

SITE INFORMATION

Report Type: Closure 2RP-5109

General Site Information:

Site:	McIntyre A West #16					
Company:	COG Operating LLC					
Section, Township and Range	Unit O	Sec. 20	T 17S	R 30E		
Lease Number:	API No. 30-015-31855					
County:	Eddy County					
GPS:	32.815367			-103.99379		
Surface Owner:	Federal					
Directions:	From the intersection of Hagerman Cutoff Rd and US 82, travel west on US 82 for 0.20 miles, turn south onto lease road for 0.25 miles, turn west onto lease road for 0.15 miles to the location.					

Release Data:

Date Released:	12/3/2018
Type Release:	Crude Oil
Source of Contamination:	Flowline
Fluid Released:	35 bbls
Fluids Recovered:	30 bbls

Official Communication:

Name:	Ike Tavaréz		Clair Gonzales
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		901 West Wall Street
	600 W. Illinois Ave.		Suite 100
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 687-8110
Fax:	(432) 684-7137		
Email:	itavarez@concho.com		Clair.Gonzales@tetrattech.com

Site Characterization

Depth to Groundwater:	80'
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Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	1,000 mg/kg	2,500 mg/kg	10,000 mg/kg



TETRA TECH

May 31, 2019

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

Re: Closure Request for the COG Operating, LLC, McIntyre A West #16, Unit O, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico. 2RP-5109.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to remediate a release that occurred at the McIntyre A West #16, Unit O, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.815367°, -103.99379°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 3, 2018, and released approximately 35 barrels of crude oil due to a flowline rupture. A vacuum truck was dispatched to remove all freestanding fluids and approximately 30 barrels of oil was recovered. The release occurred in the pasture and impacted an area measuring approximately 65'x100'. The C-141 Form is included in Appendix A.

Site Characterization

A site characterization was performed for the site and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. Additionally, the site is located in a low karst potential area. One water well is listed in Section 20 on the New Mexico Office of the State Engineer's (NMOSE) database, approximately 0.60 miles to the northeast of the site, and has a reported depth to groundwater of 80' below ground surface. No other wells are listed in Township 17 South, Range 30 East on the NMOSE database, USGS National Water Information database, or the Geology and Groundwater Resources of Eddy County (Report 3). According to the Chevron Texaco Groundwater Trend map, the average depth to ground water in the area greater than 200' below surface. The groundwater data is shown in Appendix B.

Tetra Tech

901 West Wall, Suite 100, Midland, TX 79701

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. 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 site characterization the proposed RRAL for TPH is 1,000 mg/kg (GRO+DRO) or 2,500 mg/kg (GRO+DRO+MRO). Additionally, the proposed RRAL for chlorides is 10,000 mg/kg.

Soil Assessment and Analytical Results

Tetra Tech personnel were onsite between February 11th, 2019 and April 8th, 2019 to supervise the remediation activities at the site. A total of eleven (11) bottom hole confirmation samples (BTTM-1 through BTTM-11) were collected every 400 square feet, as approved by the NMOCD. Additionally, seven (7) sidewall confirmation samples (NSW-1, NSW-2, NSW-3, SSW-1, SSW-2, WSW-1 and ESW-1) were collected. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The bore locations are shown on Figure 3.

Based on the laboratory data, the excavation was expanded to ensure proper removal of the impacted soils. The area of BTTM-9, which initially showed TPH and total BTEX concentrations above the RRAL's, was resampled with BTTM-5 at 8.0' below surface based on excavation dimensions and field observations. Referring to Table 1, all final confirmation samples showed benzene, total BTEX, TPH, and chloride concentrations below the RRALs.

Conclusion

Based on the laboratory data, COG requests closure of this spill. The final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call at (432) 682-4559.

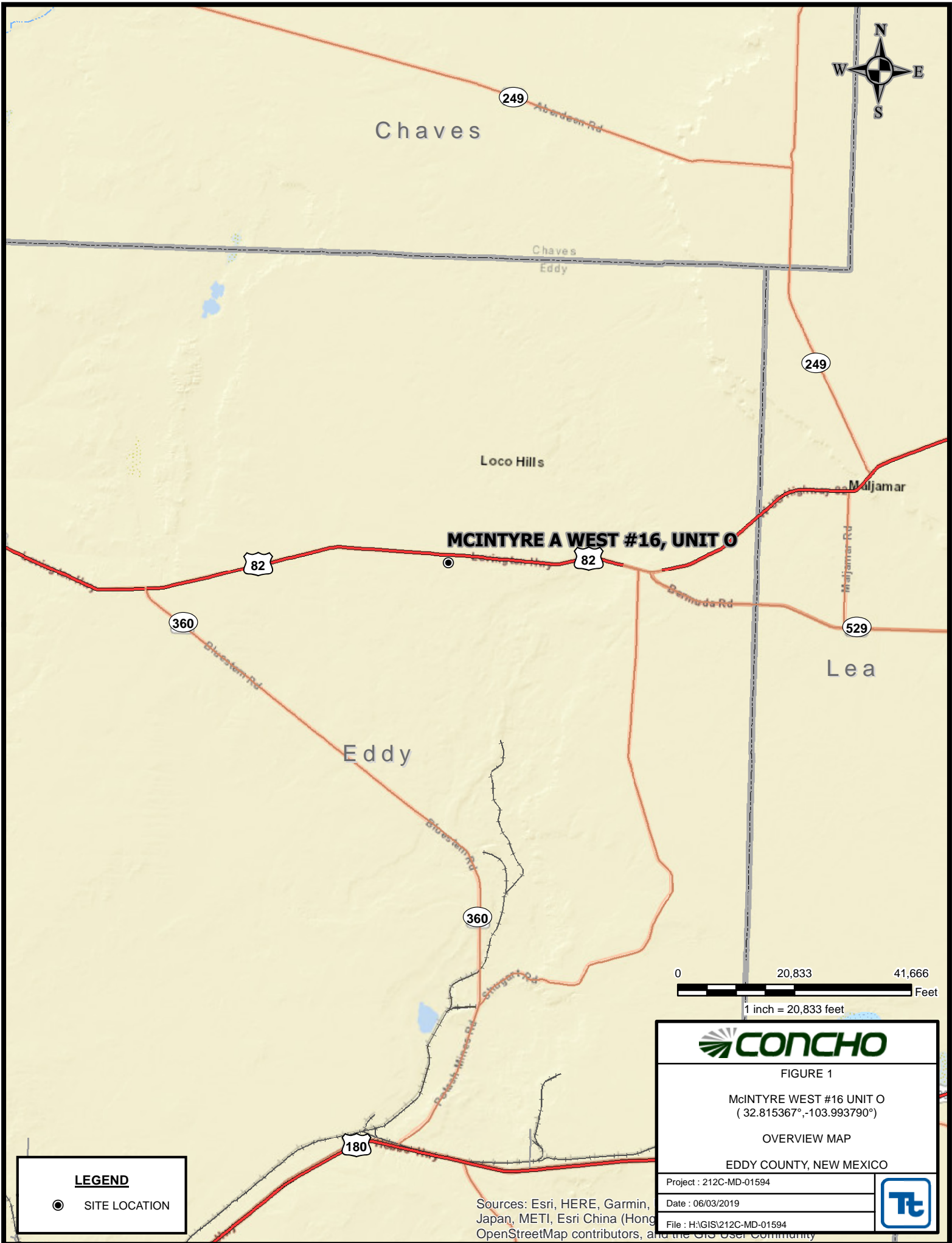
Respectfully submitted,
TETRA TECH

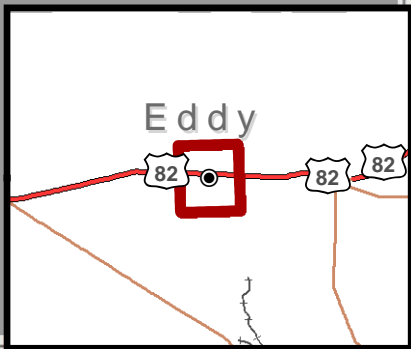
A handwritten signature in blue ink that reads 'Clair Gonzales'.

Clair Gonzales,
Project

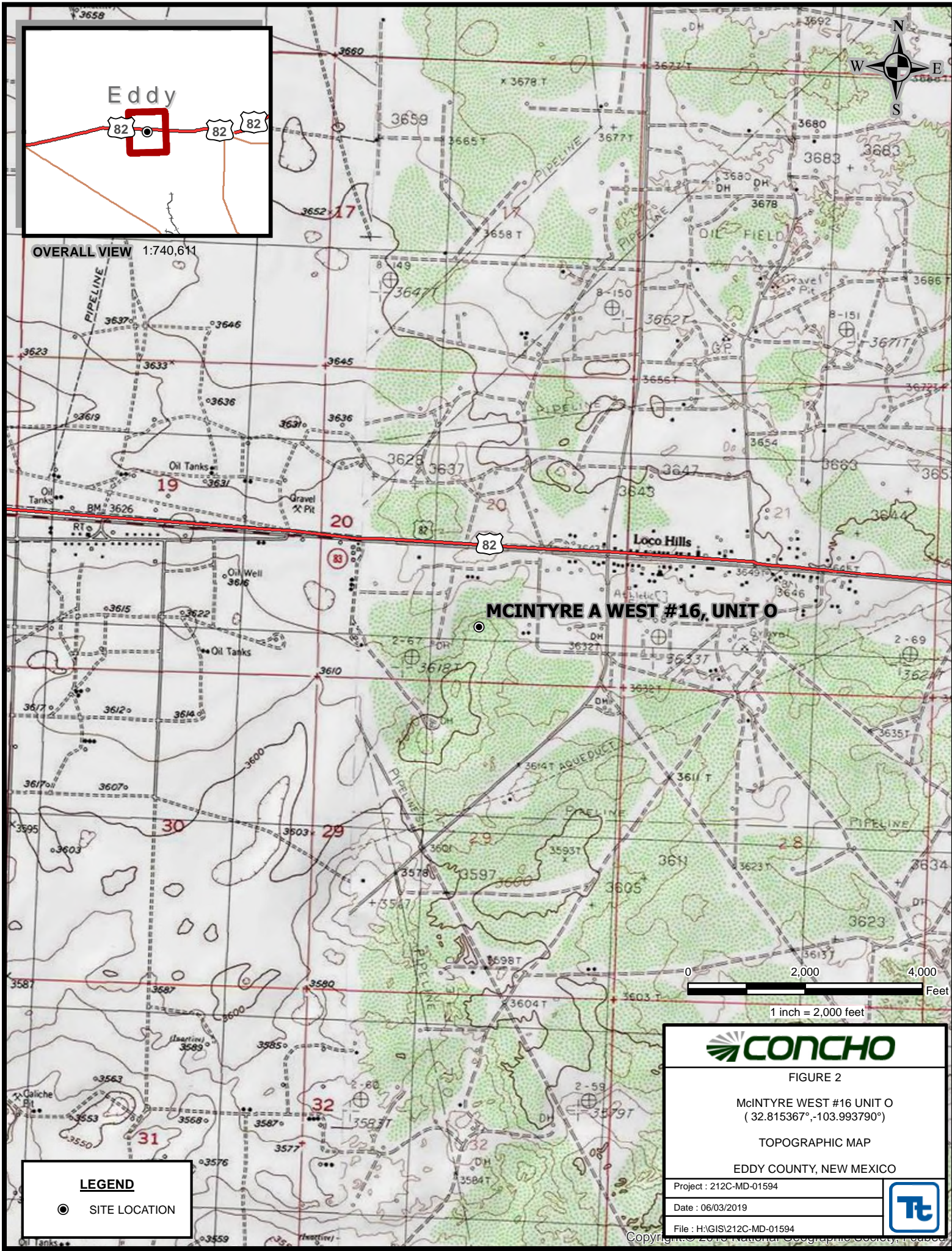
cc: Ike Tavarez - COG
Dakota Neel - COG
Rebecca Haskell - COG
Sheldon Hitchcock - COG
DeAnn Grant - COG

Figures





OVERALL VIEW 1:740,611



LEGEND

● SITE LOCATION



FIGURE 2

McINTYRE WEST #16 UNIT O
(32.815367°,-103.993790°)

TOPOGRAPHIC MAP

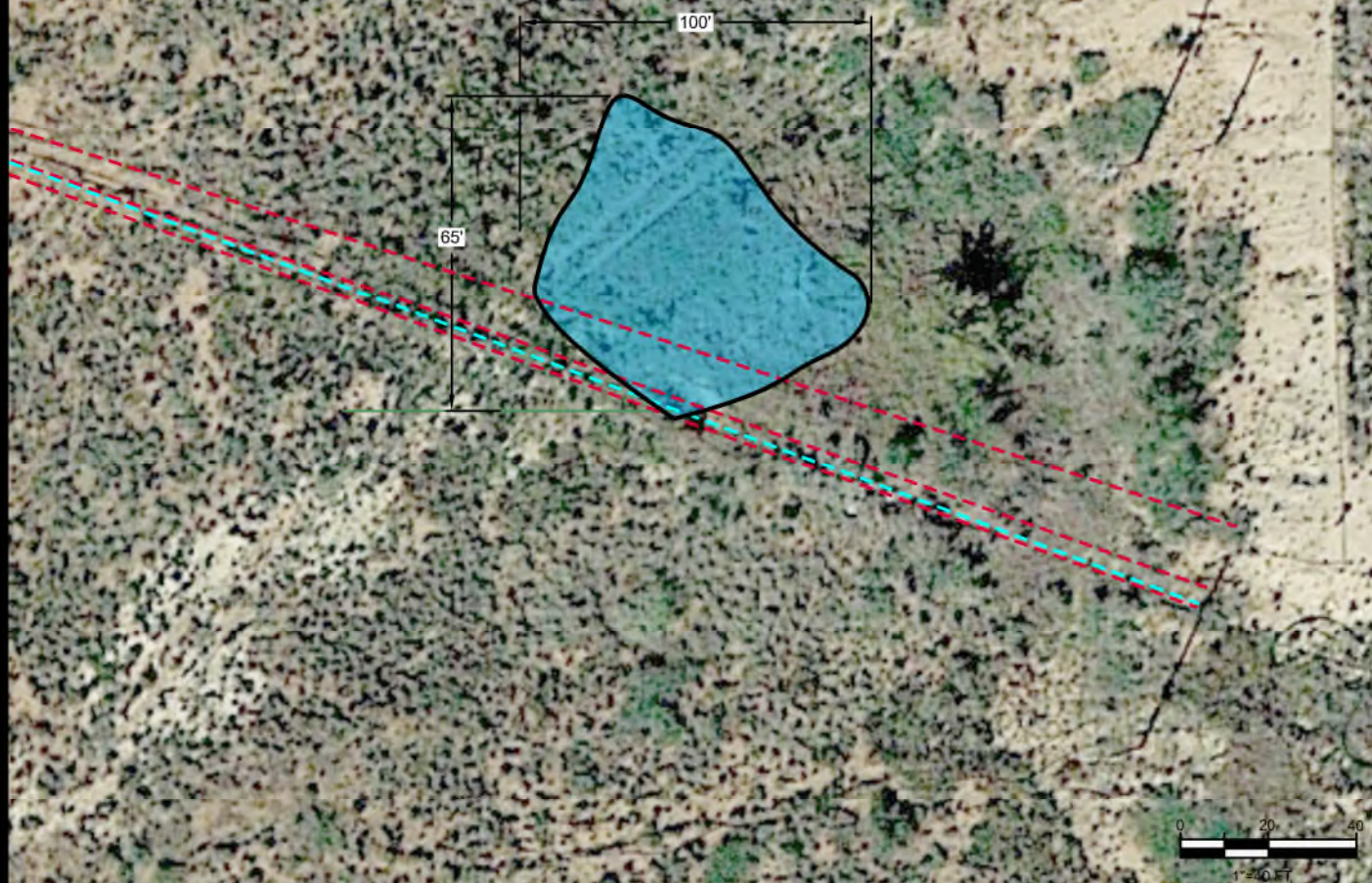
EDDY COUNTY, NEW MEXICO

Project : 212C-MD-01594

Date : 06/03/2019

File : H:\GIS\212C-MD-01594





LEGEND




-  SPILL AREA
-  COG LINE
-  HOLLY LINE



FIGURE 3

McINTYRE A WEST 16, UNIT O
(32.815367°, -103.993790°)

SPILL ASSESSMENT MAP
EDDY COUNTY, NEW MEXICO

Project: 212C-MD-01594

Date: 06/03/2019

File: H:\GIS\212C-MD-01594





LEGEND

- BTM BOTTOMHOLE SAMPLE LOCATIONS
- 2.0' EXCAVATED DEPTH AREA
- 3.0' EXCAVATED DEPTH AREA
- 8.0' EXCAVATED DEPTH AREA
- EQUIPMENT
- COG LINE
- HOLLY LINE
- SIDEWALL DESIGNATIONS



FIGURE 4

McINTYRE A WEST 16, UNIT O
(32.815367°, -103.993790°)

EXCAVATED AREA & DEPTH MAP
EDDY COUNTY, NEW MEXICO

Project: 212C-MD-01594

Date: 06/03/2019

File: H:\GIS\212C-MD-01594



Tables

Table 1
COG
McIntyre A West #16 (12/3/18)
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	GRO+DRO	MRO	Total						
BTTM-1	2/11/2019	5		X	767	2,050	2,817	63.3	2,880	1.48	19.0	36.1	37.3	93.8	80.0
	2/12/2019	6		X	1,200	3,020	4,220	313	4,533	4.84	28.0	36.1	33.6	103	48.0
	4/4/2019	8		X	121	707	828	116	944	<0.200	3.6	11.1	12.1	26.8	80.0
	4/8/2019	10	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
BTTM-2	2/12/2019	6		X	6,090	11,400	17,490	1,200	18,690	61.3	291	279	233	864	32.0
	4/8/2019	8		X	15.0	222	237	17.0	254	<0.050	<0.050	0.155	0.198	0.353	<16.0
	4/4/2019	10	X		98.1	890	988	160	1,148	<0.200	0.93	2.81	3.68	7.42	48.0
BTTM-3	2/12/2019	6		X	<50.0	125	125	<50.0	125	0.0680	0.181	0.141	<0.150	0.390	32.0
	4/8/2019	8		X	18.8	208	227	28.9	256	<0.050	0.287	0.970	1.50	2.76	48.0
	4/8/2019	10	X		<10.0	14.2	14.2	<10.0	14.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
BTTM-4	2/11/2019	2		X	16.0	659	675	74.9	750	<0.050	<0.050	0.197	0.264	0.461	16.0
	4/8/2019	10	X		38.3	383	421	55.5	477	<0.050	0.467	1.44	1.83	3.73	64.0
BTTM-5	2/12/2019	6		X	1,920	5,430	7,350	519	7,869	10.90	97.3	127	114	349	80.0
	4/8/2019	8	X		60.7	768	829	90.4	919	<0.050	0.054	0.342	0.495	0.891	96.0
BTTM-9	2/12/2019	6		X	1,700	4,540	6,240	454	6,694	5.52	50.2	635	56.5	176	160
BTTM-6	2/12/2019	6		X	620	2,020	2,640	237	2,877	5.58	45.2	55.9	50.5	157	48.0
	4/8/2019	8	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
BTTM-7	2/12/2019	6		X	1,200	3,390	4,590	339	4,929	9.07	67.3	78.0	68.4	223	96.0
	4/8/2019	10	X		<10.0	62.6	62.6	<10.0	62.6	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
BTTM-8	2/11/2019	2	X		22.4	441	463	30.2	494	<0.050	0.176	0.771	0.934	1.880	48.0
BTTM-10	2/12/2019	2		X	2,450	6,510	8,960	681	9,641	10.4	51.0	56.9	49.7	168	80.0
	2/12/2019	3		X	1,840	3,470	5,310	275	5,585	15.1	93.3	97.8	84.1	290	160
	4/8/2019	8	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	400
BTTM-11	2/12/2019	2		X	3,860	10,500	14,360	1,130	15,490	22.7	126	153	140	442	48.0
	4/8/2019	10	X		<10.0	149	149	<10.0	149	<0.050	<0.050	<0.050	<0.150	<0.300	16.0

Table 1
COG
McIntyre A West #16 (12/3/18)
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	GRO+DRO	MRO	Total						
NSW-1	2/11/2019	-	X		<10.0	13.0	13.0	<10.0	13.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
NSW-2	2/11/2019	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
NSW-3 (2')	2/12/2019	-		X	3,040	6,000	9,040	514	9,554	41.5	189	200	181	611	32.0
	4/4/2019	-		X	320	1,400	1,720	85.8	1,806	0.403	6.0	11.1	11.2	28.7	32.0
	4/8/2019	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
SSW-1	2/12/2019	-		X	766	2,090	2,856	255	3,111	4.11	52.4	72.4	66.6	195	32.0
	4/4/2019	-		X	38	336	374	65.1	439	0.064	0.59	1.42	1.68	3.76	96.0
	4/8/2019	-	X		<10.0	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SSW-2	2/12/2019	-		X	440	2,630	3,070	225	3,295	0.662	12.5	38.6	38.2	90.0	96.0
	4/4/2019	-	X		38.3	336	374	65.1	494	0.0640	0.587	1.42	1.68	3.76	96.0
WSW-1	2/12/2019	-	X		248	741	989	<50.0	989	1.97	17.3	26.3	25.2	70.7	48.0
WSW-1 (1')	2/12/2019	-	X		<10.0	15.7	15.7	<10.0	15.7	0.0790	0.321	0.445	0.476	1.32	32.0
ESW-1	2/12/2019	-	X		<50.0	325	325	<50.0	325	0.067	0.466	1.54	1.74	3.81	32.0

(-)

Not Analyzed



Excavation Depths

Photos

COG Operating LLC
McIntyre A West #16
Eddy County, New Mexico



View North – Excavated Area



View West – Excavated Area

COG Operating LLC
McIntyre A West #16
Eddy County, New Mexico



View East – Excavated Area



View South East – Excavated Area

COG Operating LLC
McIntyre A West #16
Eddy County, New Mexico



TETRA TECH



View Southeast – Excavated Area

Appendix A

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

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature: <u>Delann Opreant</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u> Received by: <u>Amelia B. Santamante</u>	
Date: _____	

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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


<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.<input type="checkbox"/> Field data<input type="checkbox"/> Data table of soil contaminant concentration data<input type="checkbox"/> Depth to water determination<input type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release<input type="checkbox"/> Boring or excavation logs<input type="checkbox"/> Photographs including date and GIS information<input type="checkbox"/> Topographic/Aerial maps<input type="checkbox"/> Laboratory data including chain of custody
--

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

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure


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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - McIntyre A West #16
Eddy County, New Mexico

16 South			29 East		
6	5	4	3	2	1
		Majamar			
7	8	9	10	11	12
18	17	16	15	14 220	13
19	20	21	22	23	24
110					
30	29	28	27	26	25
31	32	33	34	35	36

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

16 South			31 East		
6	5	4	3	2	1
				290	
7	8	9	10	11	12
18	17	16	15	14 113	288
19	20	21	22	314	299
30	29	28	27	26	25
31	32	33	34	35	36
290					

17 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 76	23	24
30	29 210	28	27	26	25
31	32	33	34	35	36
				208	153

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

17 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
			271		

18 South			29 East		
6	5	4	3	2	1
7	8	9	10	95	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
					158

18 South			30 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23 44	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15 98	14	400
19	20	21	22	317	24
30	29	28	27	26	25
31	32	33	34	35	36
				261	

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

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

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

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 11914 POD1	RA	ED		2	4	2	20	17S	30E	594801	3632002	85	80	5

Average Depth to Water: **80 feet**

Minimum Depth: **80 feet**

Maximum Depth: **80 feet**

Record Count: 1

PLSS Search:

Section(s): 20

Township: 17S

Range: 30E

McIntyre A West 16

Karst Map - Low Potential

Legend

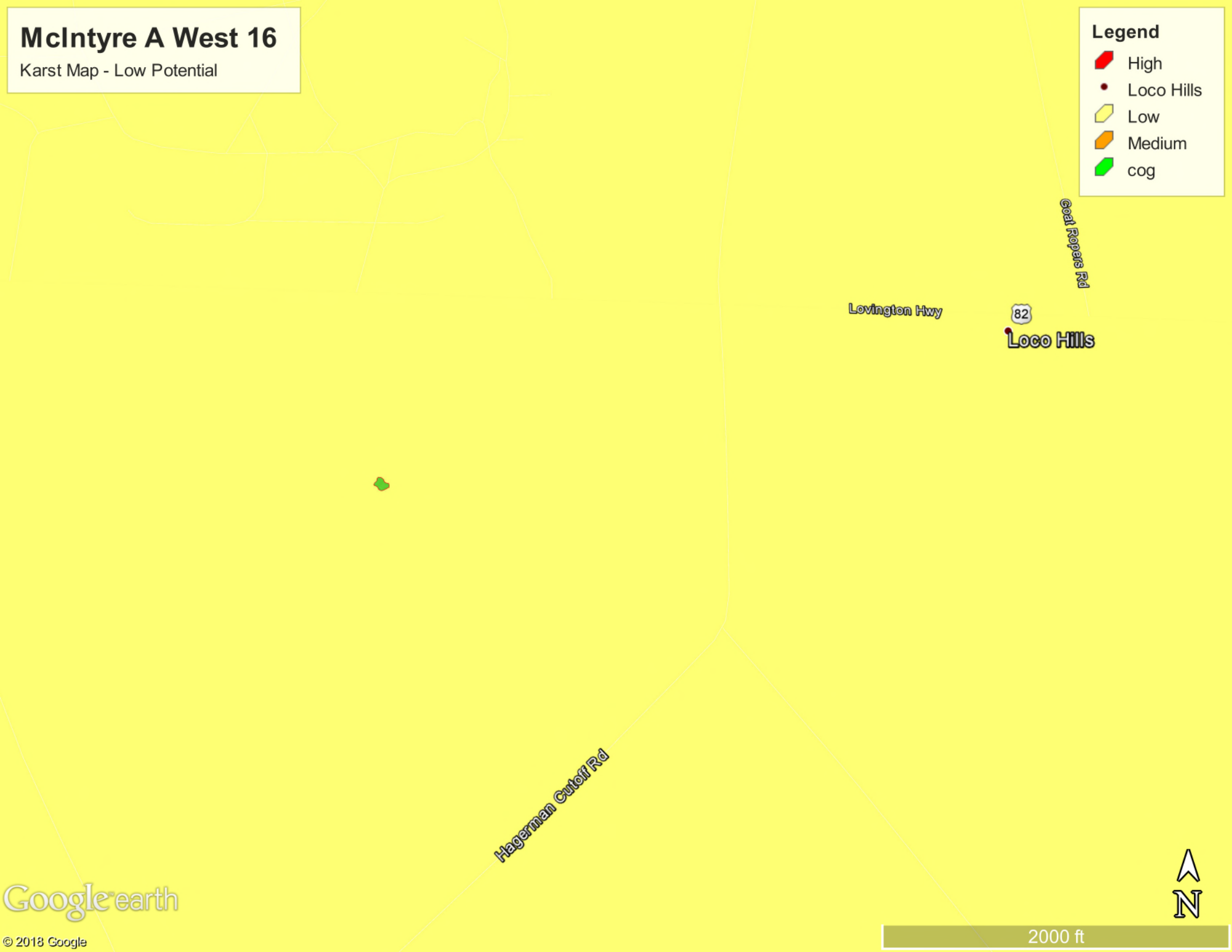
 High

 Loco Hills

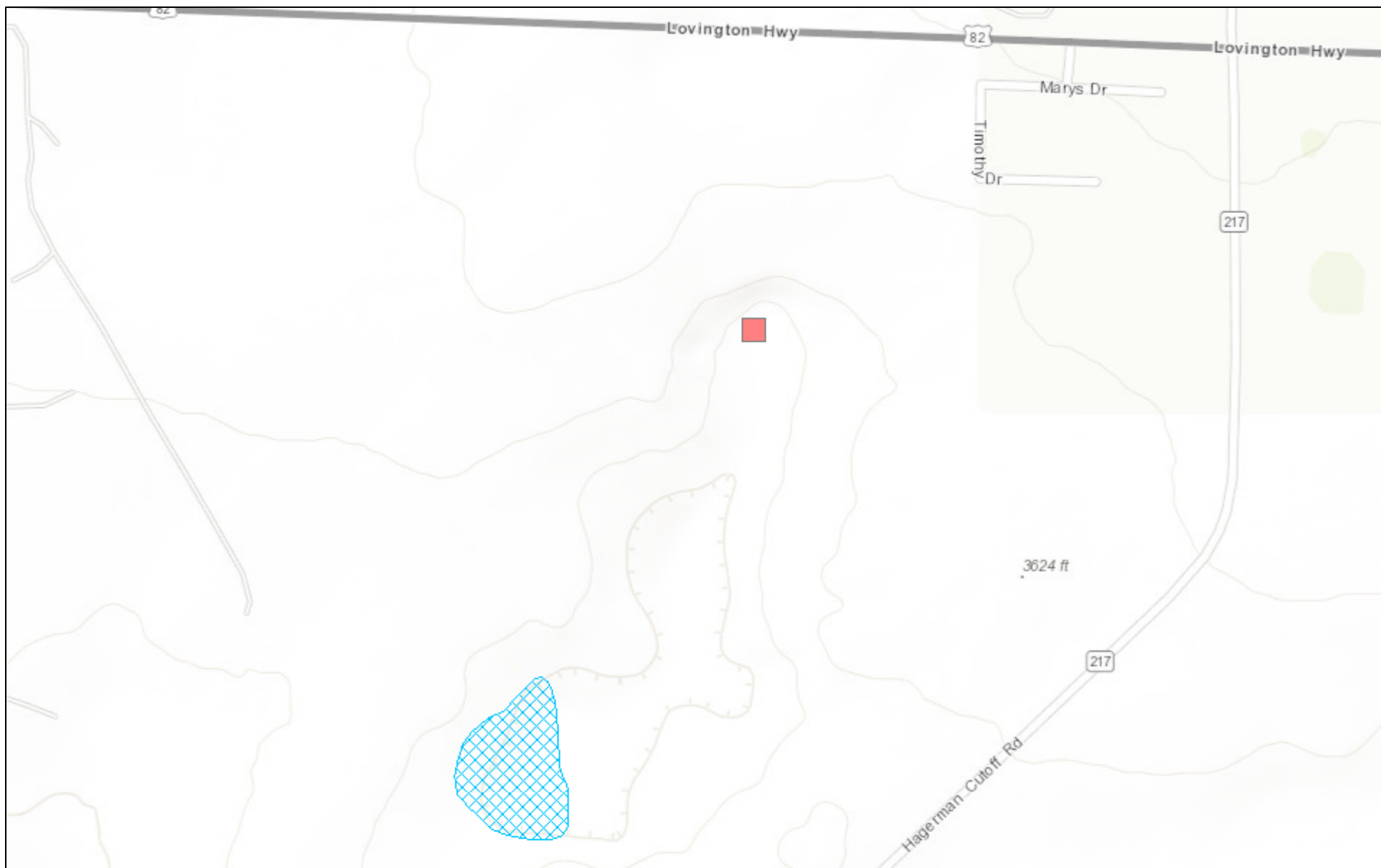
 Low

 Medium

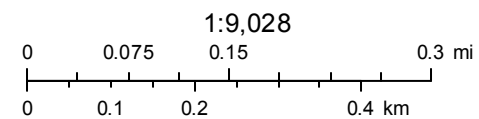
 cog



New Mexico NFHL Data



January 30, 2019



FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

Appendix C

February 12, 2019

KAYLA LOVELY TAYLOR

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCINTYRE WEST #16

Enclosed are the results of analyses for samples received by the laboratory on 02/11/19 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/11/2019
Reported: 02/12/2019
Project Name: MCINTYRE WEST #16
Project Number: 212C-MD-0
Project Location: COG - EDDY CO NM

Sampling Date: 02/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM -1 (5') (H900533-01)

BTM 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.48	1.00	02/11/2019	ND	1.97	98.7	2.00	7.12	
Toluene*	19.0	2.00	02/11/2019	ND	1.99	99.5	2.00	4.77	
Ethylbenzene*	36.1	2.00	02/11/2019	ND	1.95	97.4	2.00	4.35	
Total Xylenes*	37.3	6.00	02/11/2019	ND	5.78	96.3	6.00	6.81	
Total BTEX	93.8	11.0	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/12/2019	ND	432	108	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*	767	50.0	02/12/2019	ND	187	93.6	200	2.12		
DRO >C10-C28*	2050	50.0	02/12/2019	ND	170	84.8	200	2.13		
EXT DRO >C28-C36	63.3	50.0	02/12/2019	ND						

Surrogate: 1-Chlorooctane 130 % 41-142

Surrogate: 1-Chlorooctadecane 164 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/11/2019
Reported: 02/12/2019
Project Name: MCINTYRE WEST #16
Project Number: 212C-MD-0
Project Location: COG - EDDY CO NM

Sampling Date: 02/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: NSW -1 (H900533-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	1.97	98.7	2.00	7.12	
Toluene*	<0.050	0.050	02/11/2019	ND	1.99	99.5	2.00	4.77	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	1.95	97.4	2.00	4.35	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	5.78	96.3	6.00	6.81	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/12/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/12/2019	ND	187	93.6	200	2.12	
DRO >C10-C28*	13.0	10.0	02/12/2019	ND	170	84.8	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	02/12/2019	ND					

Surrogate: 1-Chlorooctane 86.1 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/11/2019
Reported: 02/12/2019
Project Name: MCINTYRE WEST #16
Project Number: 212C-MD-0
Project Location: COG - EDDY CO NM

Sampling Date: 02/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: NSW - 2 (H900533-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/12/2019	ND	1.97	98.7	2.00	7.12	
Toluene*	<0.050	0.050	02/12/2019	ND	1.99	99.5	2.00	4.77	
Ethylbenzene*	<0.050	0.050	02/12/2019	ND	1.95	97.4	2.00	4.35	
Total Xylenes*	<0.150	0.150	02/12/2019	ND	5.78	96.3	6.00	6.81	
Total BTX	<0.300	0.300	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/12/2019	ND	400	100	400	3.92	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/12/2019	ND	187	93.6	200	2.12	
DRO >C10-C28*	<10.0	10.0	02/12/2019	ND	170	84.8	200	2.13	
EXT DRO >C28-C36	<10.0	10.0	02/12/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/11/2019
Reported: 02/12/2019
Project Name: MCINTYRE WEST #16
Project Number: 212C-MD-0
Project Location: COG - EDDY CO NM

Sampling Date: 02/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM -4 (2') (H900533-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/12/2019	ND	1.97	98.7	2.00	7.12	
Toluene*	<0.050	0.050	02/12/2019	ND	1.99	99.5	2.00	4.77	
Ethylbenzene*	0.197	0.050	02/12/2019	ND	1.95	97.4	2.00	4.35	
Total Xylenes*	0.264	0.150	02/12/2019	ND	5.78	96.3	6.00	6.81	
Total BTEX	0.461	0.300	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/12/2019	ND	400	100	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*	16.0	10.0	02/12/2019	ND	187	93.6	200	2.12	
DRO >C10-C28*	659	10.0	02/12/2019	ND	170	84.8	200	2.13	
EXT DRO >C28-C36	74.9	10.0	02/12/2019	ND					

Surrogate: 1-Chlorooctane 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 118 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/11/2019
Reported: 02/12/2019
Project Name: MCINTYRE WEST #16
Project Number: 212C-MD-0
Project Location: COG - EDDY CO NM

Sampling Date: 02/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM -8 (2') (H900533-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/12/2019	ND	1.97	98.7	2.00	7.12	
Toluene*	0.176	0.050	02/12/2019	ND	1.99	99.5	2.00	4.77	
Ethylbenzene*	0.771	0.050	02/12/2019	ND	1.95	97.4	2.00	4.35	
Total Xylenes*	0.934	0.150	02/12/2019	ND	5.78	96.3	6.00	6.81	
Total BTEX	1.88	0.300	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2019	ND	400	100	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*	22.4	10.0	02/12/2019	ND	187	93.6	200	2.12	
DRO >C10-C28*	441	10.0	02/12/2019	ND	170	84.8	200	2.13	
EXT DRO >C28-C36	30.2	10.0	02/12/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/11/2019
Reported: 02/12/2019
Project Name: MCINTYRE WEST #16
Project Number: 212C-MD-0
Project Location: COG - EDDY CO NM

Sampling Date: 02/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: NSW - 3 (H900533-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	4.05	2.00	02/12/2019	ND	1.97	98.7	2.00	7.12	
Toluene*	37.0	2.00	02/12/2019	ND	1.99	99.5	2.00	4.77	
Ethylbenzene*	55.1	2.00	02/12/2019	ND	1.95	97.4	2.00	4.35	
Total Xylenes*	52.1	6.00	02/12/2019	ND	5.78	96.3	6.00	6.81	
Total BTEX	148	12.0	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/12/2019	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
				S-06					

Surrogate: 1-Chlorooctane		127 %	41-142							
Surrogate: 1-Chlorooctadecane		153 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

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.
QR-04	The RPD for the BS/BSD was outside of historical limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Tetra Tech</u>										P.O. #:										BILL TO										ANALYSIS REQUEST									
Project Manager: <u>Yvonne Taylor</u>										Company: <u>COLS</u>																													
Address: <u>701 W. 1st St. # 200</u>										City: <u>Midland</u>										State: <u>TX</u> Zip: <u>79701</u>																			
City: <u>Midland</u>										State: <u>TX</u> Zip: <u>79701</u>										Address:																			
Phone #: <u>-</u>										Fax #:										City: <u>Midland</u>										State: <u>TX</u> Zip: <u>79701</u>									
Project #: <u>212C-MD-0</u>										Project Owner: <u>BOB</u>										City: <u>Midland</u>										State: <u>TX</u> Zip: <u>79701</u>									
Project Name: <u>McIntyre West #16</u>										Project Location: <u>Eddy Co. NM</u>										Phone #:																			
Sample Name: <u>Client Merit</u>										Fax #:																													
FOR LAB USE ONLY																																							
Lab I.D.										Sample I.D.																													
H900533										B T M - 1 (5')										(G)RAB OR (C)OMP.										# CONTAINERS									
1										B T M - 1 (5')										C 1										GROUNDWATER									
2										ASU-1										C 1										WASTEWATER									
3										ASU-2										C 1										SOIL									
4										B T M - 4 (2')										C 1										OIL									
5										B T M - 8 (2')										C 1										SLUDGE									
6										ASU-3										C 1										OTHER :									
																														ACID/BASE:									
																														ICE / COOL									
																														OTHER :									
																														DATE									
																														TIME									
																														Chlorides									
																														TPH									
																														BTEX									

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Relinquished By:		Date: <u>2/11</u>		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
Relinquished By:		Time: <u>1745</u>		Received By:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date: <u>1745</u>		Received By:		REMARKS:			
Relinquished By:		Time:		Received By:		24hr Rush			
Delivered By: (Circle One)		Sample Condition		CHECKED BY:					
Sampler - UPS - Bus - Other:		Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>		(Initials)					
4.92 #97		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		70.					

February 13, 2019

KAYLA LOVELY TAYLOR

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCINTYRE WEST #16

Enclosed are the results of analyses for samples received by the laboratory on 02/12/19 16:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -10 (2') (H900558-01)

BTM 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	10.4	1.00	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	51.0	1.00	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	56.9	1.00	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	49.7	3.00	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTEX	168	6.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/13/2019	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*	2450	100	02/13/2019	ND	192	96.0	200	1.40		
DRO >C10-C28*	6510	100	02/13/2019	ND	206	103	200	4.41		
EXT DRO >C28-C36	681	100	02/13/2019	ND						

Surrogate: 1-Chlorooctane 183 % 41-142

Surrogate: 1-Chlorooctadecane 224 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -11 (2') (H900558-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	22.7	2.00	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	126	2.00	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	153	2.00	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	140	6.00	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTEX	442	12.0	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/13/2019	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*	3860	100	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	10500	100	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	1130	100	02/13/2019	ND					

Surrogate: 1-Chlorooctane 237 % 41-142

Surrogate: 1-Chlorooctadecane 302 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: SSW - 1 (H900558-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	4.11	0.500	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	52.4	0.500	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	72.4	0.500	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	66.6	1.50	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTX	195	3.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	766	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	2090	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	255	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 116 % 41-142

Surrogate: 1-Chlorooctadecane 126 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: SSW -2 (H900558-04)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.662	0.200	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	12.5	0.200	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	38.6	0.200	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	38.2	0.600	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTEx	90.0	1.20	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 151 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/13/2019	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*	440	100	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	2630	100	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	225	100	02/13/2019	ND					

Surrogate: 1-Chlorooctane 132 % 41-142

Surrogate: 1-Chlorooctadecane 178 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: NSW - 3 (2') (H900558-05)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	41.5	1.00	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	189	1.00	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	200	1.00	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	181	3.00	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTEX	611	6.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 130 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/13/2019	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*	3040	100	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	6000	100	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	514	100	02/13/2019	ND					

Surrogate: 1-Chlorooctane 193 % 41-142

Surrogate: 1-Chlorooctadecane 216 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: WSW - 1 (H900558-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.97	0.500	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	17.3	0.500	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	26.3	0.500	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	25.2	1.50	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTEX	70.7	3.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	248	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	741	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	<50.0	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -1 (6') (H900558-07)

BTM 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	4.84	0.500	02/13/2019	ND	2.03	102	2.00	4.25	
Toluene*	28.0	0.500	02/13/2019	ND	2.07	104	2.00	3.36	
Ethylbenzene*	36.1	0.500	02/13/2019	ND	1.99	99.5	2.00	0.930	
Total Xylenes*	33.6	1.50	02/13/2019	ND	5.78	96.3	6.00	2.53	
Total BTEX	103	3.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1200	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	3020	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	313	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 131 % 41-142

Surrogate: 1-Chlorooctadecane 144 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -2 (6') (H900558-08)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	61.3	2.00	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	291	2.00	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	279	2.00	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	233	6.00	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	864	12.0	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/13/2019	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*	6090	100	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	11400	100	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	1200	100	02/13/2019	ND					

Surrogate: 1-Chlorooctane 261 % 41-142

Surrogate: 1-Chlorooctadecane 308 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -3 (6') (H900558-09)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.068	0.050	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	0.181	0.050	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	0.141	0.050	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	<0.150	0.150	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	0.390	0.300	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/13/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	125	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	<50.0	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 99.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -5 (6') (H900558-10)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	10.9	1.00	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	97.3	1.00	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	127	1.00	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	114	3.00	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	349	6.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/13/2019	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*	1920	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	5430	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	519	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 164 % 41-142

Surrogate: 1-Chlorooctadecane 193 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
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Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -6 (6') (H900558-11)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.58	0.500	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	45.2	0.500	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	55.9	0.500	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	50.5	1.50	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	157	3.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/13/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	620	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	2020	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	237	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 124 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -7 (6') (H900558-12)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	9.07	0.500	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	67.3	0.500	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	78.0	0.500	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	68.4	1.50	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	223	3.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/13/2019	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*	1200	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	3390	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	339	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 134 % 41-142

Surrogate: 1-Chlorooctadecane 151 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: ESW - 2 (H900558-13)

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	0.067	0.050	02/13/2019	ND	2.16	108	2.00	0.104		
Toluene*	0.466	0.050	02/13/2019	ND	2.06	103	2.00	0.354		
Ethylbenzene*	1.54	0.050	02/13/2019	ND	2.04	102	2.00	1.57		
Total Xylenes*	1.74	0.150	02/13/2019	ND	6.05	101	6.00	0.280		
Total BTX	3.81	0.300	02/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/13/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	02/13/2019	ND	192	96.0	200	1.40		
DRO >C10-C28*	325	50.0	02/13/2019	ND	206	103	200	4.41		
EXT DRO >C28-C36	<50.0	50.0	02/13/2019	ND						

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -9 (6') (H900558-14)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.52	0.500	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	50.2	0.500	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	63.5	0.500	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	56.5	1.50	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	176	3.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	02/13/2019	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*	1700	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	4540	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	454	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 152 % 41-142

Surrogate: 1-Chlorooctadecane 174 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: NSW - 3 (4') (H900558-15)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.403	0.100	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	6.03	0.100	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	11.1	0.100	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	11.2	0.300	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTX	28.7	0.600	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	320	50.0	02/13/2019	ND	192	96.0	200	1.40	
DRO >C10-C28*	1400	50.0	02/13/2019	ND	206	103	200	4.41	
EXT DRO >C28-C36	85.8	50.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BTM -10 (3') (H900558-16)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	15.1	1.00	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	93.3	1.00	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	97.8	1.00	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	84.1	3.00	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	290	6.00	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	02/13/2019	ND	400	100	400	0.00		
TPH 8015M	mg/kg								S-06	

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1840	100	02/13/2019	ND	181	90.6	200	8.12	
DRO >C10-C28*	3470	100	02/13/2019	ND	181	90.3	200	8.31	
EXT DRO >C28-C36	275	100	02/13/2019	ND					

Surrogate: 1-Chlorooctane 134 % 41-142

Surrogate: 1-Chlorooctadecane 149 % 37.6-147

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Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	02/12/2019	Sampling Date:	02/12/2019
Reported:	02/13/2019	Sampling Type:	Soil
Project Name:	MCINTYRE WEST #16	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01594 (12/3/18)	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: WSW-1 (1') (H900558-17)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.079	0.050	02/13/2019	ND	2.16	108	2.00	0.104	
Toluene*	0.321	0.050	02/13/2019	ND	2.06	103	2.00	0.354	
Ethylbenzene*	0.445	0.050	02/13/2019	ND	2.04	102	2.00	1.57	
Total Xylenes*	0.476	0.150	02/13/2019	ND	6.05	101	6.00	0.280	
Total BTEX	1.32	0.300	02/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2019	ND	181	90.6	200	8.12	
DRO >C10-C28*	15.7	10.0	02/13/2019	ND	181	90.3	200	8.31	
EXT DRO >C28-C36	<10.0	10.0	02/13/2019	ND					

Surrogate: 1-Chlorooctane 69.9 % 41-142

Surrogate: 1-Chlorooctadecane 69.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Tetra Tech																			
Project Manager: Kayla Taylor																			
Address:																			
City: Midland State: TX Zip: 79701																			
Phone #: Fax #:																			
Project #: 212C-ND-C1594 Project Owner: COG																			
Project Name: McIntyre West #16 (12/3/18)																			
Project Location: Eddy Co NM																			
Sample Name: Clint Herditt																			
FOR LAB USE ONLY																			
Lab I.D.																			
Sample I.D.																			
H900558	BTHM-10(2')	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNWATER	DATE	TIME	Chlorides	TPH	BTEX										
1	BTHM-10(2')	C	1	X	2/12	9:00	X	X	X										
2	BTHM-11(2')	C	1	X		9:05	X	X	X										
3	SSBW-1	C	1	X		9:15	X	X	X										
4	SSBW-2	C	1	X		9:20	X	X	X										
5	NUSK-3(2')	C	1	X		10:00	X	X	X										
6	NUSK-1	C	1	X		10:05	X	X	X										
7	BTHM-11(1')	C	1	X		10:36	X	X	X										
8	BTHM-2(6')	C	1	X		10:35	X	X	X										
9	BTHM-3(6')	C	1	X		10:40	X	X	X										
10	BTHM-5(6')	C	1	X		10:45	X	X	X										
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Relinquished By:		Date:	Received By:																
Clint Herditt		2/12	Sherie Henderson																
Time:		16:55																	
Date:																			
Time:																			
Delivered By: (Circle One)		Sample Condition		CHECKED BY:															
(SAMPLER - UPS - BUS - OTHER)		Cool Intact		(Initials)															
4.990 #97		Yes Yes No No		gfh															
REMARKS:		24 hr turn around																	
P.O. #:		Company:		Attn:															
Fax #:		Address:		City:		State:		Zip:											
Phone #:		Address:		City:		State:		Zip:											
Fax #:		Address:		City:		State:		Zip:											
Phone #:		Address:		City:		State:		Zip:											

101 East Marland, Hobbs, NM 88240
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 $\frac{2}{2}$ [illegible]



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

April 05, 2019

KAYLA LOVELY TAYLOR

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCINTYRE A 16 WEST

Enclosed are the results of analyses for samples received by the laboratory on 04/04/19 16:22.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	04/04/2019	Sampling Date:	04/04/2019
Reported:	04/05/2019	Sampling Type:	Soil
Project Name:	MCINTYRE A 16 WEST	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE - 1 (COMP 8') (H901254-01)

BTX 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	04/05/2019	ND	2.06	103	2.00	2.24	
Toluene*	3.62	0.200	04/05/2019	ND	1.89	94.7	2.00	0.117	
Ethylbenzene*	11.1	0.200	04/05/2019	ND	1.99	99.4	2.00	2.43	
Total Xylenes*	12.1	0.600	04/05/2019	ND	6.07	101	6.00	2.78	
Total BTX	26.8	1.20	04/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	04/05/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	121	10.0	04/05/2019	ND	203	101	200	10.9	
DRO >C10-C28*	707	10.0	04/05/2019	ND	210	105	200	9.40	
EXT DRO >C28-C36	116	10.0	04/05/2019	ND					

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 96.9 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 KAYLA LOVELY TAYLOR
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	04/04/2019	Sampling Date:	04/04/2019
Reported:	04/05/2019	Sampling Type:	Soil
Project Name:	MCINTYRE A 16 WEST	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE - 2 (COMP 10') (H901254-02)

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	04/05/2019	ND	2.06	103	2.00	2.24	
Toluene*	0.931	0.200	04/05/2019	ND	1.89	94.7	2.00	0.117	
Ethylbenzene*	2.81	0.200	04/05/2019	ND	1.99	99.4	2.00	2.43	
Total Xylenes*	3.68	0.600	04/05/2019	ND	6.07	101	6.00	2.78	
Total BTEX	7.42	1.20	04/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/05/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	98.1	10.0	04/05/2019	ND	203	101	200	10.9	
DRO >C10-C28*	890	10.0	04/05/2019	ND	210	105	200	9.40	
EXT DRO >C28-C36	160	10.0	04/05/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	04/04/2019	Sampling Date:	04/04/2019
Reported:	04/05/2019	Sampling Type:	Soil
Project Name:	MCINTYRE A 16 WEST	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE - 3 (COMP 8') (H901254-03)

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	04/05/2019	ND	2.06	103	2.00	2.24	
Toluene*	0.287	0.050	04/05/2019	ND	1.89	94.7	2.00	0.117	
Ethylbenzene*	0.970	0.050	04/05/2019	ND	1.99	99.4	2.00	2.43	
Total Xylenes*	1.50	0.150	04/05/2019	ND	6.07	101	6.00	2.78	
Total BTEX	2.76	0.300	04/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/05/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	18.8	10.0	04/05/2019	ND	203	101	200	10.9	
DRO >C10-C28*	208	10.0	04/05/2019	ND	210	105	200	9.40	
EXT DRO >C28-C36	28.9	10.0	04/05/2019	ND					

Surrogate: 1-Chlorooctane 90.9 % 41-142

Surrogate: 1-Chlorooctadecane 88.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	04/04/2019	Sampling Date:	04/04/2019
Reported:	04/05/2019	Sampling Type:	Soil
Project Name:	MCINTYRE A 16 WEST	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE - 4 (COMP 10') (H901254-04)

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	04/05/2019	ND	2.06	103	2.00	2.24	
Toluene*	0.467	0.050	04/05/2019	ND	1.89	94.7	2.00	0.117	
Ethylbenzene*	1.44	0.050	04/05/2019	ND	1.99	99.4	2.00	2.43	
Total Xylenes*	1.83	0.150	04/05/2019	ND	6.07	101	6.00	2.78	
Total BTEX	3.73	0.300	04/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/05/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	38.3	10.0	04/05/2019	ND	203	101	200	10.9	
DRO >C10-C28*	383	10.0	04/05/2019	ND	210	105	200	9.40	
EXT DRO >C28-C36	55.5	10.0	04/05/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 94.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/04/2019
Reported: 04/05/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: NSW - 1 (COMP 10') (H901254-05)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.345	0.200	04/05/2019	ND	2.11	105	2.00	5.74	
Toluene*	8.12	0.200	04/05/2019	ND	2.13	106	2.00	2.84	
Ethylbenzene*	18.4	0.200	04/05/2019	ND	2.14	107	2.00	2.07	
Total Xylenes*	19.4	0.600	04/05/2019	ND	6.37	106	6.00	2.81	
Total BTEX	46.3	1.20	04/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 142 % 73.3-129

Chloride, SM4500CI-B			mg/kg					Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/05/2019	ND	416	104	400	0.00	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	257	10.0	04/05/2019	ND	203	101	200	10.9	
DRO >C10-C28*	1150	10.0	04/05/2019	ND	210	105	200	9.40	
EXT DRO >C28-C36	212	10.0	04/05/2019	ND					

Surrogate: 1-Chlorooctane 135 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/04/2019
Reported: 04/05/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SSW - 1 (COMP 7') (H901254-06)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.064	0.050	04/05/2019	ND	2.11	105	2.00	5.74	
Toluene*	0.587	0.050	04/05/2019	ND	2.13	106	2.00	2.84	
Ethylbenzene*	1.42	0.050	04/05/2019	ND	2.14	107	2.00	2.07	
Total Xylenes*	1.68	0.150	04/05/2019	ND	6.37	106	6.00	2.81	
Total BTEX	3.76	0.300	04/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 132 % 73.3-129

Chloride, SM4500CI-B			mg/kg					Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/05/2019	ND	416	104	400	0.00	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	38.3	10.0	04/05/2019	ND	203	101	200	10.9	
DRO >C10-C28*	336	10.0	04/05/2019	ND	210	105	200	9.40	
EXT DRO >C28-C36	65.1	10.0	04/05/2019	ND					

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

[illegible]



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

April 09, 2019

KAYLA LOVELY TAYLOR

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCINTYRE A 16 WEST

Enclosed are the results of analyses for samples received by the laboratory on 04/08/19 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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 "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: NSW - 3 (COMP 10') (H901282-01)

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	04/09/2019	ND	1.69	84.3	2.00	1.34	
Toluene*	<0.050	0.050	04/09/2019	ND	1.74	86.8	2.00	0.924	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	0.579	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.11	85.2	6.00	0.977	
Total BTEX	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	04/09/2019	ND	416	104	400	0.00	

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	<10.0	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					


Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE - 1 (COMP 10') (H901282-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2019	ND	1.69	84.3	2.00	1.34		
Toluene*	<0.050	0.050	04/09/2019	ND	1.74	86.8	2.00	0.924		
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	0.579		
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.11	85.2	6.00	0.977		
Total BTEx	<0.300	0.300	04/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/09/2019	ND	416	104	400	0.00		

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	<10.0	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 116 % 37.6-147

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 KAYLA LOVELY TAYLOR
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	MCINTYRE A 16 WEST	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE - 2 (COMP 8') (H901282-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2019	ND	1.69	84.3	2.00	1.34	
Toluene*	<0.050	0.050	04/09/2019	ND	1.74	86.8	2.00	0.924	
Ethylbenzene*	0.155	0.050	04/09/2019	ND	1.74	87.1	2.00	0.579	
Total Xylenes*	0.198	0.150	04/09/2019	ND	5.11	85.2	6.00	0.977	
Total BTX	0.353	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	15.3	10.0	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	222	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	17.4	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 122 % 41-142

Surrogate: 1-Chlorooctadecane 131 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	04/08/2019	Sampling Date:	04/08/2019
Reported:	04/09/2019	Sampling Type:	Soil
Project Name:	MCINTYRE A 16 WEST	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE - 3 (COMP 10') (H901282-04)

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	04/09/2019	ND	1.69	84.3	2.00	1.34		
Toluene*	<0.050	0.050	04/09/2019	ND	1.74	86.8	2.00	0.924		
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	0.579		
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.11	85.2	6.00	0.977		
Total BTEX	<0.300	0.300	04/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/09/2019	ND	416	104	400	0.00		

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	14.2	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE - 5 (COMP 8') (H901282-05)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	0.054	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	0.342	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	0.495	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEX	0.891	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/09/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
				S-04					

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*	60.7	10.0	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	768	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	90.4	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 130 % 41-142

Surrogate: 1-Chlorooctadecane 148 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE - 6 (COMP 8') (H901282-06)

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	04/09/2019	ND	1.80	89.9	2.00	0.879	
Toluene*	<0.050	0.050	04/09/2019	ND	1.68	84.2	2.00	0.693	
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.27	87.8	6.00	2.01	
Total BTEx	<0.300	0.300	04/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/09/2019	ND	416	104	400	0.00	

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	<10.0	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE - 7 (COMP 10') (H901282-07)

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	04/09/2019	ND	1.69	84.3	2.00	1.34		
Toluene*	<0.050	0.050	04/09/2019	ND	1.74	86.8	2.00	0.924		
Ethylbenzene*	<0.050	0.050	04/09/2019	ND	1.74	87.1	2.00	0.579		
Total Xylenes*	<0.150	0.150	04/09/2019	ND	5.11	85.2	6.00	0.977		
Total BTEX	<0.300	0.300	04/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/09/2019	ND	416	104	400	0.00		

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	62.6	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TETRA TECH
 KAYLA LOVELY TAYLOR
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

 Received: 04/08/2019
 Reported: 04/09/2019
 Project Name: MCINTYRE A 16 WEST
 Project Number: NONE GIVEN
 Project Location: COG - EDDY CO NM

 Sampling Date: 04/08/2019
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SSW - 1 (COMP 8') (H901282-08)

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	04/09/2019						
Toluene*	<0.050	0.050	04/09/2019						
Ethylbenzene*	<0.050	0.050	04/09/2019						
Total Xylenes*	<0.150	0.150	04/09/2019						
Total BTEX	<0.300	0.300	04/09/2019						

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/09/2019	ND	416	104	400	0.00	

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	<10.0	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE - 10 (COMP 8') (H901282-09)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2019						
Toluene*	<0.050	0.050	04/09/2019						
Ethylbenzene*	<0.050	0.050	04/09/2019						
Total Xylenes*	<0.150	0.150	04/09/2019						
Total BTEX	<0.300	0.300	04/09/2019						

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	04/09/2019	ND	416	104	400	0.00		

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	<10.0	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TETRA TECH
KAYLA LOVELY TAYLOR
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/08/2019
Reported: 04/09/2019
Project Name: MCINTYRE A 16 WEST
Project Number: NONE GIVEN
Project Location: COG - EDDY CO NM

Sampling Date: 04/08/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE - 11 (COMP 10') (H901282-10)

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	04/09/2019						
Toluene*	<0.050	0.050	04/09/2019						
Ethylbenzene*	0.088	0.050	04/09/2019						
Total Xylenes*	<0.150	0.150	04/09/2019						
Total BTEX	<0.300	0.300	04/09/2019						

Surrogate: 4-Bromofluorobenzene (PID) 92.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/09/2019	ND	416	104	400	0.00		

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	04/09/2019	ND	209	104	200	0.104	
DRO >C10-C28*	149	10.0	04/09/2019	ND	213	107	200	0.111	
EXT DRO >C28-C36	<10.0	10.0	04/09/2019	ND					

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 123 % 37.6-147

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Notes and Definitions

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

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