

3R-124

Request for Closure

**Date:
6/19/15**



June 17, 2015

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
(505) 476-3488

OIL CONS. DIV DIST. 3


JUN 19 2015

District Copy
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RE: Rowland Gas COM #1 – Request for Closure
OCD Case File No. – 3RP-124

Mr. Von Gonten,

Please consider this letter as the request for closure for groundwater site 3RP-124. Impacted soil was excavated in April of 2013, and the 2013 Annual Groundwater Report submitted in early 2014 requested closure of this location. At the request of the NMOCD, a boring was conducted in the center of the excavated area, now backfilled, and a temporary monitoring well was installed. A water sample was collected from this temporary well, and analyzed for BTEX and Cations/Anions. Additionally, a sample was collected from historical monitoring well MW-8 for comparative purposes. A *Groundwater Map*, the *Groundwater Analytical Results Table*, the *Boring Log*, and the *Laboratory Analysis* are attached for your reference.



James McDaniel
EH&S Supervisor
XTO Energy, Inc.
(505) 333-3701

Attachments: Figure 1, Groundwater Map
 Table 1, Groundwater Analytical Results
 Boring Log
 Laboratory Analysis

CC: Brandon Powell, NMOCD Aztec Division
 Jim Griswold, NMOCD Santa Fe Office

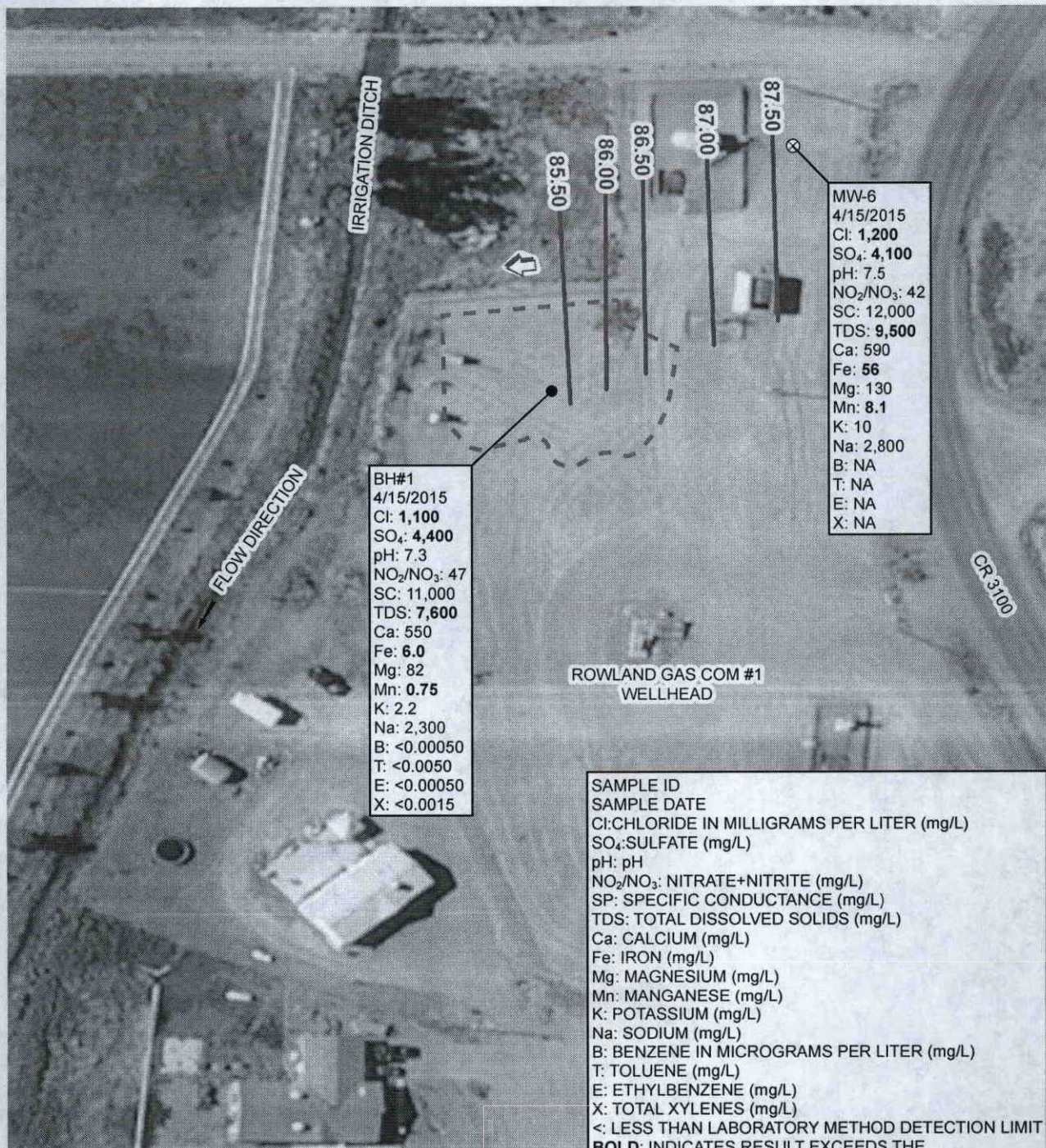


FIGURE 1
GROUNDWATER ANALYTICAL RESULTS
ROWLAND GAS COM #1
SESE SEC 25 T30N R12W
SAN JUAN COUNTY, NEW MEXICO



XTO ENERGY, INC.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
ROWLAND GAS COM #1
XTO ENERGY, INC.

Sample ID	MW-6	BH-1	<i>NMWQCC Standards</i>
XTO Sample ID	FARDN-041515-1150	FARDN-041515-1650	
Sample Date	4/15/2015	4/15/2015	
Benzene (mg/L)	NA	<0.00050	0.01
Toluene (mg/L)	NA	<0.0050	0.75
Ethylbenzene (mg/L)	NA	<0.00050	0.75
Total Xylenes (mg/L)	NA	<0.0015	0.62
pH	7.5	7.3	6 - 9
Nitrate-Nitrite (mg/L)	42	47	NE
Conductivity (µmhos/cm)	12,000	11,000	NE
Total Dissolved Solids (mg/L)	9,500	7,600	1,000
Iron (mg/L)	56	6.0	1.0
Magnesium (mg/L)	130	82	NE
Manganese (mg/L)	8.1	0.75	0.2
Calcium (mg/L)	590	550	NE
Potassium (mg/L)	10	2.2	NE
Sodium (mg/L)	2,800	2,300	NE
Chloride (mg/L)	1,200	1,100	250
Sulfate (mg/L)	4,100	4,400	600

Notes:

Bold - indicates sample exceeds NMWQCC standard

mg/L - milligrams per kilogram

NA - not applicable

NE - Not established

NMWQCC - New Mexico Water Quality Control Commission

µmhos/cm - micromhos per centimeter

< - indicates result is less than the stated laboratory method detection limit





Compliance » Engineering » Remediation
LT Environmental, Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301

Boring/Well Number:

BH-1

Date:

4/15/15

Project:

0291009

Project Number:

Rowland Gas cont.

Logged By:

Daniel Newman

Drilled By:

DN

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: 38.77923230

108.0091645

Elevation:

5657

Detector:

PID

Drilling Method:

Hand Auger

Sampling Method:

Bailer (PVC)

Hole Diameter:

2"

Total Depth:

15.5'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

10'

Slot Size:

0.01"

Slot Length:

5'

Depth to Water:

13.42'

Gravel Pack:

NONE

Seal:

NONE

Grout:

NONE

Comments:

NONE

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					0			DRY 10YR 5/2 Greenish Gray med dense, NO plastic NON COHESIVE	
MED	DRY	0.0	NONE	N/A	1		ML	35% coarse gravel 55% silt 10 med sands	
					2				
MED	MOIST	1.4	NONE	N/A	3		ML	MOIST, 10YR 5/2 Greenish Gray med dense, NON plastic / NON cohesive 35% coarse gravel 55% silt 10% med sands	
					4				
Med	MOIST	0.5	NONE	N/A	5		CL	MOIST 10YR 3/3 Dark Brown Low Plasticity Cohesive 60% clay 40% Fine / med sand	
					6				
Med	MOIST	2.0	NONE	N/A	7		CL	moist 10YR 3/3 Dark Brown Low Plasticity Cohesive 60% clay 40% Fine / med sand	
					8				
MED	MOIST	1.5	NONE	N/A	9		CL	MOIST 10YR 3/3 Dark Brown 70% clay 30% Fine / med sand Low Plasticity Cohesive	
					10				
MED	MOIST	2.1	NONE	N/A	11		CL	MOIST 10YR 3/3 Dark Brown Low Plasticity / cohesive 70% clay 30% Fine / med sand	



Compliance • Engineering • Remediation
LT Environmental, Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301

Boring/Well Number:

BH-1

Date:

4/15/15

Project:

Rowland Gas Cont #1

Project Number:

002911009

Logged By:

Daniel Newman

Drilled By:

Daniel Newman

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Lat/Long: 36.77923236
-108.04391645

Elevation:

5657

Detector:

PID

Drilling Method:

Hand Auger

Sampling Method:

Barler

Hole Diameter:

2"

Total Depth:

15.5'

Casing Type:

PVC

Casing Diameter:

2"

Casing Length:

10'

Slot Size:

0.01

Slot Length:

5'

Depth to Water:

13.42'

Gravel Pack:

NONE

Seal:

NONE

Grout:

NONE

Comments:

NONE

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					11			10-12' Description on Previous Pg	
					12				
med	moist	0.0	NONE	N/A	13		SC	10YR 5/3 yellowish Brown 30% clay 80% coarse sand 20% Fine/med sand silt	
					14				
med	moist	0.0	NONE	N/A	15		SC	10YR 5/3 50% coarse sand 30% clay 20% silt	
med	WET	0.0	NONE	N/A	16		SC	wet saturated 10YR 5/3 50% coarse sand 30% clay 20% fine silt	
					17				
					18				
					19				
					20				
					21				
					22				

Draw 13.42'

TD 15.5'



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James McDaniel
XTO Energy - San Juan Division
382 County Road 3100
Aztec, NM 87410

Report Summary

Monday April 27, 2015

Report Number: L760026

Samples Received: 04/17/15

Client Project:

Description: Rowland GC 1

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

James McDaniel
XTO Energy - San Juan Division
382 County Road 3100
Aztec, NM 87410

April 27, 2015

Date Received : April 17, 2015
Description : Rowland GC 1

Sample ID : FARDN-041515-1150

Collected By : Daniel Newman
Collection Date : 04/15/15 11:50

ESC Sample # : L760026-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	1200	100	mg/l	9056MOD	04/22/15	100
Sulfate	4100	500	mg/l	9056MOD	04/22/15	100
pH	7.5		su	9040C	04/20/15	1
Nitrate-Nitrite	42.	10.	mg/l	353.2	04/27/15	100
Specific Conductance	12000		umhos/cm	9050A	04/21/15	1
Dissolved Solids	9500	10.	mg/l	2540 C-2011	04/24/15	1
Calcium	590	10.	mg/l	6010B	04/24/15	10
Iron	56.	0.10	mg/l	6010B	04/23/15	1
Magnesium	130	1.0	mg/l	6010B	04/23/15	1
Manganese	8.1	0.010	mg/l	6010B	04/23/15	1
Potassium	10.	1.0	mg/l	6010B	04/23/15	1
Sodium	2800	10.	mg/l	6010B	04/24/15	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 04/27/15 16:27 Printed: 04/27/15 16:28
L760026-01 (PH) - 7.5 at 19.1 c



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REPORT OF ANALYSIS

James McDaniel
XTO Energy - San Juan Division
382 County Road 3100
Aztec, NM 87410

April 27, 2015

Date Received : April 17, 2015
Description : Rowland GC 1

Sample ID : FARDN-041515-1650

Collected By : Daniel Newman
Collection Date : 04/15/15 16:50

ESC Sample # : L760026-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	1100	100	mg/l	9056MOD	04/23/15	100
pH	7.3		su	9040C	04/20/15	1
Nitrate-Nitrite	47.	10.	mg/l	353.2	04/27/15	100
Specific Conductance	11000		umhos/cm	9050A	04/21/15	1
Dissolved Solids	7600	10.	mg/l	2540 C-2011	04/24/15	1
Calcium	550	10.	mg/l	6010B	04/24/15	10
Iron	6.0	0.10	mg/l	6010B	04/23/15	1
Magnesium	82.	1.0	mg/l	6010B	04/23/15	1
Manganese	0.75	0.010	mg/l	6010B	04/23/15	1
Potassium	2.2	1.0	mg/l	6010B	04/23/15	1
Sodium	2300	10.	mg/l	6010B	04/24/15	10
Benzene	BDL	0.00050	mg/l	8021B	04/22/15	1
Toluene	BDL	0.0050	mg/l	8021B	04/22/15	1
Ethylbenzene	BDL	0.00050	mg/l	8021B	04/22/15	1
Total Xylene	BDL	0.0015	mg/l	8021B	04/22/15	1
Surrogate Recovery(%) a,a,a-Trifluorotoluene (PID)	101.		% Rec.	8021B	04/22/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 04/27/15 16:27 Printed: 04/27/15 16:28
L760026-02 (PH) - 7.3 at 19.1 c

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L760026-01	WG782951	SAMP	pH	R3031818	T8
L760026-02	WG782951	SAMP	pH	R3031818	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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James McDaniel
382 County Road 3100

Aztec, NM 87410

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Level II

L760026

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(615) 758-5858
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April 27, 2015

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Specific Conductance	1.01	umhos/cm			WG783520	04/21/15 12:01
Chloride	< 1	mg/l			WG783895	04/22/15 19:26
Sulfate	< 5	mg/l			WG783895	04/22/15 19:26
Calcium	< 1	mg/l			WG783145	04/23/15 19:34
Iron	< .1	mg/l			WG783145	04/23/15 19:34
Magnesium	< 1	mg/l			WG783145	04/23/15 19:34
Manganese	< .01	mg/l			WG783145	04/23/15 19:34
Potassium	< 1	mg/l			WG783145	04/23/15 19:34
Sodium	< 1	mg/l			WG783145	04/23/15 19:34
Dissolved Solids	< 10	mg/l			WG783688	04/24/15 08:30
Benzene	< .0005	mg/l			WG783799	04/22/15 08:56
Ethylbenzene	< .0005	mg/l			WG783799	04/22/15 08:56
Toluene	< .005	mg/l			WG783799	04/22/15 08:56
Total Xylene	< .0015	mg/l			WG783799	04/22/15 08:56
a,a,a-Trifluorotoluene (PID)		% Rec.	101.0	55-122	WG783799	04/22/15 08:56
Nitrate-Nitrite	< .1	mg/l			WG784278	04/27/15 02:49

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
pH	su	4.40	4.40	0.454	1	L759581-01	WG782951
pH	su	7.00	7.00	0.573	1	L760090-02	WG782951
Specific Conductance	umhos/cm	5200	5200	0.192	20	L760265-05	WG783520
Chloride	mg/l	7.80	7.70	2.00	20	L759346-01	WG783895
Sulfate	mg/l	10.0	9.51	5.00	20	L759346-01	WG783895
Chloride	mg/l	17.0	16.8	0.0	20	L759492-01	WG783895
Sulfate	mg/l	11.0	10.9	1.00	20	L759492-01	WG783895
Dissolved Solids	mg/l	5800	5660	2.44	5	L760247-10	WG783688
Nitrate-Nitrite	mg/l	4.10	4.10	0.0	20	L759991-07	WG784278
Nitrate-Nitrite	mg/l	0.0880	0.0870	1.14	20	L760044-05	WG784278

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
pH	su	7.84	7.93	101.	98.3-101.7	WG782951
Specific Conductance	umhos/cm	534	557.	104.	85-115	WG783520
Chloride	mg/l	40	40.7	102.	90-110	WG783895

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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James McDaniel
382 County Road 3100

Aztec, NM 87410

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Mt. Juliet, TN 37122
(615) 758-5858
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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Sulfate	mg/l	40	40.9	102.	90-110	WG783895
Calcium	mg/l	10	9.85	99.0	80-120	WG783145
Iron	mg/l	1	1.01	101.	80-120	WG783145
Magnesium	mg/l	10	10.3	103.	80-120	WG783145
Manganese	mg/l	1	1.02	102.	80-120	WG783145
Potassium	mg/l	10	10.1	101.	80-120	WG783145
Sodium	mg/l	10	10.8	108.	80-120	WG783145
Dissolved Solids	mg/l	8800	7510	85.3	85-115	WG783688
Benzene	mg/l	.05	0.0471	94.2	70-130	WG783799
Ethylbenzene	mg/l	.05	0.0479	95.9	70-130	WG783799
Toluene	mg/l	.05	0.0473	94.6	70-130	WG783799
Total Xylene	mg/l	.15	0.146	97.0	70-130	WG783799
a,a,a-Trifluorotoluene (PID)				100.0	55-122	WG783799
Nitrate-Nitrite	mg/l	5	5.04	101.	90-110	WG784278

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
pH	su	7.94	7.93	101.	98.3-101.7	0.126	20	WG782951
Specific Conductance	umhos/	552.	557.	103.	85-115	0.902	20	WG783520
Chloride	mg/l	40.3	40.7	101.	90-110	1.00	20	WG783895
Sulfate	mg/l	40.5	40.9	101.	90-110	1.00	20	WG783895
Calcium	mg/l	9.78	9.85	98.0	80-120	1.00	20	WG783145
Iron	mg/l	1.01	1.01	101.	80-120	0.0	20	WG783145
Magnesium	mg/l	10.3	10.3	103.	80-120	0.0	20	WG783145
Manganese	mg/l	1.01	1.02	101.	80-120	0.0	20	WG783145
Potassium	mg/l	9.99	10.1	100.	80-120	1.00	20	WG783145
Sodium	mg/l	10.6	10.8	106.	80-120	2.00	20	WG783145
Dissolved Solids	mg/l	7830	7510	89.0	85-115	4.17	5	WG783688
Benzene	mg/l	0.0470	0.0471	94.0	70-130	0.240	20	WG783799
Ethylbenzene	mg/l	0.0472	0.0479	94.0	70-130	1.61	20	WG783799
Toluene	mg/l	0.0466	0.0473	93.0	70-130	1.40	20	WG783799
Total Xylene	mg/l	0.143	0.146	96.0	70-130	1.44	20	WG783799
a,a,a-Trifluorotoluene (PID)				99.60	55-122			WG783799
Nitrate-Nitrite	mg/l	4.81	5.04	96.0	90-110	4.67	20	WG784278

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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April 27, 2015

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Chloride	mg/l	5830	1140	.5	94.0	80-120	L760026-02	WG783895
Sulfate	mg/l	8610	4040	.5	91.0	80-120	L760026-02	WG783895
Iron	mg/l	1.33	0.291	1	100.	75-125	L760435-07	WG783145
Magnesium	mg/l	11.3	0.724	10	100.	75-125	L760435-07	WG783145
Manganese	mg/l	1.04	0.0155	1	100.	75-125	L760435-07	WG783145
Potassium	mg/l	10.9	0.677	10	100.	75-125	L760435-07	WG783145
Sodium	mg/l	227.	216.	10	110.	75-125	L760435-07	WG783145
Calcium	mg/l	11.5	2.06	10	95.0	75-125	L760435-07	WG783145
Benzene	mg/l	0.101	0.0506	.05	100.	57.2-131	L759835-13	WG783799
Ethylbenzene	mg/l	0.0494	0.0	.05	99.0	67.5-135	L759835-13	WG783799
Toluene	mg/l	0.0489	0.000150	.05	98.0	63.7-134	L759835-13	WG783799
Total Xylene	mg/l	0.151	0.0	.15	100.	65.9-138	L759835-13	WG783799
a,a,a-Trifluorotoluene (PID)					98.40	55-122		WG783799
Nitrate-Nitrite	mg/l	21.3	16.0	5	100.	90-110	L759991-05	WG784278

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Chloride	mg/l	6120	5830	9960*	80-120	5.00	20	L760026-02	WG783895
Sulfate	mg/l	8850	8610	9610*	80-120	3.00	20	L760026-02	WG783895
Iron	mg/l	1.29	1.33	99.8	75-125	3.00	20	L760435-07	WG783145
Magnesium	mg/l	10.8	11.3	101.	75-125	4.00	20	L760435-07	WG783145
Manganese	mg/l	1.02	1.04	100.	75-125	2.00	20	L760435-07	WG783145
Potassium	mg/l	10.6	10.9	99.2	75-125	3.00	20	L760435-07	WG783145
Sodium	mg/l	221.	227.	46.7*	75-125	3.00	20	L760435-07	WG783145
Calcium	mg/l	11.6	11.5	95.7	75-125	1.00	20	L760435-07	WG783145
Benzene	mg/l	0.0954	0.101	89.7	57.2-131	5.37	20	L759835-13	WG783799
Ethylbenzene	mg/l	0.0472	0.0494	94.3	67.5-135	4.67	20	L759835-13	WG783799
Toluene	mg/l	0.0467	0.0489	93.1	63.7-134	4.56	20	L759835-13	WG783799
Total Xylene	mg/l	0.144	0.151	95.8	65.9-138	4.65	20	L759835-13	WG783799
a,a,a-Trifluorotoluene (PID)				98.40	55-122				WG783799
Nitrate-Nitrite	mg/l	20.4	21.3	87.0*	90-110	4.33	20	L759991-05	WG784278

Serial Dilution

Batch number /Run number / Sample number cross reference

WG782951: R3031818: L760026-01

WG783520: R3031990: L760026-01

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

XTO Energy - San Juan Division
James McDaniel
382 County Road 3100

Aztec, NM 87410

Quality Assurance Report
Level II

L760026

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 27, 2015

WG783895: R3032607: L760026-01
WG783145: R3032667 R3033043: L760026-01 02
WG783688: R3032729: L760026-01
WG783799: R3033075: L760026-
WG784278: R3033301: L760026-01

* * Calculations are performed prior to rounding of reported values.
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

