April 5, 2017

Randy Bayliss
New Mexico Oil Conservation Division
1220 South Street Francis Drive
Santa Fe, New Mexico 87505

RE: Online Submission of 2016 Annual Groundwater Reports

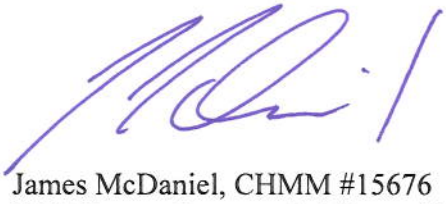
Dear Mr. Randy Bayliss:

LT Environmental (LTE), Inc., on behalf of XTO Energy, Inc. (XTO), is electronically submitting the attached 2016 annual groundwater monitoring reports covering the period from January 1, 2016, to December 31, 2016, for the following sites:

- Sullivan Gas Com D #1E (3RP-1035);
- Bruington Gas Com #1 (3RP-106);
- Federal Gas Com H #1 (3RP-110);
- McCoy Gas Com D #1E (3RP-414);
- OH Randel #007 (3RP-386); and
- Valdez A #1E (3RP-134).

If you have any questions regarding these reports please contact Ashley Ager with LTE at (970) 385-1096 or aager@ltenv.com or James McDaniel with XTO at (505) 333-3701 or James_McDaniel@xtoenergy.com.

Sincerely,



James McDaniel, CHMM #15676
XTO Energy Inc., a subsidiary of ExxonMobil
EH&S Supervisor

cc: Attachments (6)

2016 ANNUAL GROUNDWATER REPORT

Sullivan Gas Com D#1E

3RP-1035

Unit F, Section 26, Township 29N, Range 11W
San Juan County, New Mexico

PREPARED FOR:

New Mexico Oil Conservation Division
1220 South St. Francis Street
Santa Fe, New Mexico 87505
(505) 476-3488

April 2017

2016 XTO GROUNDWATER REPORT

TABLE OF CONTENTS

SULLIVAN GAS COM D#1E
3RP-1035

SITE DETAILS

LEGALS – TWN: 29N	**RNG**: 11W	**SEC**: 26	**UNIT**: F
OCD HAZARD RANKING: 20		**LAND TYPE**: FEE	
LATITUDE: 36.700134		**LONGITUDE**: -107.964522	

INTRODUCTION

XTO Energy Inc. (XTO) acquired the Sullivan Gas Com D #1E natural gas production well from Amoco Production Company (Amoco) in January 1998. This is a gas producing well in the Dakota Sandstone Formation and is currently active. The Hammond Ditch is located approximately 300 feet south and upgradient of the location, while the San Juan River is located approximately 1,100 feet north and downgradient of the location. A topographic map is presented as ***Figure 1***.

HISTORY

Historical records indicate the well was drilled and completed in March 1980 by Amoco, until the change of operator occurred in 1998. During additional facility upgrades, suspected petroleum hydrocarbon impacted soil was encountered while replacing a fiberglass line from the separator to the production tanks. The analytical results for a grab sample exceeded the 1993 New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills and Releases* and an initial Form C-141 was submitted (***Attachment 1).***

Following the identification of the impact, further site investigation via hand auger and direct-push soil borings were used to delineate and characterize petroleum hydrocarbon impacts to soil and groundwater. A copy of a summary report of the results and an initial remediation work plan were submitted to the NMOCD in September 2015 (***Attachment 2)***.

In October 2015, XTO conducted additional site characterization and began phase-separated hydrocarbon (PSH) recovery from the petroleum hydrocarbon impacted groundwater, as PSH was encountered in the newly installed monitoring wells. Utilizing both active and passive recovery at the site via vacuum truck and oil-absorbent socks in the monitoring wells, a total volume of approximately 28 barrels (bbls) of petroleum hydrocarbon impacted groundwater and PSH were recovered through November 2015. Additionally, XTO conducted dual-phase extraction and limited soil vapor extraction (SVE) tests to investigate the efficacy of an air sparge (AS)/SVE system as a means of *in situ* remediation by promoting volatilization of petroleum hydrocarbon constituents adsorbed onto soil particles in the vadose zone. Following the additional delineation and remediation recommendations, XTO submitted an updated remediation work plan and Form C-141 in November 2015 (***Attachment 3)***, which was approved by the NMOCD.

In April 2016, based on the site lithology, the findings from the dual-phase extraction, and initial

SVE testing, XTO installed a preliminary SVE system utilizing existing monitoring wells MW01, MW02, MW05, MW06, and product recovery well PR-1. The system is powered by an electric single-phase, three horsepower regenerative blower capable of approximately 100 cubic feet per minute (CFM) of flow and an applied vacuum of -50 inches of water column (IWC). The expected radius of influence on each SVE well was expected to be approximately 40 feet. ***Figure 2*** depicts the system layout and expected radius of influence. A PSH recovery tank was installed on the system to capture any liquids that accumulate while extracting soil vapors.

Following installation of the preliminary SVE system in April 2016, XTO conducted regular operations and maintenance (O&M) and monitored depth to groundwater and PSH thickness in all monitoring wells. Monitoring wells that contained PSH were manually bailed. XTO continued to conduct quarterly sampling of the monitoring wells that did not contain PSH. Based on the volumes and concentrations of the initial air samples in April 2016, XTO filed a Notice of Intent with the New Mexico Environment Department – Air Quality Bureau in anticipation of potential emissions exceeding 10 tons per year of regulated contaminants.

METHODOLOGY

Groundwater elevations were measured in February, April, June, July, September, October, and December 2016 from the monitoring wells and the product recovery well, and groundwater samples were collected and submitted for analysis of BTEX in February, June, September, and December 2016 from monitoring wells that did not contain PSH. Air samples were collected in April and August 2016 from the exhaust stack of the limited SVE system to monitor system efficacy.

Water Level Measurements

Static groundwater level monitoring included recording depth to groundwater and total depth of each monitoring well using a Keck® oil/water interface probe. Presence of any PSH hydrocarbons was also investigated using the interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement to prevent cross-contamination.

Groundwater Sampling

The volume of water in the monitoring wells was calculated and a minimum of three well casing volumes of groundwater was purged (unless the well purged dry prior) from each well using a new disposable polyvinyl chloride (PVC) bailer or a dedicated PVC bailer. All purge water was disposed of into an on-site tank.

Once each monitoring well was sufficiently purged, groundwater samples were collected by filling a minimum of two 40-milliliter (mL) glass vials. The laboratory-supplied vials were filled and capped with zero headspace to prevent degradation of the sample. Samples were labeled with the date and time of collection, well designation, project name, collector's name, and parameters to be analyzed. They were immediately sealed, packed on ice, and shipped to Environmental Science

Corporation (ESC) of Mount Juliet, Tennessee, or Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico, via Fed-Ex priority overnight delivery. Proper chain-of-custody (COC) protocol was followed documenting the date and time sampled, sample number, type of sample, sampler's name, preservative used, analyses required, and sampler's signature. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021B. Laboratory reports from the 2016 sampling events are included as ***Attachment 4*** and the 2016 field notes are included as ***Attachment 5***.

Groundwater Contour Maps

Groundwater elevations measured in monitoring wells during site visits were used to draft groundwater potentiometric surface maps (***Figures 3, 4, 5, and 6***). Contours were inferred based on groundwater elevations and observations of physical characteristics at the site (topography, proximity to irrigation ditches, etc.).

SVE System Monitoring

To monitor the volume and concentrations of petroleum hydrocarbon soil vapors being extracted from the subsurface, XTO collected gas samples from the SVE system exhaust in April and August 2016. The gas samples of the emissions from the exhaust stack of the SVE system were collected using a Tedlar® bag and submitted under strict COC protocol to HEAL of Albuquerque, New Mexico, for analysis of volatiles by EPA Method 8260B and gasoline range organics (GRO) by EPA Method 8015D in April 2016 and BTEX by EPA Method 8021B and GRO by EPA Method 8015D in August 2016.

RESULTS

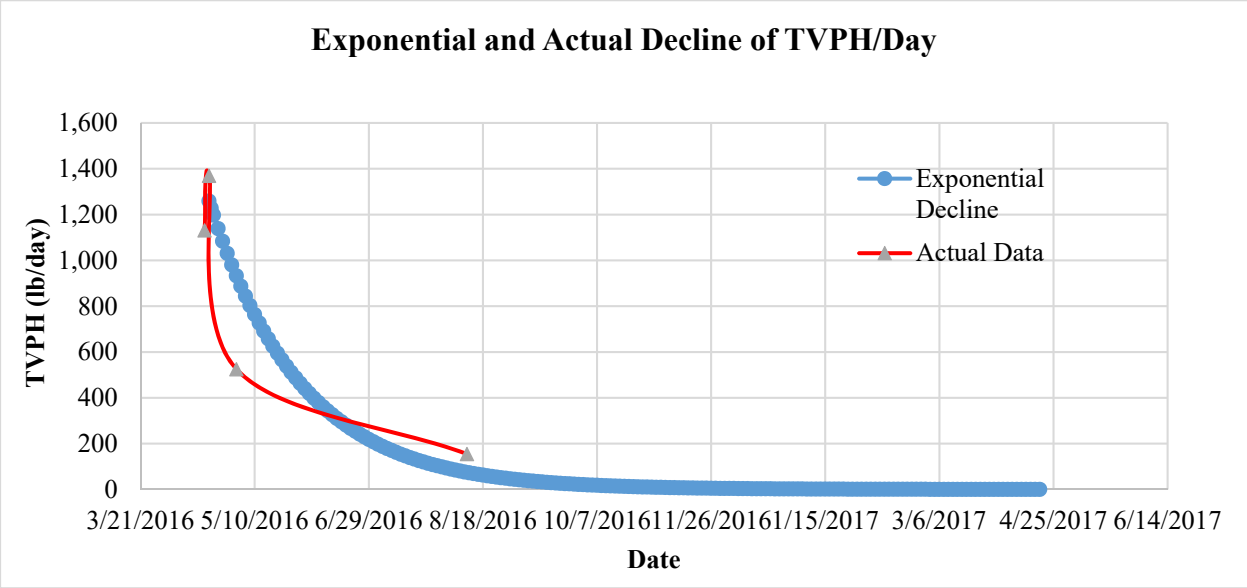
Groundwater elevations measured during site monitoring events in 2016 indicated the groundwater gradient flows to the north-northwest in February, south-southeast in June and December, and northeast in September, which is consistent with observations from previous monitoring events. ***Figures 3, 4, 5,*** and ***6*** depict groundwater elevations and groundwater analytical results for 2016. A summary of measured depths to groundwater and PSH thickness is summarized in ***Table 1***.

Product thickness generally decreased during 2016. PR-1 decreased from 2.16 feet in July of 2016 to 0.79 feet of PSH in December. MW01 decreased over the course of the year to little to no detectable PSH (0.08 feet of PSH in December). MW05 decreased from 2.60 feet of PSH in April to no PSH in December. Monitoring wells MW02, MW03, and MW06 contained no detectable PSH during the last 2 quarters of 2016. As of December 28, 2016, a total of 1,267.82 gallons of impacted groundwater has been recovered from the limited SVE system and manual removal via bailer, of which 375.27 gallons were PSH.

The February 2016 groundwater monitoring event indicated product recovery well PR-1 and monitoring wells MW01, MW02, MW05, MW06 contained PSH and were therefore not sampled. Laboratory analytical results from groundwater sampling indicated BTEX concentrations were

below the laboratory reporting limits and in compliance with the New Mexico Water Quality Control Commission (NMWQCC) standards for groundwater sampled from monitoring well MW04; however, benzene and total xylenes exceeded the NMWQCC standards in monitoring well MW03. In June and September 2016, PSH was observed in product recovery well PR-1 and in monitoring wells MW01, MW02, MW03, MW05, MW06, and were therefore not sampled. Groundwater sampled from monitoring well MW04 exceeded the NMWQCC standards for benzene and total xylenes. The December 2016 monitoring event indicated monitoring well MW01 and product recovery well PR-1 contained PSH and were therefore not sampled. Laboratory analytical results indicated all wells exceeded standards for at least one BTEX constituent. A summary of the groundwater analytical results is presented in ***Table 2.***

XTO has continued to monitor emissions from the preliminary SVE system using photo-ionization detector (PID) measurements to calculate total volatile petroleum hydrocarbons (TVPH) concentrations and assess remediation performance. The chart below illustrates the assumed exponential decline curve of TVPH compared to the actual decline of TVPH based on analytical data. A summary of the air emission analytical results is presented in ***Table 3*** and the laboratory analytical reports are included in ***Attachment 4***.



CONCLUSIONS

Groundwater flow direction and elevation fluctuations at the site appear to be in response to the seasonal volume of water in the San Juan River to the north. Additionally, the site-specific ground water flow direction is likely influenced by the limited SVE system. The absence and/or reduction of PSH in monitoring wells MW01, MW02, MW03, MW05, and MW06 indicate the SVE system is successfully decreasing the volume of petroleum hydrocarbon impact in the vadose zone and is drawing PSH from the groundwater. Additionally, the decline in TVPH concentrations indicate

the SVE system is successfully reducing hydrocarbon impact in the subsurface. The groundwater analytical results indicated that source material is still in contact with groundwater, causing the elevated concentrations of BTEX and presence of PSH in the groundwater. Laboratory analytical results indicate groundwater is impacted by BTEX concentrations, which exceed the NMWQCC groundwater standards in monitoring wells MW02, MW03, MW04, MW05, and MW06.

RECOMMENDATIONS

XTO proposes to continue monitoring groundwater elevations quarterly and sampling groundwater wells semi-annual during 2017. The preliminary SVE system will continue to operate as long as PSH levels decrease and system exhaust stack PID readings indicate hydrocarbon emissions are present. XTO is attempting to work with Western Refining to obtain access to the north of the Site to continue groundwater delineation and install additional monitoring wells for delineation.

FIGURE 1

SITE LOCATION MAP

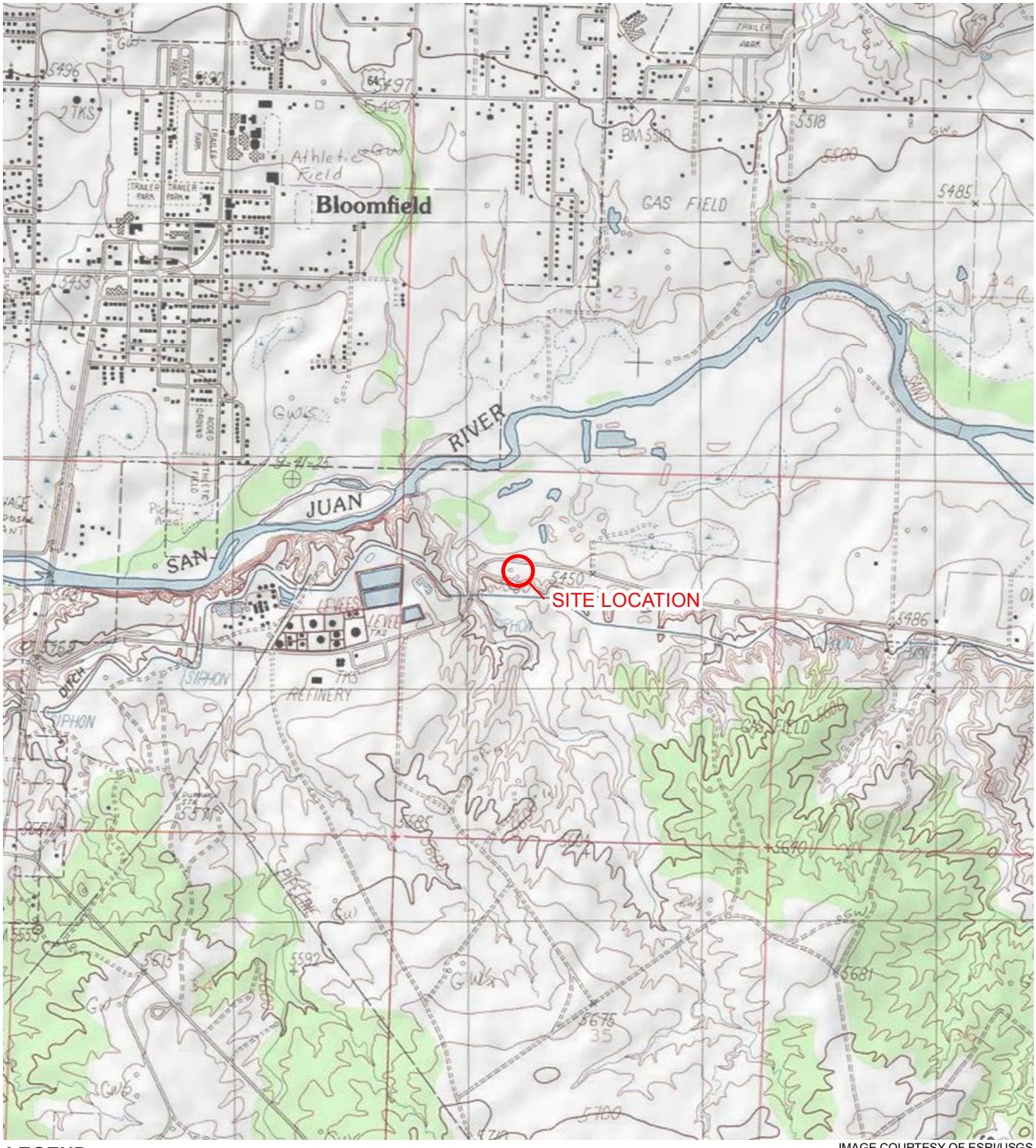


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION

0 2,000 4,000

Feet

N

FIGURE 1
SITE LOCATION MAP
SULLIVAN GAS COM D #1E
SAN JUAN COUNTY, NEW MEXICO

XTO ENERGY, INC.

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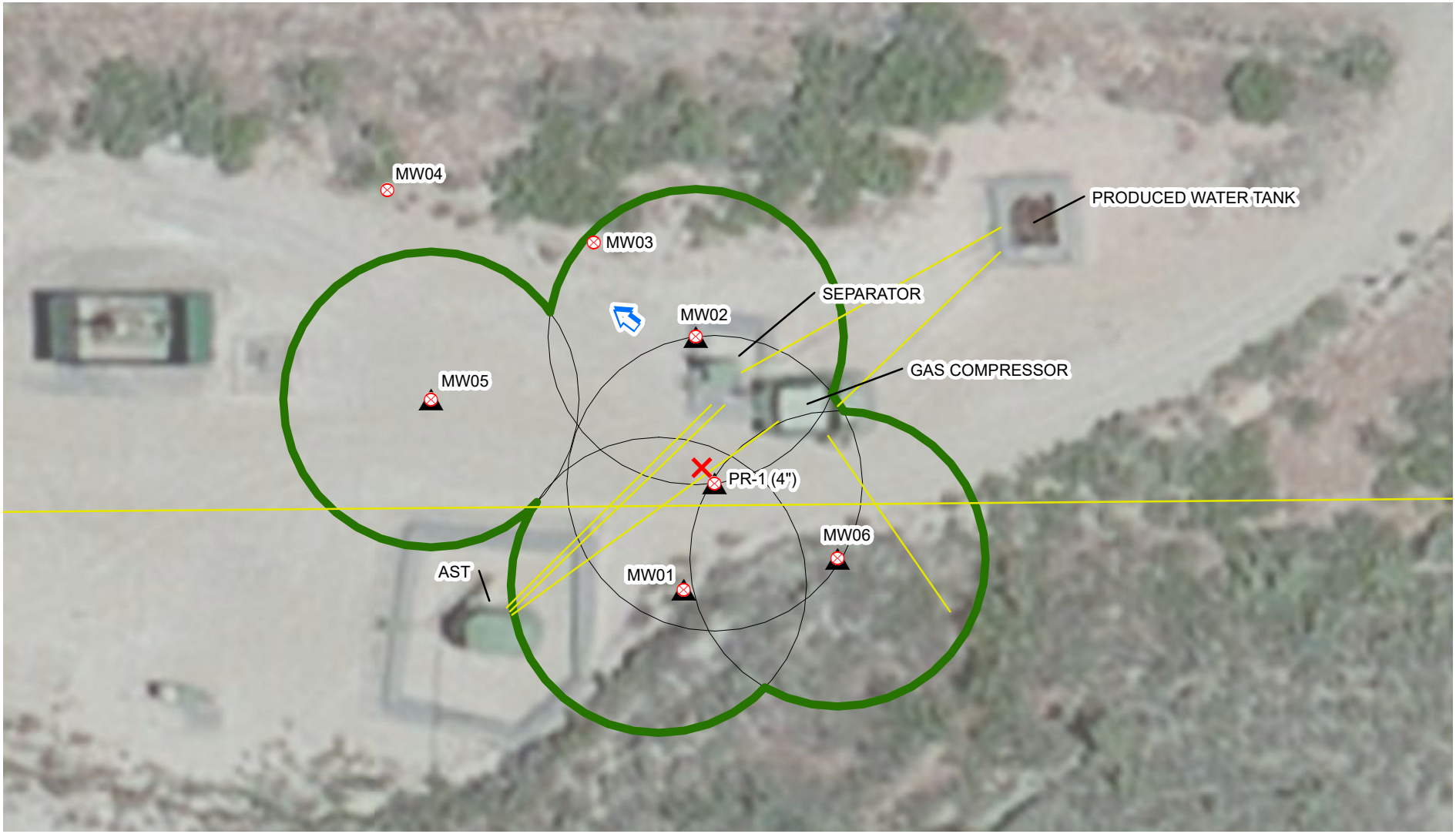
FIGURE 2

REMEDIATION SYSTEM PLAN



LEGEND

- RELEASE ORIGIN
- MONITORING WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- ESTIMATED GROUNDWATER FLOW DIRECTION
- 40 FOOT RADIUS OF INFLUENCE
- SUBSURFACE UTILITIES
- REMEDIATION SYSTEM INFLUENCE EXTENT

AST: ABOVEGROUND STORAGE TANK

IMAGE COURTESY OF ESRI

0 40 80
Feet

N

FIGURE 2
REMEDIATION SYSTEM PLAN
SULLIVAN GC D#1E
SAN JUAN COUNTY, NEW MEXICO

XTO ENERGY, INC.

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FIGURE 3

GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (FEBRUARY 2016)

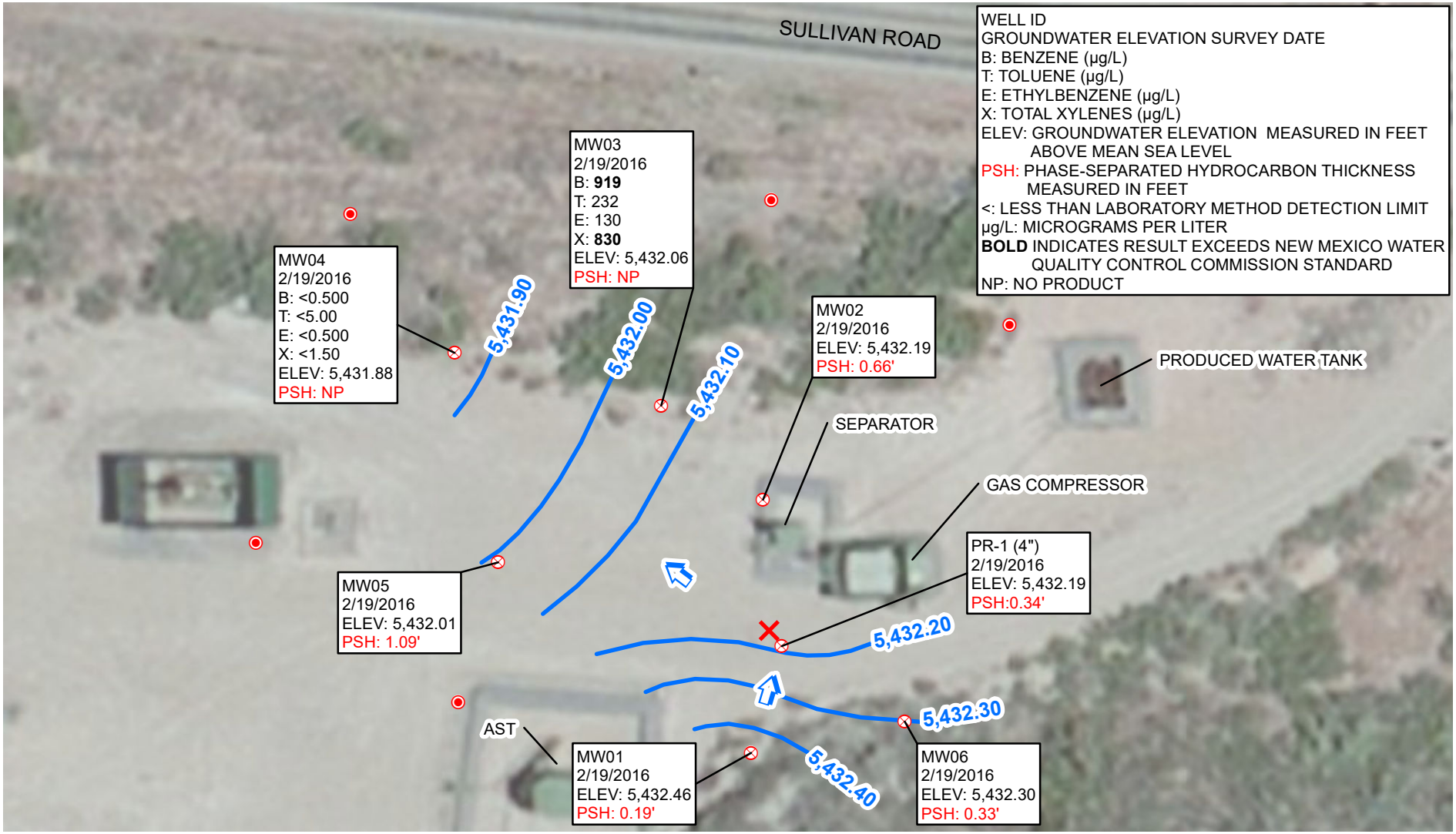

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE ORIGIN
- MONITORING WELL
- PROPOSED MONITORING WELL
- ESTIMATED GROUNDWATER FLOW DIRECTION
- RELATIVE GROUNDWATER ELEVATION CONTOUR
  CONTOUR INTERVAL = 0.10 FEET

AST: ABOVEGROUND STORAGE TANK

NOTE: A PRODUCT DENSITY FACTOR OF 0.7996 IS USED TO ACCOUNT FOR THE PRESENCE OF FREE PRODUCT IN WELLS IN WHICH FREE PRODUCT WAS OBSERVED.

0 40 80
Feet

N

FIGURE 3
GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (FEBRUARY 2016)
SULLIVAN GC D#1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012915025_SULLIVAN_GC_D_#1E\012915025_FIG03_GWE_030916.mxd

FIGURE 4

GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (JUNE 2016)

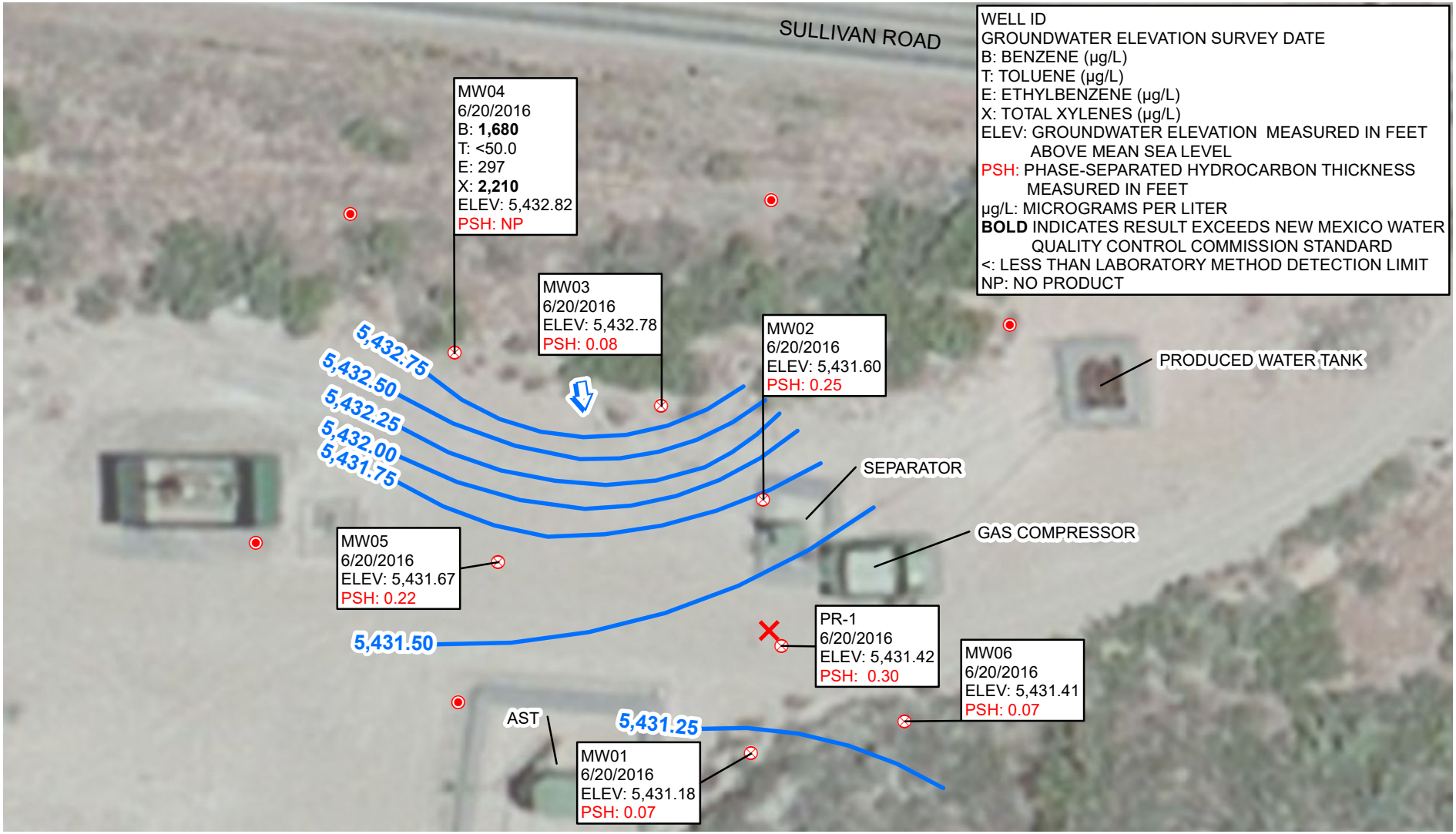

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE ORIGIN
- MONITORING WELL
- PROPOSED MONITORING WELL
- ESTIMATED GROUNDWATER FLOW DIRECTION
- RELATIVE GROUNDWATER ELEVATION CONTOUR
  CONTOUR INTERVAL = 0.25 FEET

AST: ABOVEGROUND STORAGE TANK

0 40 80
Feet

N

NOTE: A PRODUCT DENSITY FACTOR OF 0.7996 IS USED TO ACCOUNT FOR THE PRESENCE OF FREE PRODUCT IN WELLS IN WHICH FREE PRODUCT WAS OBSERVED.

FIGURE 4
GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (JUNE 2016)
SULLIVAN GC D#1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

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FIGURE 5

GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (SEPTEMBER 2016)

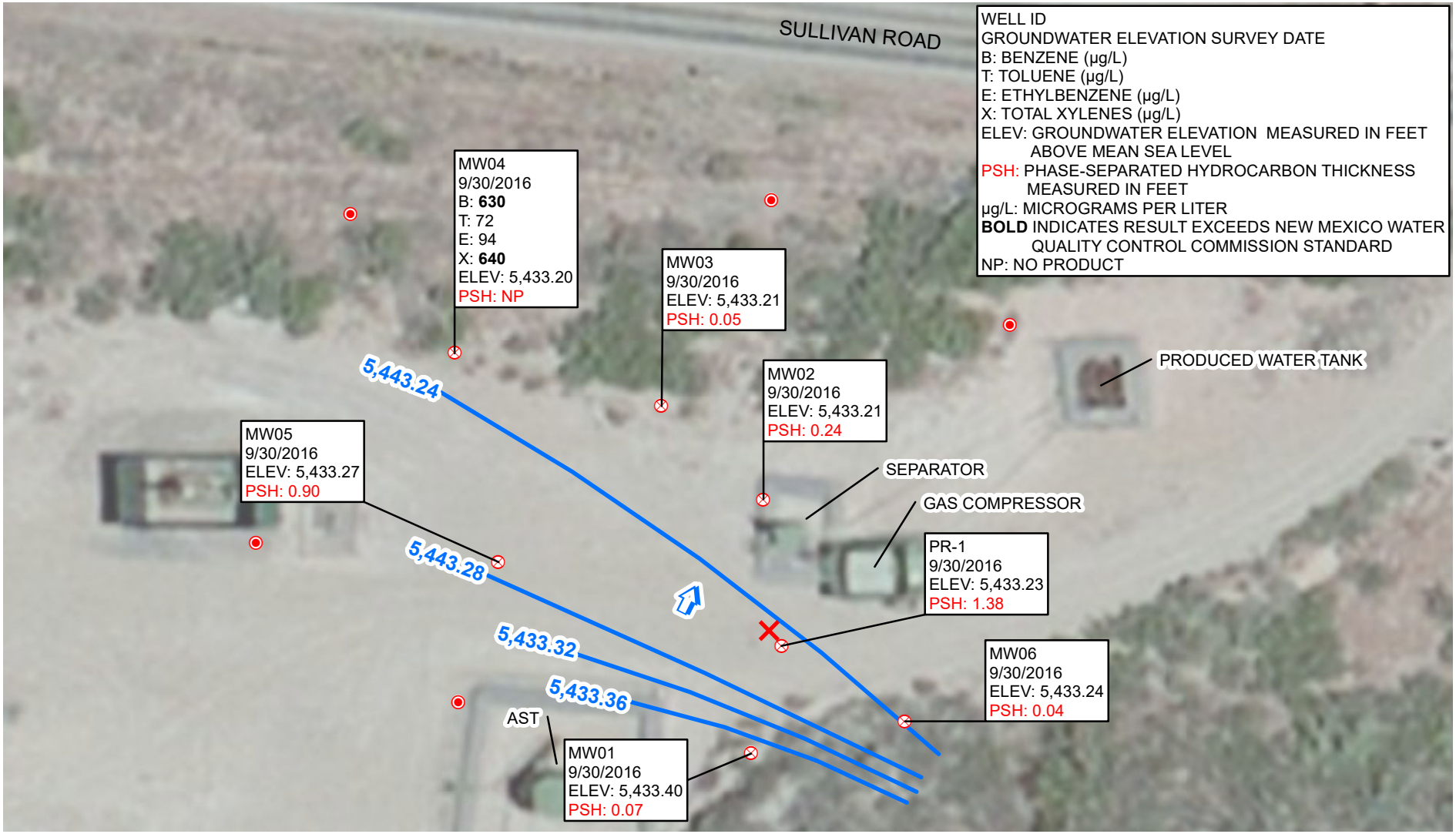

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE ORIGIN
- MONITORING WELL
- PROPOSED MONITORING WELL
- ESTIMATED GROUNDWATER FLOW DIRECTION
- RELATIVE GROUNDWATER ELEVATION CONTOUR-93016
  CONTOUR INTERVAL = 0.04 FEET

AST: ABOVEGROUND STORAGE TANK

0 40 80
Feet

N

NOTE: A PRODUCT DENSITY FACTOR OF 0.7996 IS USED TO ACCOUNT FOR THE PRESENCE OF FREE PRODUCT IN WELLS IN WHICH FREE PRODUCT WAS OBSERVED.

FIGURE 5
GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (SEPTEMBER 2016)
SULLIVAN GC D#1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

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FIGURE 6

GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (DECEMBER 2016)

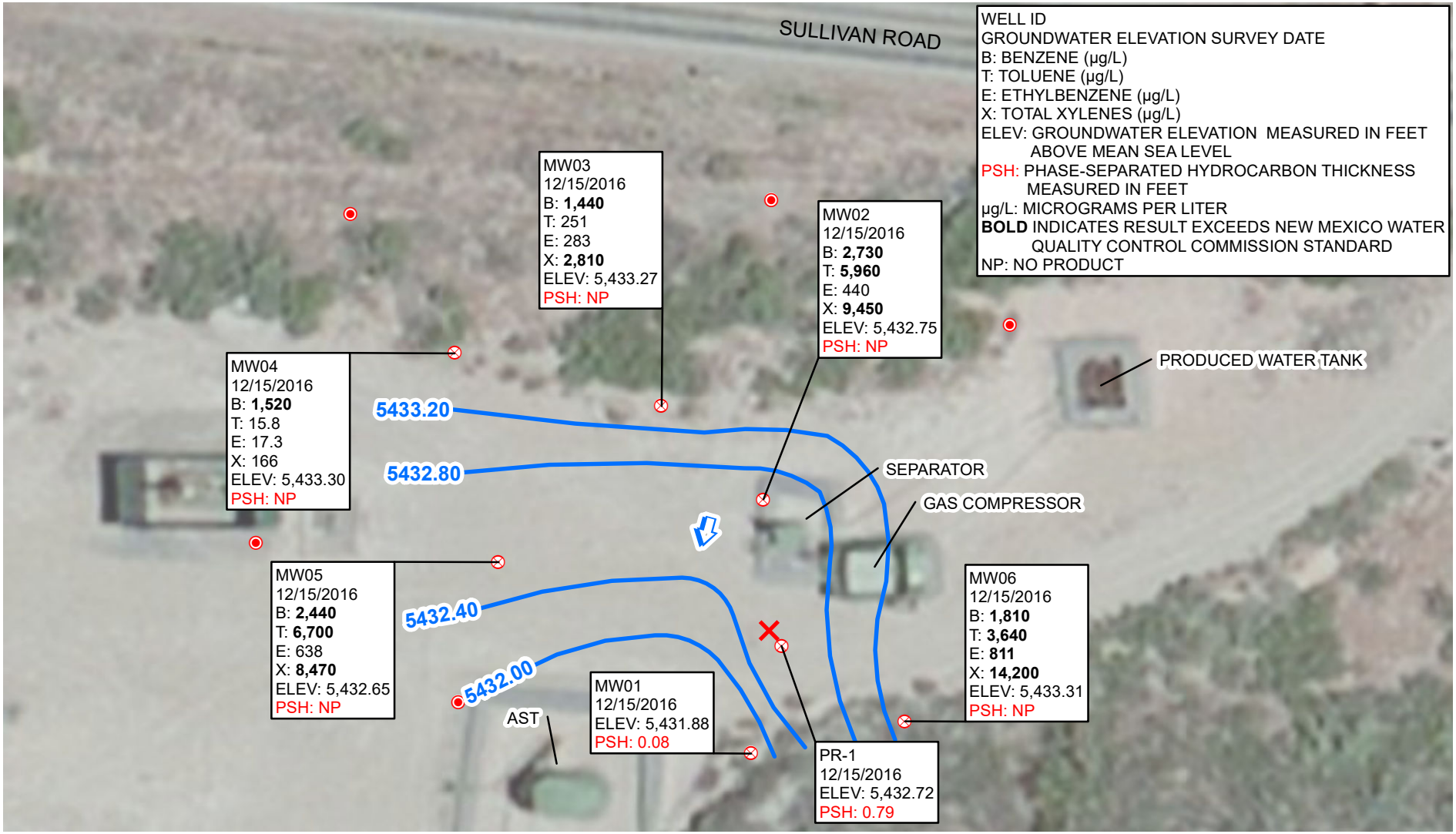

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE ORIGIN
- MONITORING WELL
- PROPOSED MONITORING WELL
- ESTIMATED GROUNDWATER FLOW DIRECTION
- RELATIVE GROUNDWATER ELEVATION CONTOUR
  CONTOUR INTERVAL = 0.40 FEET

AST: ABOVEGROUND STORAGE TANK

0 40 80
Feet

N

NOTE: A PRODUCT DENSITY FACTOR OF 0.7996 IS USED TO ACCOUNT FOR THE PRESENCE OF FREE PRODUCT IN WELLS IN WHICH FREE PRODUCT WAS OBSERVED.

FIGURE 6
GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (DECEMBER 2016)
SULLIVAN GC D#1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLE 1

GROUNDWATER ELEVATIONS

TABLE 1
GROUNDWATER ELEVATIONS

SULLIVAN GAS COM D #1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

Well ID	Date	Top of Casing Elevation (feet*)	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Product Thickness (inches)	Groundwater Elevation (feet)
PR-1	9/10/2015	5,452.23	21.55	21.82	0.27	3.24	5,430.63
	9/19/2015		--	--	--	0.21 **	--
	9/25/2015		--	--	--	0.19 **	--
	9/28/2015		20.95	21.51	0.56	6.72	5,431.17
	11/4/2015		19.09	19.58	0.49	5.88	5,433.04
	11/11/2015		19.23	19.39	0.16	1.92	5,432.97
	11/18/2015		19.28	19.44	0.16	1.92	5,432.92
	2/19/2016		19.97	20.31	0.34	4.08	5,432.19
	4/29/2016		19.32	22.01	2.69	32.28	5,432.37
	6/20/2016		20.75	21.05	0.30	3.60	5,431.42
	7/14/2016		18.86	20.91	2.05	24.60	5,432.96
	7/18/2016		18.89	20.95	2.06	24.72	5,432.93
	7/22/2016		19.43	19.88	0.45	5.40	5,432.71
	9/30/2016		18.72	20.10	1.38	16.56	5,433.23
	10/10/2016		18.72	19.94	1.22	14.64	5,433.27
	12/15/2016		19.35	20.14	0.79	9.48	5,432.72
MW01	9/10/2015	5,454.15	21.55	21.82	0.27	3.24	5,432.55
	9/19/2015		--	--	--	0.21 **	--
	9/25/2015		--	--	--	0.19 **	--
	9/28/2015		20.95	21.51	0.56	6.72	5,433.09
	11/4/2015		20.98	21.60	0.62	7.44	5,433.05
	11/11/2015		21.05	21.74	0.69	8.28	5,432.96
	11/18/2015		21.08	21.81	0.73	8.76	5,432.92
	2/19/2016		21.65	21.84	0.19	2.28	5,432.46
	4/29/2016		21.11	21.79	0.68	8.16	5,432.90
	6/20/2016		22.96	23.03	0.07	0.84	5,431.18
	7/14/2016		NP	20.71	NP	NP	5,433.44
	7/18/2016		20.80	20.91	0.11	1.32	5,433.33
	7/22/2016		21.18	21.59	0.41	4.92	5,432.89
	9/30/2016		20.74	20.81	0.07	0.84	5,433.40
	10/10/2016		NP	20.69	NP	NP	5,433.46
	12/15/2016		22.41	22.33	0.08	0.96	5,431.88
MW02	9/10/2015	5,451.95	NP	18.85	NP	NP	5,433.10
	9/19/2015		--	--	--	0.05 **	--
	9/25/2015		--	--	--	0.15 **	--
	9/28/2015		18.85	19.04	0.19	2.28	5,433.06
	11/4/2015		18.88	19.21	0.33	3.96	5,433.00
	11/11/2015		18.97	19.31	0.34	4.08	5,432.91
	11/18/2015		18.98	19.30	0.32	3.84	5,432.91
	2/19/2016		19.63	20.29	0.66	7.92	5,432.19
	4/29/2016		19.47	21.27	1.80	21.60	5,432.12
	6/20/2016		20.30	20.55	0.25	3.00	5,431.60
	7/14/2016		NP	19.04	NP	NP	5,432.91

TABLE 1
GROUNDWATER ELEVATIONS

SULLIVAN GAS COM D #1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

Well ID	Date	Top of Casing Elevation (feet*)	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Product Thickness (inches)	Groundwater Elevation (feet)
MW02	7/18/2016	5,451.95	NP	19.05	NP	NP	5,432.90
	7/22/2016		19.07	19.19	0.12	1.44	5,432.86
	9/30/2016		18.69	18.93	0.24	2.88	5,433.21
	10/10/2016		NP	18.64	NP	NP	5,433.31
	12/15/2016		NP	19.20	NP	NP	5,432.75
MW03	9/10/2015	5,452.50	NP	19.45	NP	NP	5,433.05
	9/28/2015		NP	19.49	NP	NP	5,433.01
	11/4/2015		19.54	19.56	0.02	0.24	5,432.96
	11/11/2015		NP	19.65	NP	NP	5,432.85
	11/18/2015		NP	19.67	NP	NP	5,432.83
	2/19/2016		NP	20.44	NP	NP	5,432.06
	4/29/2016		20.54	20.65	0.11	1.32	5,431.94
	6/20/2016		19.70	19.78	0.08	0.96	5,432.78
	7/14/2016		19.59	19.65	0.06	0.72	5,432.90
	7/18/2016		19.65	19.69	0.04	0.48	5,432.84
	7/22/2016		19.61	19.66	0.05	0.60	5,432.88
	9/30/2016		19.28	19.33	0.05	0.60	5,433.21
	10/10/2016		NP	19.23	NP	NP	5,433.27
	12/15/2016		NP	19.82	NP	NP	5,433.27
MW04	9/10/2015	5,451.92	NP	18.94	NP	NP	5,432.98
	9/28/2015		NP	19.98	NP	NP	5,431.94
	11/4/2015		NP	19.08	NP	NP	5,432.84
	11/11/2015		NP	19.20	NP	NP	5,432.72
	11/18/2015		NP	19.21	NP	NP	5,432.71
	2/19/2016		NP	20.04	NP	NP	5,431.88
	4/29/2016		NP	20.11	NP	NP	5,431.81
	6/20/2016		NP	19.10	NP	NP	5,432.82
	7/14/2016		NP	19.01	NP	NP	5,432.91
	7/18/2016		NP	19.00	NP	NP	5,432.92
	7/22/2016		NP	18.99	NP	NP	5,432.93
	9/30/2016		NP	18.72	NP	NP	5,433.20
	10/10/2016		NP	18.62	NP	NP	5,433.30
	12/15/2016		NP	19.36	NP	NP	5,433.30
MW05	11/4/2015	5,451.89	18.82	19.51	0.69	8.28	5,432.93
	11/11/2015		18.9	19.69	0.79	9.48	5,432.83
	11/18/2015		18.93	19.73	0.8	9.60	5,432.80
	2/19/2016		19.66	20.75	1.09	13.08	5,432.01
	4/29/2016		19.35	21.95	2.60	31.20	5,432.02
	6/20/2016		20.18	20.40	0.22	2.64	5,431.67
	7/14/2016		18.63	18.89	0.26	3.12	5,433.21
	7/18/2016		18.60	20.13	1.53	18.36	5,432.98
	7/22/2016		18.84	19.18	0.34	4.08	5,432.98
	9/30/2016		18.44	19.34	0.90	10.80	5,433.27

TABLE 1
GROUNDWATER ELEVATIONS

SULLIVAN GAS COM D #1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

Well ID	Date	Top of Casing Elevation (feet*)	Depth to Product (feet BTOC)	Depth to Groundwater (feet BTOC)	Product Thickness (feet)	Product Thickness (inches)	Groundwater Elevation (feet)
MW05	10/10/2016	5,451.89	18.39	19.17	0.78	9.36	5,433.34
	12/15/2016		NP	19.24	NP	NP	5,432.65
MW06	11/4/2015	5,454.95	21.81	22.12	0.31	3.72	5,433.08
	11/11/2015		21.88	22.3	0.42	5.04	5,432.99
	11/11/2015		21.89	22.3	0.41	4.92	5,432.98
	2/19/2016		22.58	22.91	0.33	3.96	5,432.30
	4/29/2016		22.02	23.49	1.47	17.64	5,432.64
	6/20/2016		23.53	23.60	0.07	0.84	5,431.41
	7/14/2016		21.94	22.03	0.09	1.08	5,432.99
	7/18/2016		NP	21.79	NP	NP	NP
	7/22/2016		22.09	22.31	0.22	2.64	5,432.82
	9/30/2016		21.70	21.74	0.04	0.48	5,433.24
	10/10/2016		NP	21.64	NP	NP	5,433.31
	12/15/2016		NP	22.11	NP	NP	5,433.31

Notes:

A product density factor of 0.7996 is used to account for the presence of free product in wells in which free product was observed
* - survyed using North American Vertical Datum 1988 geoid 12B in U.S. survey feet
** - Estimated based on volume recovered in a bailer
-- - Not Measured
BTOC - Below Top of Casing
NP - No Product

TABLE 2

GROUNDWATER ANALYTICAL RESULTS

TABLE 2
GROUNDWATER ANALYTICAL RESULTS

SULLIVAN GAS COM D #1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample ID	Date Sampled	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)
MW02	9/10/2015	**6,500**	**24,200**	**1,770**	**11,400**
	12/15/2016	**2,730**	**5,960**	440	**9,450**
MW03	9/10/2015	**2,050**	420	390	**2,890**
	9/14/2015	**6,800**	**1,800**	**900**	**7,600**
	2/19/2016	**919**	232	130	**830**
	12/15/2016	**1,440**	251	283	**2,810**
MW04	9/10/2015	**3,480**	30	60	180
	9/14/2015	**2,900**	25	110	290
	2/19/2016	<0.5	<5.0	<0.5	<1.50
	6/20/2016	**1,680**	<50.0	297	**2,210**
	9/30/2016	**630**	72	94	**640**
	12/15/2016	**1,520**	15.8	17.3	**166**
MW05	12/15/2016	**2,440**	**6,700**	638	**8,470**
MW06	12/15/2016	**1,810**	**3,640**	**811**	**14,200**
NMWQCC Standard		**10**	**750**	**750**	**620**

Notes:
< indicates result is less than the stated laboratory method detection limit
NMWQCC - New Mexico Water Quality Control Commission
µg/l - micrograms per liter

TABLE 3

EMISSIONS ESTIMATE SUMMARY

TABLE 3
EMISSIONS ESTIMATE SUMMARY

SULLIVAN GAS COM D #1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Information and Lab Analysis

Date	Total Flow (cf)	Delta Flow (cf)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	TVPH (µg/L)	PID (ppm)
04/18/16	0	0	840	1,900	87	840	140,000	0
04/20/16	313,920	313,920	840	1,900	87	840	140,000	2,375
04/29/17	1,480,320	1,166,400	280	1,000	64	630	65,000	3,520
08/11/16	6,721,920	5,241,600	92	700	90	910	23,000	4,215

Emission Calculations

Date	Flow Rate (cfm)	Benzene (lb/hr)	Toluene (lb/hr)	Ethyl-benzene (lb/hr)	Xylenes (lb/hr)	TVPH (lb/hr)
04/18/16	90	0.2828	0.6396	0.0293	0.2828	47.1251
04/20/16	109	0.3424	0.7746	0.0355	0.3424	57.0737
04/29/16	90	0.0943	0.3366	0.0215	0.2121	21.8795
08/11/16	70	0.0241	0.1833	0.0236	0.2382	6.0215

Tons Emitted Over Total Operating Time

Date	Total Operational Hours	Delta Hours	Benzene (tons)	Toluene (tons)	Ethyl-benzene (tons)	Xylenes (tons)	TVPH (tons)	Cumulative TVPH (tons)	Cumulative TVPH (lbs)	12 Month Rolling Throughput (tons)
04/18/16	0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0	0.0
04/20/16	48.0	48.0	0.0082	0.0186	0.0009	0.0082	1.3698	1.3698	2,740	1.4
04/29/16	264.0	216.0	0.0102	0.0364	0.0023	0.0229	2.3630	3.7328	7,466	3.7
08/11/16	1,512.0	1,248.0	0.0150	0.1144	0.0147	0.1487	3.7574	7.4902	14,980	7.5
		Sum	**0.0334**	**0.1693**	**0.0179**	**0.1798**	**7.49**			

NOTES:
cf - cubic feet
lb/hr - pounds per hour
TVPH - total volatile petroleum hydrocarbons
ppm - part per million
cfm - cubic feet per minute
lbs - pounds
µg/L - micrograms per liter
System startup occurred on 4/18/16 at 5PM with 0 hours on the blower engine.
Subtracted 1,200 hours from total operational hours on 8/11/16 to account for 50 days system shutdown in May/June 2016