 exhibited a slight chloride impact to the soils. The deeper chloride impact was encountered at SB-1, SB-2, SB-4, SB-5 and SB-9 at depths ranging from 6.0' to 25.0'. On the west spill area, deeper chloride impact was encountered at SB-1, SB-11 and SB-12 at depths ranging from 25.0' to 30.0' below excavation bottom. SB-13 only showed a shallow impact (0-1') to the soils.

Referring to Table 2, the analytical results indicate the maximum extent of chloride impact greater than 1,000 mg/kg extending from 1.0' to 25.0' below the excavated bottom. All three of the soil borings showed chloride concentrations the decreased with depth and reflect vertical delineation. The area of SB-1 showed a significant chloride impact from 1.0' to 20.0', SB-2 showed shallower impact from 1.0' to 10.0' below excavated bottom. SB-3 shows a chloride impact of 1.0' to 25.0' below excavated bottom.

Former SWD Facility

After the work plan was submitted and approved, COG had rebuilt and moved the SWD facility and allowing access for proper assessment of the former SWD location. Tetra Tech had notified and proposed to assess and remediate of the former



SWD to the NMOCD. As verbally approved, the three (3) backhoe trenches were installed (T-1, T-2 and T-3) to define extents in the area of the SWD. The SWD assessment results are shown on Table 3. The trench locations are shown on Figure 7.

Referring to Table 3, the area of trench (T-1) showed TPH and BTEX concentrations below the RRAL. In the areas of trenches (T-2 and T-3) elevated concentrations for TPH and BTEX were detected in the subsurface soils. The TPH concentrations ranged from <10.0 mg/kg to 14,230 mg/kg. The BTEX concentrations ranged from <0.300 mg/kg to 337 mg/kg. The area of trench (T-2) showed TPH and BTEX spike at 4.0' but declined below the RRAL at 6.0' below surface. The area of trench (T-3) was not vertically defined for TPH or BTEX at 10.0' below surface. In addition, all of the trenched areas showed elevated chloride concentrations ranging from 752 mg/kg to 9,060 mg/kg and were not vertically delineated.

Boreholes

On April 23, 2014, Tetra Tech personnel supervised the installation of boreholes using an air rotary drilling rig in order to vertically define the impact. A total of three (3) boreholes (BH-1, BH-2, and BH-3) were installed in the area of the former facility. The borehole locations are shown on Figure 7. 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 D. The results of the sampling are summarized in Table 3.

Referring to Table 3, all of the boreholes (BH-1, BH-2, and BH-3) showed a chloride impact which declined with depth. The areas showed chloride highs of 14,400 mg/kg at 11'-12', 9,250 mg/kg at 49'-50', and 7,900 mg/kg at 14'-15', respectively. The areas declined to chloride lows of 412 mg/kg at 64'-65', <20.0 mg/kg at 94'-95', and 48.0 mg/kg at 39'-40' below surface, respectively. The area of borehole (BH-3) showed TPH or BTEX concentrations below the RRAL at 14'-15' below surface and was vertically defined.

Remedial Activities

The site is located in a pasture and no receptors were within a one mile radius. The temporary well was drilled to a total depth of 141' below surface and found no groundwater in the well (dry). Based on published data, the depth to groundwater in this area is projected to be greater than 100' below surface.



Pasture Excavation and Remediation

As discussed in the approved work plan, the entire spill area was excavated to a depth of approximately 4.0' below surface and capped with a 40 mil plastic liner to prevent further vertical migration of the impact. The excavation depths and liner locations are shown on Figure 6 and highlighted (green) in Table 1 and Table 2.

Former SWD Facility Excavation

Based on the trench and borehole results, the area of the former SWD was excavated to a depth of approximately 4.0' to 10.0' and capped with a 40 mil liner at 4.0' below surface to prevent vertical migration of the remaining impact. The excavation depths and liner locations are shown on Figure 7 and highlighted (green) in Table 3. Sidewall confirmation samples were taken in the areas of SB-1, SB-3, SB-4, SB-6, SB-10, SB-11, SB-12 and SB-13 as shown in Table 4.

Referring to Table 4, the SB-1 (south and west sidewalls) showed chloride concentrations of 697 mg/kg and 448 mg/kg, respectively. The SB-3 west sidewall, SB-4 south sidewall, SB-6 east sidewall, SB-12 west sidewall, and SB-13 south sidewall showed chloride concentrations ranging from 100 mg/kg to 448 mg/kg. The SB-10 east sidewall, SB-10 north sidewall, and SB-11 west sidewall showed chloride concentrations of 2,190 mg/kg, 2,090 mg/kg, and 1,240 mg/kg, respectively.

Conclusion

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

Respectfully submitted,
TETRA TECH

A handwritten signature in blue ink, appearing to read 'Ike Tavarez'.

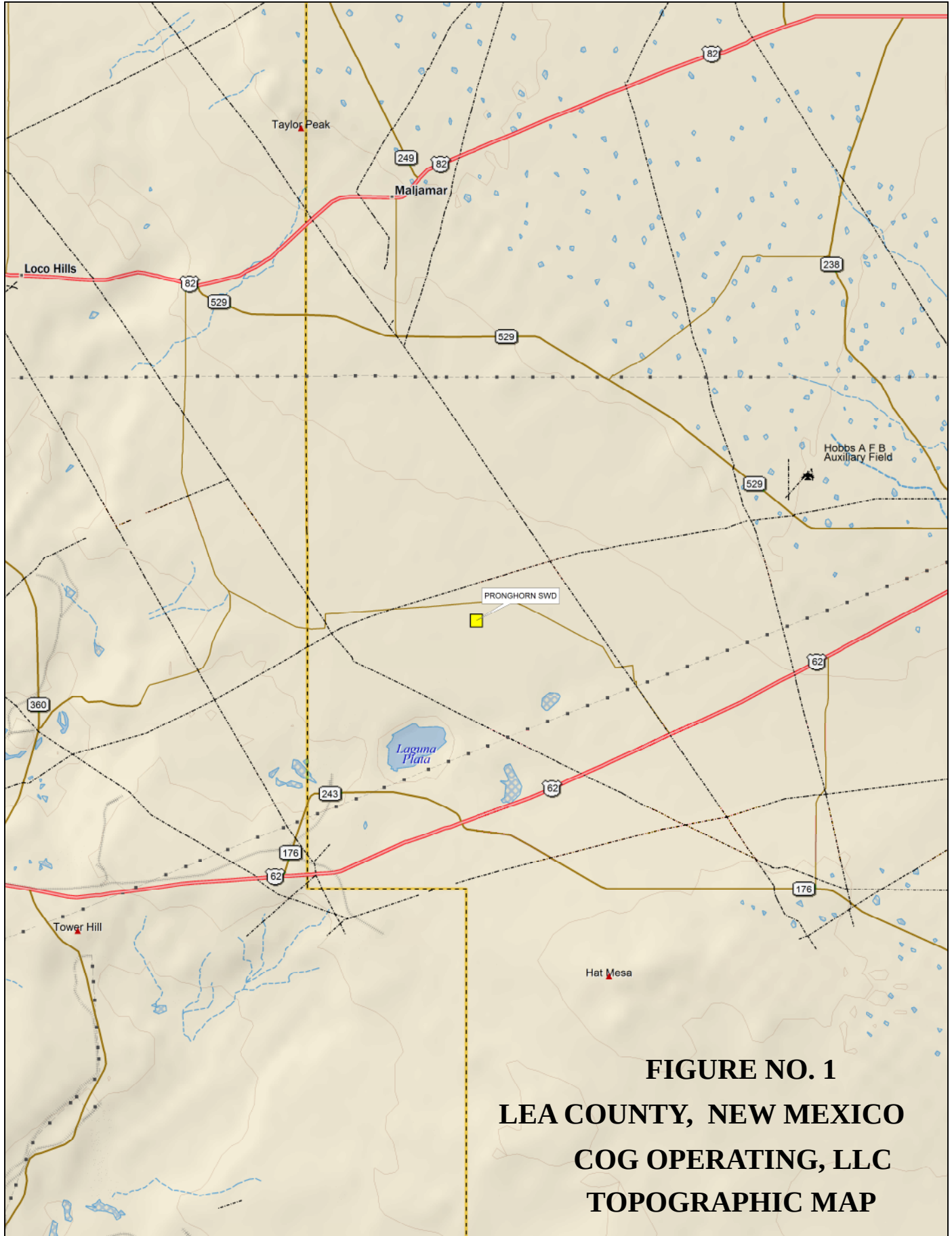
Ike Tavarez, PG
Senior Project Manager

cc: Robert McNeil – COG

Figures



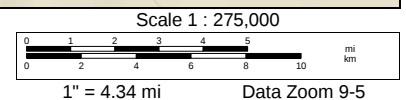
Topo USA® 8



Data use subject to license.

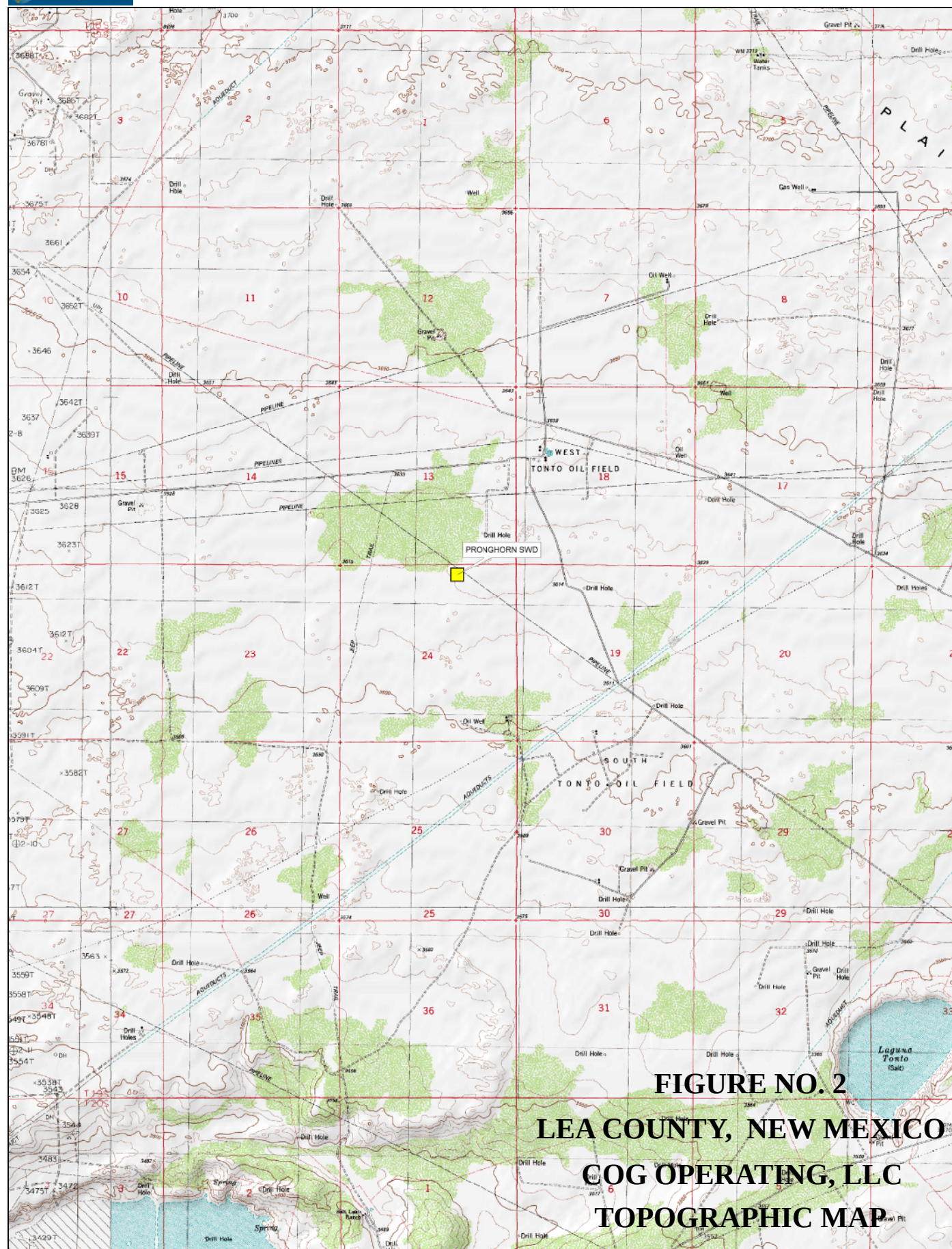
© DeLorme. Topo USA® 8.

www.delorme.com





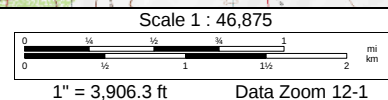
Topo USA® 8

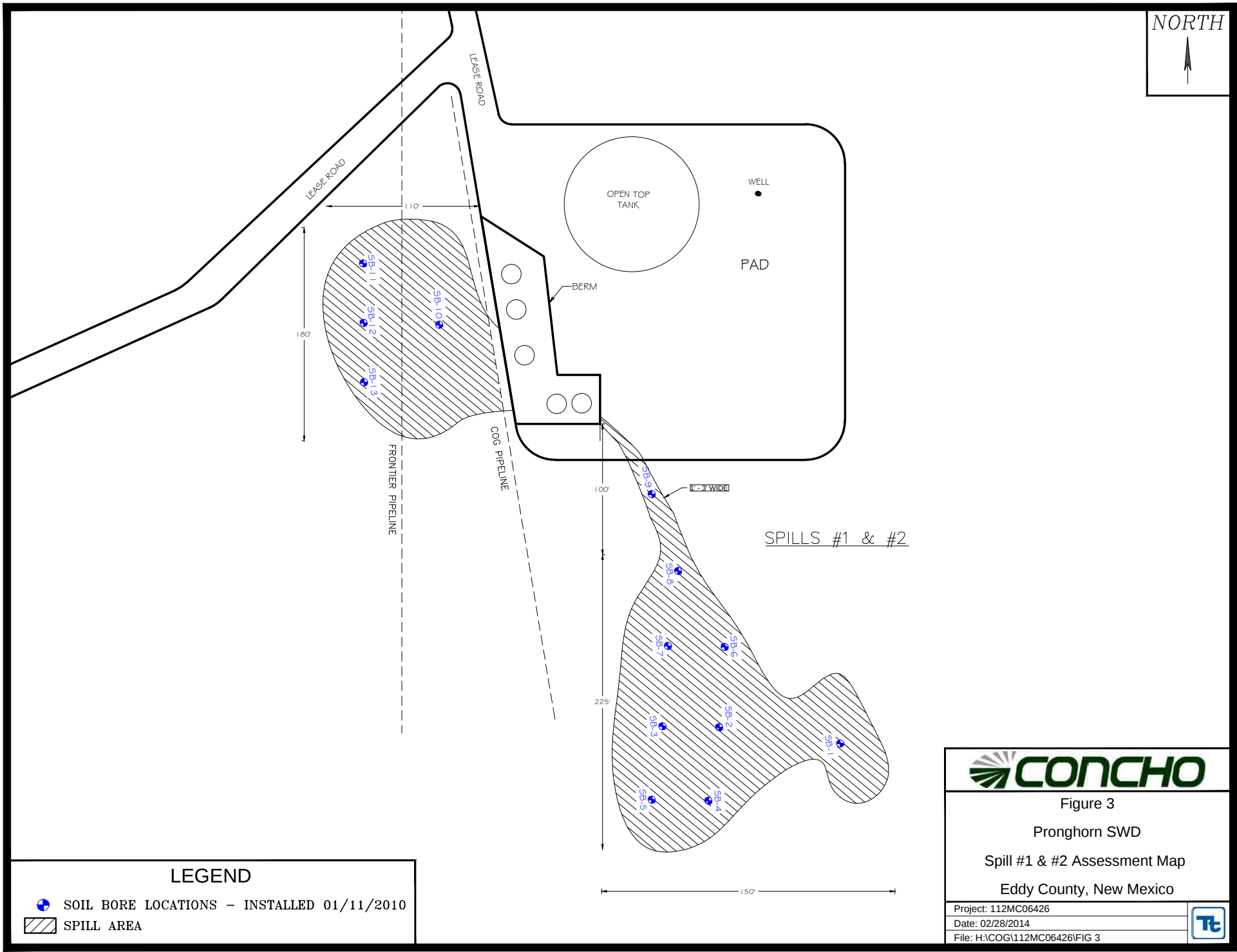


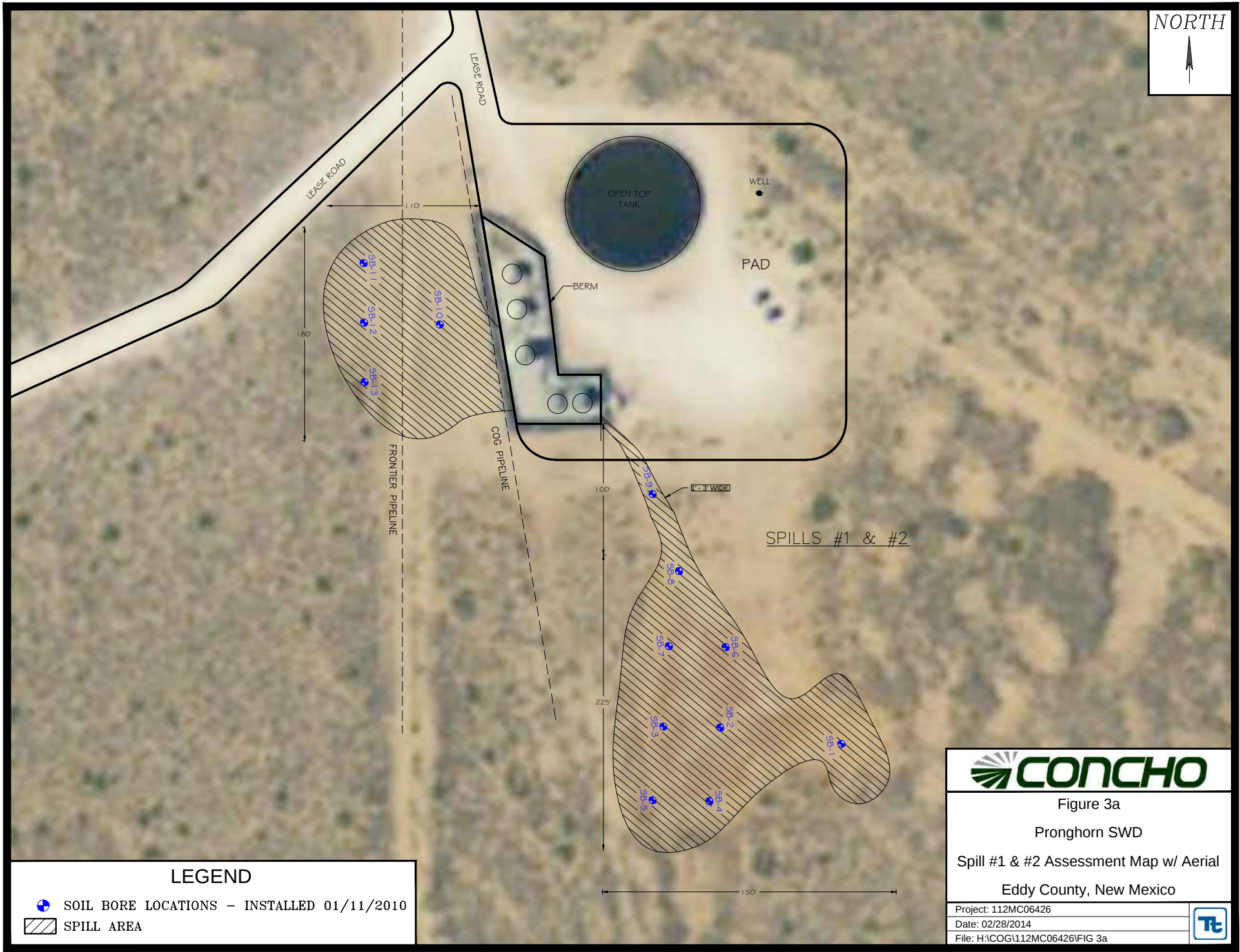
Data use subject to license.

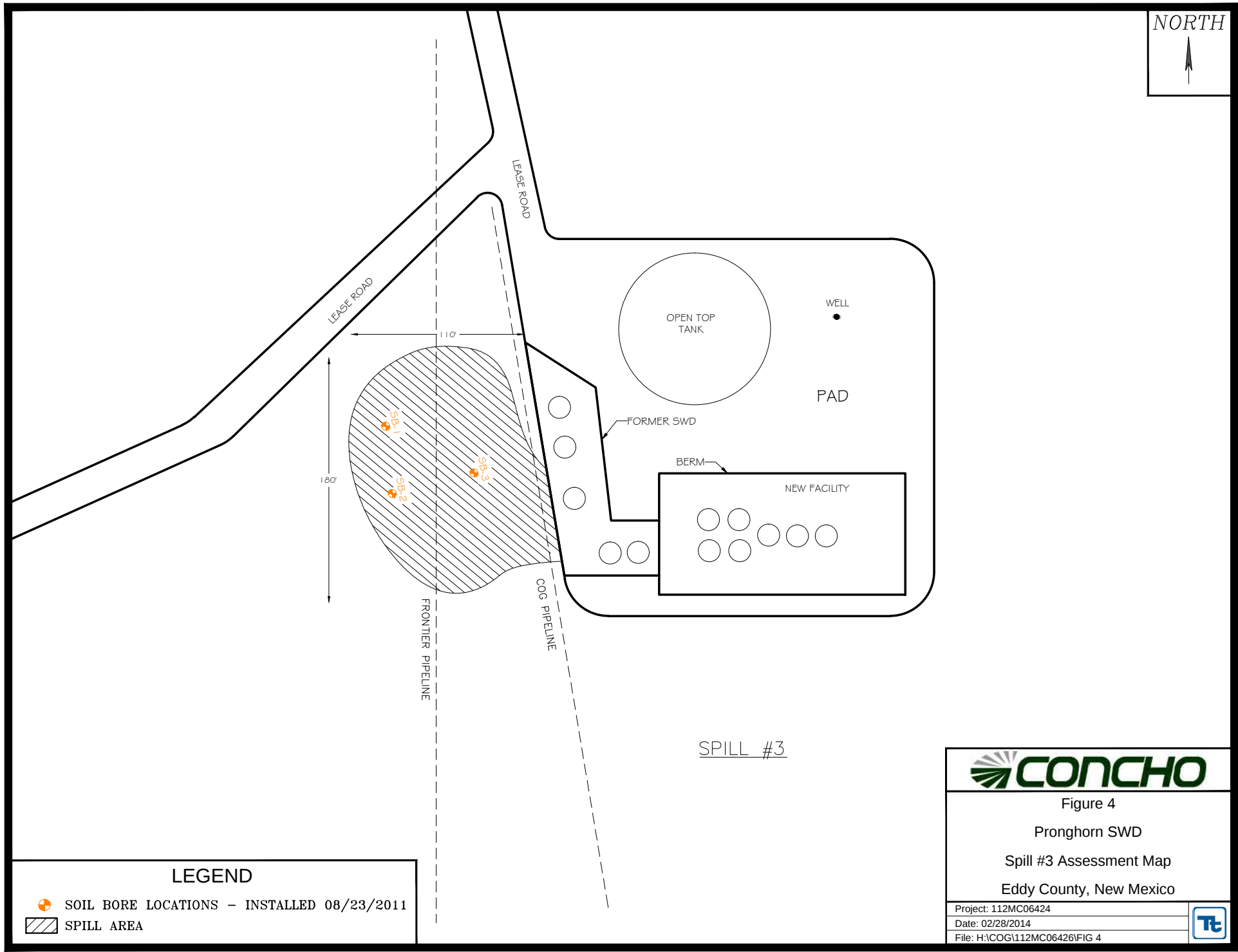
© DeLorme. Topo USA® 8.

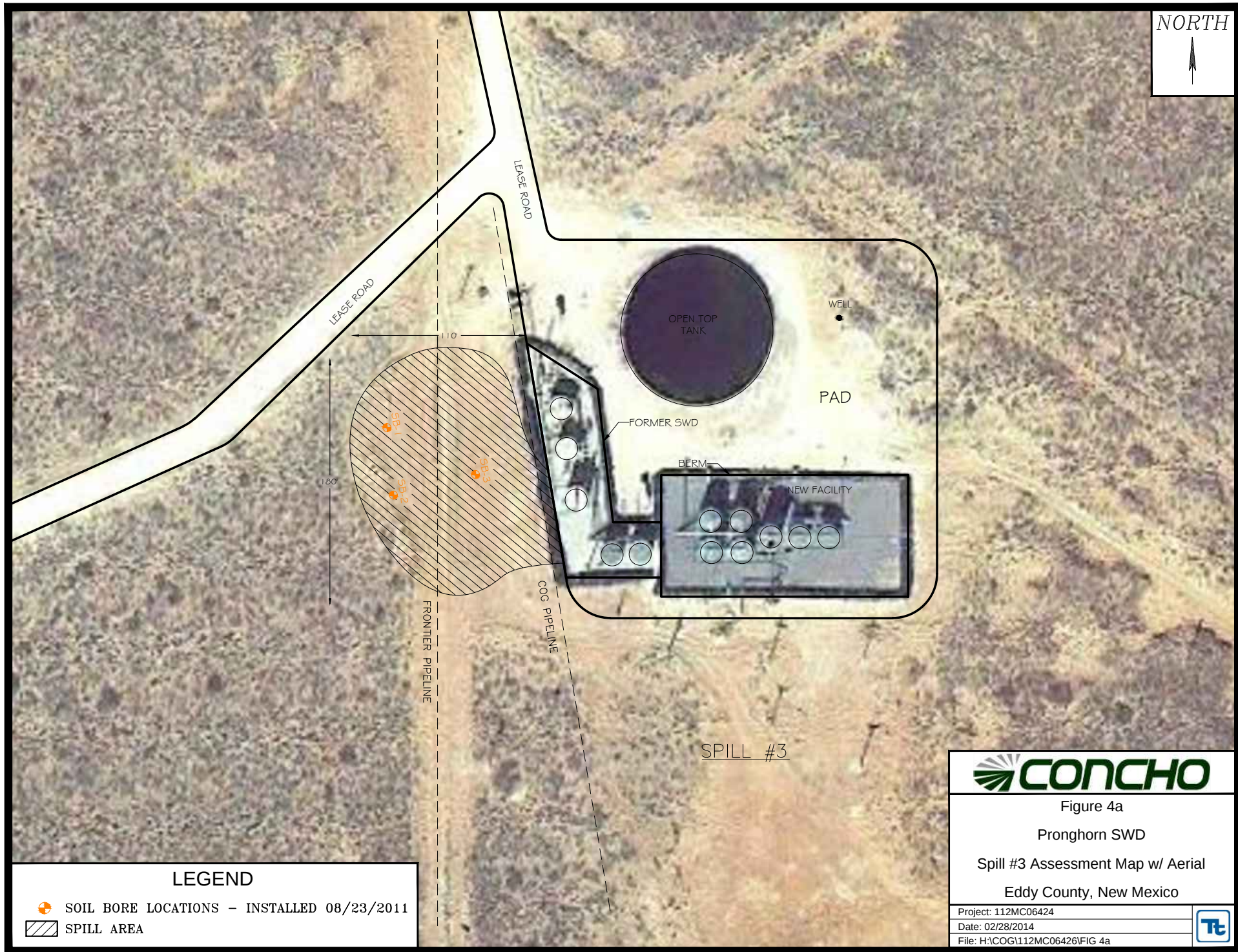
www.delorme.com











LEGEND

- SOIL BORE LOCATIONS - INSTALLED 08/23/2011
- SPILL AREA



Figure 4a

Pronghorn SWD

Spill #3 Assessment Map w/ Aerial

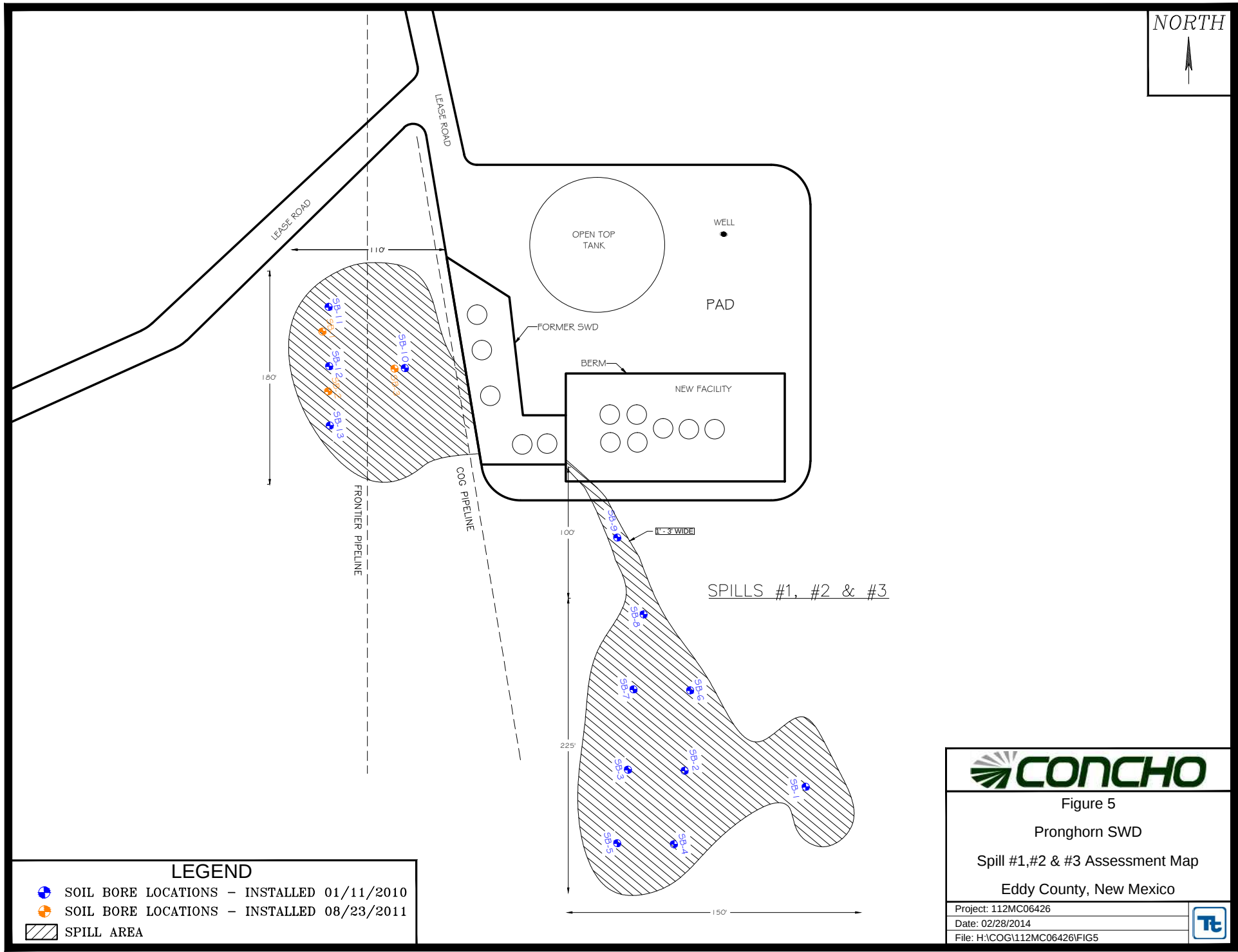
Eddy County, New Mexico

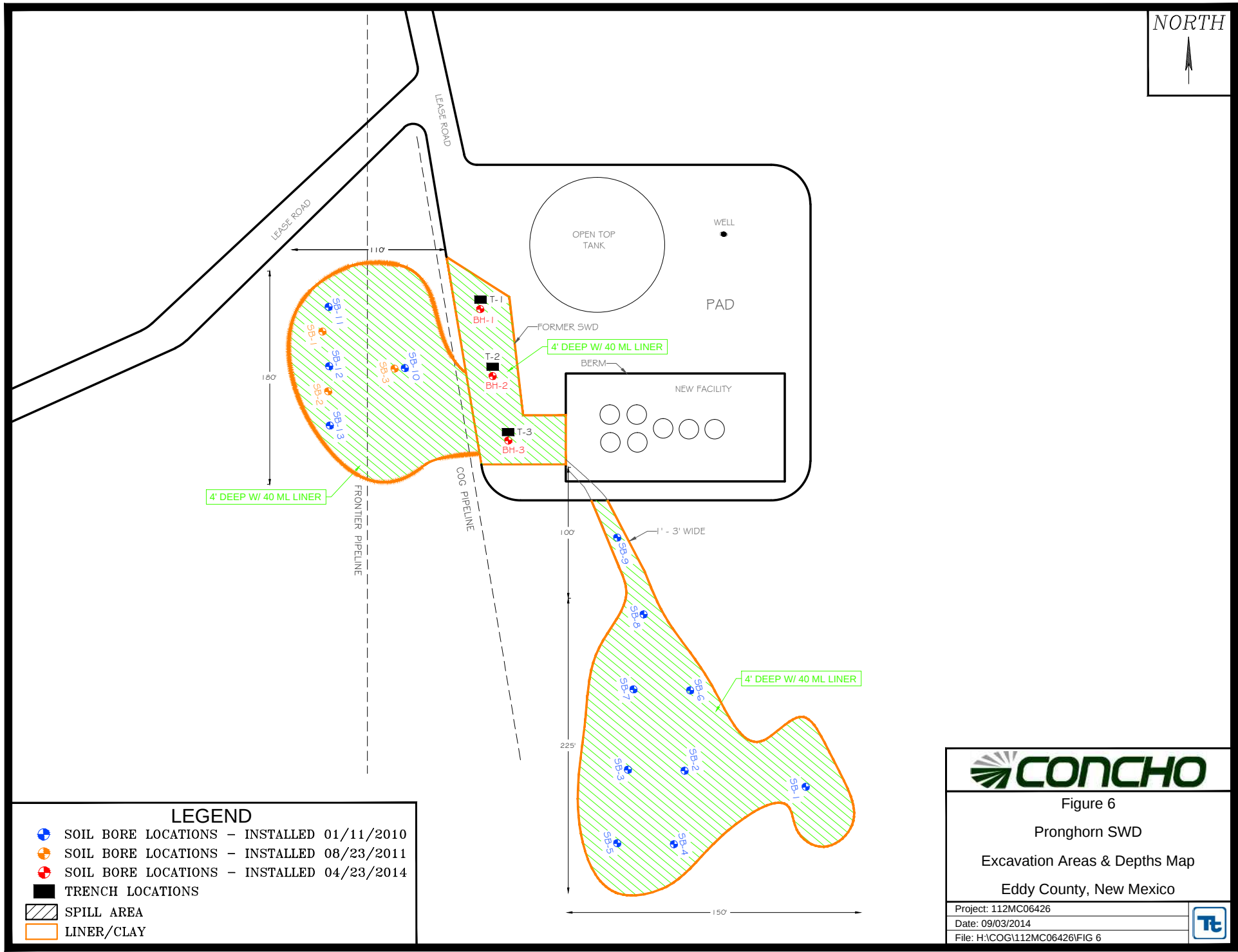
Project: 112MC06424

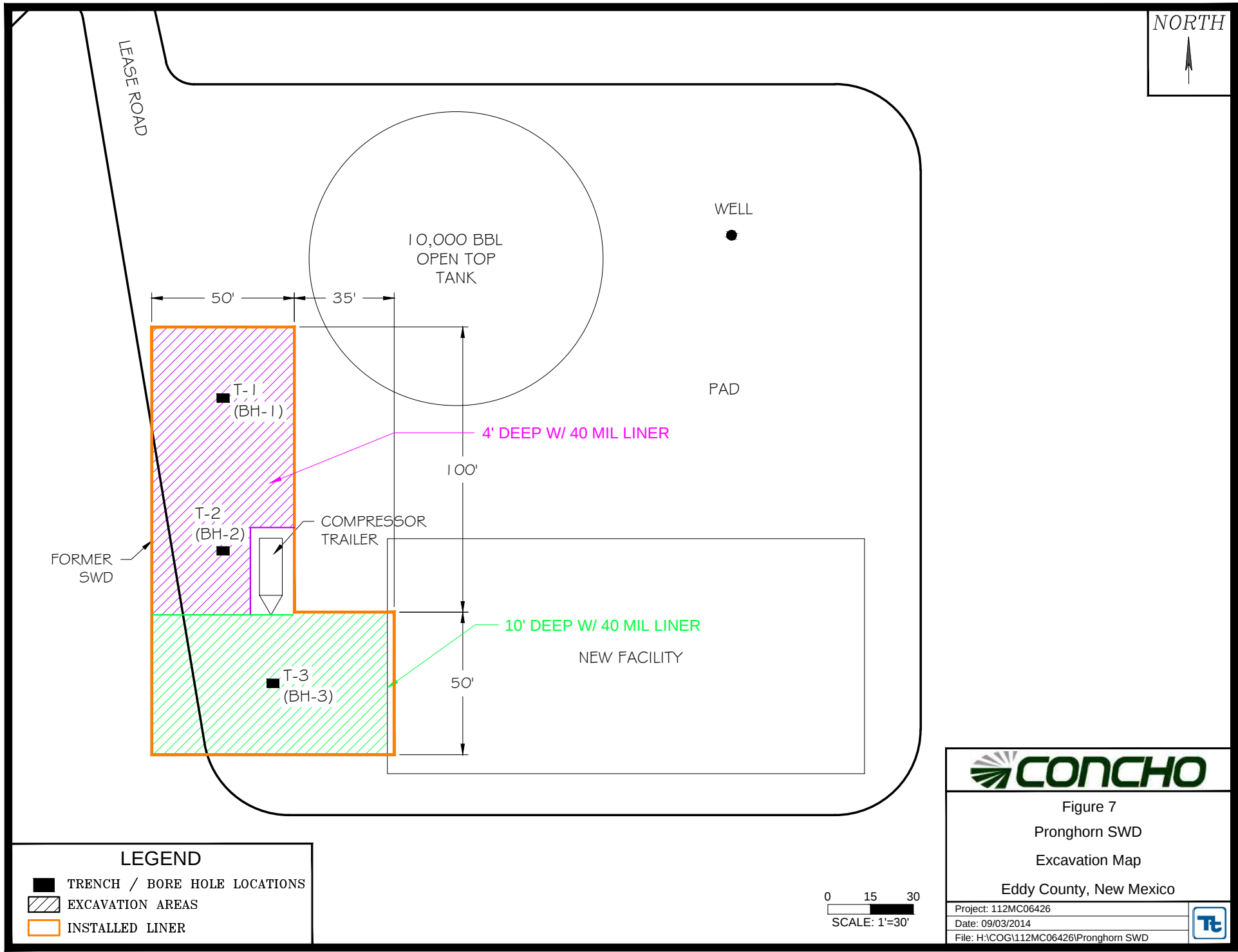
Date: 02/28/2014

File: H:\COG\112MC06426\FIG 4a









Tables

Table 1
COG Operating LLC.
Pronghorn SWD #1
SPILL #1 and #2
LEA COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Excavation Depth	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
South Spill Area													
SB-1	1/11/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	14,100
		2-3'			X	-	-	-	-	-	-	-	14,100
		4-5'		X		-	-	-	-	-	-	-	7,330
		6-7'		X		-	-	-	-	-	-	-	3,250
		10-11'		X		-	-	-	-	-	-	-	440
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	312
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200
SB-2	1/11/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	14,900
		2-3'			X	-	-	-	-	-	-	-	13,600
		4-5'		X		-	-	-	-	-	-	-	16,000
		6-7'		X		-	-	-	-	-	-	-	9,760
		10-11'		X		-	-	-	-	-	-	-	435
		15-16'		X		-	-	-	-	-	-	-	1,350
		20-21'		X		-	-	-	-	-	-	-	656
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200
SB-3	1/11/2010	0-1'	1'		X	12.3	<50.0	<50.0	<0.0100	<0.0100	<0.0100	0.0523	8,660
		2-3'			X	-	-	-	-	-	-	-	9,220
		4-5'		X		-	-	-	-	-	-	-	1,010
		6-7'		X		-	-	-	-	-	-	-	<200
		10-11'		X		-	-	-	-	-	-	-	<200
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	<200
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Pronghorn SWD #1
SPILL #1 and #2
LEA COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Excavation Depth	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-4	1/11/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	11,800
		2-3'			X	-	-	-	-	-	-	-	10,500
		4-5'		X		-	-	-	-	-	-	-	4,920
		6-7'		X		-	-	-	-	-	-	-	6,790
		10-11'		X		-	-	-	-	-	-	-	1,050
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	227
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200
SB-5	1/11/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	9,750
		2-3'			X	-	-	-	-	-	-	-	10,400
		4-5'		X		-	-	-	-	-	-	-	7,530
		6-7'		X		-	-	-	-	-	-	-	557
		10-11'		X		-	-	-	-	-	-	-	5,570
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	354
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200
SB-6	1/11/2010	0-1'	1'	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200
		2-3'		X		-	-	-	-	-	-	-	<200
		4-5'		X		-	-	-	-	-	-	-	510
		6-7'		X		-	-	-	-	-	-	-	<200
		10-11'		X		-	-	-	-	-	-	-	<200
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	<200
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Pronghorn SWD #1
SPILL #1 and #2
LEA COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Excavation Depth	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-7	1/11/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	17,400
		2-3'			X								14,100
		4-5'		X									16,100
		6-7'		X									878
		10-11'		X									465
		15-16'		X									<200
		20-21'		X									207
		25-26'		X									<200
		30-31'		X									<200
SB-8	1/12/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	14,800
		2-3'			X	-	-	-	-	-	-	-	9,250
		4-5'		X		-	-	-	-	-	-	-	7,980
		6-7'		X		-	-	-	-	-	-	-	595
		10-11'		X		-	-	-	-	-	-	-	330
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	<200
		25-26'		X		-	-	-	-	-	-	-	208
		30-31'		X		-	-	-	-	-	-	-	<200
SB-9	1/12/2010	0-1'	1'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	503
		2-3'			X	-	-	-	-	-	-	-	4,040
		4-5'		X		-	-	-	-	-	-	-	534
		6-7'		X		-	-	-	-	-	-	-	778
		10-11'		X		-	-	-	-	-	-	-	2,850
		15-16'		X		-	-	-	-	-	-	-	5,650
		20-21'		X		-	-	-	-	-	-	-	3,490
		25-26'		X		-	-	-	-	-	-	-	1,240
		30-31'		X		-	-	-	-	-	-	-	<200
		40-41'		X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Pronghorn SWD #1
SPILL #1 and #2
LEA COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Excavation Depth	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
West Spill Area													
SB-10	1/12/2010	0-1'	2'		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	10,600
		2-3'			X	-	-	-	-	-	-	-	6,150
		4-5'		X		-	-	-	-	-	-	-	4,550
		6-7'		X		-	-	-	-	-	-	-	1,960
		10-11'		X		-	-	-	-	-	-	-	1,010
		15-16'		X		-	-	-	-	-	-	-	671
		20-21'		X		-	-	-	-	-	-	-	574
		25-26'		X		-	-	-	-	-	-	-	1,110
		30-31'		X		-	-	-	-	-	-	-	625
SB-11	1/12/2010	0-1'	2'		X	744	520	1,264	0.484	5.18	1.26	7.37	2,120
		2-3'			X	-	-	-	-	-	-	-	981
		4-5'		X		-	-	-	-	-	-	-	803
		6-7'		X		-	-	-	-	-	-	-	701
		10-11'		X		-	-	-	-	-	-	-	867
		15-16'		X		-	-	-	-	-	-	-	3,380
		20-21'		X		-	-	-	-	-	-	-	3,740
		25-26'		X		-	-	-	-	-	-	-	4,800
		30-31'		X		-	-	-	-	-	-	-	1,450
SB-12	1/12/2010	0-1'	2'		X	43.9	<50.0	43.9	<0.0100	<0.0100	<0.0100	<0.0100	2,720
		2-3'			X	-	-	-	-	-	-	-	576
		4-5'		X		-	-	-	-	-	-	-	586
		6-7'		X		-	-	-	-	-	-	-	1,210
		10-11'		X		-	-	-	-	-	-	-	2,210
		15-16'		X		-	-	-	-	-	-	-	4,420
		20-21'		X		-	-	-	-	-	-	-	1,850
		25-26'		X		-	-	-	-	-	-	-	454
		30-31'		X		-	-	-	-	-	-	-	275

Table 1
COG Operating LLC.
Pronghorn SWD #1
SPILL #1 and #2
LEA COUNTY, NEW MEXICO

Sample ID	Date Sampled	Sample Depth (ft)	Excavation Depth	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
SB-13	1/12/2010	0-1'	2'		X	7.24	59.1	66.34	<0.0100	<0.0100	<0.0100	<0.0100	1,880
		2-3'			X	-	-	-	-	-	-	-	<200
		4-5'		X		-	-	-	-	-	-	-	205
		6-7'		X		-	-	-	-	-	-	-	<200
		10-11'		X		-	-	-	-	-	-	-	<200
		15-16'		X		-	-	-	-	-	-	-	<200
		20-21'		X		-	-	-	-	-	-	-	<200
		25-26'		X		-	-	-	-	-	-	-	<200
		30-31'		X		-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

 Excavation Depths

 Liner Installation

Table 2
COG Operating LLC
Pronghorn SWD #1
SPILL #3
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
SB-1	8/23/2011	0-1'	2'	X		<2.00	358	358	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	4,980
	"	3'		X		-	-	-	-	-	-	-	-	4,570
	"	5'		X		-	-	-	-	-	-	-	-	1,230
	"	7'		X		-	-	-	-	-	-	-	-	1,310
	"	10'		X		-	-	-	-	-	-	-	-	2,260
	"	15'		X		-	-	-	-	-	-	-	-	5,580
	"	20'		X		-	-	-	-	-	-	-	-	7,190
	"	25'		X		-	-	-	-	-	-	-	-	1,350
	"	30'		X		-	-	-	-	-	-	-	-	857
	"	40'		X		-	-	-	-	-	-	-	-	<200
	"	50'		X		-	-	-	-	-	-	-	-	<200
SB-2	8/23/2011	0-1'	2'	X		<2.00	216	216	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	16,100
	"	3'		X		-	-	-	-	-	-	-	-	1,770
	"	5'		X		-	-	-	-	-	-	-	-	2,660
	"	7'		X		-	-	-	-	-	-	-	-	4,190
	"	10'		X		-	-	-	-	-	-	-	-	3,010
	"	15'		X		-	-	-	-	-	-	-	-	620
	"	20'		X		-	-	-	-	-	-	-	-	308
	"	25'		X		-	-	-	-	-	-	-	-	<200
	"	30'		X		-	-	-	-	-	-	-	-	<200
	"	40'		X		-	-	-	-	-	-	-	-	<200
	"	50'		X		-	-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC
Pronghorn SWD #1
SPILL #3
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
SB-3	8/23/2011	0-1'	2'	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	12,800
	"	3'		X		-	-	-	-	-	-	-	-	5,570
	"	5'		X		-	-	-	-	-	-	-	-	3,000
	"	7'		X		-	-	-	-	-	-	-	-	3,440
	"	10'		X		-	-	-	-	-	-	-	-	4,230
	"	15'		X		-	-	-	-	-	-	-	-	5,500
	"	20'		X		-	-	-	-	-	-	-	-	7,200
	"	25'		X		-	-	-	-	-	-	-	-	1,380
	"	30'		X		-	-	-	-	-	-	-	-	<200
	"	40'		X		-	-	-	-	-	-	-	-	<200
	"	50'		X		-	-	-	-	-	-	-	-	<200

(--) Not Analyzed

 Proposed Excavation Depths

 Proposed Liner Installed

Table 3
COG Operating LLC.
Pronghorn Central Salt Water Disposal
Former SWD Facility
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
T-1	4/10/2014	Surface	0		X	<10.0	1,125	1,125	<0.050	<0.050	<0.050	<0.150	<0.300	1,790
	"	2	0		X	129	4,013	4,142	<0.100	<0.100	1.17	0.950	2.12	1,070
	"	4	0		X	201	1,841	2,042	<0.200	<0.200	0.964	3.42	4.38	9,060
	"	6	0	X		-	-	-	-	-	-	-	-	6,640
	"	8	0	X		-	-	-	-	-	-	-	-	2,040
	"	9	0	X		-	-	-	-	-	-	-	-	5,840
BH-1	4/23/2014	11-12	0	X		-	-	-	-	-	-	-	-	14,400
	"	14-15	0	X		-	-	-	-	-	-	-	-	9,380
	"	19-20	0	X		-	-	-	-	-	-	-	-	10,300
	"	24-25	0	X		-	-	-	-	-	-	-	-	11,200
	"	29-30	0	X		-	-	-	-	-	-	-	-	4,970
	"	39-40	0	X		-	-	-	-	-	-	-	-	1,150
	"	49-50	0	X		-	-	-	-	-	-	-	-	7,080
	"	59-60	0	X		-	-	-	-	-	-	-	-	3,550
	"	64-65	0	X		-	-	-	-	-	-	-	-	412

Table 3
COG Operating LLC.
Pronghorn Central Salt Water Disposal
Former SWD Facility
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
T-2	4/10/2014	Surface	0		X	<10.0	279	279	<0.050	<0.050	<0.050	<0.150	<0.300	3,000
	"	2	0		X	275	3,600	3,875	<0.200	0.727	0.258	6.41	7.40	5,040
	"	4	0		X	3,170	11,060	14,230	<2.00	55.4	79.3	169	304	1,880
	"	6	0	X		<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	4,160
	"	8	0	X		42.4	794	836	<0.050	0.107	0.455	2.39	2.95	6,720
	"	10	0	X		-	-	-	-	-	-	-	-	4,000
	"	12	0	X		-	-	-	-	-	-	-	-	5,840
BH-2	4/23/2014	14-15	0	X		-	-	-	-	-	-	-	-	8,410
	"	19-20	0	X		-	-	-	-	-	-	-	-	4,200
	"	24-25	0	X		-	-	-	-	-	-	-	-	5,270
	"	29-30	0	X		-	-	-	-	-	-	-	-	6,990
	"	39-40	0	X		-	-	-	-	-	-	-	-	7,130
	"	49-50	0	X		-	-	-	-	-	-	-	-	9,250
	"	59-60	0	X		-	-	-	-	-	-	-	-	5,570
	"	69-70	0	X		-	-	-	-	-	-	-	-	5,170
	"	79-80	0	X		-	-	-	-	-	-	-	-	2,200
	"	89-90	0	X		-	-	-	-	-	-	-	-	1,460
	"	94-95	0	X		-	-	-	-	-	-	-	-	<20.0

Table 3
COG Operating LLC.
Pronghorn Central Salt Water Disposal
Former SWD Facility
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
T-3	4/10/2014	Surface	0		X	924	5,044	5,968	<0.500	12.1	16.3	51.3	79.7	1,090
	"	2	0		X	656	4,451	5,107	<0.500	10.7	5.51	33.7	49.9	752
	"	4	0		X	2,010	8,760	10,770	<2.00	46.3	44.8	114	205	2,000
	"	6	0		X	715	3,251	3,966	0.770	23.5	28.5	52.1	105	3,600
	"	8	0		X	1,870	5,531	7,401	3.92	103	92.8	137	337	2,560
	"	10	0		X	2,730	7,993	10,723	3.16	87.2	84.1	125	300	7,600
BH-3	4/23/2014	14-15	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	7,900
	"	19-20	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	4,570
	"	24-25	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	3,160
	"	29-30	0	X		<4.00	161	161	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	975
	"	39-40	0	X		<4.00	180	180	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	48.0
	"	49-50	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	827

(-) Not Analyzed

 Excavation Depths

 Liner Installation

(BEB) Below Excavation Bottom

Table 4
COG Operating LLC.
Pronghorn Central Salt Water Disposal
Lea County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
SB-1 South Sidewall	4/11/2014	-	-	X		-	-	-	-	-	-	-	-	697
SB-1 West Sidewall	4/11/2014	-	-	X		-	-	-	-	-	-	-	-	448
SB-3 West Sidewall	4/14/2014	-	-	X		-	-	-	-	-	-	-	-	100
SB-4 South Sidewall	4/11/2014	-	-	X		-	-	-	-	-	-	-	-	448
SB-6 East Sidewall	4/11/2014	-	-	X		-	-	-	-	-	-	-	-	249
SB-10 East Sidewall	4/14/2014	-	-	X		-	-	-	-	-	-	-	-	2,190
SB-10 North Sidewall	4/14/2014	-	-	X		-	-	-	-	-	-	-	-	2,090
SB-11 West Sidewall	4/11/2014	-	-	X		-	-	-	-	-	-	-	-	1,240
SB-12 West Sidewall	4/14/2014	-	-	X		-	-	-	-	-	-	-	-	249
SB-13 South Sidewall	4/14/2014	-	-	X		-	-	-	-	-	-	-	-	398

(-) Not Analyzed

(BEB) Below Excavation Bottom

Photos

COG Operating LLC
Pronghorn SWD #1
Lea County, New Mexico



Typical Trench



View South – Area of BH-1 and BH-2

COG Operating LLC
Pronghorn SWD #1
Lea County, New Mexico



TETRA TECH



View South – Area of BH-3



View West – Excavated area of the West Spill

COG Operating LLC
Pronghorn SWD #1
Lea County, New Mexico



View South – Excavated area of the South Spill



View South – Excavated area of the South Spill

COG Operating LLC
Pronghorn SWD #1
Lea County, New Mexico



View South – Excavated area of the former facility



View West – Lined area of the West Spill

COG Operating LLC
Pronghorn SWD #1
Lea County, New Mexico



View North – Lined area of the South Spill



View South – Lined area of the former facility

COG Operating LLC
Pronghorn SWD #1
Lea County, New Mexico



View West- Backfilled area of the West Spill



View South – Backfilled area of the former facility

Appendix A

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

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Kanicia Carrillo
Address	550 W. Texas, Suite 100 Midland, TX 79701	Telephone No.	432-685-4332
Facility Name -	Pronghorn SWD #1	Facility Type-	Central booster station

Surface Owner	Federal	Mineral Owner		Lease No.	30-025-32735
---------------	---------	---------------	--	-----------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	19S	32E	330	North	1650	East	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release- Produced water	Volume of Release-60 bbls	Volume Recovered- 45 bbls
Source of Release- Pressure Gauge	Date and Hour of Occurrence- 10/15/09	Date and Hour of Discovery 10/15/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Trishia Bad Bear, Larry Johnson	
By Whom? Rick Wright	Date and Hour 10/15/09	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A pressure gauge broke off of pump. Replaced gauge.

Describe Area Affected and Cleanup Action Taken.*
Spill is located off location to the west of the pad.
Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.

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

OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:		
Printed Name: Kanicia Carrillo			
Title: Regulatory Analyst	Approval Date:	Expiration Date:	
E-mail Address: kcarrillo@conchoresources.com	Conditions of Approval:		Attached ☐
Date: 10/28/09	Phone: 432-685-4332		

Attach Additional Sheets If Necessary

Page 38 of 338
Received by OGD- 4/11/2023 1:30:04 PM
Released to Imaging: 4/18/2023 7:25:17 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

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 Report

Name of Company	COG OPERATING LLC	Contact	Kanicia Carrillo
Address	550 W. Texas, Suite 100 Midland, TX 79701	Telephone No.	432-685-4332
Facility Name	Pronghorn SWD #1	Facility Type-	Central booster station
Surface Owner	Federal	Mineral Owner	
		Lease No.	30-025-32735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	19S	32E	330	North	1650	East	Lea

Latitude 32.65220 Longitude 103.71675

NATURE OF RELEASE

Type of Release-	Produced water	Volume of Release-	1500 bbls	Volume Recovered-	1300 bbls
Source of Release-	1x4 swedge	Date and Hour of Occurrence-	11/20/09 AM	Date and Hour of Discovery	11/20/09 AM
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Paul Evans/ BLM, Maxey Brown/ OCD		
By Whom?	Pat Ellis, Kanicia Castillo	Date and Hour	11/20/09 3:38pm, 4:37pm		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*					
Describe Cause of Problem and Remedial Action Taken.* A 1x4 swedge broke off the discharge of the pump going to the Pronghorn well. Replaced with a heavy duty metal swedge.					
Describe Area Affected and Cleanup Action Taken.* About 25% of the battery pad was covered with produced water. The majority of the produced water went off location south of the battery into the pasture. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation work.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
Signature:		OIL CONSERVATION DIVISION			
Printed Name: Kanicia Carrillo		Approved by District Supervisor:			
Title: Regulatory Analyst		Approval Date:		Expiration Date:	
E-mail Address: kcarrillo@conchoresources.com		Conditions of Approval:		Attached ☐	
Date: 11/25/09 Phone: 432-685-4332					

Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-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 Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Pronghorn SWD #1	Facility Type	Salt Water Disposal
Surface Owner	Federal	Mineral Owner	
		Lease No. (API#) 30-025-32735	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	19S	32E					Lea

Latitude 32 39.120 Longitude 103 43.010

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	100bbls	Volume Recovered	95bbls
Source of Release	Transfer pump	Date and Hour of Occurrence	07/20/2011	Date and Hour of Discovery	07/20/2011 6:00 a.m.
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking-OCD Paul Evans-BLM			
By Whom?	Josh Russo	Date and Hour 07/20/2011 5:14 p.m.			
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

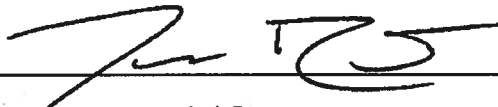
The check valve on the water transfer pump failed. The faulty check valve has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Initially 100bbls were released from the transfer pump due to the faulty check valve. We were able to recover 95bbls with a vacuum truck. The spill encompassed the area immediately around the transfer pump inside the battery, and to the west of the pad location in the pasture. All standing fluid has been removed and all contaminated soil on location has been hauled to appropriate disposal. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan 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.

OIL CONSERVATION DIVISION

Signature:			
Printed Name:	Josh Russo	Approved by District Supervisor:	
Title:	HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address:	jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date:	07/25/2011	Phone:	432-212-2399

* Attach Additional Sheets If Necessary

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

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Robert McNeil
Address 600 West Illinois Avenue, Midland, Texas 79701	Telephone No. (432) 230-0077
Facility Name Pronghorn SWD #1	Facility Type Central Booster Station
Surface Owner: Federal	Mineral Owner
Lease No. (API#) 30-025-32735	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	19S	32E	330	North	1650	East	Lea

Latitude N 32.65220 ° Longitude W 103.71675 °

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 60 bbls	Volume Recovered 45 bbls
Source of Release Pressure Gauge	Date and Hour of Occurrence 10/15/09	Date and Hour of Discovery 10/15/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Trishia Bad Bear, Larry Johnson	
By Whom? Rick Wright	Date and Hour 10/15/09	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* A pressure gauge broke off of a pump. Replaced the gauge.		
Describe Area Affected and Cleanup Action Taken.* Spill is located off location to the west of the pad. Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. 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 federal, state, or local laws and/or regulations.		
Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor: 	
Title: Senior Project Manager, P.G.	Closure approved 3/26/2014. Original signed report from 2014 can be found under RP#. Uploading historical documentation to incident file.	
E-mail Address: ike.tavarez@tetrattech.com		
Date: 09/12/2014 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

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

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Robert McNeil
Address 600 West Illinois Avenue, Midland, Texas 79701	Telephone No. (432) 230-0077
Facility Name Pronghorn SWD #1	Facility Type Central Booster Station
Surface Owner: Federal	Mineral Owner
Lease No. (API#) 30-025-32735	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	19S	32E	330	North	1650	East	Lea

Latitude N 32.65220 ° Longitude W 103.71675°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 1500 bbls	Volume Recovered 1300 bbls
Source of Release 1x4 swedge	Date and Hour of Occurrence 11/20/09	Date and Hour of Discovery 11/20/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Paul Evans – BLM, Maxey Brown - OCD	
By Whom?	Date and Hour 11/20/09 3:38 pm, 4:37 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* A 1x4 swedge broke off the discharge of the pump going to the Pronghorn well. Replaced with a heavy duty metal swedge.		
Describe Area Affected and Cleanup Action Taken.* About 25% of the battery pad was covered with produced water. The majority of the produced water went off the location south of the battery into the pasture. Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. 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 federal, state, or local laws and/or regulations.		

OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:	
Printed Name: Ike Tavarez		
Title: Senior Project Manager, P.G.	Approval Date:	Expiration Date:
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 09/12/2014 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

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

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Robert McNeil
Address 600 West Illinois Avenue, Midland, Texas 79701	Telephone No. (432) 230-0077
Facility Name Pronghorn SWD #1	Facility Type Salt Water Disposal
Surface Owner: Federal	Mineral Owner
Lease No. (API#) 30-025-32735	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	24	19S	32E	330	North	1650	East	Lea

Latitude N 32.65220 ° Longitude W 103.71675 °

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 100 bbls	Volume Recovered 95 bbls
Source of Release Transfer Pump	Date and Hour of Occurrence 07/20/2011	Date and Hour of Discovery 07/20/2011 6:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking – OCD, Paul Evans – BLM	
By Whom? Josh Russo	Date and Hour 07/20/2011 5:14 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The check valve on the water transfer pump failed. The faulty check valve has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Initially 100 bbls were released from the transfer pump due to the faulty check valve. We were able to recover 95 bbls with a vacuum truck. The spill encompassed the area immediately around the transfer pump inside the battery, and to the west of the pad location in the pasture. All standing fluid has been removed and all contaminated soil on location has been hauled to appropriate disposal. Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. 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 federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor:	
Title: Senior Project Manager, P.G.	Approval Date:	Expiration Date:
E-mail Address: ike.tavarez@tetrattech.com	Conditions of Approval:	
Date: 09/12/2014 Phone: (432) 682-4559	Attached ☐	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Pronghorn SWD Facility (Pad)
Lea County, New Mexico

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

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

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

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

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

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

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

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

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

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System
- Eddy and Lea County Boundary

Appendix C

Soil Boring Log**Boring/Well:** SB-1**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/11/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red Clay
2-3'	1'	--	Red Clay with some sand
4-5'	1'	--	Damp Caliche (dirty)
6-7'	1'	--	Dry Caliche (clean)
10-11'	1'	--	Dry Caliche
15-16'	1'	--	Dry Caliche with some sand mix
20-21'	1'	--	Red sandy clay mix
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-2**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/11/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red Clay
2-3'	1'	--	Tan fine grain sand
4-5'	1'	--	Damp Caliche (dirty)
6-7'	1'	--	Sandy Caliche (90/10))
10-11'	1'	--	Sandy Calcihe (50/50)
15-16'	1'	--	Red sandy clay mix
20-21'	1'	--	Red sandy clay mix
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-3**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/11/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red sandy clay mix
2-3'	1'	--	Tan fine grain sand
4-5'	1'	--	Sandy Caliche (80/20)
6-7'	1'	--	Sandy Caliche (50/50)
10-11'	1'	--	Sandy Caliche (20/80)
15-16'	1'	--	Red sandy clay mix
20-21'	1'	--	Red sandy clay mix
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-4**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/11/10

DEPTH (Ft)	BEB (Ft)	OVN	SAMPLE DESCRIPTION
0-1'	1'	--	Red Clay
2-3'	1'	--	Red Clay
4-5'	1'	--	Sandy Caliche (60/40)
6-7'	1'	--	Sandy Caliche (50/50)
10-11'	1'	--	Red sandy clay mix
15-16'	1'	--	Red sandy clay mix
20-21'	1'	--	Red sandy clay mix
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-5**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/11/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red sandy clay
2-3'	1'	--	Red sandy clay
4-5'	1'	--	Tan clay and sand
6-7'	1'	--	Tan sandy clay with some caliche
10-11'	1'	--	Tan sandy clay with caliche
15-16'	1'	--	Tan sandy clay with caliche
20-21'	1'	--	Red sandy clay mix
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-6**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/11/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red sandy clay
2-3'	1'	--	Red sandy clay
4-5'	1'	--	Caliche
6-7'	1'	--	Caliche (dry)
10-11'	1'	--	Caliche (dry)
15-16'	1'	--	Red sandy clay with some caliche
20-21'	1'	--	Red sandy clay
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-7**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red/Brown sandy clay
2-3'	1'	--	Red/Brown sandy clay
4-5'	1'	--	Tan sandy clay
6-7'	1'	--	Tan sandy clay
10-11'	1'	--	Tan sandy clay with some caliche
15-16'	1'	--	Red sandy clay
20-21'	1'	--	Red sandy clay
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-8**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility
T19S R32E Sec. 24**Location:** Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVM	SAMPLE DESCRIPTION
0-1'	1'	--	Red clay
2-3'	1'	--	Tan sandy clay
4-5'	1'	--	Tan sandy clay
6-7'	1'	--	Tan sandy clay
10-11'	1'	--	Red sandy clay
15-16'	1'	--	Red sandy clay
20-21'	1'	--	Red sandy clay
25-26'	1'	--	Red clay (dry)
30-31'	1'	--	Red clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-9**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 41**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVN	SAMPLE DESCRIPTION
0-1'	1'	--	Brown sand
2-3'	1'	--	Brown sand
4-5'	1'	--	Brown wet sand with caliche (80/20)
6-7'	1'	--	Caliche
10-11'	1'	--	Caliche with fine grain tan sand
15-16'	1'	--	Red sandy clay
20-21'	1'	--	Red sandy clay
25-26'	1'	--	Red clay
30-31'	1'	--	Red clay (dry)
40-41'	1'	--	Red clay (dry)

Total Depth is 41 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-10**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVN	SAMPLE DESCRIPTION
0-1'	2'	--	Brown sand
2-3'	2'	--	Red/Brown sandy clay
4-5'	2'	--	Red sandy clay
6-7'	2'	--	Sandy clay with caliche (50/50)
10-11'	2'	--	Sandy clay with caliche (50/50)
15-16'	2'	--	Red sandy clay
20-21'	2'	--	Red clay
25-26'	2'	--	Red clay
30-31'	2'	--	Red clay with pieces of chert (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(-- Not Analyzed

Soil Boring Log**Boring/Well:** SB-11**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVN	SAMPLE DESCRIPTION
0-1'	2'	--	Brown sand
2-3'	2'	--	Brown sandy clay
4-5'	2'	--	Caliche
6-7'	2'	--	Tan sand with caliche
10-11'	2'	--	Red clay with caliche
15-16'	2'	--	Red clay with caliche
20-21'	2'	--	Red clay with caliche
25-26'	2'	--	Red clay
30-31'	2'	--	Red sandy clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-12**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVN	SAMPLE DESCRIPTION
0-1'	2'	--	Brown sand
2-3'	2'	--	Brown sandy clay
4-5'	2'	--	Caliche
6-7'	2'	--	Caliche
10-11'	2'	--	Red sandy clay with caliche
15-16'	2'	--	Red sandy clay
20-21'	2'	--	Red clay
25-26'	2'	--	Red clay
30-31'	2'	--	Red sandy clay (dry)

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(--) Not Analyzed

Soil Boring Log**Boring/Well:** SB-13**Project Number:** 114-6400374**Client:** COG**Site Location:** Pronghorn SWD Facility

T19S R32E Sec. 24

Location: Lea County, New Mexico**Total Depth** 31**Date Installed:** 01/12/10

DEPTH (Ft)	BEB (Ft)	OVN	SAMPLE DESCRIPTION
0-1'	2'	--	Brown sand
2-3'	2'	--	Brown sandy clay
4-5'	2'	--	Caliche
6-7'	2'	--	Tan sand with caliche
10-11'	2'	--	Tan sand with caliche
15-16'	2'	--	Red sandy clay
20-21'	2'	--	Red sandy clay
25-26'	2'	--	Red clay (dry)
30-31'	2'	--	Red clay (dry) with chert pieces

Total Depth is 31 feet

Groundwater was not encountered

BEB Below Excavation Bottom

(-- Not Analyzed

Borehole Log

Boring/ Well Name **BH-1**
Project Number **114-6401001**
Client **COG**
Site Name **Pronghorn SWD Facility**
Site Location **Eddy CO., NM**
Total Depth (ft) **50**
Date Installed **August 23, 2011**

Depth (Ft)	Field Chlorides	Sample Description
0-1'	1.89 ppt	Loose blow sand
3'	--	Soft silty caliche clay
5'	1.26 ppt	Sift silty sandy mix
7'	--	Soft loose reddish silty coarse sand
10'	1.87 ppt	Soft loose reddish silty coarse sand w/ limestone pieces 30-40mm
15'	--	SAA - Limestone pieces rounded - increase clay content
20'	3.91 ppt	Red sandy clay 20/80
25'	1.01 ppt	Stiff red sandy clay
30'	745 ppm	Medium dense sandy clay 80/20
40'	291 ppm	Very stiff red clay
50'	216 ppm	Very stiff red clay

Total Depth: 50' - Groundwater was not encountered
 (--) Not Analyzed

Borehole Log

Boring/ Well Name BH-2
Project Number 114-6401001
Client COG
Site Name Pronghorn SWD Facility
Site Location Eddy CO., NM
Total Depth (ft) 50
Date Installed August 23, 2011

Depth (Ft)	Field Chlorides	Sample Description
0-1'	2.11 ppt	Loose blow sand
3'	--	Medium stiff sandy clay 10/90
5'	1.84 ppt	Tan sandy silty caliche mix
7'	--	Tan sandy silty caliche mix
10'	3.02 ppt	Tan loose sand
15'	1.01 ppt	Stiff red sandy clay w/ limestone pieces 10-20mm
20'	625 ppm	Tan sandy caliche mix
25'	584 ppm	Red soft sandy clay 20/80
30'	712 ppm	Red soft sandy clay (lot more sand) 40/60
40'	215 ppm	Red medium stiff sandy clay 60/40
50'	176 ppm	Red stiff sandy clay

Total Depth: 50' - Groundwater was not encountered
(--) Not Analyzed

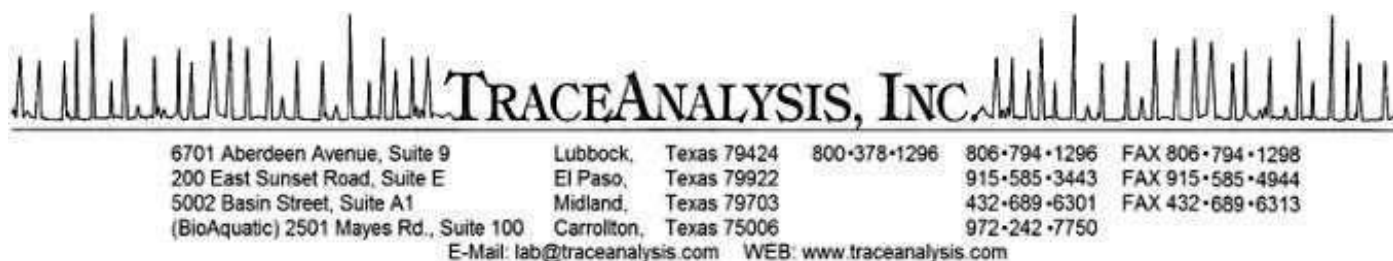
Borehole Log

Boring/ Well Name **BH-3**
Project Number **114-6401001**
Client **COG**
Site Name **Pronghorn SWD Facility**
Site Location **Eddy CO., NM**
Total Depth (ft) **56'**
Date Installed **August 23, 2011**

Depth (Ft)	Field Chlorides	Sample Description
0-1'	3.86 ppt	Loose blow sand
3'	--	Medium stiff sandy clay 10/90
5'	1.06 ppt	Tan sandy silty caliche mix
7'	--	Tan sandy silty caliche mix
10'	--	Tan sandy silty caliche mix
15'	1.31 ppt	Red medium stiff sandy clay
20'	--	Red sandy clay 20/80
25'	986 ppm	Red sandy clay
30'	378 ppm	Red sandy clay - more sand 50/50
40'	513 ppm	Red sandy clay - Limestone pieces 20-40mm
50'	260 ppm	Coarse sandy gravel dirty sand mix
60'	--	Not Collected - above gravel prevented collecting sample

Total Depth: 56' - Groundwater was not encountered
 (--) Not Analyzed

Appendix D



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavaréz
Tetra Tech
1901 N. Big Spring St.
Midland, TX, 79705

Report Date: May 7, 2014

Work Order: 14050221



Project Location: Lea Co, NM
Project Name: COG/Pronghorn Central SWD
Project Number: 112MC06426

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
362020	SB1 (South Side Wall)	soil	2014-04-11	00:00	2014-05-02
362021	SB1 (West Side Wall)	soil	2014-04-11	00:00	2014-05-02
362022	SB3 (West Side Wall)	soil	2014-04-14	00:00	2014-05-02
362023	SB4 (South Side Wall)	soil	2014-04-11	00:00	2014-05-02
362024	SB6 (East Side Wall)	soil	2014-04-11	00:00	2014-05-02
362025	SB10(East Side Wall)	soil	2014-04-14	00:00	2014-05-02
362026	SB10 (North Side Wall)	soil	2014-04-14	00:00	2014-05-02
362027	SB11 (West Side Wall)	soil	2014-04-11	00:00	2014-05-02
362028	SB12 (West Side Wall)	soil	2014-04-14	00:00	2014-05-02
362029	SB13 (South Side Wall)	soil	2014-04-14	00:00	2014-05-02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 13 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, slightly slanted style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative	4
Analytical Report	5
Sample 362020 (SB1 (South Side Wall))	5
Sample 362021 (SB1 (West Side Wall))	5
Sample 362022 (SB3 (West Side Wall))	5
Sample 362023 (SB4 (South Side Wall))	5
Sample 362024 (SB6 (East Side Wall))	6
Sample 362025 (SB10(East Side Wall))	6
Sample 362026 (SB10 (North Side Wall))	6
Sample 362027 (SB11 (West Side Wall))	7
Sample 362028 (SB12 (West Side Wall))	7
Sample 362029 (SB13 (South Side Wall))	7
Method Blanks	8
QC Batch 111737 - Method Blank (1)	8
Laboratory Control Spikes	9
QC Batch 111737 - LCS (1)	9
Matrix Spikes	10
QC Batch 111737 - MS (1)	10
Calibration Standards	11
QC Batch 111737 - ICV (1)	11
QC Batch 111737 - CCV (1)	11
Appendix	12
Report Definitions	12
Laboratory Certifications	12
Standard Flags	12
Attachments	12

Case Narrative

Samples for project COG/Pronghorn Central SWD were received by TraceAnalysis, Inc. on 2014-05-02 and assigned to work order 14050221. Samples for work order 14050221 were received intact at a temperature of 4.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	94480	2014-05-05 at 09:40	111737	2014-05-06 at 15:00

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14050221 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 5 of 13
Lea Co, NM

Analytical Report

Sample: 362020 - SB1 (South Side Wall)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111737	Date Analyzed:	2014-05-06
Prep Batch:	94480	Sample Preparation:	2014-05-05
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			697	mg/Kg	5	4.00

Sample: 362021 - SB1 (West Side Wall)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111737	Date Analyzed:	2014-05-06
Prep Batch:	94480	Sample Preparation:	2014-05-05
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			448	mg/Kg	5	4.00

Sample: 362022 - SB3 (West Side Wall)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111737	Date Analyzed:	2014-05-06
Prep Batch:	94480	Sample Preparation:	2014-05-05
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			100	mg/Kg	5	4.00

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 6 of 13
Lea Co, NM

Sample: 362023 - SB4 (South Side Wall)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-05-06	Analyzed By:	AK
QC Batch:	111737	Sample Preparation:	2014-05-05	Prepared By:	AK
Prep Batch:	94480				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			448	mg/Kg	5	4.00

Sample: 362024 - SB6 (East Side Wall)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-05-06	Analyzed By:	AK
QC Batch:	111737	Sample Preparation:	2014-05-05	Prepared By:	AK
Prep Batch:	94480				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			249	mg/Kg	5	4.00

Sample: 362025 - SB10(East Side Wall)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-05-06	Analyzed By:	AK
QC Batch:	111737	Sample Preparation:	2014-05-05	Prepared By:	AK
Prep Batch:	94480				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2190	mg/Kg	5	4.00

Sample: 362026 - SB10 (North Side Wall)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-05-06	Analyzed By:	AK
QC Batch:	111737	Sample Preparation:	2014-05-05	Prepared By:	AK
Prep Batch:	94480				

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 7 of 13
Lea Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2090	mg/Kg	5	4.00

Sample: 362027 - SB11 (West Side Wall)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 111737 Date Analyzed: 2014-05-06 Analyzed By: AK
Prep Batch: 94480 Sample Preparation: 2014-05-05 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1240	mg/Kg	5	4.00

Sample: 362028 - SB12 (West Side Wall)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 111737 Date Analyzed: 2014-05-06 Analyzed By: AK
Prep Batch: 94480 Sample Preparation: 2014-05-05 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			249	mg/Kg	5	4.00

Sample: 362029 - SB13 (South Side Wall)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 111737 Date Analyzed: 2014-05-06 Analyzed By: AK
Prep Batch: 94480 Sample Preparation: 2014-05-05 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			398	mg/Kg	5	4.00

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 8 of 13
Lea Co, NM

Method Blanks

Method Blank (1) QC Batch: 111737

QC Batch: 111737
Prep Batch: 94480

Date Analyzed: 2014-05-06
QC Preparation: 2014-05-05

Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 9 of 13
Lea Co, NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 111737
Prep Batch: 94480

Date Analyzed: 2014-05-06
QC Preparation: 2014-05-05

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	5	2500	<19.2	106	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 10 of 13
Lea Co, NM

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 362029

QC Batch: 111737
Prep Batch: 94480

Date Analyzed: 2014-05-06
QC Preparation: 2014-05-05

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3040	mg/Kg	5	2500	398	106	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3130	mg/Kg	5	2500	398	109	78.9 - 121	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 11 of 13
Lea Co, NM

Calibration Standards

Standard (ICV-1)

QC Batch: 111737				Date Analyzed: 2014-05-06			Analyzed By: AK	
Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2014-05-06

Standard (CCV-1)

QC Batch: 111737				Date Analyzed: 2014-05-06			Analyzed By: AK	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2014-05-06

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 12 of 13
Lea Co, NM

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

Report Date: May 7, 2014
112MC06426

Work Order: 14050221
COG/Pronghorn Central SWD

Page Number: 13 of 13
Lea Co, NM

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

Analysis Request of Chain of Custody Record



**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

Please fill out all copies - Laboratory retains yellow copy - Return Original copy to Istra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Report Date: May 7, 2014

Work Order: 14050221

Page Number: 1 of 2

Summary Report

Ike Tavaréz
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: May 7, 2014

Work Order: 14050221



Project Location: Lea Co, NM
Project Name: COG/Pronghorn Central SWD
Project Number: 112MC06426

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
362020	SB1 (South Side Wall)	soil	2014-04-11	00:00	2014-05-02
362021	SB1 (West Side Wall)	soil	2014-04-11	00:00	2014-05-02
362022	SB3 (West Side Wall)	soil	2014-04-14	00:00	2014-05-02
362023	SB4 (South Side Wall)	soil	2014-04-11	00:00	2014-05-02
362024	SB6 (East Side Wall)	soil	2014-04-11	00:00	2014-05-02
362025	SB10(East Side Wall)	soil	2014-04-14	00:00	2014-05-02
362026	SB10 (North Side Wall)	soil	2014-04-14	00:00	2014-05-02
362027	SB11 (West Side Wall)	soil	2014-04-11	00:00	2014-05-02
362028	SB12 (West Side Wall)	soil	2014-04-14	00:00	2014-05-02
362029	SB13 (South Side Wall)	soil	2014-04-14	00:00	2014-05-02

Sample: 362020 - SB1 (South Side Wall)

Param	Flag	Result	Units	RL
Chloride		697	mg/Kg	4

Sample: 362021 - SB1 (West Side Wall)

Param	Flag	Result	Units	RL
Chloride		448	mg/Kg	4

Sample: 362022 - SB3 (West Side Wall)

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: May 7, 2014

Work Order: 14050221

Page Number: 2 of 2

Param	Flag	Result	Units	RL
Chloride		100	mg/Kg	4

Sample: 362023 - SB4 (South Side Wall)

Param	Flag	Result	Units	RL
Chloride		448	mg/Kg	4

Sample: 362024 - SB6 (East Side Wall)

Param	Flag	Result	Units	RL
Chloride		249	mg/Kg	4

Sample: 362025 - SB10(East Side Wall)

Param	Flag	Result	Units	RL
Chloride		2190	mg/Kg	4

Sample: 362026 - SB10 (North Side Wall)

Param	Flag	Result	Units	RL
Chloride		2090	mg/Kg	4

Sample: 362027 - SB11 (West Side Wall)

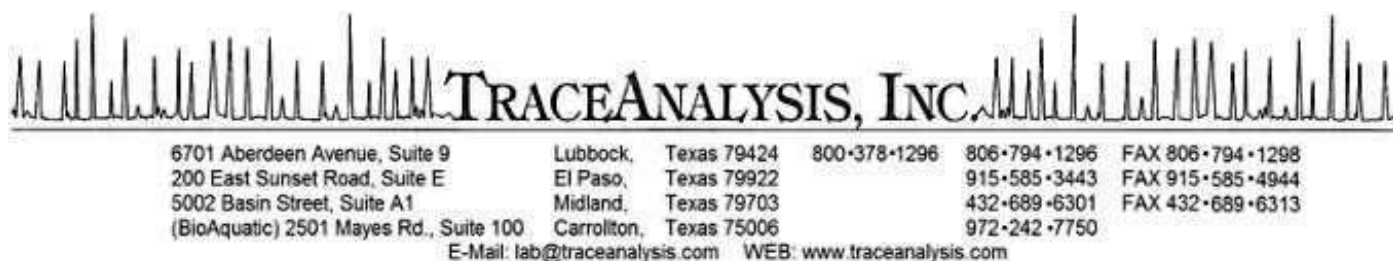
Param	Flag	Result	Units	RL
Chloride		1240	mg/Kg	4

Sample: 362028 - SB12 (West Side Wall)

Param	Flag	Result	Units	RL
Chloride		249	mg/Kg	4

Sample: 362029 - SB13 (South Side Wall)

Param	Flag	Result	Units	RL
Chloride		398	mg/Kg	4



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavaréz
Tetra Tech
1901 N. Big Spring St.
Midland, TX, 79705

Report Date: April 25, 2014

Work Order: 14042401



Project Location: Lea Co, NM
Project Name: COG/Pronghorn Central SWD
Project Number: 112MC06426

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
361030	BH-1 11-12'	soil	2014-04-23	00:00	2014-04-24
361031	BH-1 14-15'	soil	2014-04-23	00:00	2014-04-24
361032	BH-1 19-20'	soil	2014-04-23	00:00	2014-04-24
361033	BH-1 24-25'	soil	2014-04-23	00:00	2014-04-24
361034	BH-1 29-30'	soil	2014-04-23	00:00	2014-04-24
361035	BH-1 39-40'	soil	2014-04-23	00:00	2014-04-24
361036	BH-1 49-50'	soil	2014-04-23	00:00	2014-04-24
361037	BH-1 59-60'	soil	2014-04-23	00:00	2014-04-24
361038	BH-1 64-65'	soil	2014-04-23	00:00	2014-04-24
361045	BH-2 14-15'	soil	2014-04-23	00:00	2014-04-24
361046	BH-2 19-20'	soil	2014-04-23	00:00	2014-04-24
361047	BH-2 24-25'	soil	2014-04-23	00:00	2014-04-24
361048	BH-2 29-30'	soil	2014-04-23	00:00	2014-04-24
361049	BH-2 39-40'	soil	2014-04-23	00:00	2014-04-24
361050	BH-2 49-50'	soil	2014-04-23	00:00	2014-04-24
361051	BH-2 59-60'	soil	2014-04-23	00:00	2014-04-24
361052	BH-2 69-70'	soil	2014-04-23	00:00	2014-04-24
361053	BH-2 79-80'	soil	2014-04-23	00:00	2014-04-24

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
361054	BH-2 89-90'	soil	2014-04-23	00:00	2014-04-24
361055	BH-2 94-95'	soil	2014-04-23	00:00	2014-04-24
361061	BH-3 14-15'	soil	2014-04-23	00:00	2014-04-24
361062	BH-3 19-20'	soil	2014-04-23	00:00	2014-04-24
361063	BH-3 24-25'	soil	2014-04-23	00:00	2014-04-24
361064	BH-3 29-30'	soil	2014-04-23	00:00	2014-04-24
361065	BH-3 39-40'	soil	2014-04-23	00:00	2014-04-24
361066	BH-3 49-50'	soil	2014-04-23	00:00	2014-04-24

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 36 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative	5
Analytical Report	6
Sample 361030 (BH-1 11-12')	6
Sample 361031 (BH-1 14-15')	6
Sample 361032 (BH-1 19-20')	6
Sample 361033 (BH-1 24-25')	6
Sample 361034 (BH-1 29-30')	7
Sample 361035 (BH-1 39-40')	7
Sample 361036 (BH-1 49-50')	7
Sample 361037 (BH-1 59-60')	8
Sample 361038 (BH-1 64-65')	8
Sample 361045 (BH-2 14-15')	8
Sample 361046 (BH-2 19-20')	8
Sample 361047 (BH-2 24-25')	9
Sample 361048 (BH-2 29-30')	9
Sample 361049 (BH-2 39-40')	9
Sample 361050 (BH-2 49-50')	10
Sample 361051 (BH-2 59-60')	10
Sample 361052 (BH-2 69-70')	10
Sample 361053 (BH-2 79-80')	10
Sample 361054 (BH-2 89-90')	11
Sample 361055 (BH-2 94-95')	11
Sample 361061 (BH-3 14-15')	11
Sample 361062 (BH-3 19-20')	13
Sample 361063 (BH-3 24-25')	14
Sample 361064 (BH-3 29-30')	16
Sample 361065 (BH-3 39-40')	17
Sample 361066 (BH-3 49-50')	18
Method Blanks	21
QC Batch 111436 - Method Blank (1)	21
QC Batch 111446 - Method Blank (1)	21
QC Batch 111447 - Method Blank (1)	21
QC Batch 111448 - Method Blank (1)	21
QC Batch 111450 - Method Blank (1)	22
QC Batch 111460 - Method Blank (1)	22
QC Batch 111461 - Method Blank (1)	22
Laboratory Control Spikes	24
QC Batch 111436 - LCS (1)	24
QC Batch 111446 - LCS (1)	24
QC Batch 111447 - LCS (1)	24
QC Batch 111448 - LCS (1)	25
QC Batch 111450 - LCS (1)	25
QC Batch 111460 - LCS (1)	26

QC Batch 111461 - LCS (1)	26
QC Batch 111436 - MS (1)	27
QC Batch 111446 - MS (1)	27
QC Batch 111447 - MS (1)	28
QC Batch 111448 - MS (1)	28
QC Batch 111450 - MS (1)	28
QC Batch 111460 - MS (1)	29
QC Batch 111461 - MS (1)	29
Calibration Standards	31
QC Batch 111436 - CCV (1)	31
QC Batch 111436 - CCV (2)	31
QC Batch 111446 - ICV (1)	31
QC Batch 111446 - CCV (1)	31
QC Batch 111447 - ICV (1)	31
QC Batch 111447 - CCV (1)	32
QC Batch 111448 - ICV (1)	32
QC Batch 111448 - CCV (1)	32
QC Batch 111450 - ICV (1)	32
QC Batch 111450 - CCV (1)	33
QC Batch 111460 - CCV (1)	33
QC Batch 111460 - CCV (2)	33
QC Batch 111460 - CCV (3)	33
QC Batch 111461 - CCV (1)	34
QC Batch 111461 - CCV (2)	34
Appendix	35
Report Definitions	35
Laboratory Certifications	35
Standard Flags	35
Attachments	35

Case Narrative

Samples for project COG/Pronghorn Central SWD were received by TraceAnalysis, Inc. on 2014-04-24 and assigned to work order 14042401. Samples for work order 14042401 were received intact at a temperature of 3.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	94203	2014-04-24 at 10:47	111460	2014-04-25 at 08:05
Chloride (Titration)	SM 4500-Cl B	94202	2014-04-24 at 10:46	111446	2014-04-24 at 12:00
Chloride (Titration)	SM 4500-Cl B	94202	2014-04-24 at 10:46	111447	2014-04-24 at 15:35
Chloride (Titration)	SM 4500-Cl B	94202	2014-04-24 at 10:46	111448	2014-04-24 at 15:43
Chloride (Titration)	SM 4500-Cl B	94202	2014-04-24 at 10:46	111450	2014-04-24 at 16:01
TPH DRO - NEW	S 8015 D	94213	2014-04-24 at 11:30	111436	2014-04-24 at 12:45
TPH GRO	S 8015 D	94203	2014-04-24 at 10:47	111461	2014-04-25 at 08:15

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14042401 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 6 of 36
Lea Co, NM

Analytical Report

Sample: 361030 - BH-1 11-12'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111446	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			14400	mg/Kg	5	4.00

Sample: 361031 - BH-1 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111446	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9380	mg/Kg	5	4.00

Sample: 361032 - BH-1 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111446	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			10300	mg/Kg	5	4.00

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 7 of 36
Lea Co, NM

Sample: 361033 - BH-1 24-25'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111446	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			11200	mg/Kg	5	4.00

Sample: 361034 - BH-1 29-30'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111446	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4970	mg/Kg	5	4.00

Sample: 361035 - BH-1 39-40'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111446	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1150	mg/Kg	5	4.00

Sample: 361036 - BH-1 49-50'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111446	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 8 of 36
Lea Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7080	mg/Kg	5	4.00

Sample: 361037 - BH-1 59-60'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	111446	Date Analyzed:	2014-04-24	Analyzed By:	AK	
Prep Batch:	94202	Sample Preparation:	2014-04-24	Prepared By:	AK	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3550	mg/Kg	5	4.00

Sample: 361038 - BH-1 64-65'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	111446	Date Analyzed:	2014-04-24	Analyzed By:	AK	
Prep Batch:	94202	Sample Preparation:	2014-04-24	Prepared By:	AK	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			412	mg/Kg	5	4.00

Sample: 361045 - BH-2 14-15'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	111447	Date Analyzed:	2014-04-24	Analyzed By:	AK	
Prep Batch:	94202	Sample Preparation:	2014-04-24	Prepared By:	AK	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8410	mg/Kg	5	4.00

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 9 of 36
Lea Co, NM

Sample: 361046 - BH-2 19-20'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111447	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4200	mg/Kg	5	4.00

Sample: 361047 - BH-2 24-25'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111447	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5270	mg/Kg	5	4.00

Sample: 361048 - BH-2 29-30'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111447	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6990	mg/Kg	5	4.00

Sample: 361049 - BH-2 39-40'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	111447	Date Analyzed:	2014-04-24
Prep Batch:	94202	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	AK
		Prepared By:	AK

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 10 of 36
Lea Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7130	mg/Kg	5	4.00

Sample: 361050 - BH-2 49-50'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	111448	Date Analyzed:	2014-04-24	Analyzed By:	AK
Prep Batch:	94202	Sample Preparation:	2014-04-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9250	mg/Kg	5	4.00

Sample: 361051 - BH-2 59-60'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	111448	Date Analyzed:	2014-04-24	Analyzed By:	AK
Prep Batch:	94202	Sample Preparation:	2014-04-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5570	mg/Kg	5	4.00

Sample: 361052 - BH-2 69-70'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	111448	Date Analyzed:	2014-04-24	Analyzed By:	AK
Prep Batch:	94202	Sample Preparation:	2014-04-24	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5170	mg/Kg	5	4.00

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 11 of 36
Lea Co, NM

Sample: 361053 - BH-2 79-80'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111448	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2200	mg/Kg	5	4.00

Sample: 361054 - BH-2 89-90'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111448	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1460	mg/Kg	5	4.00

Sample: 361055 - BH-2 94-95'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111448	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 361061 - BH-3 14-15'

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2014-04-25	Analyzed By:	AK
QC Batch:	111460	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94203				

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 12 of 36
Lea Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.66	mg/Kg	1	2.00	83	70 - 130
4-Bromofluorobenzene (4-BFB)			1.49	mg/Kg	1	2.00	74	70 - 130

Sample: 361061 - BH-3 14-15'

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 111448 Date Analyzed: 2014-04-24 Analyzed By: AK
 Prep Batch: 94202 Sample Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7900	mg/Kg	5	4.00

Sample: 361061 - BH-3 14-15'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 111436 Date Analyzed: 2014-04-24 Analyzed By: RG
 Prep Batch: 94213 Sample Preparation: 2014-04-24 Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	70 - 130

Sample: 361061 - BH-3 14-15'

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 111461 Date Analyzed: 2014-04-25 Analyzed By: AK
 Prep Batch: 94203 Sample Preparation: 2014-04-24 Prepared By: AK

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 13 of 36
Lea Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.59	mg/Kg	1	2.00	80	70 - 130
4-Bromofluorobenzene (4-BFB)			1.42	mg/Kg	1	2.00	71	70 - 130

Sample: 361062 - BH-3 19-20'

Laboratory: Midland
Analysis: BTEX
QC Batch: 111460
Prep Batch: 94203

Analytical Method: S 8021B
Date Analyzed: 2014-04-25
Sample Preparation: 2014-04-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.68	mg/Kg	1	2.00	84	70 - 130

Sample: 361062 - BH-3 19-20'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 111448
Prep Batch: 94202

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-04-24
Sample Preparation: 2014-04-24

Prep Method: N/A
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4570	mg/Kg	5	4.00

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 14 of 36
Lea Co, NM

Sample: 361062 - BH-3 19-20'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	111436	Date Analyzed:	2014-04-24
Prep Batch:	94213	Sample Preparation:	2014-04-24
		Prep Method:	N/A
		Analyzed By:	RG
		Prepared By:	RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			115	mg/Kg	1	100	115	70 - 130

Sample: 361062 - BH-3 19-20'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	111461	Date Analyzed:	2014-04-25
Prep Batch:	94203	Sample Preparation:	2014-04-24
		Prep Method:	S 5035
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	70 - 130

Sample: 361063 - BH-3 24-25'

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	111460	Date Analyzed:	2014-04-25
Prep Batch:	94203	Sample Preparation:	2014-04-24
		Prep Method:	S 5035
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 15 of 36
Lea Co, NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	70 - 130

Sample: 361063 - BH-3 24-25'

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 111448 Date Analyzed: 2014-04-24 Analyzed By: AK
 Prep Batch: 94202 Sample Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3160	mg/Kg	5	4.00

Sample: 361063 - BH-3 24-25'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 111436 Date Analyzed: 2014-04-24 Analyzed By: RG
 Prep Batch: 94213 Sample Preparation: 2014-04-24 Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			107	mg/Kg	1	100	107	70 - 130

Sample: 361063 - BH-3 24-25'

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 111461 Date Analyzed: 2014-04-25 Analyzed By: AK
 Prep Batch: 94203 Sample Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 16 of 36
Lea Co, NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.61	mg/Kg	1	2.00	80	70 - 130

Sample: 361064 - BH-3 29-30'

Laboratory: Midland
Analysis: BTEX
QC Batch: 111460
Prep Batch: 94203

Analytical Method: S 8021B
Date Analyzed: 2014-04-25
Sample Preparation: 2014-04-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.72	mg/Kg	1	2.00	86	70 - 130

Sample: 361064 - BH-3 29-30'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 111448
Prep Batch: 94202

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-04-24
Sample Preparation: 2014-04-24

Prep Method: N/A
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			975	mg/Kg	5	4.00

Sample: 361064 - BH-3 29-30'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 111436
Prep Batch: 94213

Analytical Method: S 8015 D
Date Analyzed: 2014-04-24
Sample Preparation: 2014-04-24

Prep Method: N/A
Analyzed By: RG
Prepared By: RG

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 17 of 36
Lea Co, NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	161	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	133	mg/Kg	1	100	133	70 - 130

Sample: 361064 - BH-3 29-30'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 111461
Prep Batch: 94203

Analytical Method: S 8015 D
Date Analyzed: 2014-04-25
Sample Preparation: 2014-04-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	mg/Kg	1	2.00	86	70 - 130

Sample: 361065 - BH-3 39-40'

Laboratory: Midland
Analysis: BTEX
QC Batch: 111460
Prep Batch: 94203

Analytical Method: S 8021B
Date Analyzed: 2014-04-25
Sample Preparation: 2014-04-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.56	mg/Kg	1	2.00	78	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 18 of 36
Lea Co, NM

Sample: 361065 - BH-3 39-40'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2014-04-24	Analyzed By:	AK
QC Batch:	111450	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94202				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			48.0	mg/Kg	5	4.00

Sample: 361065 - BH-3 39-40'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2014-04-24	Analyzed By:	RG
QC Batch:	111436	Sample Preparation:	2014-04-24	Prepared By:	RG
Prep Batch:	94213				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	180	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			122	mg/Kg	1	100	122	70 - 130

Sample: 361065 - BH-3 39-40'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2014-04-25	Analyzed By:	AK
QC Batch:	111461	Sample Preparation:	2014-04-24	Prepared By:	AK
Prep Batch:	94203				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.72	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.65	mg/Kg	1	2.00	82	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 19 of 36
Lea Co, NM

Sample: 361066 - BH-3 49-50'

Laboratory: Midland

Analysis: BTEX

QC Batch: 111460

Prep Batch: 94203

Analytical Method: S 8021B

Date Analyzed: 2014-04-25

Sample Preparation: 2014-04-24

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.61	mg/Kg	1	2.00	80	70 - 130

Sample: 361066 - BH-3 49-50'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 111450

Prep Batch: 94202

Analytical Method: SM 4500-Cl B

Date Analyzed: 2014-04-24

Sample Preparation: 2014-04-24

Prep Method: N/A

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			827	mg/Kg	5	4.00

Sample: 361066 - BH-3 49-50'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 111436

Prep Batch: 94213

Analytical Method: S 8015 D

Date Analyzed: 2014-04-24

Sample Preparation: 2014-04-24

Prep Method: N/A

Analyzed By: RG

Prepared By: RG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			105	mg/Kg	1	100	105	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 20 of 36
Lea Co, NM

Sample: 361066 - BH-3 49-50'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 111461
Prep Batch: 94203

Analytical Method: S 8015 D
Date Analyzed: 2014-04-25
Sample Preparation: 2014-04-24

Prep Method: S 5035
Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.54	mg/Kg	1	2.00	77	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 21 of 36
Lea Co, NM

Method Blanks

Method Blank (1) QC Batch: 111436

QC Batch: 111436 Date Analyzed: 2014-04-24 Analyzed By: RG
Prep Batch: 94213 QC Preparation: 2014-04-24 Prepared By: RG

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			121	mg/Kg	1	100	121	70 - 130

Method Blank (1) QC Batch: 111446

QC Batch: 111446 Date Analyzed: 2014-04-24 Analyzed By: AK
Prep Batch: 94202 QC Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 111447

QC Batch: 111447 Date Analyzed: 2014-04-24 Analyzed By: AK
Prep Batch: 94202 QC Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 22 of 36
Lea Co, NM

Method Blank (1) QC Batch: 111448

QC Batch: 111448 Date Analyzed: 2014-04-24 Analyzed By: AK
Prep Batch: 94202 QC Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 111450

QC Batch: 111450 Date Analyzed: 2014-04-24 Analyzed By: AK
Prep Batch: 94202 QC Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 111460

QC Batch: 111460 Date Analyzed: 2014-04-25 Analyzed By: AK
Prep Batch: 94203 QC Preparation: 2014-04-24 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00533	mg/Kg	0.02
Toluene		1	<0.00645	mg/Kg	0.02
Ethylbenzene		1	<0.0116	mg/Kg	0.02
Xylene		1	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.74	mg/Kg	1	2.00	87	70 - 130

Method Blank (1) QC Batch: 111461

QC Batch: 111461 Date Analyzed: 2014-04-25 Analyzed By: AK
Prep Batch: 94203 QC Preparation: 2014-04-24 Prepared By: AK

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 23 of 36
Lea Co, NM

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			1.65	mg/Kg	1	2.00	82	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 24 of 36
Lea Co, NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 111436
Prep Batch: 94213

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: RG
Prepared By: RG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	212	mg/Kg	1	250	<7.41	85	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	226	mg/Kg	1	250	<7.41	90	70 - 130	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	112	113	mg/Kg	1	100	112	113	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 111446
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2580	mg/Kg	5	2500	<19.2	103	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 25 of 36
Lea Co, NM

Laboratory Control Spike (LCS-1)

QC Batch: 111447
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2480	mg/Kg	5	2500	<19.2	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2540	mg/Kg	5	2500	<19.2	102	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 111448
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2480	mg/Kg	5	2500	<19.2	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2530	mg/Kg	5	2500	<19.2	101	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 111450
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2560	mg/Kg	5	2500	<19.2	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 26 of 36
Lea Co, NM

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2490	mg/Kg	5	2500	<19.2	100	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 111460
Prep Batch: 94203

Date Analyzed: 2014-04-25
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.54	mg/Kg	1	2.00	<0.00533	77	70 - 130
Toluene		1	1.60	mg/Kg	1	2.00	<0.00645	80	70 - 130
Ethylbenzene		1	1.69	mg/Kg	1	2.00	<0.0116	84	70 - 130
Xylene		1	5.07	mg/Kg	1	6.00	<0.00874	84	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.65	mg/Kg	1	2.00	<0.00533	82	70 - 130	7	20
Toluene		1	1.69	mg/Kg	1	2.00	<0.00645	84	70 - 130	6	20
Ethylbenzene		1	1.79	mg/Kg	1	2.00	<0.0116	90	70 - 130	6	20
Xylene		1	5.38	mg/Kg	1	6.00	<0.00874	90	70 - 130	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCSD Result	LCSD Result	Units	Dil.	Spike Amount	LCSD Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.89	1.99	mg/Kg	1	2.00	94	100	70 - 130
4-Bromofluorobenzene (4-BFB)	1.61	1.63	mg/Kg	1	2.00	80	82	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 111461
Prep Batch: 94203

Date Analyzed: 2014-04-25
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.4	mg/Kg	1	20.0	<2.32	82	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 27 of 36
Lea Co, NM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	16.3	mg/Kg	1	20.0	<2.32	82	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.88	1.82	mg/Kg	1	2.00	94	91	70 - 130
4-Bromofluorobenzene (4-BFB)	1.70	1.71	mg/Kg	1	2.00	85	86	70 - 130

Matrix Spike (MS-1) Spiked Sample: 361061

QC Batch: 111436
Prep Batch: 94213

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: RG
Prepared By: RG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	230	mg/Kg	1	250	<7.41	92	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	234	mg/Kg	1	250	<7.41	94	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	117	116	mg/Kg	1	100	117	116	70 - 130

Matrix Spike (MS-1) Spiked Sample: 361038

QC Batch: 111446
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3070	mg/Kg	5	2500	412	106	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 28 of 36
Lea Co, NM

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3280	mg/Kg	5	2500	412	115	78.9 - 121	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 361049

QC Batch: 111447
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9480	mg/Kg	5	2500	7130	94	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			9640	mg/Kg	5	2500	7130	100	78.9 - 121	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 361064

QC Batch: 111448
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3730	mg/Kg	5	2500	975	110	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3510	mg/Kg	5	2500	975	101	78.9 - 121	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 29 of 36
Lea Co, NM

Matrix Spike (MS-1) Spiked Sample: 360768

QC Batch: 111450
Prep Batch: 94202

Date Analyzed: 2014-04-24
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2950	mg/Kg	5	2500	163	111	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2820	mg/Kg	5	2500	163	106	78.9 - 121	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 361066

QC Batch: 111460
Prep Batch: 94203

Date Analyzed: 2014-04-25
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.62	mg/Kg	1	2.00	<0.00533	81	70 - 130
Toluene		1	1.66	mg/Kg	1	2.00	<0.00645	83	70 - 130
Ethylbenzene		1	1.76	mg/Kg	1	2.00	<0.0116	88	70 - 130
Xylene		1	5.31	mg/Kg	1	6.00	<0.00874	88	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.61	mg/Kg	1	2.00	<0.00533	80	70 - 130	1	20
Toluene		1	1.64	mg/Kg	1	2.00	<0.00645	82	70 - 130	1	20
Ethylbenzene		1	1.77	mg/Kg	1	2.00	<0.0116	88	70 - 130	1	20
Xylene		1	5.33	mg/Kg	1	6.00	<0.00874	89	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.99	1.94	mg/Kg	1	2	100	97	70 - 130
4-Bromofluorobenzene (4-BFB)	1.69	1.72	mg/Kg	1	2	84	86	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 30 of 36
Lea Co, NM

Matrix Spike (MS-1) Spiked Sample: 361066

QC Batch: 111461
Prep Batch: 94203

Date Analyzed: 2014-04-25
QC Preparation: 2014-04-24

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.5	mg/Kg	1	20.0	<2.32	82	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	16.0	mg/Kg	1	20.0	<2.32	80	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.89	1.80	mg/Kg	1	2	94	90	70 - 130
4-Bromofluorobenzene (4-BFB)	1.84	1.68	mg/Kg	1	2	92	84	70 - 130

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 31 of 36
Lea Co, NM

Calibration Standards

Standard (CCV-1)

QC Batch: 111436

Date Analyzed: 2014-04-24

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	210	84	80 - 120	2014-04-24

Standard (CCV-2)

QC Batch: 111436

Date Analyzed: 2014-04-24

Analyzed By: RG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	208	83	80 - 120	2014-04-24

Standard (ICV-1)

QC Batch: 111446

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2014-04-24

Standard (CCV-1)

QC Batch: 111446

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.0	98	85 - 115	2014-04-24

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 32 of 36
Lea Co, NM

Standard (ICV-1)

QC Batch: 111447

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-04-24

Standard (CCV-1)

QC Batch: 111447

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-04-24

Standard (ICV-1)

QC Batch: 111448

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-04-24

Standard (CCV-1)

QC Batch: 111448

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2014-04-24

Standard (ICV-1)

QC Batch: 111450

Date Analyzed: 2014-04-24

Analyzed By: AK

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 33 of 36
Lea Co, NM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2014-04-24

Standard (CCV-1)

QC Batch: 111450

Date Analyzed: 2014-04-24

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.0	98	85 - 115	2014-04-24

Standard (CCV-1)

QC Batch: 111460

Date Analyzed: 2014-04-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0877	88	80 - 120	2014-04-25
Toluene		1	mg/kg	0.100	0.0880	88	80 - 120	2014-04-25
Ethylbenzene		1	mg/kg	0.100	0.0886	89	80 - 120	2014-04-25
Xylene		1	mg/kg	0.300	0.269	90	80 - 120	2014-04-25

Standard (CCV-2)

QC Batch: 111460

Date Analyzed: 2014-04-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0900	90	80 - 120	2014-04-25
Toluene		1	mg/kg	0.100	0.0893	89	80 - 120	2014-04-25
Ethylbenzene		1	mg/kg	0.100	0.0889	89	80 - 120	2014-04-25
Xylene		1	mg/kg	0.300	0.265	88	80 - 120	2014-04-25

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 34 of 36
Lea Co, NM

Standard (CCV-3)

QC Batch: 111460

Date Analyzed: 2014-04-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0893	89	80 - 120	2014-04-25
Toluene		1	mg/kg	0.100	0.0887	89	80 - 120	2014-04-25
Ethylbenzene		1	mg/kg	0.100	0.0867	87	80 - 120	2014-04-25
Xylene		1	mg/kg	0.300	0.260	87	80 - 120	2014-04-25

Standard (CCV-1)

QC Batch: 111461

Date Analyzed: 2014-04-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.965	96	80 - 120	2014-04-25

Standard (CCV-2)

QC Batch: 111461

Date Analyzed: 2014-04-25

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.882	88	80 - 120	2014-04-25

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 35 of 36
Lea Co, NM

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-13-7	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

Report Date: April 25, 2014
112MC06426

Work Order: 14042401
COG/Pronghorn Central SWD

Page Number: 36 of 36
Lea Co, NM

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

14042401

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 5

ANALYSIS REQUEST

(Circle or Specify Method No.)

**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: 114 Tovariz		PRESERVATIVE METHOD	
PROJECT NO.: 112MCO424		PROJECT NAME: Progen Central 300		☐ HCL ☒ HNO3 ☒ ICE ☐ NONE	
LAB I.D. NUMBER		DATE		TIME	
045		4/23		5	
046		1		19-20	
047		1		24-25	
048		1		29-30	
049		1		39-40	
050		1		49-50	
051		1		59-100	
052		1		109-70	
053		1		79-80	
054		1		89-90	
055		1		99-100	
056		1		109-70	
057		1		79-80	
058		1		89-90	
059		1		99-100	
060		1		109-70	
061		1		79-80	
062		1		89-90	
063		1		99-100	
064		1		109-70	
065		1		79-80	
066		1		89-90	
067		1		99-100	
068		1		109-70	
069		1		79-80	
070		1		89-90	
071		1		99-100	
072		1		109-70	
073		1		79-80	
074		1		89-90	
075		1		99-100	
076		1		109-70	
077		1		79-80	
078		1		89-90	
079		1		99-100	
080		1		109-70	
081		1		79-80	
082		1		89-90	
083		1		99-100	
084		1		109-70	
085		1		79-80	
086		1		89-90	
087		1		99-100	
088		1		109-70	
089		1		79-80	
090		1		89-90	
091		1		99-100	
092		1		109-70	
093		1		79-80	
094		1		89-90	
095		1		99-100	
096		1		109-70	
097		1		79-80	
098		1		89-90	
099		1		99-100	
100		1		109-70	
101		1		79-80	
102		1		89-90	
103		1		99-100	
104		1		109-70	
105		1		79-80	
106		1		89-90	
107		1		99-100	
108		1		109-70	
109		1		79-80	
110		1		89-90	
111		1		99-100	
112		1		109-70	
113		1		79-80	
114		1		89-90	
115		1		99-100	
116		1		109-70	
117		1		79-80	
118		1		89-90	
119		1		99-100	
120		1		109-70	
121		1		79-80	
122		1		89-90	
123		1		99-100	
124		1		109-70	
125		1		79-80	
126		1		89-90	
127		1		99-100	
128		1		109-70	
129		1		79-80	
130		1		89-90	
131		1		99-100	
132		1		109-70	
133		1		79-80	
134		1		89-90	
135		1		99-100	
136		1		109-70	
137		1		79-80	
138		1		89-90	
139		1		99-100	
140		1		109-70	
141		1		79-80	
142		1		89-90	
143		1		99-100	
144		1		109-70	
145		1		79-80	
146		1		89-90	
147		1		99-100	
148		1		109-70	
149		1		79-80	
150		1		89-90	
151		1		99-100	
152		1		109-70	
153		1		79-80	
154		1		89-90	
155		1		99-100	
156		1		109-70	
157		1		79-80	
158		1		89-90	
159		1		99-100	
160		1		109-70	
161		1		79-80	
162		1		89-90	
163		1		99-100	
164		1		109-70	
165		1		79-80	
166		1		89-90	
167		1		99-100	
168		1		109-70	
169		1		79-80	
170		1		89-90	
171		1		99-100	
172		1		109-70	
173		1		79-80	
174		1		89-90	
175		1		99-100	
176		1		109-70	
177		1		79-80	
178		1		89-90	
179		1		99-100	
180		1		109-70	
181		1		79-80	
182		1		89-90	
183		1		99-100	
184		1		109-70	
185		1		79-80	
186		1		89-90	
187		1		99-100	
188		1		109-70	
189		1		79-80	
190		1		89-90	
191		1		99-100	
192		1		109-70	
193		1		79-80	
194		1		89-90	
195		1		99-100	
196		1		109-70	
197		1		79-80	
198		1		89-90	
199		1		99-100	
200		1		109-70	
201		1		79-80	
202		1		89-90	
203		1		99-100	
204		1		109-70	
205		1		79-80	
206		1		89-90	
207		1		99-100	
208		1		109-70	
209		1		79-80	
210		1		89-90	
211		1		99-100	
212		1		109-70	
213		1		79-80	
214		1		89-90	
215		1		99-100	
216		1		109-70	
217		1		79-80	
218		1		89-90	
219		1		99-100	
220		1		109-70	
221		1		79-80	
222		1		89-90	
223		1		99-100	
224		1		109-70	
225		1		79-80	
226		1		89-90	
227		1		99-100	
228		1		109-70	
229		1		79-80	
230		1		89-90	
231		1		99-100	
232		1		109-70	
233		1		79-80	
234		1		89-90	
235		1		99-100	
236		1		109-70	
237		1		79-80	
238		1		89-90	
239		1		99-100	
240		1		109-70	
241		1		79-80	
242		1		89-90	
243		1		99-100	
244		1		109-70	
245		1		79-80	
246		1		89-90	
247		1		99-100	
248		1		109-70	
249		1		79-80	
250		1		89-90	
251		1		99-100	
252		1		109-70	
253		1		79-80	
254		1		89-90	
255		1		99-100	
256		1		109-70	
257		1		79-80	
258		1		89-90	
259		1		99-100	
260		1		109-70	
261		1		79-80	
262		1		89-90	
263		1		99-100	
264		1		109-70	
265		1		79-80	
266		1		89-90	
267		1		99-100	
268		1		109-70	
269		1		79-80	
270		1		89-90	
271		1		99-100	
272		1		109-70	
273		1		79-80	
274		1		89-90	
275		1		99-100	
276		1		109-70	
277		1		79-80	
278		1		89-90	
279		1		99-100	
280		1		109-70	
281		1		79-80	
282		1		89-90	
283		1		99-100	
284		1		109-70	
285		1		79-80	
286		1		89-90	
287		1		99-100	
288		1		109-70	
289		1		79-80	
290		1		89-90	
291		1		99-100	
292		1		109-70	
293		1		79-80	
294		1		89-90	
295		1		99-100	
296		1		109-70	
297		1		79-80	
298		1		89-90	
299		1		99-100	
300		1		109-70	
301		1		79-80	
302		1		89-90	
303		1		99-100	
304		1		109-70	
305		1		79-80	
306		1		89-90	
307		1		99-100	
308		1		109-70	
309		1		79-80	
310		1		89-90	
311		1		99-100	
312		1		109-70	
313		1		79-80	

Analysis Request of Chain of Custody Record

PAGE: 24 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: C04		SITE MANAGER: 1ko Javarez	
PROJECT NO.: 112MCO6426		PROJECT NAME: Pronghorn Central SWO	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
	2014		
0554/23			94-95
056			99-100
051			BH-3 0-1 (Hold)
058			2-3 (Hold)
059			4-5 (Hold)
060			6-7 (Hold)
061			9-10 (Hold)
062			14-15
063			19-20
064			24-25

PRESERVATIVE METHOD	
HCL	
HNO3	
ICE	
NONE	

PAH 8270	
RCRA Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Metals Ag As Ba Cd Yr Pd Hg Se	
TCLP Semi Volatiles	
RCI	
GC/MS Vol. 8240/8260/624	
GC/MS Semi. Vol. 8270/625	
PCB's 8080/608	
Pest. 808/608	
Chloride	
Gamma Spec.	
Alpha Beta (Air)	
PLM (Asbestos)	
Major Anions/Cations, pH, TDS	

RELINQUISHED BY: (Signature)	Date: 4/12/14	RECEIVED BY: (Signature)	Date: 4/12/14
RELINQUISHED BY: (Signature)	Date: 4/12/14	RECEIVED BY: (Signature)	Date: 4/12/14
RELINQUISHED BY: (Signature)	Date: 4/12/14	RECEIVED BY: (Signature)	Date: 4/12/14
RECEIVING LABORATORY:		RECEIVED BY: (Signature)	Date: 4/12/14
ADDRESS:		RECEIVED BY: (Signature)	Date: 4/12/14
CITY:		RECEIVED BY: (Signature)	Date: 4/12/14
STATE:		RECEIVED BY: (Signature)	Date: 4/12/14
PHONE:		RECEIVED BY: (Signature)	Date: 4/12/14
ZIP:		RECEIVED BY: (Signature)	Date: 4/12/14

SAMPLE CONDITION WHEN RECEIVED:	
340	

REMARKS:	
Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.	

nd RUSH

Report Date: April 25, 2014

Work Order: 14042401

Page Number: 1 of 5

Summary Report

Ike Tavaréz
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: April 25, 2014

Work Order: 14042401



Project Location: Lea Co, NM
Project Name: COG/Pronghorn Central SWD
Project Number: 112MC06426

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
361030	BH-1 11-12'	soil	2014-04-23	00:00	2014-04-24
361031	BH-1 14-15'	soil	2014-04-23	00:00	2014-04-24
361032	BH-1 19-20'	soil	2014-04-23	00:00	2014-04-24
361033	BH-1 24-25'	soil	2014-04-23	00:00	2014-04-24
361034	BH-1 29-30'	soil	2014-04-23	00:00	2014-04-24
361035	BH-1 39-40'	soil	2014-04-23	00:00	2014-04-24
361036	BH-1 49-50'	soil	2014-04-23	00:00	2014-04-24
361037	BH-1 59-60'	soil	2014-04-23	00:00	2014-04-24
361038	BH-1 64-65'	soil	2014-04-23	00:00	2014-04-24
361045	BH-2 14-15'	soil	2014-04-23	00:00	2014-04-24
361046	BH-2 19-20'	soil	2014-04-23	00:00	2014-04-24
361047	BH-2 24-25'	soil	2014-04-23	00:00	2014-04-24
361048	BH-2 29-30'	soil	2014-04-23	00:00	2014-04-24
361049	BH-2 39-40'	soil	2014-04-23	00:00	2014-04-24
361050	BH-2 49-50'	soil	2014-04-23	00:00	2014-04-24
361051	BH-2 59-60'	soil	2014-04-23	00:00	2014-04-24
361052	BH-2 69-70'	soil	2014-04-23	00:00	2014-04-24
361053	BH-2 79-80'	soil	2014-04-23	00:00	2014-04-24
361054	BH-2 89-90'	soil	2014-04-23	00:00	2014-04-24
361055	BH-2 94-95'	soil	2014-04-23	00:00	2014-04-24
361061	BH-3 14-15'	soil	2014-04-23	00:00	2014-04-24
361062	BH-3 19-20'	soil	2014-04-23	00:00	2014-04-24
361063	BH-3 24-25'	soil	2014-04-23	00:00	2014-04-24
361064	BH-3 29-30'	soil	2014-04-23	00:00	2014-04-24
361065	BH-3 39-40'	soil	2014-04-23	00:00	2014-04-24
361066	BH-3 49-50'	soil	2014-04-23	00:00	2014-04-24

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: April 25, 2014

Work Order: 14042401

Page Number: 2 of 5

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
361061 - BH-3 14-15'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
361062 - BH-3 19-20'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
361063 - BH-3 24-25'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
361064 - BH-3 29-30'	<0.0200	<0.0200	<0.0200	<0.0200	161	<4.00
361065 - BH-3 39-40'	<0.0200	<0.0200	<0.0200	<0.0200	180	<4.00
361066 - BH-3 49-50'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00

Sample: 361030 - BH-1 11-12'

Param	Flag	Result	Units	RL
Chloride		14400	mg/Kg	4

Sample: 361031 - BH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		9380	mg/Kg	4

Sample: 361032 - BH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		10300	mg/Kg	4

Sample: 361033 - BH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4

Sample: 361034 - BH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		4970	mg/Kg	4

Sample: 361035 - BH-1 39-40'

Param	Flag	Result	Units	RL
Chloride		1150	mg/Kg	4

Sample: 361036 - BH-1 49-50'

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: April 25, 2014

Work Order: 14042401

Page Number: 3 of 5

Param	Flag	Result	Units	RL
Chloride		7080	mg/Kg	4

Sample: 361037 - BH-1 59-60'

Param	Flag	Result	Units	RL
Chloride		3550	mg/Kg	4

Sample: 361038 - BH-1 64-65'

Param	Flag	Result	Units	RL
Chloride		412	mg/Kg	4

Sample: 361045 - BH-2 14-15'

Param	Flag	Result	Units	RL
Chloride		8410	mg/Kg	4

Sample: 361046 - BH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		4200	mg/Kg	4

Sample: 361047 - BH-2 24-25'

Param	Flag	Result	Units	RL
Chloride		5270	mg/Kg	4

Sample: 361048 - BH-2 29-30'

Param	Flag	Result	Units	RL
Chloride		6990	mg/Kg	4

Sample: 361049 - BH-2 39-40'

Param	Flag	Result	Units	RL
Chloride		7130	mg/Kg	4

Report Date: April 25, 2014

Work Order: 14042401

Page Number: 4 of 5

Sample: 361050 - BH-2 49-50'

Param	Flag	Result	Units	RL
Chloride		9250	mg/Kg	4

Sample: 361051 - BH-2 59-60'

Param	Flag	Result	Units	RL
Chloride		5570	mg/Kg	4

Sample: 361052 - BH-2 69-70'

Param	Flag	Result	Units	RL
Chloride		5170	mg/Kg	4

Sample: 361053 - BH-2 79-80'

Param	Flag	Result	Units	RL
Chloride		2200	mg/Kg	4

Sample: 361054 - BH-2 89-90'

Param	Flag	Result	Units	RL
Chloride		1460	mg/Kg	4

Sample: 361055 - BH-2 94-95'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 361061 - BH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		7900	mg/Kg	4

Sample: 361062 - BH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		4570	mg/Kg	4

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: April 25, 2014

Work Order: 14042401

Page Number: 5 of 5

Sample: 361063 - BH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		3160	mg/Kg	4

Sample: 361064 - BH-3 29-30'

Param	Flag	Result	Units	RL
Chloride		975	mg/Kg	4

Sample: 361065 - BH-3 39-40'

Param	Flag	Result	Units	RL
Chloride		48.0	mg/Kg	4

Sample: 361066 - BH-3 49-50'

Param	Flag	Result	Units	RL
Chloride		827	mg/Kg	4

Report Date: April 25, 2014

Work Order: 14042401

Page Number: 1 of 5

Summary Report

Jeanne Fitch
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: April 25, 2014

Work Order: 14042401



Project Location: Lea Co, NM
Project Name: COG/Pronghorn Central SWD
Project Number: 112MC06426

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
361030	BH-1 11-12'	soil	2014-04-23	00:00	2014-04-24
361031	BH-1 14-15'	soil	2014-04-23	00:00	2014-04-24
361032	BH-1 19-20'	soil	2014-04-23	00:00	2014-04-24
361033	BH-1 24-25'	soil	2014-04-23	00:00	2014-04-24
361034	BH-1 29-30'	soil	2014-04-23	00:00	2014-04-24
361035	BH-1 39-40'	soil	2014-04-23	00:00	2014-04-24
361036	BH-1 49-50'	soil	2014-04-23	00:00	2014-04-24
361037	BH-1 59-60'	soil	2014-04-23	00:00	2014-04-24
361038	BH-1 64-65'	soil	2014-04-23	00:00	2014-04-24
361045	BH-2 14-15'	soil	2014-04-23	00:00	2014-04-24
361046	BH-2 19-20'	soil	2014-04-23	00:00	2014-04-24
361047	BH-2 24-25'	soil	2014-04-23	00:00	2014-04-24
361048	BH-2 29-30'	soil	2014-04-23	00:00	2014-04-24
361049	BH-2 39-40'	soil	2014-04-23	00:00	2014-04-24
361050	BH-2 49-50'	soil	2014-04-23	00:00	2014-04-24
361051	BH-2 59-60'	soil	2014-04-23	00:00	2014-04-24
361052	BH-2 69-70'	soil	2014-04-23	00:00	2014-04-24
361053	BH-2 79-80'	soil	2014-04-23	00:00	2014-04-24
361054	BH-2 89-90'	soil	2014-04-23	00:00	2014-04-24
361055	BH-2 94-95'	soil	2014-04-23	00:00	2014-04-24
361061	BH-3 14-15'	soil	2014-04-23	00:00	2014-04-24
361062	BH-3 19-20'	soil	2014-04-23	00:00	2014-04-24
361063	BH-3 24-25'	soil	2014-04-23	00:00	2014-04-24
361064	BH-3 29-30'	soil	2014-04-23	00:00	2014-04-24
361065	BH-3 39-40'	soil	2014-04-23	00:00	2014-04-24
361066	BH-3 49-50'	soil	2014-04-23	00:00	2014-04-24

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: April 25, 2014

Work Order: 14042401

Page Number: 2 of 5

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
361061 - BH-3 14-15'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
361062 - BH-3 19-20'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
361063 - BH-3 24-25'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
361064 - BH-3 29-30'	<0.0200	<0.0200	<0.0200	<0.0200	161	<4.00
361065 - BH-3 39-40'	<0.0200	<0.0200	<0.0200	<0.0200	180	<4.00
361066 - BH-3 49-50'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00

Sample: 361030 - BH-1 11-12'

Param	Flag	Result	Units	RL
Chloride		14400	mg/Kg	4

Sample: 361031 - BH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		9380	mg/Kg	4

Sample: 361032 - BH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		10300	mg/Kg	4

Sample: 361033 - BH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4

Sample: 361034 - BH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		4970	mg/Kg	4

Sample: 361035 - BH-1 39-40'

Param	Flag	Result	Units	RL
Chloride		1150	mg/Kg	4

Sample: 361036 - BH-1 49-50'

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: April 25, 2014

Work Order: 14042401

Page Number: 3 of 5

Param	Flag	Result	Units	RL
Chloride		7080	mg/Kg	4

Sample: 361037 - BH-1 59-60'

Param	Flag	Result	Units	RL
Chloride		3550	mg/Kg	4

Sample: 361038 - BH-1 64-65'

Param	Flag	Result	Units	RL
Chloride		412	mg/Kg	4

Sample: 361045 - BH-2 14-15'

Param	Flag	Result	Units	RL
Chloride		8410	mg/Kg	4

Sample: 361046 - BH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		4200	mg/Kg	4

Sample: 361047 - BH-2 24-25'

Param	Flag	Result	Units	RL
Chloride		5270	mg/Kg	4

Sample: 361048 - BH-2 29-30'

Param	Flag	Result	Units	RL
Chloride		6990	mg/Kg	4

Sample: 361049 - BH-2 39-40'

Param	Flag	Result	Units	RL
Chloride		7130	mg/Kg	4

Report Date: April 25, 2014

Work Order: 14042401

Page Number: 4 of 5

Sample: 361050 - BH-2 49-50'

Param	Flag	Result	Units	RL
Chloride		9250	mg/Kg	4

Sample: 361051 - BH-2 59-60'

Param	Flag	Result	Units	RL
Chloride		5570	mg/Kg	4

Sample: 361052 - BH-2 69-70'

Param	Flag	Result	Units	RL
Chloride		5170	mg/Kg	4

Sample: 361053 - BH-2 79-80'

Param	Flag	Result	Units	RL
Chloride		2200	mg/Kg	4

Sample: 361054 - BH-2 89-90'

Param	Flag	Result	Units	RL
Chloride		1460	mg/Kg	4

Sample: 361055 - BH-2 94-95'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 361061 - BH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		7900	mg/Kg	4

Sample: 361062 - BH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		4570	mg/Kg	4

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: April 25, 2014

Work Order: 14042401

Page Number: 5 of 5

Sample: 361063 - BH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		3160	mg/Kg	4

Sample: 361064 - BH-3 29-30'

Param	Flag	Result	Units	RL
Chloride		975	mg/Kg	4

Sample: 361065 - BH-3 39-40'

Param	Flag	Result	Units	RL
Chloride		48.0	mg/Kg	4

Sample: 361066 - BH-3 49-50'

Param	Flag	Result	Units	RL
Chloride		827	mg/Kg	4



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

April 17, 2014

IKE TAVAREZ

TETRA TECH

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

RE: COG / PRONGHORN CENTRAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 04/11/14 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T1 (SURFACE) (H401108-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	<0.050	0.050	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	<0.050	0.050	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTEX	<0.300	0.300	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1790	16.0	04/14/2014	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	809	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	316	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 116 % 65.2-140

Surrogate: 1-Chlorooctadecane 165 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T1 (2') (H401108-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	<0.100	0.100	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	1.17	0.100	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	0.950	0.300	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTEX	2.12	0.600	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1070	16.0	04/14/2014	ND	416	104	400	3.92		

TPH 8015M	mg/kg		Analyzed By: ms					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	129	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	3260	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	753	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 126 % 65.2-140

Surrogate: 1-Chlorooctadecane 165 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T1 (4') (H401108-03)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	<0.200	0.200	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	0.964	0.200	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	3.42	0.600	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTEX	4.38	1.20	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 143 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9060	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	201	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	1570	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	271	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 130 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T1 (6') (H401108-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6640	16.0	04/14/2014	ND	416	104	400	3.92	

Sample ID: T1 (8') (H401108-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2040	16.0	04/14/2014	ND	416	104	400	3.92		

Sample ID: T1 (9') (H401108-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5840	16.0	04/14/2014	ND	416	104	400	3.92		

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T2 (SURFACE) (H401108-07)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	<0.050	0.050	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	<0.050	0.050	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	<0.150	0.150	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTX	<0.300	0.300	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3000	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	195	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	83.7	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T2 (2') (H401108-08)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	0.727	0.200	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	0.258	0.200	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	6.41	0.600	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTEX	7.40	1.20	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5040	16.0	04/14/2014	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	275	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	2990	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	610	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 139 % 65.2-140

Surrogate: 1-Chlorooctadecane 166 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T2 (4') (H401108-09)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	55.4	2.00	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	79.3	2.00	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	169	6.00	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTX	304	12.0	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 158 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1880	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	3170	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	9650	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	1410	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 184 % 65.2-140

Surrogate: 1-Chlorooctadecane 231 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T2 (6') (H401108-10)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/16/2014	ND	2.54	127	2.00	0.0570		
Toluene*	<0.050	0.050	04/16/2014	ND	2.42	121	2.00	0.392		
Ethylbenzene*	<0.050	0.050	04/16/2014	ND	2.39	120	2.00	0.684		
Total Xylenes*	<0.150	0.150	04/16/2014	ND	6.93	115	6.00	1.27		
Total BTX	<0.300	0.300	04/16/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4160	16.0	04/14/2014	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/15/2014	ND	213	106	200	0.378	
DRO >C10-C28	<10.0	10.0	04/15/2014	ND	235	117	200	2.09	
EXT DRO >C28-C35	<10.0	10.0	04/15/2014	ND					

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 100 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T2 (8') (H401108-11)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2014	ND	2.54	127	2.00	0.0570	
Toluene*	0.107	0.050	04/16/2014	ND	2.42	121	2.00	0.392	
Ethylbenzene*	0.455	0.050	04/16/2014	ND	2.39	120	2.00	0.684	
Total Xylenes*	2.39	0.150	04/16/2014	ND	6.93	115	6.00	1.27	
Total BTEX	2.95	0.300	04/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 201 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6720	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	42.4	10.0	04/15/2014	ND	213	106	200	0.378	
DRO >C10-C28	672	10.0	04/15/2014	ND	235	117	200	2.09	
EXT DRO >C28-C35	122	10.0	04/15/2014	ND					

Surrogate: 1-Chlorooctane 120 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T2 (10') (H401108-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4000	16.0	04/14/2014	ND	416	104	400	3.92		

Sample ID: T2 (12') (H401108-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5840	16.0	04/14/2014	ND	416	104	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T3 (SURFACE) (H401108-14)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	12.1	0.500	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	16.3	0.500	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	51.3	1.50	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTX	79.7	3.00	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 179 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	924	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	4420	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	624	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 151 % 65.2-140

Surrogate: 1-Chlorooctadecane 168 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T3 (2') (H401108-15)

BTEx 8021B			mg/kg					Analyzed By: MS		S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.500	0.500	04/14/2014	ND	2.47	123	2.00	5.14			
Toluene*	10.7	0.500	04/14/2014	ND	2.30	115	2.00	3.80			
Ethylbenzene*	5.51	0.500	04/14/2014	ND	2.27	114	2.00	2.81			
Total Xylenes*	33.7	1.50	04/14/2014	ND	6.51	108	6.00	2.24			
Total BTEX	49.9	3.00	04/14/2014	ND							

Surrogate: 4-Bromofluorobenzene (PID) 168 % 89.4-126

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AP			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	752	16.0	04/14/2014	ND	416	104	400	3.92			

TPH 8015M			mg/kg					Analyzed By: ms		S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10	656	10.0	04/14/2014	ND	184	92.1	200	5.84			
DRO >C10-C28	3840	10.0	04/14/2014	ND	192	96.0	200	9.09			
EXT DRO >C28-C35	611	10.0	04/14/2014	ND							

Surrogate: 1-Chlorooctane 176 % 65.2-140

Surrogate: 1-Chlorooctadecane 159 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T3 (4') (H401108-16)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	04/14/2014	ND	2.47	123	2.00	5.14	
Toluene*	46.3	2.00	04/14/2014	ND	2.30	115	2.00	3.80	
Ethylbenzene*	44.8	2.00	04/14/2014	ND	2.27	114	2.00	2.81	
Total Xylenes*	114	6.00	04/14/2014	ND	6.51	108	6.00	2.24	
Total BTEX	205	12.0	04/14/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 142 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2010	10.0	04/14/2014	ND	184	92.1	200	5.84	
DRO >C10-C28	7580	10.0	04/14/2014	ND	192	96.0	200	9.09	
EXT DRO >C28-C35	1180	10.0	04/14/2014	ND					

Surrogate: 1-Chlorooctane 168 % 65.2-140

Surrogate: 1-Chlorooctadecane 219 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T3 (6') (H401108-17)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.770	0.500	04/16/2014	ND	2.54	127	2.00	0.0570	
Toluene*	23.5	0.500	04/16/2014	ND	2.42	121	2.00	0.392	
Ethylbenzene*	28.5	0.500	04/16/2014	ND	2.39	120	2.00	0.684	
Total Xylenes*	52.1	1.50	04/16/2014	ND	6.93	115	6.00	1.27	
Total BTX	105	3.00	04/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 161 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	715	100	04/15/2014	ND	213	106	200	0.378	
DRO >C10-C28	2810	100	04/15/2014	ND	235	117	200	2.09	
EXT DRO >C28-C35	441	100	04/15/2014	ND					

Surrogate: 1-Chlorooctane 170 % 65.2-140

Surrogate: 1-Chlorooctadecane 160 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T3 (8') (H401108-18)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.92	1.00	04/16/2014	ND	2.54	127	2.00	0.0570	
Toluene*	103	1.00	04/16/2014	ND	2.42	121	2.00	0.392	
Ethylbenzene*	92.8	1.00	04/16/2014	ND	2.39	120	2.00	0.684	
Total Xylenes*	137	3.00	04/16/2014	ND	6.93	115	6.00	1.27	
Total BTX	337	6.00	04/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 151 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	04/14/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1870	100	04/15/2014	ND	213	106	200	0.378	
DRO >C10-C28	4890	100	04/15/2014	ND	235	117	200	2.09	
EXT DRO >C28-C35	641	100	04/15/2014	ND					

Surrogate: 1-Chlorooctane 157 % 65.2-140

Surrogate: 1-Chlorooctadecane 163 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TETRA TECH
 IKE TAVAREZ
 1910 N. BIG SPRING STREET
 MIDLAND TX, 79705
 Fax To: (432) 682-3946

Received:	04/11/2014	Sampling Date:	04/10/2014
Reported:	04/17/2014	Sampling Type:	Soil
Project Name:	COG / PRONGHORN CENTRAL SWD	Sampling Condition:	Cool & Intact
Project Number:	112MCO6426	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

Sample ID: T3 (10') (H401108-19)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.16	2.00	04/17/2014	ND	2.54	127	2.00	0.0570	
Toluene*	87.2	2.00	04/17/2014	ND	2.42	121	2.00	0.392	
Ethylbenzene*	84.1	2.00	04/17/2014	ND	2.39	120	2.00	0.684	
Total Xylenes*	125	6.00	04/17/2014	ND	6.93	115	6.00	1.27	
Total BTX	300	12.0	04/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 133 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	04/14/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2730	100	04/17/2014	ND	206	103	200	0.409	
DRO >C10-C28	7010	100	04/17/2014	ND	218	109	200	0.425	
EXT DRO >C28-C35	983	100	04/17/2014	ND					

Surrogate: 1-Chlorooctane 206 % 65.2-140

Surrogate: 1-Chlorooctadecane 215 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

OF: 2



1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME:

106

SITE MANAGER:

The parent?

PROJECT NO.:

112 M6064 26

PROJECT NAME: 1010

Phosphor Enthal SUD

LAB I.D.
NUMBER

DATE _____

TIME

MATRIX
COMP.
GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

	FILTERED (Y/N)
--	----------------

HCL

HNO₃

ICE

[illegible]

BTEX 8021B

TPH 8015 MOD TX1005 (Ext. to C35)

PAH 8270

RCRA Metals	Ag	As	Ba	Cd	Cr	Pb	Hg	Se
-------------	----	----	----	----	----	----	----	----

TCLP Metals	Ag	As	Ba	Cd	Vr	Pd	Hg	Se
-------------	----	----	----	----	----	----	----	----

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC.MS Vol. 8240/8260/624

GC.MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.	
-------------	--

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

Page 19 of 20

REINQUISHED BY: (Signature)	Date: 4-11-94 Time: 1200	RECEIVED BY: (Signature)	Date: _____ Time: _____	SAMPLED BY: (Print & Initial)	Date: 4-11-94 Time: 1200
REINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	SAMPLE SHIPPED BY: (Circle)	AIRBILL #: _____
REINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	FEDEX	OTHER: _____
REINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	HAND DELIVERED	UPS
RECEIVING LABORATORY: Candm	ADDRESS: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	TETRA TECH CONTACT PERSON: _____	Results by: _____
CITY: Hobbs	STATE: NM	RECEIVED BY: (Signature)	Date: _____ Time: _____	_____	_____
CONTACT: _____	PHONE: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	_____	_____
SAMPLE CONDITION WHEN RECEIVED: _____	REMARKS: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	_____	_____

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

Ike, Tavaroz@teta.trek.com // Mya, Reid@tetrated.com // Jeanne, fikh@tetakab.com



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
 200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
 5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
 E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: September 2, 2011

Work Order: 11082504



Project Location: Eddy Co., NM
 Project Name: COG/Pronghorn SWD Facility
 Project Number: 114-6401001

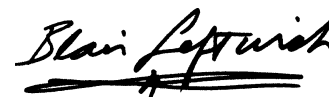
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275369	BH-1 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275370	BH-1 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275371	BH-1 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275372	BH-1 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275373	BH-1 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275374	BH-1 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275375	BH-1 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275376	BH-1 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275377	BH-1 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275378	BH-1 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275379	BH-1 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275380	BH-2 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275381	BH-2 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275382	BH-2 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275383	BH-2 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275384	BH-2 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275385	BH-2 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275386	BH-2 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275387	BH-2 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275388	BH-2 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275389	BH-2 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275390	BH-2 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275391	BH-3 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275392	BH-3 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275393	BH-3 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275394	BH-3 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275395	BH-3 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275396	BH-3 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275397	BH-3 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275398	BH-3 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275399	BH-3 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275400	BH-3 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275401	BH-3 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 34 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative	5
Analytical Report	6
Sample 275369 (BH-1 0-1' (2' BEB))	6
Sample 275370 (BH-1 3' (2' BEB))	7
Sample 275371 (BH-1 5' (2' BEB))	7
Sample 275372 (BH-1 7' (2' BEB))	8
Sample 275373 (BH-1 10' (2' BEB))	8
Sample 275374 (BH-1 15' (2' BEB))	8
Sample 275375 (BH-1 20' (2' BEB))	9
Sample 275376 (BH-1 25' (2' BEB))	9
Sample 275377 (BH-1 30' (2' BEB))	9
Sample 275378 (BH-1 40' (2' BEB))	9
Sample 275379 (BH-1 50' (2' BEB))	10
Sample 275380 (BH-2 0-1' (2' BEB))	10
Sample 275381 (BH-2 3' (2' BEB))	11
Sample 275382 (BH-2 5' (2' BEB))	12
Sample 275383 (BH-2 7' (2' BEB))	12
Sample 275384 (BH-2 10' (2' BEB))	12
Sample 275385 (BH-2 15' (2' BEB))	13
Sample 275386 (BH-2 20' (2' BEB))	13
Sample 275387 (BH-2 25' (2' BEB))	13
Sample 275388 (BH-2 30' (2' BEB))	13
Sample 275389 (BH-2 40' (2' BEB))	14
Sample 275390 (BH-2 50' (2' BEB))	14
Sample 275391 (BH-3 0-1' (2' BEB))	14
Sample 275392 (BH-3 3' (2' BEB))	16
Sample 275393 (BH-3 5' (2' BEB))	16
Sample 275394 (BH-3 7' (2' BEB))	16
Sample 275395 (BH-3 10' (2' BEB))	17
Sample 275396 (BH-3 15' (2' BEB))	17
Sample 275397 (BH-3 20' (2' BEB))	17
Sample 275398 (BH-3 25' (2' BEB))	17
Sample 275399 (BH-3 30' (2' BEB))	18
Sample 275400 (BH-3 40' (2' BEB))	18
Sample 275401 (BH-3 50' (2' BEB))	18
Method Blanks	20
QC Batch 84264 - Method Blank (1)	20
QC Batch 84286 - Method Blank (1)	20
QC Batch 84287 - Method Blank (1)	20
QC Batch 84423 - Method Blank (1)	21
QC Batch 84424 - Method Blank (1)	21
QC Batch 84425 - Method Blank (1)	21
QC Batch 84439 - Method Blank (1)	21

Laboratory Control Spikes	23
QC Batch 84264 - LCS (1)	23
QC Batch 84286 - LCS (1)	23
QC Batch 84287 - LCS (1)	24
QC Batch 84423 - LCS (1)	24
QC Batch 84424 - LCS (1)	24
QC Batch 84425 - LCS (1)	25
QC Batch 84439 - LCS (1)	25
QC Batch 84264 - MS (1)	26
QC Batch 84286 - MS (1)	26
QC Batch 84287 - MS (1)	27
QC Batch 84423 - MS (1)	27
QC Batch 84424 - MS (1)	28
QC Batch 84425 - MS (1)	28
QC Batch 84439 - MS (1)	28
Calibration Standards	30
QC Batch 84264 - CCV (3)	30
QC Batch 84264 - CCV (4)	30
QC Batch 84286 - CCV (1)	30
QC Batch 84286 - CCV (2)	30
QC Batch 84287 - CCV (1)	31
QC Batch 84287 - CCV (2)	31
QC Batch 84423 - ICV (1)	31
QC Batch 84423 - CCV (1)	31
QC Batch 84424 - ICV (1)	32
QC Batch 84424 - CCV (1)	32
QC Batch 84425 - ICV (1)	32
QC Batch 84425 - CCV (1)	32
QC Batch 84439 - ICV (1)	33
QC Batch 84439 - CCV (1)	33
Appendix	34
Laboratory Certifications	34
Standard Flags	34
Attachments	34

Case Narrative

Samples for project COG/Pronghorn SWD Facility were received by TraceAnalysis, Inc. on 2011-08-25 and assigned to work order 11082504. Samples for work order 11082504 were received intact at a temperature of 3.6 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	71575	2011-08-26 at 11:51	84286	2011-08-26 at 11:51
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84423	2011-08-31 at 12:46
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84424	2011-08-31 at 12:47
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84425	2011-08-31 at 12:48
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84439	2011-09-01 at 15:34
TPH DRO - NEW	S 8015 D	71548	2011-08-24 at 14:42	84264	2011-08-24 at 14:42
TPH GRO	S 8015 D	71575	2011-08-26 at 11:51	84287	2011-08-26 at 11:51

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11082504 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 6 of 34
Eddy Co., NM

Analytical Report

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: BTEX
QC Batch: 84286
Prep Batch: 71575

Analytical Method: S 8021B
Date Analyzed: 2011-08-26
Sample Preparation: 2011-08-26

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.49	mg/Kg	1	2.00	124	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.43	mg/Kg	1	2.00	122	70.6 - 179

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 84423
Prep Batch: 71623

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-08-31
Sample Preparation: 2011-08-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4980	mg/Kg	100	4.00

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 84264
Prep Batch: 71548

Analytical Method: S 8015 D
Date Analyzed: 2011-08-24
Sample Preparation: 2011-08-24

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	358	mg/Kg	1	50.0

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 7 of 34
Eddy Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}		210	mg/Kg	1	100	210	67.5 - 147.1

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 84287
Prep Batch: 71575

Analytical Method: S 8015 D
Date Analyzed: 2011-08-26
Sample Preparation: 2011-08-26

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.25	mg/Kg	1	2.00	112	30 - 134.6
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	22.4 - 149

Sample: 275370 - BH-1 3' (2' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 84423
Prep Batch: 71623

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-08-31
Sample Preparation: 2011-08-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4570	mg/Kg	100	4.00

Sample: 275371 - BH-1 5' (2' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 84423
Prep Batch: 71623

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-08-31
Sample Preparation: 2011-08-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 8 of 34
Eddy Co., NM

sample 275371 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1230	mg/Kg	100	4.00

Sample: 275372 - BH-1 7' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1310	mg/Kg	100	4.00

Sample: 275373 - BH-1 10' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2260	mg/Kg	100	4.00

Sample: 275374 - BH-1 15' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 9 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5580	mg/Kg	100	4.00

Sample: 275375 - BH-1 20' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84423 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7190	mg/Kg	100	4.00

Sample: 275376 - BH-1 25' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84423 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1350	mg/Kg	100	4.00

Sample: 275377 - BH-1 30' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84423 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			857	mg/Kg	50	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 10 of 34
Eddy Co., NM

Sample: 275378 - BH-1 40' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84423	Date Analyzed:	2011-08-31
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275379 - BH-1 50' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84424	Date Analyzed:	2011-08-31
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	84286	Date Analyzed:	2011-08-26
Prep Batch:	71575	Sample Preparation:	2011-08-26
		Prep Method:	S 5035
		Analyzed By:	ME
		Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.34	mg/Kg	1	2.00	117	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.27	mg/Kg	1	2.00	114	70.6 - 179

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 11 of 34
Eddy Co., NM

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			16100	mg/Kg	100	4.00

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-08-24	Analyzed By:	kg
QC Batch:	84264	Sample Preparation:	2011-08-24	Prepared By:	kg
Prep Batch:	71548				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		₁	216	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			128	mg/Kg	1	100	128	67.5 - 147.1

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-08-26	Analyzed By:	ME
QC Batch:	84287	Sample Preparation:	2011-08-26	Prepared By:	ME
Prep Batch:	71575				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	_U	₁	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	1	2.00	106	30 - 134.6
4-Bromofluorobenzene (4-BFB)	_J		1.92	mg/Kg	1	2.00	96	22.4 - 149

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 12 of 34
Eddy Co., NM

Sample: 275381 - BH-2 3' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1770	mg/Kg	100	4.00

Sample: 275382 - BH-2 5' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2660	mg/Kg	100	4.00

Sample: 275383 - BH-2 7' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4190	mg/Kg	100	4.00

Sample: 275384 - BH-2 10' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 13 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3010	mg/Kg	100	4.00

Sample: 275385 - BH-2 15' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84424	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			620	mg/Kg	50	4.00

Sample: 275386 - BH-2 20' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84424	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			308	mg/Kg	50	4.00

Sample: 275387 - BH-2 25' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84424	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 14 of 34
Eddy Co., NM

Sample: 275388 - BH-2 30' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275389 - BH-2 40' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84425	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275390 - BH-2 50' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84425	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2011-08-26	Analyzed By:	ME
QC Batch:	84286	Sample Preparation:	2011-08-26	Prepared By:	ME
Prep Batch:	71575				

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 15 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.49	mg/Kg	1	2.00	124	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.37	mg/Kg	1	2.00	118	70.6 - 179

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			12800	mg/Kg	100	4.00

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg
 Prep Batch: 71548 Sample Preparation: 2011-08-24 Prepared By: kg

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			126	mg/Kg	1	100	126	67.5 - 147.1

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 84287 Date Analyzed: 2011-08-26 Analyzed By: ME
 Prep Batch: 71575 Sample Preparation: 2011-08-26 Prepared By: ME

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 16 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.26	mg/Kg	1	2.00	113	30 - 134.6
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	22.4 - 149

Sample: 275392 - BH-3 3' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5570	mg/Kg	100	4.00

Sample: 275393 - BH-3 5' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3000	mg/Kg	100	4.00

Sample: 275394 - BH-3 7' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 17 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3440	mg/Kg	100	4.00

Sample: 275395 - BH-3 10' (2' BEB)

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	84425	Date Analyzed:	2011-08-31	Analyzed By:	AR	
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4230	mg/Kg	100	4.00

Sample: 275396 - BH-3 15' (2' BEB)

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	84425	Date Analyzed:	2011-08-31	Analyzed By:	AR	
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5500	mg/Kg	100	4.00

Sample: 275397 - BH-3 20' (2' BEB)

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	84425	Date Analyzed:	2011-08-31	Analyzed By:	AR	
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7200	mg/Kg	100	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 18 of 34
Eddy Co., NM

Sample: 275398 - BH-3 25' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84425	Date Analyzed:	2011-08-31
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1380	mg/Kg	100	4.00

Sample: 275399 - BH-3 30' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84439	Date Analyzed:	2011-09-01
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275400 - BH-3 40' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84439	Date Analyzed:	2011-09-01
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275401 - BH-3 50' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84439	Date Analyzed:	2011-09-01
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 19 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 20 of 34
Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 84264

QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg
Prep Batch: 71548 QC Preparation: 2011-08-24 Prepared By: kg

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			128	mg/Kg	1	100	128	52.7 - 133.8

Method Blank (1) QC Batch: 84286

QC Batch: 84286 Date Analyzed: 2011-08-26 Analyzed By: ME
Prep Batch: 71575 QC Preparation: 2011-08-26 Prepared By: ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.0118	mg/Kg	0.02
Toluene		1	<0.00600	mg/Kg	0.02
Ethylbenzene		1	<0.00850	mg/Kg	0.02
Xylene		1	<0.00613	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	48.4 - 123.1

Method Blank (1) QC Batch: 84287

QC Batch: 84287 Date Analyzed: 2011-08-26 Analyzed By: ME
Prep Batch: 71575 QC Preparation: 2011-08-26 Prepared By: ME

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 21 of 34
Eddy Co., NM

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.753	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	67.6 - 150
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	52.4 - 130

Method Blank (1) QC Batch: 84423

QC Batch: 84423 Date Analyzed: 2011-08-31 Analyzed By: AR
Prep Batch: 71623 QC Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 84424

QC Batch: 84424 Date Analyzed: 2011-08-31 Analyzed By: AR
Prep Batch: 71623 QC Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 84425

QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
Prep Batch: 71623 QC Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 22 of 34
Eddy Co., NM

Method Blank (1) QC Batch: 84439

QC Batch: 84439
Prep Batch: 71623

Date Analyzed: 2011-09-01
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 23 of 34
Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 84264
Prep Batch: 71548

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: kg
Prepared By: kg

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	260	mg/Kg	1	250	<14.5	104	64.5 - 146.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	294	mg/Kg	1	250	<14.5	118	64.5 - 146.9	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	117	132	mg/Kg	1	100	117	132	65.3 - 135.8

Laboratory Control Spike (LCS-1)

QC Batch: 84286
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.90	mg/Kg	1	2.00	<0.0118	95	77.4 - 121.7
Toluene		1	2.04	mg/Kg	1	2.00	<0.00600	102	88.6 - 121.6
Ethylbenzene		1	2.05	mg/Kg	1	2.00	<0.00850	102	74.3 - 117.9
Xylene		1	6.17	mg/Kg	1	6.00	<0.00613	103	73.4 - 118.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.84	mg/Kg	1	2.00	<0.0118	92	77.4 - 121.7	3	20
Toluene		1	1.97	mg/Kg	1	2.00	<0.00600	98	88.6 - 121.6	4	20
Ethylbenzene		1	1.98	mg/Kg	1	2.00	<0.00850	99	74.3 - 117.9	4	20
Xylene		1	5.98	mg/Kg	1	6.00	<0.00613	100	73.4 - 118.8	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 24 of 34
Eddy Co., NM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	1.96	mg/Kg	1	2.00	108	98	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	2.13	1.96	mg/Kg	1	2.00	106	98	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: 84287
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.1	mg/Kg	1	20.0	<0.753	86	60.9 - 95.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.3	mg/Kg	1	20.0	<0.753	92	60.9 - 95.4	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	1.87	mg/Kg	1	2.00	102	94	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.89	1.76	mg/Kg	1	2.00	94	88	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 84423
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.9	mg/Kg	1	100	<3.85	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			104	mg/Kg	1	100	<3.85	104	85 - 115	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 25 of 34
Eddy Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: 84424
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.0	mg/Kg	1	100	<3.85	97	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 84425
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.1	mg/Kg	1	100	<3.85	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 84439
Prep Batch: 71623

Date Analyzed: 2011-09-01
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			94.8	mg/Kg	1	100	<3.85	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 26 of 34
Eddy Co., NM

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			105	mg/Kg	1	100	<3.85	105	85 - 115	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275112

QC Batch: 84264
Prep Batch: 71548

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: kg
Prepared By: kg

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	291	mg/Kg	1	250	<14.5	116	38.8 - 153.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	269	mg/Kg	1	250	<14.5	108	38.8 - 153.3	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	131	123	mg/Kg	1	100	131	123	54.6 - 149.8

Matrix Spike (MS-1) Spiked Sample: 275391

QC Batch: 84286
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.76	mg/Kg	1	2.00	<0.0118	88	69.4 - 123.6
Toluene		1	1.94	mg/Kg	1	2.00	<0.00600	97	75.4 - 134.3
Ethylbenzene		1	2.05	mg/Kg	1	2.00	<0.00850	102	58.8 - 133.7
Xylene		1	6.22	mg/Kg	1	6.00	<0.00613	104	57 - 134.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.63	mg/Kg	1	2.00	<0.0118	82	69.4 - 123.6	8	20
Toluene		1	1.78	mg/Kg	1	2.00	<0.00600	89	75.4 - 134.3	9	20

continued . . .

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 27 of 34
Eddy Co., NM

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene		1	1.86	mg/Kg	1	2.00	<0.00850	93	58.8 - 133.7	10	20
Xylene		1	5.62	mg/Kg	1	6.00	<0.00613	94	57 - 134.2	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.40	2.56	mg/Kg	1	2	120	128	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.35	2.50	mg/Kg	1	2	118	125	71 - 167

Matrix Spike (MS-1) Spiked Sample: 275380

QC Batch: 84287
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.6	mg/Kg	1	20.0	<0.753	88	61.8 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.1	mg/Kg	1	20.0	<0.753	90	61.8 - 114	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.31	2.41	mg/Kg	1	2	116	120	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.25	2.36	mg/Kg	1	2	112	118	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 275378

QC Batch: 84423
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10200	mg/Kg	100	10000	<385	102	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 28 of 34
Eddy Co., NM

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10700	mg/Kg	100	10000	<385	107	79.4 - 120.6	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275388

QC Batch: 84424
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10100	mg/Kg	100	10000	<385	101	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10700	mg/Kg	100	10000	<385	107	79.4 - 120.6	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275398

QC Batch: 84425
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			11400	mg/Kg	100	10000	1380	100	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11900	mg/Kg	100	10000	1380	105	79.4 - 120.6	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275723

QC Batch: 84439
Prep Batch: 71623

Date Analyzed: 2011-09-01
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 29 of 34
Eddy Co., NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9660	mg/Kg	100	10000	<385	97	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10300	mg/Kg	100	10000	<385	103	79.4 - 120.6	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 30 of 34
Eddy Co., NM

Calibration Standards

Standard (CCV-3)

QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	275	110	80 - 120	2011-08-24

Standard (CCV-4)

QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	290	116	80 - 120	2011-08-24

Standard (CCV-1)

QC Batch: 84286 Date Analyzed: 2011-08-26 Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.101	101	80 - 120	2011-08-26
Toluene		1	mg/Kg	0.100	0.108	108	80 - 120	2011-08-26
Ethylbenzene		1	mg/Kg	0.100	0.106	106	80 - 120	2011-08-26
Xylene		1	mg/Kg	0.300	0.326	109	80 - 120	2011-08-26

Standard (CCV-2)

QC Batch: 84286 Date Analyzed: 2011-08-26 Analyzed By: ME

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 31 of 34
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.0964	96	80 - 120	2011-08-26
Toluene		1	mg/Kg	0.100	0.103	103	80 - 120	2011-08-26
Ethylbenzene		1	mg/Kg	0.100	0.103	103	80 - 120	2011-08-26
Xylene		1	mg/Kg	0.300	0.311	104	80 - 120	2011-08-26

Standard (CCV-1)

QC Batch: 84287

Date Analyzed: 2011-08-26

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.10	110	80 - 120	2011-08-26

Standard (CCV-2)

QC Batch: 84287

Date Analyzed: 2011-08-26

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.985	98	80 - 120	2011-08-26

Standard (ICV-1)

QC Batch: 84423

Date Analyzed: 2011-08-31

Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2011-08-31

Standard (CCV-1)

QC Batch: 84423

Date Analyzed: 2011-08-31

Analyzed By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 32 of 34
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.3	98	85 - 115	2011-08-31

Standard (ICV-1)

QC Batch: 84424 Date Analyzed: 2011-08-31 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2011-08-31

Standard (CCV-1)

QC Batch: 84424 Date Analyzed: 2011-08-31 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2011-08-31

Standard (ICV-1)

QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.1	99	85 - 115	2011-08-31

Standard (CCV-1)

QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 33 of 34
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2011-08-31

Standard (ICV-1)

QC Batch: 84439

Date Analyzed: 2011-09-01

Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2011-09-01

Standard (CCV-1)

QC Batch: 84439

Date Analyzed: 2011-09-01

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2011-09-01

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 34 of 34
Eddy Co., NM

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4

ANALYSIS REQUEST
(Circle or Specify Method No.)**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavares	
PROJECT NO.: 114-6401001		PROJECT NAME: Ponghorn SWD Facility	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
275389	8/23		BH-2 40' (2' BEB)
390			50' (2' BEB)
391			BH-3 0-1' (2' BEB)
392			3' (2' BEB)
393			5' (2' BEB)
394			7' (2' BEB)
395			10' (2' BEB)
396			15' (2' BEB)
397			20' (2' BEB)
398			25' (2' BEB)

RELINQUISHED BY: (Signature) Kat Sula	Date: 8/23/11 Time: 9:50	RECEIVED BY: (Signature) Ike Tavares	Date: 8/23/11 Time: 9:50
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RECEIVING LABORATORY: TRACE	DATE: _____	RECEIVED BY: (Signature)	DATE: _____
ADDRESS: MIDLAND	STATE: TX	ZIP: _____	PHONE: _____
CITY: MIDLAND	STATE: TX	ZIP: _____	PHONE: _____
CONTACT: 3.6 Cintact	STATE: _____	ZIP: _____	PHONE: _____

REMARKS: If TPH > 5000 mg/kg - Run deeper samples

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

If Benzene > 10 mg/kg or total BTEX > 50 mg/kg run deeper sample

Report Date: September 2, 2011

Work Order: 11082504

Page Number: 1 of 6

Summary Report

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

Report Date: September 2, 2011

Work Order: 11082504



Project Location: Eddy Co., NM
Project Name: COG/Pronghorn SWD Facility
Project Number: 114-6401001

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275369	BH-1 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275370	BH-1 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275371	BH-1 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275372	BH-1 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275373	BH-1 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275374	BH-1 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275375	BH-1 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275376	BH-1 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275377	BH-1 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275378	BH-1 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275379	BH-1 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275380	BH-2 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275381	BH-2 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275382	BH-2 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275383	BH-2 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275384	BH-2 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275385	BH-2 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275386	BH-2 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275387	BH-2 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275388	BH-2 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275389	BH-2 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275390	BH-2 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275391	BH-3 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275392	BH-3 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275393	BH-3 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275394	BH-3 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275395	BH-3 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275396	BH-3 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275397	BH-3 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275398	BH-3 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25

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: September 2, 2011

Work Order: 11082504

Page Number: 2 of 6

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275399	BH-3 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275400	BH-3 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275401	BH-3 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
275369 - BH-1 0-1' (2' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	358	<2.00
275380 - BH-2 0-1' (2' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	216	<2.00
275391 - BH-3 0-1' (2' BEB)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 275369 - BH-1 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4980	mg/Kg	4

Sample: 275370 - BH-1 3' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4570	mg/Kg	4

Sample: 275371 - BH-1 5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1230	mg/Kg	4

Sample: 275372 - BH-1 7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1310	mg/Kg	4

Sample: 275373 - BH-1 10' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		2260	mg/Kg	4

Sample: 275374 - BH-1 15' (2' BEB)*continued ...*

Report Date: September 2, 2011

Work Order: 11082504

Page Number: 3 of 6

sample 275374 continued ...

Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Chloride		5580	mg/Kg	4

Sample: 275375 - BH-1 20' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		7190	mg/Kg	4

Sample: 275376 - BH-1 25' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1350	mg/Kg	4

Sample: 275377 - BH-1 30' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		857	mg/Kg	4

Sample: 275378 - BH-1 40' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275379 - BH-1 50' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275380 - BH-2 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		16100	mg/Kg	4

Sample: 275381 - BH-2 3' (2' BEB)

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: September 2, 2011

Work Order: 11082504

Page Number: 4 of 6

Param	Flag	Result	Units	RL
Chloride		1770	mg/Kg	4

Sample: 275382 - BH-2 5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		2660	mg/Kg	4

Sample: 275383 - BH-2 7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4190	mg/Kg	4

Sample: 275384 - BH-2 10' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		3010	mg/Kg	4

Sample: 275385 - BH-2 15' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		620	mg/Kg	4

Sample: 275386 - BH-2 20' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		308	mg/Kg	4

Sample: 275387 - BH-2 25' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275388 - BH-2 30' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Report Date: September 2, 2011

Work Order: 11082504

Page Number: 5 of 6

Sample: 275389 - BH-2 40' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275390 - BH-2 50' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275391 - BH-3 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		12800	mg/Kg	4

Sample: 275392 - BH-3 3' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		5570	mg/Kg	4

Sample: 275393 - BH-3 5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		3000	mg/Kg	4

Sample: 275394 - BH-3 7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		3440	mg/Kg	4

Sample: 275395 - BH-3 10' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4230	mg/Kg	4

Sample: 275396 - BH-3 15' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		5500	mg/Kg	4

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: September 2, 2011

Work Order: 11082504

Page Number: 6 of 6

Sample: 275397 - BH-3 20' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		7200	mg/Kg	4

Sample: 275398 - BH-3 25' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1380	mg/Kg	4

Sample: 275399 - BH-3 30' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275400 - BH-3 40' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 275401 - BH-3 50' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Report Date: January 20, 2010

Work Order: 10011527

Page Number: 1 of 19

Summary Report

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

Report Date: January 20, 2010

Work Order: 10011527



Project Location: Lea County, NM
Project Name: COG/Pronghorn SWD Facility
Project Number: 114-6400353

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219674	SB-1 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219675	SB-1 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219676	SB-1 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219677	SB-1 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219678	SB-1 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219679	SB-1 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219680	SB-1 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219681	SB-1 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219682	SB-1 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219683	SB-2 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219684	SB-2 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219685	SB-2 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219686	SB-2 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219687	SB-2 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219688	SB-2 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219689	SB-2 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219690	SB-2 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219691	SB-2 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219692	SB-3 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219693	SB-3 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219694	SB-3 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219695	SB-3 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219696	SB-3 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219697	SB-3 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219698	SB-3 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219699	SB-3 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219700	SB-3 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219701	SB-4 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219702	SB-4 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219703	SB-4 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14

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: January 20, 2010

Work Order: 10011527

Page Number: 2 of 19

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219704	SB-4 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219705	SB-4 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219706	SB-4 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219707	SB-4 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219708	SB-4 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219709	SB-4 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219710	SB-5 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219711	SB-5 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219712	SB-5 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219713	SB-5 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219714	SB-5 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219715	SB-5 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219716	SB-5 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219717	SB-5 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219718	SB-5 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219719	SB-6 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219720	SB-6 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219721	SB-6 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219722	SB-6 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219723	SB-6 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219724	SB-6 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219725	SB-6 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219726	SB-6 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219727	SB-6 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219728	SB-7 0-1' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219729	SB-7 2-3' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219730	SB-7 4-5' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219731	SB-7 6-7' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219732	SB-7 10-11' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219733	SB-7 15-16' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219734	SB-7 20-21' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219735	SB-7 25-26' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219736	SB-7 30-31' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219737	SB-8 0-1' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219738	SB-8 2-3' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219739	SB-8 4-5' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219740	SB-8 6-7' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219741	SB-8 10-11' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219742	SB-8 15-16' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219743	SB-8 20-21' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219744	SB-8 25-26' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219745	SB-8 30-31' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219746	SB-9 0-1' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219747	SB-9 2-3' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219748	SB-9 4-5' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219749	SB-9 6-7' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219750	SB-9 10-11' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219751	SB-9 15-16' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219752	SB-9 20-21' (1' BEB)	soil	2010-01-12	00:00	2010-01-14

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: January 20, 2010

Work Order: 10011527

Page Number: 3 of 19

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219753	SB-9 25-26' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219754	SB-9 30-31' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219755	SB-9 40-41' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219756	SB-10 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219757	SB-10 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219758	SB-10 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219759	SB-10 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219760	SB-10 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219761	SB-10 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219762	SB-10 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219763	SB-10 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219764	SB-10 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219765	SB-11 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219766	SB-11 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219767	SB-11 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219768	SB-11 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219769	SB-11 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219770	SB-11 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219771	SB-11 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219772	SB-11 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219773	SB-11 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219774	SB-12 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219775	SB-12 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219776	SB-12 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219777	SB-12 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219778	SB-12 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219779	SB-12 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219780	SB-12 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219781	SB-12 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219782	SB-12 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219783	SB-13 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219784	SB-13 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219785	SB-13 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219786	SB-13 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219787	SB-13 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219788	SB-13 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219789	SB-13 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219790	SB-13 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219791	SB-13 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
219674 - SB-1 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219683 - SB-2 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219692 - SB-3 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	0.0523	<50.0	12.3
219701 - SB-4 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219710 - SB-5 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

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: January 20, 2010

Work Order: 10011527

Page Number: 4 of 19

... continued

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
219719 - SB-6 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219728 - SB-7 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219737 - SB-8 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219746 - SB-9 0-1' (1' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219756 - SB-10 0-1' (2' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
219765 - SB-11 0-1' (2' BEB)	0.484	5.18	1.26	7.37	520	744
219774 - SB-12 0-1' (2' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	43.9
219783 - SB-13 0-1' (2' BEB)	<0.0100	<0.0100	<0.0100	<0.0100	59.1	7.24

Sample: 219674 - SB-1 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		14100	mg/Kg	4.00

Sample: 219675 - SB-1 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		14400	mg/Kg	4.00

Sample: 219676 - SB-1 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		7330	mg/Kg	4.00

Sample: 219677 - SB-1 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		3250	mg/Kg	4.00

Sample: 219678 - SB-1 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		440	mg/Kg	4.00

Sample: 219679 - SB-1 15-16' (1' BEB)

continued ...

Report Date: January 20, 2010

Work Order: 10011527

Page Number: 5 of 19

sample 219679 continued . . .

Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219680 - SB-1 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		312	mg/Kg	4.00

Sample: 219681 - SB-1 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219682 - SB-1 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219683 - SB-2 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		14900	mg/Kg	4.00

Sample: 219684 - SB-2 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		13600	mg/Kg	4.00

Sample: 219685 - SB-2 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		16000	mg/Kg	4.00

Sample: 219686 - SB-2 6-7' (1' BEB)

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: January 20, 2010

Work Order: 10011527

Page Number: 6 of 19

Param	Flag	Result	Units	RL
Chloride		9760	mg/Kg	4.00

Sample: 219687 - SB-2 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		435	mg/Kg	4.00

Sample: 219688 - SB-2 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		1350	mg/Kg	4.00

Sample: 219689 - SB-2 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		656	mg/Kg	4.00

Sample: 219690 - SB-2 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219691 - SB-2 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219692 - SB-3 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		8660	mg/Kg	4.00

Sample: 219693 - SB-3 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		9220	mg/Kg	4.00

Report Date: January 20, 2010

Work Order: 10011527

Page Number: 7 of 19

Sample: 219694 - SB-3 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		1010	mg/Kg	4.00

Sample: 219695 - SB-3 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219696 - SB-3 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219697 - SB-3 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219698 - SB-3 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219699 - SB-3 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219700 - SB-3 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219701 - SB-4 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		11800	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: January 20, 2010

Work Order: 10011527

Page Number: 8 of 19

Sample: 219702 - SB-4 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		10500	mg/Kg	4.00

Sample: 219703 - SB-4 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		4920	mg/Kg	4.00

Sample: 219704 - SB-4 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		6790	mg/Kg	4.00

Sample: 219705 - SB-4 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		1050	mg/Kg	4.00

Sample: 219706 - SB-4 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219707 - SB-4 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		227	mg/Kg	4.00

Sample: 219708 - SB-4 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219709 - SB-4 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	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: January 20, 2010

Work Order: 10011527

Page Number: 9 of 19

Sample: 219710 - SB-5 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		9750	mg/Kg	4.00

Sample: 219711 - SB-5 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4.00

Sample: 219712 - SB-5 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		7530	mg/Kg	4.00

Sample: 219713 - SB-5 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		557	mg/Kg	4.00

Sample: 219714 - SB-5 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		5570	mg/Kg	4.00

Sample: 219715 - SB-5 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219716 - SB-5 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		354	mg/Kg	4.00

Sample: 219717 - SB-5 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	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: January 20, 2010

Work Order: 10011527

Page Number: 10 of 19

Sample: 219718 - SB-5 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219719 - SB-6 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219720 - SB-6 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219721 - SB-6 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		510	mg/Kg	4.00

Sample: 219722 - SB-6 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219723 - SB-6 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219724 - SB-6 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219725 - SB-6 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	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: January 20, 2010

Work Order: 10011527

Page Number: 11 of 19

Sample: 219726 - SB-6 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219727 - SB-6 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219728 - SB-7 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		17400	mg/Kg	4.00

Sample: 219729 - SB-7 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		14100	mg/Kg	4.00

Sample: 219730 - SB-7 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		16100	mg/Kg	4.00

Sample: 219731 - SB-7 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		878	mg/Kg	4.00

Sample: 219732 - SB-7 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		465	mg/Kg	4.00

Sample: 219733 - SB-7 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	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: January 20, 2010

Work Order: 10011527

Page Number: 12 of 19

Sample: 219734 - SB-7 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		207	mg/Kg	4.00

Sample: 219735 - SB-7 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219736 - SB-7 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219737 - SB-8 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		14800	mg/Kg	4.00

Sample: 219738 - SB-8 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		9250	mg/Kg	4.00

Sample: 219739 - SB-8 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		7980	mg/Kg	4.00

Sample: 219740 - SB-8 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		595	mg/Kg	4.00

Sample: 219741 - SB-8 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		330	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: January 20, 2010

Work Order: 10011527

Page Number: 13 of 19

Sample: 219742 - SB-8 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219743 - SB-8 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219744 - SB-8 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		208	mg/Kg	4.00

Sample: 219745 - SB-8 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219746 - SB-9 0-1' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		503	mg/Kg	4.00

Sample: 219747 - SB-9 2-3' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		4040	mg/Kg	4.00

Sample: 219748 - SB-9 4-5' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		534	mg/Kg	4.00

Sample: 219749 - SB-9 6-7' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		778	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: January 20, 2010

Work Order: 10011527

Page Number: 14 of 19

Sample: 219750 - SB-9 10-11' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		2850	mg/Kg	4.00

Sample: 219751 - SB-9 15-16' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		5650	mg/Kg	4.00

Sample: 219752 - SB-9 20-21' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		3490	mg/Kg	4.00

Sample: 219753 - SB-9 25-26' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		1240	mg/Kg	4.00

Sample: 219754 - SB-9 30-31' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219755 - SB-9 40-41' (1' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219756 - SB-10 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		10600	mg/Kg	4.00

Sample: 219757 - SB-10 2-3' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		6150	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: January 20, 2010

Work Order: 10011527

Page Number: 15 of 19

Sample: 219758 - SB-10 4-5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4550	mg/Kg	4.00

Sample: 219759 - SB-10 6-7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1960	mg/Kg	4.00

Sample: 219760 - SB-10 10-11' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1010	mg/Kg	4.00

Sample: 219761 - SB-10 15-16' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		671	mg/Kg	4.00

Sample: 219762 - SB-10 20-21' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		574	mg/Kg	4.00

Sample: 219763 - SB-10 25-26' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1110	mg/Kg	4.00

Sample: 219764 - SB-10 30-31' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		625	mg/Kg	4.00

Sample: 219765 - SB-11 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		2120	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: January 20, 2010

Work Order: 10011527

Page Number: 16 of 19

Sample: 219766 - SB-11 2-3' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		981	mg/Kg	4.00

Sample: 219767 - SB-11 4-5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		803	mg/Kg	4.00

Sample: 219768 - SB-11 6-7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		701	mg/Kg	4.00

Sample: 219769 - SB-11 10-11' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		867	mg/Kg	4.00

Sample: 219770 - SB-11 15-16' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		3380	mg/Kg	4.00

Sample: 219771 - SB-11 20-21' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		3740	mg/Kg	4.00

Sample: 219772 - SB-11 25-26' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4800	mg/Kg	4.00

Sample: 219773 - SB-11 30-31' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1450	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: January 20, 2010

Work Order: 10011527

Page Number: 17 of 19

Sample: 219774 - SB-12 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		2720	mg/Kg	4.00

Sample: 219775 - SB-12 2-3' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		576	mg/Kg	4.00

Sample: 219776 - SB-12 4-5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		586	mg/Kg	4.00

Sample: 219777 - SB-12 6-7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1210	mg/Kg	4.00

Sample: 219778 - SB-12 10-11' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		2210	mg/Kg	4.00

Sample: 219779 - SB-12 15-16' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		4420	mg/Kg	4.00

Sample: 219780 - SB-12 20-21' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1850	mg/Kg	4.00

Sample: 219781 - SB-12 25-26' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		454	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: January 20, 2010

Work Order: 10011527

Page Number: 18 of 19

Sample: 219782 - SB-12 30-31' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		275	mg/Kg	4.00

Sample: 219783 - SB-13 0-1' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		1880	mg/Kg	4.00

Sample: 219784 - SB-13 2-3' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219785 - SB-13 4-5' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		205	mg/Kg	4.00

Sample: 219786 - SB-13 6-7' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219787 - SB-13 10-11' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219788 - SB-13 15-16' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219789 - SB-13 20-21' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	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: January 20, 2010

Work Order: 10011527

Page Number: 19 of 19

Sample: 219790 - SB-13 25-26' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 219791 - SB-13 30-31' (2' BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
 200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
 5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
 E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX **El Paso:** T104704221-08-TX **Midland:** T104704392-08-TX
 LELAP-02003 LELAP-02002
 Kansas E-10317

Analytical and Quality Control Report

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

Report Date: January 20, 2010

Work Order: 10011527



Project Location: Lea County, NM
 Project Name: COG/Pronghorn SWD Facility
 Project Number: 114-6400353

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219674	SB-1 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219675	SB-1 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219676	SB-1 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219677	SB-1 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219678	SB-1 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219679	SB-1 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219680	SB-1 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219681	SB-1 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219682	SB-1 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219683	SB-2 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219684	SB-2 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219685	SB-2 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219686	SB-2 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219687	SB-2 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219688	SB-2 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219689	SB-2 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219690	SB-2 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219691	SB-2 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219692	SB-3 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219693	SB-3 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219694	SB-3 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219695	SB-3 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219696	SB-3 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219697	SB-3 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219698	SB-3 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219699	SB-3 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219700	SB-3 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219701	SB-4 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219702	SB-4 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219703	SB-4 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219704	SB-4 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219705	SB-4 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219706	SB-4 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219707	SB-4 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219708	SB-4 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219709	SB-4 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219710	SB-5 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219711	SB-5 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219712	SB-5 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219713	SB-5 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219714	SB-5 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219715	SB-5 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219716	SB-5 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219717	SB-5 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219718	SB-5 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219719	SB-6 0-1' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219720	SB-6 2-3' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219721	SB-6 4-5' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219722	SB-6 6-7' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219723	SB-6 10-11' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219724	SB-6 15-16' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219725	SB-6 20-21' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219726	SB-6 25-26' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219727	SB-6 30-31' (1' BEB)	soil	2010-01-11	00:00	2010-01-14
219728	SB-7 0-1' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219729	SB-7 2-3' (1' BEB)	soil	2010-01-12	00:00	2010-01-14

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219730	SB-7 4-5' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219731	SB-7 6-7' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219732	SB-7 10-11' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219733	SB-7 15-16' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219734	SB-7 20-21' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219735	SB-7 25-26' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219736	SB-7 30-31' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219737	SB-8 0-1' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219738	SB-8 2-3' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219739	SB-8 4-5' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219740	SB-8 6-7' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219741	SB-8 10-11' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219742	SB-8 15-16' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219743	SB-8 20-21' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219744	SB-8 25-26' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219745	SB-8 30-31' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219746	SB-9 0-1' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219747	SB-9 2-3' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219748	SB-9 4-5' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219749	SB-9 6-7' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219750	SB-9 10-11' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219751	SB-9 15-16' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219752	SB-9 20-21' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219753	SB-9 25-26' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219754	SB-9 30-31' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219755	SB-9 40-41' (1' BEB)	soil	2010-01-12	00:00	2010-01-14
219756	SB-10 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219757	SB-10 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219758	SB-10 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219759	SB-10 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219760	SB-10 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219761	SB-10 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219762	SB-10 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219763	SB-10 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219764	SB-10 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219765	SB-11 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219766	SB-11 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219767	SB-11 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219768	SB-11 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219769	SB-11 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219770	SB-11 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219771	SB-11 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219772	SB-11 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219773	SB-11 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219774	SB-12 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219775	SB-12 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
219776	SB-12 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219777	SB-12 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219778	SB-12 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219779	SB-12 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219780	SB-12 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219781	SB-12 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219782	SB-12 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219783	SB-13 0-1' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219784	SB-13 2-3' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219785	SB-13 4-5' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219786	SB-13 6-7' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219787	SB-13 10-11' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219788	SB-13 15-16' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219789	SB-13 20-21' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219790	SB-13 25-26' (2' BEB)	soil	2010-01-12	00:00	2010-01-14
219791	SB-13 30-31' (2' BEB)	soil	2010-01-12	00:00	2010-01-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 75 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project COG/Pronghorn SWD Facility were received by TraceAnalysis, Inc. on 2010-01-14 and assigned to work order 10011527. Samples for work order 10011527 were received intact at a temperature of 17.0 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	57175	2010-01-19 at 14:00	66862	2010-01-19 at 11:58
Chloride (Titration)	SM 4500-Cl B	57115	2010-01-18 at 09:39	66836	2010-01-19 at 14:40
Chloride (Titration)	SM 4500-Cl B	57116	2010-01-18 at 09:39	66837	2010-01-19 at 14:41
Chloride (Titration)	SM 4500-Cl B	57117	2010-01-18 at 09:40	66838	2010-01-19 at 14:41
Chloride (Titration)	SM 4500-Cl B	57118	2010-01-18 at 09:40	66839	2010-01-19 at 14:42
Chloride (Titration)	SM 4500-Cl B	57119	2010-01-18 at 09:41	66840	2010-01-19 at 14:43
Chloride (Titration)	SM 4500-Cl B	57120	2010-01-18 at 08:41	66841	2010-01-19 at 14:44
Chloride (Titration)	SM 4500-Cl B	57132	2010-01-18 at 12:36	66842	2010-01-19 at 14:44
Chloride (Titration)	SM 4500-Cl B	57133	2010-01-18 at 12:37	66865	2010-01-20 at 10:45
Chloride (Titration)	SM 4500-Cl B	57134	2010-01-18 at 12:38	66866	2010-01-20 at 10:46
Chloride (Titration)	SM 4500-Cl B	57135	2010-01-18 at 12:38	66867	2010-01-20 at 10:46
Chloride (Titration)	SM 4500-Cl B	57137	2010-01-18 at 12:39	66868	2010-01-20 at 10:47
Chloride (Titration)	SM 4500-Cl B	57138	2010-01-18 at 12:39	66869	2010-01-20 at 10:48
Chloride (Titration)	SM 4500-Cl B	57139	2010-01-18 at 12:40	66870	2010-01-20 at 10:49
TPH DRO - NEW	Mod. 8015B	57147	2010-01-18 at 10:36	66823	2010-01-18 at 10:36
TPH GRO	S 8015B	57175	2010-01-19 at 14:00	66863	2010-01-19 at 12:26

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10011527 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 6 of 75
Lea County, NM

Analytical Report

Sample: 219674 - SB-1 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5035
Analysis: BTEX	Date Analyzed: 2010-01-19	Analyzed By: AG
QC Batch: 66862	Sample Preparation: 2010-01-19	Prepared By: AG
Prep Batch: 57175		

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	43.1 - 158.4

Sample: 219674 - SB-1 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66836	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57115		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14100	mg/Kg	100	4.00

Sample: 219674 - SB-1 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2010-01-18	Analyzed By: kg
QC Batch: 66823	Sample Preparation: 2010-01-18	Prepared By: kg
Prep Batch: 57147		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 7 of 75
Lea County, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		100	mg/Kg	1	100	100	70 - 130

Sample: 219674 - SB-1 0-1' (1' BEB)

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
 QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG
 Prep Batch: 57175 Sample Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.07	mg/Kg	1	2.00	104	61.7 - 131.1

Sample: 219675 - SB-1 2-3' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57115 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14400	mg/Kg	100	4.00

Sample: 219676 - SB-1 4-5' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57115 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7330	mg/Kg	100	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 8 of 75
Lea County, NM

Sample: 219677 - SB-1 6-7' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66836	Date Analyzed:	2010-01-19
Prep Batch:	57115	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3250	mg/Kg	100	4.00

Sample: 219678 - SB-1 10-11' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		440	mg/Kg	50	4.00

Sample: 219679 - SB-1 15-16' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219680 - SB-1 20-21' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		312	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 9 of 75
Lea County, NM

Sample: 219681 - SB-1 25-26' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219682 - SB-1 30-31' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219683 - SB-2 0-1' (1' BEB)

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	66862	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.20	mg/Kg	1	2.00	110	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.16	mg/Kg	1	2.00	108	43.1 - 158.4

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 10 of 75
Lea County, NM

Sample: 219683 - SB-2 0-1' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14900	mg/Kg	100	4.00

Sample: 219683 - SB-2 0-1' (1' BEB)

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B
QC Batch:	66823	Date Analyzed:	2010-01-18
Prep Batch:	57147	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		103	mg/Kg	1	100	103	70 - 130

Sample: 219683 - SB-2 0-1' (1' BEB)

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	66863	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.34	mg/Kg	1	2.00	117	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.22	mg/Kg	1	2.00	111	61.7 - 131.1

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 11 of 75
Lea County, NM

Sample: 219684 - SB-2 2-3' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13600	mg/Kg	100	4.00

Sample: 219685 - SB-2 4-5' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		16000	mg/Kg	100	4.00

Sample: 219686 - SB-2 6-7' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9760	mg/Kg	100	4.00

Sample: 219687 - SB-2 10-11' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66837	Date Analyzed:	2010-01-19
Prep Batch:	57116	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		435	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 12 of 75
Lea County, NM

Sample: 219688 - SB-2 15-16' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66838	Date Analyzed:	2010-01-19
Prep Batch:	57117	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1350	mg/Kg	50	4.00

Sample: 219689 - SB-2 20-21' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66838	Date Analyzed:	2010-01-19
Prep Batch:	57117	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		656	mg/Kg	50	4.00

Sample: 219690 - SB-2 25-26' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66838	Date Analyzed:	2010-01-19
Prep Batch:	57117	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219691 - SB-2 30-31' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66838	Date Analyzed:	2010-01-19
Prep Batch:	57117	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 13 of 75
Lea County, NM

Sample: 219692 - SB-3 0-1' (1' BEB)

Laboratory: Midland

Analysis: BTEX

QC Batch: 66862

Prep Batch: 57175

Analytical Method: S 8021B

Date Analyzed: 2010-01-19

Sample Preparation: 2010-01-19

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		0.0523	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.56	mg/Kg	1	2.00	78	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.60	mg/Kg	1	2.00	80	43.1 - 158.4

Sample: 219692 - SB-3 0-1' (1' BEB)

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 66838

Prep Batch: 57117

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-01-19

Sample Preparation: 2010-01-18

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8660	mg/Kg	100	4.00

Sample: 219692 - SB-3 0-1' (1' BEB)

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 66823

Prep Batch: 57147

Analytical Method: Mod. 8015B

Date Analyzed: 2010-01-18

Sample Preparation: 2010-01-18

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		105	mg/Kg	1	100	105	70 - 130

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 14 of 75
Lea County, NM

Sample: 219692 - SB-3 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2010-01-19	Analyzed By: AG
QC Batch: 66863	Sample Preparation: 2010-01-19	Prepared By: AG
Prep Batch: 57175		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		12.3	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.69	mg/Kg	1	2.00	84	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	61.7 - 131.1

Sample: 219693 - SB-3 2-3' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66838	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57117		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9220	mg/Kg	100	4.00

Sample: 219694 - SB-3 4-5' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66838	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57117		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1010	mg/Kg	50	4.00

Sample: 219695 - SB-3 6-7' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66838	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57117		

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 15 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219696 - SB-3 10-11' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66838	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57117				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219697 - SB-3 15-16' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66838	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57117				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219698 - SB-3 20-21' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66839	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57118				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219699 - SB-3 25-26' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66839	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57118				

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 16 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219700 - SB-3 30-31' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66839 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57118 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219701 - SB-4 0-1' (1' BEB)

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG
 Prep Batch: 57175 Sample Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.27	mg/Kg	1	2.00	114	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.24	mg/Kg	1	2.00	112	43.1 - 158.4

Sample: 219701 - SB-4 0-1' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66839 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57118 Sample Preparation: 2010-01-18 Prepared By: AR

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 17 of 75
Lea County, NM

sample 219701 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11800	mg/Kg	100	4.00

Sample: 219701 - SB-4 0-1' (1' BEB)

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-01-18	Analyzed By:	kg
QC Batch:	66823	Sample Preparation:	2010-01-18	Prepared By:	kg
Prep Batch:	57147				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Sample: 219701 - SB-4 0-1' (1' BEB)

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-01-19	Analyzed By:	AG
QC Batch:	66863	Sample Preparation:	2010-01-19	Prepared By:	AG
Prep Batch:	57175				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.31	mg/Kg	1	2.00	116	61.7 - 131.1

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 18 of 75
Lea County, NM

Sample: 219702 - SB-4 2-3' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66839	Date Analyzed:	2010-01-19
Prep Batch:	57118	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10500	mg/Kg	100	4.00

Sample: 219703 - SB-4 4-5' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66839	Date Analyzed:	2010-01-19
Prep Batch:	57118	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4920	mg/Kg	100	4.00

Sample: 219704 - SB-4 6-7' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66839	Date Analyzed:	2010-01-19
Prep Batch:	57118	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6790	mg/Kg	100	4.00

Sample: 219705 - SB-4 10-11' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66839	Date Analyzed:	2010-01-19
Prep Batch:	57118	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1050	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 19 of 75
Lea County, NM

Sample: 219706 - SB-4 15-16' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66839	Date Analyzed:	2010-01-19
Prep Batch:	57118	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219707 - SB-4 20-21' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66839	Date Analyzed:	2010-01-19
Prep Batch:	57118	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		227	mg/Kg	50	4.00

Sample: 219708 - SB-4 25-26' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66840	Date Analyzed:	2010-01-19
Prep Batch:	57119	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219709 - SB-4 30-31' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66840	Date Analyzed:	2010-01-19
Prep Batch:	57119	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 20 of 75
Lea County, NM

Sample: 219710 - SB-5 0-1' (1' BEB)

Laboratory: Midland			
Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035	
QC Batch: 66862	Date Analyzed: 2010-01-19	Analyzed By: AG	
Prep Batch: 57175	Sample Preparation: 2010-01-19	Prepared By: AG	

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.97	mg/Kg	1	2.00	98	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	43.1 - 158.4

Sample: 219710 - SB-5 0-1' (1' BEB)

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 66840	Date Analyzed: 2010-01-19	Analyzed By: AR	
Prep Batch: 57119	Sample Preparation: 2010-01-18	Prepared By: AR	

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9750	mg/Kg	100	4.00

Sample: 219710 - SB-5 0-1' (1' BEB)

Laboratory: Midland			
Analysis: TPH DRO - NEW	Analytical Method: Mod. 8015B	Prep Method: N/A	
QC Batch: 66823	Date Analyzed: 2010-01-18	Analyzed By: kg	
Prep Batch: 57147	Sample Preparation: 2010-01-18	Prepared By: kg	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		97.6	mg/Kg	1	100	98	70 - 130

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 21 of 75
Lea County, NM

Sample: 219710 - SB-5 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2010-01-19	Analyzed By: AG
QC Batch: 66863	Sample Preparation: 2010-01-19	Prepared By: AG
Prep Batch: 57175		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/Kg	1	2.00	105	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	61.7 - 131.1

Sample: 219711 - SB-5 2-3' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66840	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57119		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10400	mg/Kg	100	4.00

Sample: 219712 - SB-5 4-5' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66840	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57119		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7530	mg/Kg	100	4.00

Sample: 219713 - SB-5 6-7' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66840	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57119		

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 22 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		557	mg/Kg	50	4.00

Sample: 219714 - SB-5 10-11' (1' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 66840 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57119 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5570	mg/Kg	100	4.00

Sample: 219715 - SB-5 15-16' (1' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 66840 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57119 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219716 - SB-5 20-21' (1' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 66840 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57119 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		354	mg/Kg	50	4.00

Sample: 219717 - SB-5 25-26' (1' BEB)

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 66840 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57119 Sample Preparation: 2010-01-18 Prepared By: AR

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 23 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219718 - SB-5 30-31' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66841 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57120 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219719 - SB-6 0-1' (1' BEB)

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG
 Prep Batch: 57175 Sample Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/Kg	1	2.00	105	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	43.1 - 158.4

Sample: 219719 - SB-6 0-1' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66841 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57120 Sample Preparation: 2010-01-18 Prepared By: AR

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 24 of 75
Lea County, NM

sample 219719 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219719 - SB-6 0-1' (1' BEB)

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-01-18	Analyzed By:	kg
QC Batch:	66823	Sample Preparation:	2010-01-18	Prepared By:	kg
Prep Batch:	57147				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		102	mg/Kg	1	100	102	70 - 130

Sample: 219719 - SB-6 0-1' (1' BEB)

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-01-19	Analyzed By:	AG
QC Batch:	66863	Sample Preparation:	2010-01-19	Prepared By:	AG
Prep Batch:	57175				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.24	mg/Kg	1	2.00	112	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.13	mg/Kg	1	2.00	106	61.7 - 131.1

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 25 of 75
Lea County, NM

Sample: 219720 - SB-6 2-3' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219721 - SB-6 4-5' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		510	mg/Kg	50	4.00

Sample: 219722 - SB-6 6-7' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219723 - SB-6 10-11' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 26 of 75
Lea County, NM

Sample: 219724 - SB-6 15-16' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219725 - SB-6 20-21' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219726 - SB-6 25-26' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219727 - SB-6 30-31' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66841	Date Analyzed:	2010-01-19
Prep Batch:	57120	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 27 of 75
Lea County, NM

Sample: 219728 - SB-7 0-1' (1' BEB)

Laboratory: Midland			
Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035	
QC Batch: 66862	Date Analyzed: 2010-01-19	Analyzed By: AG	
Prep Batch: 57175	Sample Preparation: 2010-01-19	Prepared By: AG	

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.83	mg/Kg	1	2.00	92	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	43.1 - 158.4

Sample: 219728 - SB-7 0-1' (1' BEB)

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 66842	Date Analyzed: 2010-01-19	Analyzed By: AR	
Prep Batch: 57132	Sample Preparation: 2010-01-18	Prepared By: AR	

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		17400	mg/Kg	100	4.00

Sample: 219728 - SB-7 0-1' (1' BEB)

Laboratory: Midland			
Analysis: TPH DRO - NEW	Analytical Method: Mod. 8015B	Prep Method: N/A	
QC Batch: 66823	Date Analyzed: 2010-01-18	Analyzed By: kg	
Prep Batch: 57147	Sample Preparation: 2010-01-18	Prepared By: kg	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 28 of 75
Lea County, NM

Sample: 219728 - SB-7 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2010-01-19	Analyzed By: AG
QC Batch: 66863	Sample Preparation: 2010-01-19	Prepared By: AG
Prep Batch: 57175		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.95	mg/Kg	1	2.00	98	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	61.7 - 131.1

Sample: 219729 - SB-7 2-3' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66842	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57132		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14100	mg/Kg	100	4.00

Sample: 219730 - SB-7 4-5' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66842	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57132		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		16100	mg/Kg	100	4.00

Sample: 219731 - SB-7 6-7' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-19	Analyzed By: AR
QC Batch: 66842	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57132		

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 29 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		878	mg/Kg	50	4.00

Sample: 219732 - SB-7 10-11' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66842	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57132				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		465	mg/Kg	50	4.00

Sample: 219733 - SB-7 15-16' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66842	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57132				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219734 - SB-7 20-21' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66842	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57132				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		207	mg/Kg	50	4.00

Sample: 219735 - SB-7 25-26' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-19	Analyzed By:	AR
QC Batch:	66842	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57132				

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 30 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219736 - SB-7 30-31' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57132 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219737 - SB-8 0-1' (1' BEB)

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG
 Prep Batch: 57175 Sample Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.70	mg/Kg	1	2.00	85	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.65	mg/Kg	1	2.00	82	43.1 - 158.4

Sample: 219737 - SB-8 0-1' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR
 Prep Batch: 57132 Sample Preparation: 2010-01-18 Prepared By: AR

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 31 of 75
Lea County, NM

sample 219737 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14800	mg/Kg	100	4.00

Sample: 219737 - SB-8 0-1' (1' BEB)

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-01-18	Analyzed By:	kg
QC Batch:	66823	Sample Preparation:	2010-01-18	Prepared By:	kg
Prep Batch:	57147				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		109	mg/Kg	1	100	109	70 - 130

Sample: 219737 - SB-8 0-1' (1' BEB)

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-01-19	Analyzed By:	AG
QC Batch:	66863	Sample Preparation:	2010-01-19	Prepared By:	AG
Prep Batch:	57175				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.84	mg/Kg	1	2.00	92	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.72	mg/Kg	1	2.00	86	61.7 - 131.1

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 32 of 75
Lea County, NM

Sample: 219738 - SB-8 2-3' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9250	mg/Kg	100	4.00

Sample: 219739 - SB-8 4-5' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7980	mg/Kg	100	4.00

Sample: 219740 - SB-8 6-7' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		595	mg/Kg	50	4.00

Sample: 219741 - SB-8 10-11' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		330	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 33 of 75
Lea County, NM

Sample: 219742 - SB-8 15-16' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219743 - SB-8 20-21' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219744 - SB-8 25-26' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		208	mg/Kg	50	4.00

Sample: 219745 - SB-8 30-31' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 34 of 75
Lea County, NM

Sample: 219746 - SB-9 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5035
Analysis: BTEX	Date Analyzed: 2010-01-19	Analyzed By: AG
QC Batch: 66862	Sample Preparation: 2010-01-19	Prepared By: AG
Prep Batch: 57175		

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.97	mg/Kg	1	2.00	98	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	43.1 - 158.4

Sample: 219746 - SB-9 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-01-20	Analyzed By: AR
QC Batch: 66865	Sample Preparation: 2010-01-18	Prepared By: AR
Prep Batch: 57133		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		503	mg/Kg	50	4.00

Sample: 219746 - SB-9 0-1' (1' BEB)

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2010-01-18	Analyzed By: kg
QC Batch: 66823	Sample Preparation: 2010-01-18	Prepared By: kg
Prep Batch: 57147		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		112	mg/Kg	1	100	112	70 - 130

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 35 of 75
Lea County, NM

Sample: 219746 - SB-9 0-1' (1' BEB)

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	66863	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.96	mg/Kg	1	2.00	98	61.7 - 131.1

Sample: 219747 - SB-9 2-3' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66865	Date Analyzed:	2010-01-20
Prep Batch:	57133	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4040	mg/Kg	100	4.00

Sample: 219748 - SB-9 4-5' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66866	Date Analyzed:	2010-01-20
Prep Batch:	57134	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		534	mg/Kg	50	4.00

Sample: 219749 - SB-9 6-7' (1' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66866	Date Analyzed:	2010-01-20
Prep Batch:	57134	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 36 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		778	mg/Kg	50	4.00

Sample: 219750 - SB-9 10-11' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66866	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57134				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2850	mg/Kg	100	4.00

Sample: 219751 - SB-9 15-16' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66866	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57134				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		5650	mg/Kg	100	4.00

Sample: 219752 - SB-9 20-21' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66866	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57134				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3490	mg/Kg	100	4.00

Sample: 219753 - SB-9 25-26' (1' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66866	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57134				

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 37 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1240	mg/Kg	50	4.00

Sample: 219754 - SB-9 30-31' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66866 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57134 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219755 - SB-9 40-41' (1' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66866 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57134 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219756 - SB-10 0-1' (2' BEB)

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG
 Prep Batch: 57175 Sample Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	1	2.00	101	64.4 - 141.2

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 38 of 75
Lea County, NM

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	43.1 - 158.4

Sample: 219756 - SB-10 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66866	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57134				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10600	mg/Kg	100	4.00

Sample: 219756 - SB-10 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-01-18	Analyzed By:	kg
QC Batch:	66823	Sample Preparation:	2010-01-18	Prepared By:	kg
Prep Batch:	57147				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		107	mg/Kg	1	100	107	70 - 130

Sample: 219756 - SB-10 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-01-19	Analyzed By:	AG
QC Batch:	66863	Sample Preparation:	2010-01-19	Prepared By:	AG
Prep Batch:	57175				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 39 of 75
Lea County, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.01	mg/Kg	1	2.00	100	61.7 - 131.1

Sample: 219757 - SB-10 2-3' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66866 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57134 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6150	mg/Kg	100	4.00

Sample: 219758 - SB-10 4-5' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66867 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57135 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4550	mg/Kg	100	4.00

Sample: 219759 - SB-10 6-7' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66867 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57135 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1960	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 40 of 75
Lea County, NM

Sample: 219760 - SB-10 10-11' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66867	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57135				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1010	mg/Kg	50	4.00

Sample: 219761 - SB-10 15-16' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66867	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57135				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		671	mg/Kg	50	4.00

Sample: 219762 - SB-10 20-21' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66867	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57135				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		574	mg/Kg	50	4.00

Sample: 219763 - SB-10 25-26' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66867	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57135				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1110	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 41 of 75
Lea County, NM

Sample: 219764 - SB-10 30-31' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66867	Date Analyzed:	2010-01-20
Prep Batch:	57135	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		625	mg/Kg	50	4.00

Sample: 219765 - SB-11 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	66862	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.484	mg/Kg	20	0.0100
Toluene		5.18	mg/Kg	20	0.0100
Ethylbenzene		1.26	mg/Kg	20	0.0100
Xylene		7.37	mg/Kg	20	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		25.9	mg/Kg	20	20.0	130	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		26.3	mg/Kg	20	20.0	132	43.1 - 158.4

Sample: 219765 - SB-11 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66867	Date Analyzed:	2010-01-20
Prep Batch:	57135	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2120	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 42 of 75
Lea County, NM

Sample: 219765 - SB-11 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B
QC Batch:	66823	Date Analyzed:	2010-01-18
Prep Batch:	57147	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		520	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	1	131	mg/Kg	1	100	131	70 - 130

Sample: 219765 - SB-11 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	66863	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		744	mg/Kg	20	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		28.2	mg/Kg	20	20.0	141	65.3 - 145
4-Bromofluorobenzene (4-BFB)	2	28.1	mg/Kg	20	20.0	140	61.7 - 131.1

Sample: 219766 - SB-11 2-3' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66867	Date Analyzed:	2010-01-20
Prep Batch:	57135	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		981	mg/Kg	50	4.00

¹ High surrogate recovery due to peak interference.

² High surrogate recovery due to peak interference.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 43 of 75
Lea County, NM

Sample: 219767 - SB-11 4-5' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66867	Date Analyzed:	2010-01-20
Prep Batch:	57135	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		803	mg/Kg	50	4.00

Sample: 219768 - SB-11 6-7' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66868	Date Analyzed:	2010-01-20
Prep Batch:	57137	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		701	mg/Kg	50	4.00

Sample: 219769 - SB-11 10-11' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66868	Date Analyzed:	2010-01-20
Prep Batch:	57137	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		867	mg/Kg	50	4.00

Sample: 219770 - SB-11 15-16' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66868	Date Analyzed:	2010-01-20
Prep Batch:	57137	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3380	mg/Kg	100	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 44 of 75
Lea County, NM

Sample: 219771 - SB-11 20-21' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66868	Date Analyzed:	2010-01-20
Prep Batch:	57137	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3740	mg/Kg	100	4.00

Sample: 219772 - SB-11 25-26' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66868	Date Analyzed:	2010-01-20
Prep Batch:	57137	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4800	mg/Kg	100	4.00

Sample: 219773 - SB-11 30-31' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66868	Date Analyzed:	2010-01-20
Prep Batch:	57137	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1450	mg/Kg	50	4.00

Sample: 219774 - SB-12 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	66862	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 45 of 75
Lea County, NM

sample 219774 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.30	mg/Kg	1	2.00	115	43.1 - 158.4

Sample: 219774 - SB-12 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-01-20	Analyzed By:	AR
QC Batch:	66868	Sample Preparation:	2010-01-18	Prepared By:	AR
Prep Batch:	57137				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2720	mg/Kg	100	4.00

Sample: 219774 - SB-12 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-01-18	Analyzed By:	kg
QC Batch:	66823	Sample Preparation:	2010-01-18	Prepared By:	kg
Prep Batch:	57147				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		85.8	mg/Kg	1	100	86	70 - 130

Sample: 219774 - SB-12 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-01-19	Analyzed By:	AG
QC Batch:	66863	Sample Preparation:	2010-01-19	Prepared By:	AG
Prep Batch:	57175				

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 46 of 75
Lea County, NM

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		43.9	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.07	mg/Kg	1	2.00	104	61.7 - 131.1

Sample: 219775 - SB-12 2-3' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57137 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		576	mg/Kg	50	4.00

Sample: 219776 - SB-12 4-5' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57137 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		586	mg/Kg	50	4.00

Sample: 219777 - SB-12 6-7' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR
 Prep Batch: 57137 Sample Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1210	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 47 of 75
Lea County, NM

Sample: 219778 - SB-12 10-11' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2210	mg/Kg	100	4.00

Sample: 219779 - SB-12 15-16' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4420	mg/Kg	100	4.00

Sample: 219780 - SB-12 20-21' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1850	mg/Kg	50	4.00

Sample: 219781 - SB-12 25-26' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		454	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 48 of 75
Lea County, NM

Sample: 219782 - SB-12 30-31' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		275	mg/Kg	50	4.00

Sample: 219783 - SB-13 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	66862	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.93	mg/Kg	1	2.00	96	43.1 - 158.4

Sample: 219783 - SB-13 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1880	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 49 of 75
Lea County, NM

Sample: 219783 - SB-13 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B
QC Batch:	66823	Date Analyzed:	2010-01-18
Prep Batch:	57147	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		59.1	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		102	mg/Kg	1	100	102	70 - 130

Sample: 219783 - SB-13 0-1' (2' BEB)

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	66863	Date Analyzed:	2010-01-19
Prep Batch:	57175	Sample Preparation:	2010-01-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		7.24	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	61.7 - 131.1

Sample: 219784 - SB-13 2-3' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 50 of 75
Lea County, NM

Sample: 219785 - SB-13 4-5' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		205	mg/Kg	50	4.00

Sample: 219786 - SB-13 6-7' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219787 - SB-13 10-11' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66869	Date Analyzed:	2010-01-20
Prep Batch:	57138	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219788 - SB-13 15-16' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66870	Date Analyzed:	2010-01-20
Prep Batch:	57139	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 51 of 75
Lea County, NM

Sample: 219789 - SB-13 20-21' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66870	Date Analyzed:	2010-01-20
Prep Batch:	57139	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219790 - SB-13 25-26' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66870	Date Analyzed:	2010-01-20
Prep Batch:	57139	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 219791 - SB-13 30-31' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	66870	Date Analyzed:	2010-01-20
Prep Batch:	57139	Sample Preparation:	2010-01-18
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Method Blank (1) QC Batch: 66823

QC Batch:	66823	Date Analyzed:	2010-01-18	Analyzed By:	kg
Prep Batch:	57147	QC Preparation:	2010-01-18	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 52 of 75
Lea County, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		91.6	mg/Kg	1	100	92	70 - 130

Method Blank (1) QC Batch: 66836

QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57115 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66837

QC Batch: 66837 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57116 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66838

QC Batch: 66838 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57117 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66839

QC Batch: 66839 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57118 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 53 of 75
Lea County, NM

Method Blank (1) QC Batch: 66840

QC Batch: 66840 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57119 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66841

QC Batch: 66841 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57120 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66842

QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57132 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66862

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG
Prep Batch: 57175 QC Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	43.9 - 141.9

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 54 of 75
Lea County, NM

Method Blank (1) QC Batch: 66863

QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG
Prep Batch: 57175 QC Preparation: 2010-01-19 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	66.2 - 145
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	62 - 120.5

Method Blank (1) QC Batch: 66865

QC Batch: 66865 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57133 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66866

QC Batch: 66866 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57134 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66867

QC Batch: 66867 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57135 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 55 of 75
Lea County, NM

Method Blank (1) QC Batch: 66868

QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57137 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66869

QC Batch: 66869 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57138 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66870

QC Batch: 66870 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57139 QC Preparation: 2010-01-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg
Prep Batch: 57147 QC Preparation: 2010-01-18 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	284	mg/Kg	1	250	<5.86	114	57.4 - 133.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	295	mg/Kg	1	250	<5.86	118	57.4 - 133.4	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 56 of 75
Lea County, NM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	102	105	mg/Kg	1	100	102	105	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57115 QC Preparation: 2010-01-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	95.5	mg/Kg	1	100	<2.18	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	97.3	mg/Kg	1	100	<2.18	97	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66837 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57116 QC Preparation: 2010-01-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.4	mg/Kg	1	100	<2.18	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66838 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57117 QC Preparation: 2010-01-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 57 of 75
Lea County, NM

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66839
Prep Batch: 57118

Date Analyzed: 2010-01-19
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66840
Prep Batch: 57119

Date Analyzed: 2010-01-19
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.9	mg/Kg	1	100	<2.18	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	99.8	mg/Kg	1	100	<2.18	100	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66841
Prep Batch: 57120

Date Analyzed: 2010-01-19
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 58 of 75
Lea County, NM

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57132 QC Preparation: 2010-01-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	98.9	mg/Kg	1	100	<2.18	99	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG
Prep Batch: 57175 QC Preparation: 2010-01-19 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.02	mg/Kg	1	2.00	<0.00410	101	75.4 - 115.7
Toluene	1.85	mg/Kg	1	2.00	<0.00310	92	78.4 - 113.6
Ethylbenzene	1.76	mg/Kg	1	2.00	<0.00240	88	76 - 114.2
Xylene	5.34	mg/Kg	1	6.00	<0.00650	89	76.9 - 113.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 59 of 75
Lea County, NM

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.06	mg/Kg	1	2.00	<0.00410	103	75.4 - 115.7	2	20
Toluene	1.89	mg/Kg	1	2.00	<0.00310	94	78.4 - 113.6	2	20
Ethylbenzene	1.80	mg/Kg	1	2.00	<0.00240	90	76 - 114.2	2	20
Xylene	5.44	mg/Kg	1	6.00	<0.00650	91	76.9 - 113.6	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	1.92	mg/Kg	1	2.00	97	96	65 - 142.9
4-Bromofluorobenzene (4-BFB)	1.97	1.96	mg/Kg	1	2.00	98	98	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 66863
Prep Batch: 57175

Date Analyzed: 2010-01-19
QC Preparation: 2010-01-19

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.9	mg/Kg	1	20.0	<0.396	84	52.5 - 114.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.6	mg/Kg	1	20.0	<0.396	88	52.5 - 114.3	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	2.12	mg/Kg	1	2.00	105	106	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.03	2.06	mg/Kg	1	2.00	102	103	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 66865
Prep Batch: 57133

Date Analyzed: 2010-01-20
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 60 of 75
Lea County, NM

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66866
Prep Batch: 57134

Date Analyzed: 2010-01-20
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66867
Prep Batch: 57135

Date Analyzed: 2010-01-20
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 61 of 75
Lea County, NM

Laboratory Control Spike (LCS-1)

QC Batch: 66868
Prep Batch: 57137

Date Analyzed: 2010-01-20
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66869
Prep Batch: 57138

Date Analyzed: 2010-01-20
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.0	mg/Kg	1	100	<2.18	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	99.2	mg/Kg	1	100	<2.18	99	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 66870
Prep Batch: 57139

Date Analyzed: 2010-01-20
QC Preparation: 2010-01-18

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.7	mg/Kg	1	100	<2.18	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 62 of 75
Lea County, NM

Matrix Spike (MS-1) Spiked Sample: 219597

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg
Prep Batch: 57147 QC Preparation: 2010-01-18 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	323	mg/Kg	1	250	<5.86	129	35.2 - 167.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	328	mg/Kg	1	250	<5.86	131	35.2 - 167.1	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	97.8	98.0	mg/Kg	1	100	98	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 219677

QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57115 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11500	mg/Kg	100	10000	<218	115	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11000	mg/Kg	100	10000	<218	110	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219687

QC Batch: 66837 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57116 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10400	mg/Kg	100	10000	435	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 63 of 75
Lea County, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	435	102	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219697

QC Batch: 66838 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57117 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9440	mg/Kg	100	10000	<218	94	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	9600	mg/Kg	100	10000	<218	96	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219707

QC Batch: 66839 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57118 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11000	mg/Kg	100	10000	227	108	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11100	mg/Kg	100	10000	227	109	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219717

QC Batch: 66840 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57119 QC Preparation: 2010-01-18 Prepared By: AR

continued ...

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 64 of 75
Lea County, NM

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	<218	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10400	mg/Kg	100	10000	<218	104	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219727

QC Batch: 66841 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57120 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9960	mg/Kg	100	10000	<218	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10100	mg/Kg	100	10000	<218	99	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219737

QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR
Prep Batch: 57132 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24000	mg/Kg	100	10000	14800	92	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	24400	mg/Kg	100	10000	14800	96	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 65 of 75
Lea County, NM

Matrix Spike (MS-1) Spiked Sample: 219728

QC Batch: 66862
Prep Batch: 57175

Date Analyzed: 2010-01-19
QC Preparation: 2010-01-19

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.42	mg/Kg	1	2.00	<0.00410	121	57.7 - 140.7
Toluene	2.26	mg/Kg	1	2.00	<0.00310	113	53.4 - 146.6
Ethylbenzene	2.22	mg/Kg	1	2.00	<0.00240	111	62.1 - 141.6
Xylene	6.71	mg/Kg	1	6.00	<0.00650	112	61.2 - 142.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.32	mg/Kg	1	2.00	<0.00410	116	57.7 - 140.7	4	20
Toluene	2.17	mg/Kg	1	2.00	<0.00310	108	53.4 - 146.6	4	20
Ethylbenzene	2.12	mg/Kg	1	2.00	<0.00240	106	62.1 - 141.6	5	20
Xylene	6.42	mg/Kg	1	6.00	<0.00650	107	61.2 - 142.7	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.93	2.11	mg/Kg	1	2	96	106	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.93	2.11	mg/Kg	1	2	96	106	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 219879

QC Batch: 66863
Prep Batch: 57175

Date Analyzed: 2010-01-19
QC Preparation: 2010-01-19

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.6	mg/Kg	1	20.0	<0.396	93	10 - 198.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	19.2	mg/Kg	1	20.0	<0.396	96	10 - 198.3	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.29	2.13	mg/Kg	1	2	114	106	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.33	2.21	mg/Kg	1	2	116	110	58.6 - 140

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 66 of 75
Lea County, NM

Matrix Spike (MS-1) Spiked Sample: 219747

QC Batch: 66865 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57133 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	13600	mg/Kg	100	10000	4040	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	13700	mg/Kg	100	10000	4040	97	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219757

QC Batch: 66866 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57134 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	16300	mg/Kg	100	10000	6150	102	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	16100	mg/Kg	100	10000	6150	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219767

QC Batch: 66867 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57135 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10900	mg/Kg	100	10000	803	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11000	mg/Kg	100	10000	803	102	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 67 of 75
Lea County, NM

Matrix Spike (MS-1) Spiked Sample: 219777

QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57137 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11500	mg/Kg	100	10000	1210	103	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11600	mg/Kg	100	10000	1210	104	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219787

QC Batch: 66869 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57138 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10000	mg/Kg	100	10000	<218	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10100	mg/Kg	100	10000	<218	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 219791

QC Batch: 66870 Date Analyzed: 2010-01-20 Analyzed By: AR
Prep Batch: 57139 QC Preparation: 2010-01-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<218	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	<218	102	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 68 of 75
Lea County, NM

Standard (CCV-1)

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	297	119	80 - 120	2010-01-18

Standard (CCV-2)

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	290	116	80 - 120	2010-01-18

Standard (CCV-3)

QC Batch: 66823 Date Analyzed: 2010-01-18 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	295	118	80 - 120	2010-01-18

Standard (ICV-1)

QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66836 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.8	98	85 - 115	2010-01-19

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 69 of 75
Lea County, NM

Standard (ICV-1)

QC Batch: 66837 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.2	99	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66837 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-01-19

Standard (ICV-1)

QC Batch: 66838 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	105	105	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66838 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	95.5	96	85 - 115	2010-01-19

Standard (ICV-1)

QC Batch: 66839 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-01-19

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 70 of 75
Lea County, NM

Standard (CCV-1)

QC Batch: 66839

Date Analyzed: 2010-01-19

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-01-19

Standard (ICV-1)

QC Batch: 66840

Date Analyzed: 2010-01-19

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66840

Date Analyzed: 2010-01-19

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.6	100	85 - 115	2010-01-19

Standard (ICV-1)

QC Batch: 66841

Date Analyzed: 2010-01-19

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.5	100	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66841

Date Analyzed: 2010-01-19

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-01-19

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 71 of 75
Lea County, NM

Standard (ICV-1)

QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66842 Date Analyzed: 2010-01-19 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-01-19

Standard (CCV-1)

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-01-19
Toluene		mg/Kg	0.100	0.0927	93	80 - 120	2010-01-19
Ethylbenzene		mg/Kg	0.100	0.0891	89	80 - 120	2010-01-19
Xylene		mg/Kg	0.300	0.270	90	80 - 120	2010-01-19

Standard (CCV-2)

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-01-19
Toluene		mg/Kg	0.100	0.0926	93	80 - 120	2010-01-19
Ethylbenzene		mg/Kg	0.100	0.0879	88	80 - 120	2010-01-19
Xylene		mg/Kg	0.300	0.265	88	80 - 120	2010-01-19

Standard (CCV-3)

QC Batch: 66862 Date Analyzed: 2010-01-19 Analyzed By: AG

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 72 of 75
Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-01-19
Toluene		mg/Kg	0.100	0.0915	92	80 - 120	2010-01-19
Ethylbenzene		mg/Kg	0.100	0.0859	86	80 - 120	2010-01-19
Xylene		mg/Kg	0.300	0.259	86	80 - 120	2010-01-19

Standard (CCV-1)

QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.07	107	80 - 120	2010-01-19

Standard (CCV-2)

QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.994	99	80 - 120	2010-01-19

Standard (CCV-3)

QC Batch: 66863 Date Analyzed: 2010-01-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	80 - 120	2010-01-19

Standard (ICV-1)

QC Batch: 66865 Date Analyzed: 2010-01-20 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.5	98	85 - 115	2010-01-20

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 73 of 75
Lea County, NM

Standard (CCV-1)

QC Batch: 66865

Date Analyzed: 2010-01-20

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-01-20

Standard (ICV-1)

QC Batch: 66866

Date Analyzed: 2010-01-20

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-01-20

Standard (CCV-1)

QC Batch: 66866

Date Analyzed: 2010-01-20

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.4	98	85 - 115	2010-01-20

Standard (ICV-1)

QC Batch: 66867

Date Analyzed: 2010-01-20

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-01-20

Standard (CCV-1)

QC Batch: 66867

Date Analyzed: 2010-01-20

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-01-20

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 74 of 75
Lea County, NM

Standard (ICV-1)

QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-01-20

Standard (CCV-1)

QC Batch: 66868 Date Analyzed: 2010-01-20 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.7	100	85 - 115	2010-01-20

Standard (ICV-1)

QC Batch: 66869 Date Analyzed: 2010-01-20 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2010-01-20

Standard (CCV-1)

QC Batch: 66869 Date Analyzed: 2010-01-20 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-01-20

Standard (ICV-1)

QC Batch: 66870 Date Analyzed: 2010-01-20 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-01-20

Report Date: January 20, 2010
114-6400353

Work Order: 10011527
COG/Pronghorn SWD Facility

Page Number: 75 of 75
Lea County, NM

Standard (CCV-1)

QC Batch: 66870

Date Analyzed: 2010-01-20

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.3	99	85 - 115	2010-01-20

Order # 16011527

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 12

ANALYSIS REQUEST
(Circle or Specify Method No.)**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz	
PROJECT NO.: 114-6400353		PROJECT NAME: COG / Pronghorn SWD facility	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
219684	1/11		SB-2 (2-3') (1' BED)
685	1/11		SB-2 4-5' (1' BED)
686	1/11		SB-2 6-7' (1' BED)
687	1/11		SB-2 10-11' (1' BED)
688	1/11		SB-2 15-16' (1' BED)
689	1/11		SB-2 20-21' (1' BED)
690	1/11		SB-2 25-26' (1' BED)
691	1/11		SB-2 30-31' (1' BED)
692	1/11		SB-3 0-1' (1' BED)
693	1/11		SB-3 2-3' (1' BED)

NUMBER OF CONTAINERS	PRESERVATIVE METHOD			
	HCL	HNO3	ICE	NONE

PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Saml. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
----------	-------------------------------------	-------------------------------------	----------------	-----	--------------------------	---------------------------	----------------	---------------	----------	-------------	------------------	----------------	-------------------------------

RELINQUISHED BY: (Signature)	Date: 1/14/10	Time: 16:45	SAMPLED BY: (Print & Initial)	Date: 1/14/10	Time: 16:45
RELINQUISHED BY: (Signature)	Date: 1/14/10	Time: 16:45	SAMPLE SHIPPED BY: (Circle)	AIRBILL #:	
RELINQUISHED BY: (Signature)	Date: 1/14/10	Time: 16:45	FEDEX	BUS	OTHER:
RELINQUISHED BY: (Signature)	Date: 1/14/10	Time: 16:45	UPS		
RECEIVING LABORATORY:	STATE:	ZIP:	CONTACT:	PHONE:	DATE:
ADDRESS:					
CITY:					
REMARKS:			TETRA TECH CONTACT PERSON:		
SAMPLE CONDITION WHEN RECEIVED:			Results by:		
17.0 c intact			Ike Tavaraz		
RUSH Charges Authorized:			Yes No		

REMARKS: If TPH 75,000 mly run deeper samples / If total BTEX 750 run deeper samples

17.0 c intact

Order #: 10011527

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 12

ANALYSIS REQUEST
(Circle or Specify Method No.)**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG	SITE MANAGER: Ike Tavaréz	PROJECT NAME: COG / Poughon SWD Facility	LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD				PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS				
												HCL	HNO3	ICE	NONE																			
219694			1/11						SB-3 4-5' (1' BED)	1																								
695			1/11						SB-3 6-7' (1' BED)	1																								
696			1/11						SB-3 10-11' (1' BED)	1																								
697			1/11						SB-3 15-16' (1' BED)	1																								
698			1/11						SB-3 20-21' (1' BED)	1																								
699			1/11						SB-3 25-26' (1' BED)	1																								
700			1/11						SB-3 30-31' (1' BED)	1																								
701			1/11						SB-4 0-1' (1' BED)	1																								
702			1/11						SB-4 2-3' (1' BED)	1																								
703			1/11						SB-4 4-5' (1' BED)	1																								

RELINQUISHED BY: (Signature) _____ Date: 1/11/10 Time: 16:45
 RELINQUISHED BY: (Signature) _____ Date: 1/11/10 Time: 16:45
 RELINQUISHED BY: (Signature) _____ Date: 1/11/10 Time: 16:45
 RECEIVING LABORATORY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____ PHONE: _____ DATE: _____

REMARKS: IF TPH 15000 m/kg run deeper samples / If total BTEX 750 run deeper sample

17,000 intact

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

RECEIVED BY: (Signature) _____ Date: 1/11/10 Time: 16:45

Order #: 1001527

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 12

OF:

21

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Tkc Tereez		PROJECT NAME: COG/Ponghorn SWD Facility				PRESERVATIVE METHOD	
PROJECT NO.: 114-6400353		DATE 2010		MATRIX	COMPR	GRAB	SAMPLE IDENTIFICATION Lea Co., NM	FILTERED (Y/N)	
LAB I.D. NUMBER		DATE	TIME					HCL	
219704	1/11						SB-4 6-7' (1' BED)		NONE
705	1/11						SB-4 10-11' (1' BED)		ICE
706	1/11						SB-4 15-16' (1' BED)		HNO3
707	1/11						SB-4 20-21' (1' BED)		
708	1/11						SB-4 25-26' (1' BED)		
709	1/11						SB-4 30-31' (1' BED)		
710	1/11						SB-5 0-1' (1' BED)		
711	1/11						SB-5 2-3' (1' BED)		
712	1/11						SB-5 4-5' (1' BED)		
713	1/11						SB-5 6-7' (1' BED)		

RELINQUISHED BY: (Signature) _____ Date: 1/19/10 Time: 1645 RECEIVED BY: (Signature) _____ Date: 1/19/10 Time: 1645

RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____ RECEIVED BY: (Signature) _____ Date: _____ Time: _____

RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____ RECEIVED BY: (Signature) _____ Date: _____ Time: _____

RECEIVING LABORATORY: _____ ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____ PHONE: _____ DATE: _____

CONTAINER	DATE	REMARKS
17.05.1408A		IP TPH 75000 mly run deeper sample / If total BTEX > 50 run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 10011527

Analysis Request of Chain of Custody Record

PAGE: 5 OF: 12

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Die Tarez	
PROJECT NO.: 114-640-0353		PROJECT NAME: COG / Pronghorn Sand Facility	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
209714	1/11		SB-5 10-11' (1' BEB)
715	1/11		SB-5 15-16' (1' BEB)
716	1/11		SB-5 20-21' (1' BEB)
717	1/11		SB-5 25-26' (1' BEB)
718	1/11		SB-5 30-31' (1' BEB)
719	1/11		SB-6 0-1' (1' BEB)
720	1/11		SB-6 2-3' (1' BEB)
721	1/11		SB-6 4-5' (1' BEB)
722	1/11		SB-6 6-7' (1' BEB)
723	1/11		SB-6 10-11' (1' BEB)
RELINQUISHED BY: (Signature)		Date: 1/11/10	Time: 16:45
RELINQUISHED BY: (Signature)		Date: 1/11/10	Time: 16:45
RELINQUISHED BY: (Signature)		Date: 1/11/10	Time: 16:45
RECEIVING LABORATORY:		REMARKS:	
ADDRESS:	STATE:	PHONE:	DATE:
CITY:	ZIP:	SAMPLE CONDITION WHEN RECEIVED:	
CONTACT:	17.0°C in tact		

TPH 8015 MOD. TX1005 (Ext. to C35)
 BTX 80215
 PAH 8270
 RCRA Metals Ag As Ba Cd Cr Pb Hg Se
 TCLP Metals Ag As Ba Cd Cr Pb Hg Se
 TCLP Volatiles
 TCLP Semi Volatiles
 RCI
 GC/MS Vol. 8240/8260/624
 GC/MS Semi. Vol. 8270/625
 PCB's 8080/608
 Pest. 808/608
 Chloride
 Gamma Spec.
 Alpha Beta (Air)
 PLM (Asbestos)
 Major Anions/Cations, pH, TDS

IF TPH 75000 mgs run deeper samples / If total BTEX 750 run deeper samples

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 10011527

Analysis Request of Chain of Custody Record

**TETRA TECH**

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavares		PRESERVATIVE METHOD		ANALYSIS REQUEST (Circle or Specify Method No.)	
PROJECT NO.: 114-6400353		PROJECT NAME: COG / Proxhorm SWD Facility		NUMBER OF CONTAINERS			
LAB I.D. NUMBER		DATE		TIME			
209734		1/12		2010			
735		1/12					
736		1/12					
737		1/12					
738		1/12					
739		1/12					
740		1/12					
741		1/12					
742		1/12					
743		1/12					
744		1/12					
745		1/12					
746		1/12					
747		1/12					
748		1/12					
749		1/12					
750		1/12					
751		1/12					
752		1/12					
753		1/12					
754		1/12					
755		1/12					
756		1/12					
757		1/12					
758		1/12					
759		1/12					
760		1/12					
761		1/12					
762		1/12					
763		1/12					
764		1/12					
765		1/12					
766		1/12					
767		1/12					
768		1/12					
769		1/12					
770		1/12					
771		1/12					
772		1/12					
773		1/12					
774		1/12					
775		1/12					
776		1/12					
777		1/12					
778		1/12					
779		1/12					
780		1/12					
781		1/12					
782		1/12					
783		1/12					
784		1/12					
785		1/12					
786		1/12					
787		1/12					
788		1/12					
789		1/12					
790		1/12					
791		1/12					
792		1/12					
793		1/12					
794		1/12					
795		1/12					
796		1/12					
797		1/12					
798		1/12					
799		1/12					
800		1/12					
801		1/12					
802		1/12					
803		1/12					
804		1/12					
805		1/12					
806		1/12					
807		1/12					
808		1/12					
809		1/12					
810		1/12					
811		1/12					
812		1/12					
813		1/12					
814		1/12					
815		1/12					
816		1/12					
817		1/12					
818		1/12					
819		1/12					
820		1/12					
821		1/12					
822		1/12					
823		1/12					
824		1/12					
825		1/12					
826		1/12					
827		1/12					
828		1/12					
829		1/12					
830		1/12					
831		1/12					
832		1/12					
833		1/12					
834		1/12					
835		1/12					
836		1/12					
837		1/12					
838		1/12					
839		1/12					
840		1/12					
841		1/12					
842		1/12					
843		1/12					
844		1/12					
845		1/12					
846		1/12					
847		1/12					
848		1/12					
849		1/12					
850		1/12					
851		1/12					
852		1/12					
853		1/12					
854		1/12					
855		1/12					
856		1/12					
857		1/12					
858		1/12					
859		1/12					
860		1/12					
861		1/12					
862		1/12					
863		1/12					
864		1/12					
865		1/12					
866		1/12					
867		1/12					
868		1/12					
869		1/12					
870		1/12					
871		1/12					
872		1/12					
873		1/12					
874		1/12					
875		1/12					
876		1/12					
877		1/12					
878		1/12					
879		1/12					
880		1/12					
881		1/12					
882		1/12					
883		1/12					
884		1/12					
885		1/12					
886		1/12					
887		1/12					
888		1/12					
889		1/12					
890		1/12					
891		1/12					
892		1/12					
893		1/12					
894		1/12					
895		1/12					
896		1/12					
897		1/12					
898		1/12					
899		1/12					
900		1/12					
901		1/12					
902		1/12					
903		1/12					
904		1/12					
905		1/12					
906		1/12					
907		1/12					
908		1/12					
909		1/12					
910		1/12					
911		1/12					
912		1/12					
913		1/12					
914		1/12					
915		1/12					
916		1/12					
917		1/12					
918		1/12					
919		1/12					
920		1/12					
921		1/12					
922		1/12					
923		1/12					
924		1/12					
925		1/12					
926		1/12					
927		1/12					
928		1/12					
929		1/12					
930		1/12					
931		1/12					
932		1/12					
933		1/12					
934		1/12					
935		1/12					
936		1/12					
937		1/12					
938		1/12					
939		1/12					
940		1/12					
941		1/12					
942		1/12					
943		1/12					
944		1/12					
945		1/12					
946		1/12					
947		1/12					
948		1/12					
949		1/12					
950		1/12					
951		1/12					
952		1/12					
953		1/12					
954		1/12					
955		1/12					
956		1/12					
957		1/12					
958		1/12					
959		1/12					
960		1/12					
961		1/12					
962		1/12					
963		1/12					
964		1/12					
965		1/12					
966		1/12					
967		1/12					
968		1/12					
969		1/12					
970		1/12					
971		1/12					
972		1/12					
973		1/12					
974		1/12					
975		1/12					
976		1/12					
977		1/12					
978		1/12					
979		1/1					

Order #: 10011527

Analysis Request of Chain of Custody Record

 PAGE: 8 OF: 12
 ANALYSIS REQUEST
 (Circle or Specify Method No.)


TETRA TECH

 1910 N. Big Spring St.
 Midland, Texas 79705
 (432) 682-4559 • Fax (432) 682-3946

CLIENT NAME:		PROJECT NAME:		SITe MANAGER:		PRESERVATIVE METHOD		NUMBER OF CONTAINERS		FILTERED (Y/N)		HCL		HNO3		ICE		NONE	
COG		COG / Ponghorn SWD Facility		Dlc Tavaraz		HCL		HNO3		ICE		HNO3		ICE		NONE			
PROJECT NO.: 114-6400353		TIME		DATE		MATRIX		COMP		GRAB		SAMPLE IDENTIFICATION							
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION													
219744	1/12				X	SB-B 25-26' (1' BEB)													
745	1/12				X	SB-B 30-31' (1' BEB)													
746	1/12				X	SB-Q 0-1' (1' BEB)													
747	1/12				X	SB-Q 2-3' (1' BEB)													
748	1/12				X	SB-Q 4-5' (1' BEB)													
749	1/12				X	SB-Q 6-7' (1' BEB)													
750	1/12				X	SB-Q 10-11' (1' BEB)													
751	1/12				X	SB-Q 15-16' (1' BEB)													
752	1/12				X	SB-Q 20-21' (1' BEB)													
753	1/12				X	SB-Q 25-26' (1' BEB)													
RELINQUISHED BY: (Signature)		Date: 1/14/10		Time: 16:45		RECEIVED BY: (Signature)		Date: 1/14/10		Time: 16:45		SAMPLED BY: (Print & Initial)		Date: 1/14/10		Time: 16:45			
RELINQUISHED BY: (Signature)		Date: 1/14/10		Time: 16:45		RECEIVED BY: (Signature)		Date: 1/14/10		Time: 16:45		SAMPLED BY: (Print & Initial)		Date: 1/14/10		Time: 16:45			
RELINQUISHED BY: (Signature)		Date: 1/14/10		Time: 16:45		RECEIVED BY: (Signature)		Date: 1/14/10		Time: 16:45		SAMPLED BY: (Print & Initial)		Date: 1/14/10		Time: 16:45			
RECEIVING LABORATORY:		ADDRESS:		CITY:		STATE:		ZIP:		PHONE:		DATE:		TIME:		REMARKS:			
1700c intact		IF TPH 75000 mg/kg run deeper samples / If total BTEX 250 run deeper samples																	

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy Accounting receives Gold copy.

Order #: 10011527

Analysis Request of Chain of Custody Record

**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG		SITE MANAGER: Ike Tavaraz		PROJECT NAME: COG / Pronghorn SWD Facility		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS		PRESERVATIVE METHOD		ANALYSIS REQUEST (Circle or Specify Method No.)																			
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMB	GRAB	DATE	TIME	NUMBER OF CONTAINERS	PREPARED (Y/N)	HCL	HNO3	ICE	NONE	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS		
219764	1/12							SB-10 30-31' (2' BEB)	1																						
765	1/12							SB-11 0-1' (2' BEB)	1																						
766	1/12							SB-11 2-3' (2' BEB)	1																						
767	1/12							SB-11 4-5' (2' BEB)	1																						
768	1/12							SB-11 6-7' (2' BEB)	1																						
769	1/12							SB-11 10-11' (2' BEB)	1																						
770	1/12							SB-11 15-16' (2' BEB)	1																						
771	1/12							SB-11 20-21' (2' BEB)	1																						
772	1/12							SB-11 25-26' (2' BEB)	1																						
773	1/12							SB-11 30-31' (2' BEB)	1																						

RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
<i>[Signature]</i>	1/14/10	16:45	<i>[Signature]</i>	1/14/10	16:45

RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
<i>[Signature]</i>	1/14/10	16:45	<i>[Signature]</i>	1/14/10	16:45

RELINQUISHED BY: (Signature)	Date:	Time:	RECEIVED BY: (Signature)	Date:	Time:
<i>[Signature]</i>	1/14/10	16:45	<i>[Signature]</i>	1/14/10	16:45

RECEIVING LABORATORY:	ADDRESS:	CITY:	STATE:	ZIP:	PHONE:	DATE:	TIME:
170°C intact							

REMARKS:	
If TPH > 5000 mg/kg run deeper samples / If total BTEX > 50 run deeper samples	

SAMPLE CONDITION WHEN RECEIVED:	
170°C intact	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

RECEIVED BY: (Signature)		DATE:		TIME:	
<i>[Signature]</i>		1/14/10		16:45	

||
||
||



6701 Aberdeen Avenue, Suite 9
200 East Sunset Road, Suite E
5002 Basin Street, Suite A1
6015 Harris Parkway, Suite 110

Lubbock, Texas 79424
El Paso, Texas 79922
Midland, Texas 79703
Ft. Worth, Texas 76132

800•378•1296

888•588•3443

E-Mail: lab@traceanalysis.com

806•794•1296

915•585•3443

432•689•6301

817•201•5260

FAX 806•794•1298

FAX 915•585•4944

FAX 432•689•6313

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: September 2, 2011

Work Order: 11082504



Project Location: Eddy Co., NM
Project Name: COG/Pronghorn SWD Facility
Project Number: 114-6401001

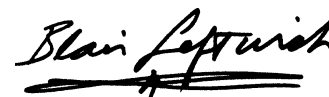
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275369	BH-1 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275370	BH-1 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275371	BH-1 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275372	BH-1 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275373	BH-1 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275374	BH-1 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275375	BH-1 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275376	BH-1 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275377	BH-1 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275378	BH-1 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275379	BH-1 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275380	BH-2 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275381	BH-2 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275382	BH-2 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275383	BH-2 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275384	BH-2 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275385	BH-2 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275386	BH-2 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275387	BH-2 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275388	BH-2 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275389	BH-2 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275390	BH-2 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275391	BH-3 0-1' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275392	BH-3 3' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275393	BH-3 5' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275394	BH-3 7' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275395	BH-3 10' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275396	BH-3 15' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275397	BH-3 20' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275398	BH-3 25' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275399	BH-3 30' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275400	BH-3 40' (2' BEB)	soil	2011-08-23	00:00	2011-08-25
275401	BH-3 50' (2' BEB)	soil	2011-08-23	00:00	2011-08-25

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 34 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative	5
Analytical Report	6
Sample 275369 (BH-1 0-1' (2' BEB))	6
Sample 275370 (BH-1 3' (2' BEB))	7
Sample 275371 (BH-1 5' (2' BEB))	7
Sample 275372 (BH-1 7' (2' BEB))	8
Sample 275373 (BH-1 10' (2' BEB))	8
Sample 275374 (BH-1 15' (2' BEB))	8
Sample 275375 (BH-1 20' (2' BEB))	9
Sample 275376 (BH-1 25' (2' BEB))	9
Sample 275377 (BH-1 30' (2' BEB))	9
Sample 275378 (BH-1 40' (2' BEB))	9
Sample 275379 (BH-1 50' (2' BEB))	10
Sample 275380 (BH-2 0-1' (2' BEB))	10
Sample 275381 (BH-2 3' (2' BEB))	11
Sample 275382 (BH-2 5' (2' BEB))	12
Sample 275383 (BH-2 7' (2' BEB))	12
Sample 275384 (BH-2 10' (2' BEB))	12
Sample 275385 (BH-2 15' (2' BEB))	13
Sample 275386 (BH-2 20' (2' BEB))	13
Sample 275387 (BH-2 25' (2' BEB))	13
Sample 275388 (BH-2 30' (2' BEB))	13
Sample 275389 (BH-2 40' (2' BEB))	14
Sample 275390 (BH-2 50' (2' BEB))	14
Sample 275391 (BH-3 0-1' (2' BEB))	14
Sample 275392 (BH-3 3' (2' BEB))	16
Sample 275393 (BH-3 5' (2' BEB))	16
Sample 275394 (BH-3 7' (2' BEB))	16
Sample 275395 (BH-3 10' (2' BEB))	17
Sample 275396 (BH-3 15' (2' BEB))	17
Sample 275397 (BH-3 20' (2' BEB))	17
Sample 275398 (BH-3 25' (2' BEB))	17
Sample 275399 (BH-3 30' (2' BEB))	18
Sample 275400 (BH-3 40' (2' BEB))	18
Sample 275401 (BH-3 50' (2' BEB))	18
Method Blanks	20
QC Batch 84264 - Method Blank (1)	20
QC Batch 84286 - Method Blank (1)	20
QC Batch 84287 - Method Blank (1)	20
QC Batch 84423 - Method Blank (1)	21
QC Batch 84424 - Method Blank (1)	21
QC Batch 84425 - Method Blank (1)	21
QC Batch 84439 - Method Blank (1)	21

Laboratory Control Spikes	23
QC Batch 84264 - LCS (1)	23
QC Batch 84286 - LCS (1)	23
QC Batch 84287 - LCS (1)	24
QC Batch 84423 - LCS (1)	24
QC Batch 84424 - LCS (1)	24
QC Batch 84425 - LCS (1)	25
QC Batch 84439 - LCS (1)	25
QC Batch 84264 - MS (1)	26
QC Batch 84286 - MS (1)	26
QC Batch 84287 - MS (1)	27
QC Batch 84423 - MS (1)	27
QC Batch 84424 - MS (1)	28
QC Batch 84425 - MS (1)	28
QC Batch 84439 - MS (1)	28
Calibration Standards	30
QC Batch 84264 - CCV (3)	30
QC Batch 84264 - CCV (4)	30
QC Batch 84286 - CCV (1)	30
QC Batch 84286 - CCV (2)	30
QC Batch 84287 - CCV (1)	31
QC Batch 84287 - CCV (2)	31
QC Batch 84423 - ICV (1)	31
QC Batch 84423 - CCV (1)	31
QC Batch 84424 - ICV (1)	32
QC Batch 84424 - CCV (1)	32
QC Batch 84425 - ICV (1)	32
QC Batch 84425 - CCV (1)	32
QC Batch 84439 - ICV (1)	33
QC Batch 84439 - CCV (1)	33
Appendix	34
Laboratory Certifications	34
Standard Flags	34
Attachments	34

Case Narrative

Samples for project COG/Pronghorn SWD Facility were received by TraceAnalysis, Inc. on 2011-08-25 and assigned to work order 11082504. Samples for work order 11082504 were received intact at a temperature of 3.6 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	71575	2011-08-26 at 11:51	84286	2011-08-26 at 11:51
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84423	2011-08-31 at 12:46
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84424	2011-08-31 at 12:47
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84425	2011-08-31 at 12:48
Chloride (Titration)	SM 4500-Cl B	71623	2011-08-30 at 08:59	84439	2011-09-01 at 15:34
TPH DRO - NEW	S 8015 D	71548	2011-08-24 at 14:42	84264	2011-08-24 at 14:42
TPH GRO	S 8015 D	71575	2011-08-26 at 11:51	84287	2011-08-26 at 11:51

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11082504 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 6 of 34
Eddy Co., NM

Analytical Report

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: BTEX
QC Batch: 84286
Prep Batch: 71575

Analytical Method: S 8021B
Date Analyzed: 2011-08-26
Sample Preparation: 2011-08-26

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.49	mg/Kg	1	2.00	124	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.43	mg/Kg	1	2.00	122	70.6 - 179

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 84423
Prep Batch: 71623

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-08-31
Sample Preparation: 2011-08-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4980	mg/Kg	100	4.00

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 84264
Prep Batch: 71548

Analytical Method: S 8015 D
Date Analyzed: 2011-08-24
Sample Preparation: 2011-08-24

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	358	mg/Kg	1	50.0

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 7 of 34
Eddy Co., NM

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}		210	mg/Kg	1	100	210	67.5 - 147.1

Sample: 275369 - BH-1 0-1' (2' BEB)

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 84287
Prep Batch: 71575

Analytical Method: S 8015 D
Date Analyzed: 2011-08-26
Sample Preparation: 2011-08-26

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.25	mg/Kg	1	2.00	112	30 - 134.6
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	22.4 - 149

Sample: 275370 - BH-1 3' (2' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 84423
Prep Batch: 71623

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-08-31
Sample Preparation: 2011-08-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4570	mg/Kg	100	4.00

Sample: 275371 - BH-1 5' (2' BEB)

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 84423
Prep Batch: 71623

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-08-31
Sample Preparation: 2011-08-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 8 of 34
Eddy Co., NM

sample 275371 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1230	mg/Kg	100	4.00

Sample: 275372 - BH-1 7' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1310	mg/Kg	100	4.00

Sample: 275373 - BH-1 10' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2260	mg/Kg	100	4.00

Sample: 275374 - BH-1 15' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 9 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5580	mg/Kg	100	4.00

Sample: 275375 - BH-1 20' (2' BEB)

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR	
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7190	mg/Kg	100	4.00

Sample: 275376 - BH-1 25' (2' BEB)

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR	
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1350	mg/Kg	100	4.00

Sample: 275377 - BH-1 30' (2' BEB)

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch:	84423	Date Analyzed:	2011-08-31	Analyzed By:	AR	
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			857	mg/Kg	50	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 10 of 34
Eddy Co., NM

Sample: 275378 - BH-1 40' (2' BEB)

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 84423	Date Analyzed: 2011-08-31	Analyzed By: AR	
Prep Batch: 71623	Sample Preparation: 2011-08-30	Prepared By: AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275379 - BH-1 50' (2' BEB)

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 84424	Date Analyzed: 2011-08-31	Analyzed By: AR	
Prep Batch: 71623	Sample Preparation: 2011-08-30	Prepared By: AR	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory: Midland			
Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035	
QC Batch: 84286	Date Analyzed: 2011-08-26	Analyzed By: ME	
Prep Batch: 71575	Sample Preparation: 2011-08-26	Prepared By: ME	

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.34	mg/Kg	1	2.00	117	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.27	mg/Kg	1	2.00	114	70.6 - 179

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 11 of 34
Eddy Co., NM

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			16100	mg/Kg	100	4.00

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-08-24	Analyzed By:	kg
QC Batch:	84264	Sample Preparation:	2011-08-24	Prepared By:	kg
Prep Batch:	71548				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		₁	216	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			128	mg/Kg	1	100	128	67.5 - 147.1

Sample: 275380 - BH-2 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-08-26	Analyzed By:	ME
QC Batch:	84287	Sample Preparation:	2011-08-26	Prepared By:	ME
Prep Batch:	71575				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	_U	₁	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	1	2.00	106	30 - 134.6
4-Bromofluorobenzene (4-BFB)	_J		1.92	mg/Kg	1	2.00	96	22.4 - 149

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 12 of 34
Eddy Co., NM

Sample: 275381 - BH-2 3' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1770	mg/Kg	100	4.00

Sample: 275382 - BH-2 5' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2660	mg/Kg	100	4.00

Sample: 275383 - BH-2 7' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4190	mg/Kg	100	4.00

Sample: 275384 - BH-2 10' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 13 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3010	mg/Kg	100	4.00

Sample: 275385 - BH-2 15' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84424	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			620	mg/Kg	50	4.00

Sample: 275386 - BH-2 20' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84424	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			308	mg/Kg	50	4.00

Sample: 275387 - BH-2 25' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84424	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 14 of 34
Eddy Co., NM

Sample: 275388 - BH-2 30' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84424	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275389 - BH-2 40' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84425	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275390 - BH-2 50' (2' BEB)

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-08-31	Analyzed By:	AR
QC Batch:	84425	Sample Preparation:	2011-08-30	Prepared By:	AR
Prep Batch:	71623				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2011-08-26	Analyzed By:	ME
QC Batch:	84286	Sample Preparation:	2011-08-26	Prepared By:	ME
Prep Batch:	71575				

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 15 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.49	mg/Kg	1	2.00	124	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.37	mg/Kg	1	2.00	118	70.6 - 179

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			12800	mg/Kg	100	4.00

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg
 Prep Batch: 71548 Sample Preparation: 2011-08-24 Prepared By: kg

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			126	mg/Kg	1	100	126	67.5 - 147.1

Sample: 275391 - BH-3 0-1' (2' BEB)

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 84287 Date Analyzed: 2011-08-26 Analyzed By: ME
 Prep Batch: 71575 Sample Preparation: 2011-08-26 Prepared By: ME

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 16 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.26	mg/Kg	1	2.00	113	30 - 134.6
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	22.4 - 149

Sample: 275392 - BH-3 3' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5570	mg/Kg	100	4.00

Sample: 275393 - BH-3 5' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3000	mg/Kg	100	4.00

Sample: 275394 - BH-3 7' (2' BEB)

Laboratory: Midland
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
 Prep Batch: 71623 Sample Preparation: 2011-08-30 Prepared By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 17 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3440	mg/Kg	100	4.00

Sample: 275395 - BH-3 10' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84425	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4230	mg/Kg	100	4.00

Sample: 275396 - BH-3 15' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84425	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5500	mg/Kg	100	4.00

Sample: 275397 - BH-3 20' (2' BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	84425	Date Analyzed:	2011-08-31	Analyzed By:	AR
Prep Batch:	71623	Sample Preparation:	2011-08-30	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7200	mg/Kg	100	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 18 of 34
Eddy Co., NM

Sample: 275398 - BH-3 25' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84425	Date Analyzed:	2011-08-31
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1380	mg/Kg	100	4.00

Sample: 275399 - BH-3 30' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84439	Date Analyzed:	2011-09-01
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275400 - BH-3 40' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84439	Date Analyzed:	2011-09-01
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Sample: 275401 - BH-3 50' (2' BEB)

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	84439	Date Analyzed:	2011-09-01
Prep Batch:	71623	Sample Preparation:	2011-08-30
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 19 of 34
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<200	mg/Kg	50	4.00

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 20 of 34
Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 84264

QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg
Prep Batch: 71548 QC Preparation: 2011-08-24 Prepared By: kg

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			128	mg/Kg	1	100	128	52.7 - 133.8

Method Blank (1) QC Batch: 84286

QC Batch: 84286 Date Analyzed: 2011-08-26 Analyzed By: ME
Prep Batch: 71575 QC Preparation: 2011-08-26 Prepared By: ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.0118	mg/Kg	0.02
Toluene		1	<0.00600	mg/Kg	0.02
Ethylbenzene		1	<0.00850	mg/Kg	0.02
Xylene		1	<0.00613	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	48.4 - 123.1

Method Blank (1) QC Batch: 84287

QC Batch: 84287 Date Analyzed: 2011-08-26 Analyzed By: ME
Prep Batch: 71575 QC Preparation: 2011-08-26 Prepared By: ME

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 21 of 34
Eddy Co., NM

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.753	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	67.6 - 150
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	52.4 - 130

Method Blank (1) QC Batch: 84423

QC Batch: 84423 Date Analyzed: 2011-08-31 Analyzed By: AR
Prep Batch: 71623 QC Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 84424

QC Batch: 84424 Date Analyzed: 2011-08-31 Analyzed By: AR
Prep Batch: 71623 QC Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 84425

QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR
Prep Batch: 71623 QC Preparation: 2011-08-30 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 22 of 34
Eddy Co., NM

Method Blank (1) QC Batch: 84439

QC Batch: 84439
Prep Batch: 71623

Date Analyzed: 2011-09-01
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 23 of 34
Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 84264
Prep Batch: 71548

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: kg
Prepared By: kg

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	260	mg/Kg	1	250	<14.5	104	64.5 - 146.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	294	mg/Kg	1	250	<14.5	118	64.5 - 146.9	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	117	132	mg/Kg	1	100	117	132	65.3 - 135.8

Laboratory Control Spike (LCS-1)

QC Batch: 84286
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.90	mg/Kg	1	2.00	<0.0118	95	77.4 - 121.7
Toluene		1	2.04	mg/Kg	1	2.00	<0.00600	102	88.6 - 121.6
Ethylbenzene		1	2.05	mg/Kg	1	2.00	<0.00850	102	74.3 - 117.9
Xylene		1	6.17	mg/Kg	1	6.00	<0.00613	103	73.4 - 118.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.84	mg/Kg	1	2.00	<0.0118	92	77.4 - 121.7	3	20
Toluene		1	1.97	mg/Kg	1	2.00	<0.00600	98	88.6 - 121.6	4	20
Ethylbenzene		1	1.98	mg/Kg	1	2.00	<0.00850	99	74.3 - 117.9	4	20
Xylene		1	5.98	mg/Kg	1	6.00	<0.00613	100	73.4 - 118.8	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 24 of 34
Eddy Co., NM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	1.96	mg/Kg	1	2.00	108	98	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	2.13	1.96	mg/Kg	1	2.00	106	98	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: 84287
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.1	mg/Kg	1	20.0	<0.753	86	60.9 - 95.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.3	mg/Kg	1	20.0	<0.753	92	60.9 - 95.4	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	1.87	mg/Kg	1	2.00	102	94	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.89	1.76	mg/Kg	1	2.00	94	88	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 84423
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.9	mg/Kg	1	100	<3.85	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			104	mg/Kg	1	100	<3.85	104	85 - 115	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 25 of 34
Eddy Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: 84424
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.0	mg/Kg	1	100	<3.85	97	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 84425
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.1	mg/Kg	1	100	<3.85	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 84439
Prep Batch: 71623

Date Analyzed: 2011-09-01
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			94.8	mg/Kg	1	100	<3.85	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 26 of 34
Eddy Co., NM

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			105	mg/Kg	1	100	<3.85	105	85 - 115	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275112

QC Batch: 84264
Prep Batch: 71548

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: kg
Prepared By: kg

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	291	mg/Kg	1	250	<14.5	116	38.8 - 153.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	269	mg/Kg	1	250	<14.5	108	38.8 - 153.3	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	131	123	mg/Kg	1	100	131	123	54.6 - 149.8

Matrix Spike (MS-1) Spiked Sample: 275391

QC Batch: 84286
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.76	mg/Kg	1	2.00	<0.0118	88	69.4 - 123.6
Toluene		1	1.94	mg/Kg	1	2.00	<0.00600	97	75.4 - 134.3
Ethylbenzene		1	2.05	mg/Kg	1	2.00	<0.00850	102	58.8 - 133.7
Xylene		1	6.22	mg/Kg	1	6.00	<0.00613	104	57 - 134.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.63	mg/Kg	1	2.00	<0.0118	82	69.4 - 123.6	8	20
Toluene		1	1.78	mg/Kg	1	2.00	<0.00600	89	75.4 - 134.3	9	20

continued . . .

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 27 of 34
Eddy Co., NM

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene		1	1.86	mg/Kg	1	2.00	<0.00850	93	58.8 - 133.7	10	20
Xylene		1	5.62	mg/Kg	1	6.00	<0.00613	94	57 - 134.2	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.40	2.56	mg/Kg	1	2	120	128	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.35	2.50	mg/Kg	1	2	118	125	71 - 167

Matrix Spike (MS-1) Spiked Sample: 275380

QC Batch: 84287
Prep Batch: 71575

Date Analyzed: 2011-08-26
QC Preparation: 2011-08-26

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.6	mg/Kg	1	20.0	<0.753	88	61.8 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.1	mg/Kg	1	20.0	<0.753	90	61.8 - 114	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.31	2.41	mg/Kg	1	2	116	120	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.25	2.36	mg/Kg	1	2	112	118	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 275378

QC Batch: 84423
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10200	mg/Kg	100	10000	<385	102	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 28 of 34
Eddy Co., NM

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10700	mg/Kg	100	10000	<385	107	79.4 - 120.6	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275388

QC Batch: 84424
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10100	mg/Kg	100	10000	<385	101	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10700	mg/Kg	100	10000	<385	107	79.4 - 120.6	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275398

QC Batch: 84425
Prep Batch: 71623

Date Analyzed: 2011-08-31
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			11400	mg/Kg	100	10000	1380	100	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11900	mg/Kg	100	10000	1380	105	79.4 - 120.6	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 275723

QC Batch: 84439
Prep Batch: 71623

Date Analyzed: 2011-09-01
QC Preparation: 2011-08-30

Analyzed By: AR
Prepared By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 29 of 34
Eddy Co., NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9660	mg/Kg	100	10000	<385	97	79.4 - 120.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10300	mg/Kg	100	10000	<385	103	79.4 - 120.6	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 30 of 34
Eddy Co., NM

Calibration Standards

Standard (CCV-3)

QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	275	110	80 - 120	2011-08-24

Standard (CCV-4)

QC Batch: 84264 Date Analyzed: 2011-08-24 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	290	116	80 - 120	2011-08-24

Standard (CCV-1)

QC Batch: 84286 Date Analyzed: 2011-08-26 Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.101	101	80 - 120	2011-08-26
Toluene		1	mg/Kg	0.100	0.108	108	80 - 120	2011-08-26
Ethylbenzene		1	mg/Kg	0.100	0.106	106	80 - 120	2011-08-26
Xylene		1	mg/Kg	0.300	0.326	109	80 - 120	2011-08-26

Standard (CCV-2)

QC Batch: 84286 Date Analyzed: 2011-08-26 Analyzed By: ME

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 31 of 34
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.0964	96	80 - 120	2011-08-26
Toluene		1	mg/Kg	0.100	0.103	103	80 - 120	2011-08-26
Ethylbenzene		1	mg/Kg	0.100	0.103	103	80 - 120	2011-08-26
Xylene		1	mg/Kg	0.300	0.311	104	80 - 120	2011-08-26

Standard (CCV-1)

QC Batch: 84287

Date Analyzed: 2011-08-26

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.10	110	80 - 120	2011-08-26

Standard (CCV-2)

QC Batch: 84287

Date Analyzed: 2011-08-26

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.985	98	80 - 120	2011-08-26

Standard (ICV-1)

QC Batch: 84423

Date Analyzed: 2011-08-31

Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2011-08-31

Standard (CCV-1)

QC Batch: 84423

Date Analyzed: 2011-08-31

Analyzed By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 32 of 34
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.3	98	85 - 115	2011-08-31

Standard (ICV-1)

QC Batch: 84424 Date Analyzed: 2011-08-31 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2011-08-31

Standard (CCV-1)

QC Batch: 84424 Date Analyzed: 2011-08-31 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2011-08-31

Standard (ICV-1)

QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.1	99	85 - 115	2011-08-31

Standard (CCV-1)

QC Batch: 84425 Date Analyzed: 2011-08-31 Analyzed By: AR

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 33 of 34
Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2011-08-31

Standard (ICV-1)

QC Batch: 84439

Date Analyzed: 2011-09-01

Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2011-09-01

Standard (CCV-1)

QC Batch: 84439

Date Analyzed: 2011-09-01

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2011-09-01

Report Date: September 2, 2011
114-6401001

Work Order: 11082504
COG/Pronghorn SWD Facility

Page Number: 34 of 34
Eddy Co., NM

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 206380

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 206380
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Closure approved 3/26/2014. Original signed report from 2014 can be found under RP#. Uploading historical documentation to incident file.	4/18/2023