August, 2017

Mr. Randy Bayliss
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: August 2017 – Continued Remediation Plan
XTO Energy, Inc.
Sullivan GC D #1E, API # 30-045-24083
San Juan County, New Mexico
3RP – 1035

Dear Mr. Bayliss:

XTO Energy Inc. (XTO) is submitting the following ***Continued Remediation Plan*** for the Sullivan Gas COM D #1E groundwater site, 3RP-1035, in response to a letter received on June 15, 2017 requesting a work plan for continued remediation at this location; see ***June 15, 2017 Letter***.

BACKGROUND

The Sullivan Gas COM D #1E is located in Unit F of Section 26, Township 29N, Range 11W, San Juan County, New Mexico, API 30-045-24083; see attached ***Aerial Photograph***. A release was identified at the Site on June 8, 2015. The source was a failed union in a fiberglass flow line connecting the separator and aboveground storage tank. The site was ranked a 30 pursuant to the *NMOCD Guidelines for the Remediation of Leaks, Spills and Releases* due to a depth to groundwater of less than 50 feet, and surface water features existing less than 1,000 feet from the Site. XTO responded by collecting subsurface soil samples from potholes and with a hand auger in locations depicted on the attached ***Figure 2 Diagram***, created by LT Environmental. The observed subsurface lithology consisted of a silty to clayey sand that is 13 feet to 17 feet thick underlain by saturated gravel occurring at 13 feet to 17.5 feet bgs. The laboratory analytical results indicated soil is impacted at the source from approximately 4 feet bgs to the saturated sediments at approximately 18.5 feet bgs. Concentrations of benzene from samples collected under the source ranged from 10 mg/kg at 8 feet bgs to 53 mg/kg at 19 feet bgs. TPH was detected in the soil samples as high as 16,300 mg/kg at 19 feet bgs.

Based on the presence of saturated sediments, XTO attempted to collect groundwater samples from BH-1, BH-2, and BH-3. The sidewalls of BH-1 collapsed and no groundwater was sampled at that location. A sample was collected from BH-2 and BH-3 for BTEX analysis. The concentrations of benzene, toluene, and total xylenes in the sample collected from BH-2 exceeded New Mexico Water Quality Control Commission (NMWQCC) standards. The sample collected from BH-3 contained no detectable concentrations of benzene, toluene, and ethyl-benzene. Although total xylenes were detected, the concentration did not exceed NMWQCC standards.

REMEDIATION WORK TO DATE

On August 19, 2015, additional delineation was performed by LT Environmental using a Geoprobe push rig. A report detailing the delineation findings is attached; see attached ***Subsurface Investigation Results***, dated September 1, 2015.

Monitoring wells MW-1, 2, 3, 4, 5 and 6 were installed, as well as a product recovery well, PR-1 in September of 2015. The locations of these wells can be referenced on the attached ***Figure 2 Diagram***, created by LT Environmental. Monitoring wells MW-1, 2, 5 and 6, as well as product recovery well PR-1, were modified to act as soil vapor extraction (SVE) wells beginning in April of 2016. The system has been monitored weekly since its installation, and has removed a total of 12.91 bbls of liquid product from the groundwater table through a liquid knockout attached to the SVE system piping. An estimated additional 275 bbls of hydrocarbons have been removed through the SVE system exhaust based on calculations of the total volatile petroleum hydrocarbons released through the system exhaust since it began operation in April of 2016.

Since the installation of the monitoring wells on location in September of 2015, product levels have shown a decreasing trend across all wells. Product recovery well PR-1 has shown a decrease in measured product level from a maximum of 32.28 inches in April of 2016, to current measurable levels of 1.68 inches, measured in June of 2017. Monitoring well MW-1 did not have any measurable product in June of 2017. This is a decrease from a maximum measurable product of 8.76 inches in November of 2015. Monitoring well MW-2 has shown a decrease from a maximum measured product level of 21.6 inches in April of 2016, to 0.6 inches in June of 2017. Monitoring well MW-3 and MW-4 showed no measurable product in June of 2017, a decrease in MW-3 from a maximum measured product thickness of 1.32 inches in April of 2016. Monitoring well MW-4 has never shown measurable product. Monitoring well MW-5 has shown a decrease in product levels to 5.05 inches, measured in June of 2017, a decrease from a maximum measured product thickness of 31.2 inches in April of 2016. Monitoring well MW-6 had a trace of product in June of 2017, but not enough to be measured. The total product thickness in this well has shown a decrease from the maximum measured product thickness of 17.64 inches in April of 2016. All product thickness values can be referenced on ***Table 1 – Groundwater Elevations***, created by LT Environmental and attached to this report for reference.

Since installation of the monitoring wells on location, periodic groundwater monitoring has taken place. Groundwater levels have been measured, and water samples have been collected and analyzed for BTEX via USEPA Method 8021. Monitoring wells that have free product are not sampled during monitoring events. Monitoring wells MW-3 and MW-4 have had the most frequent samples collected since their installation, and have shown an overall decrease in BTEX concentrations since their first sample was collected in September of 2015. Monitoring well MW-3 has shown a decrease in benzene concentrations from 6,500 ug/l in September of 2015, to current levels of 334 ug/l, from samples collected in June of 2017. Levels of toluene, ethyl-benzene and total xylenes have decreased during this time period as well. Monitoring well MW-4 has shown a sharp decline in benzene levels as well from initial levels of 3,480 ug/l measured in September of 2015. The most recent sampling event took place in June of 2017, and the water sample collected from MW-4 returned benzene results of 24 ug/l. During the same time period, toluene and ethyl-benzene levels have remained constant, but levels of total xylenes have shown an overall increase from levels of 180 ug/l in September of 2015, to levels of 2,350 ug/l in June

of 2017. Sampling results for all wells can be referenced on ***Table 2 – Groundwater Analytical Results***, completed by LT Environmental and attached to this report.

CONTINUED REMEDIATION PLAN

Soil Vapor Extraction

PID readings collected from the SVE exhaust have shown continued removal of volatile organic vapors from the oil and groundwater over the operating period. Due to volatile organic vapor results of 1,711 ppm collected from the exhaust during the most recent SVE system check, XTO proposes the continued operation of the SVE system to continue removal of volatile hydrocarbons at this site.

Groundwater Monitoring

Additional monitoring wells will be installed at locations as previously approved by the NMOCD. Approved monitoring well locations are outlined on the attached ***Figure 6***, created by LT Environmental. The additional monitoring wells will be installed and completed as temporary monitoring wells, and may be plugged based on results of BTEX sampling collected after the well's installation. Should a temporary well return groundwater results below WQCC standards for two (2) consecutive sampling events after initial installation. Assessment of the necessity of the well will take place at that time. Groundwater monitoring will be conducted semi-annually moving forward, and will include water level monitoring in all monitoring wells, the documentation of product thickness, if applicable, in all monitoring wells, and the sampling of monitoring wells that do not have measurable product. Samples will be analyzed for BTEX via USEPA Method 8021. Sample collection will continue in monitoring wells which have shown BTEX results in groundwater above WQCC standards until eight (8) consecutive quarters of sampling results indicate BTEX levels are below WQCC standards. The temporary monitoring wells will be installed off pad once approval is received from the landowner, Andeavor. XTO has been in discussion with Andeavor regarding the off-pad monitoring wells, and a revised lease agreement has been submitted to them and is pending approval.

Product Recovery

XTO proposes to continue product recovery utilizing the SVE system in place. The need to convert the newly installed temporary monitoring wells into SVE wells will be based on conditions observed once the temporary monitoring wells have been installed.

Reporting

Semi-annual groundwater monitoring will be submitted in annual reports to the NMOCD. Reports will additionally include product recovery volumes; SVE data including applied pressure, flow and vacuum with air emission estimates; groundwater elevations and analytical results.

James McDaniel
XTO Energy Inc.
EH&S Supervisor
Rockies District, Central Division

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division

15 June 2017

James McDaniel
EH&S Supervisor
XTO Energy
382 Road 3100
Aztec, NM 87410

Subject: Work Plans Needed for 2017

Re:	3RP	Site Name
	1035	Sullivan GC D#1E
	106	Bruington GC #1

Mr. McDaniel:

I have reviewed the six 2016 Annual Groundwater Monitoring Reports you submitted on 05Apr17. OCD comments on the two AGWMRs referenced above follow. At this time, we have no comments on the other 3RPs.

RP-1035 SVE recovered 15,000 lbs of TPH and 800 lbs BTEX in about 60 days of operation in 2016. NAPL thickness reduced in several wells. You've proposed four new monitoring wells but, even so, delineation of NAPL plumes have yet to be defined as follows. Recall the WQCC standard for NAPL is non-detect.

MW6	North, East, South	(0.33 ft NAPL)
MW1	South, Southwest	(0.19 ft NAPL)
MW2	East	(0.66 ft NAPL)

Your 2016 AGWMR indicates the preliminary SVE system will continue to operate so long as NAPL is reduced and vapor is present. Your OCD-approved Work Plan covered the 2016 monitoring and recovery operations. On or before 14Aug17, please submit a Work Plan for 2017 monitoring and recovery operations. Please include details on further delineation (see above) and specifics of SVE operations (timing, duration, notifications to District III staff, monitoring, equipment used, and so forth). OCD appreciates your aggressive and successful remediation work in 2016 and encourages the same for the future. Please keep us informed on negotiations with Western for access for more MWs.

3RP-106 Test results indicate source material is still in contact with ground water. Delineation of groundwater plumes of BTEX has yet to be defined as follows. Recall the WQCC standard for benzene is 10 ppb.

MW6	North	(21,300 ppb benzene)
MW7	North, South	(7,520 ppb benzene)
MW8	North, East, South	(15,300 ppb benzene)
MW2R	South	(14,000 ppb benzene)

We note a history of a) proposed remediation schemes, b) attempts to involve EPFS in investigation and cleanup efforts and c) attempts to elicit responses from OCD on proposals and assistance. This monitoring project has been going on since 1996 and the levels of benzene in the groundwater have remained about the same. We appreciate your long-standing efforts to get resolution on this project. Let's get together and start some movement. Meanwhile, be thinking about more MWs to fill the gaps above and about remediation strategies to a) find and remove any remaining source material, and b) to get the BTEX out of the groundwater.

Once we have the strategies worked out, OCD will want you to a) submit a remediation plan approved by us ("us" meaning jointly by the District III staff and by the Santa Fe Environmental Bureau) pursuant to 19.15.29.11 NMAC, or b) submit an abatement plan proposal to the OCD director for approval pursuant to 19.15.30 NMAC.

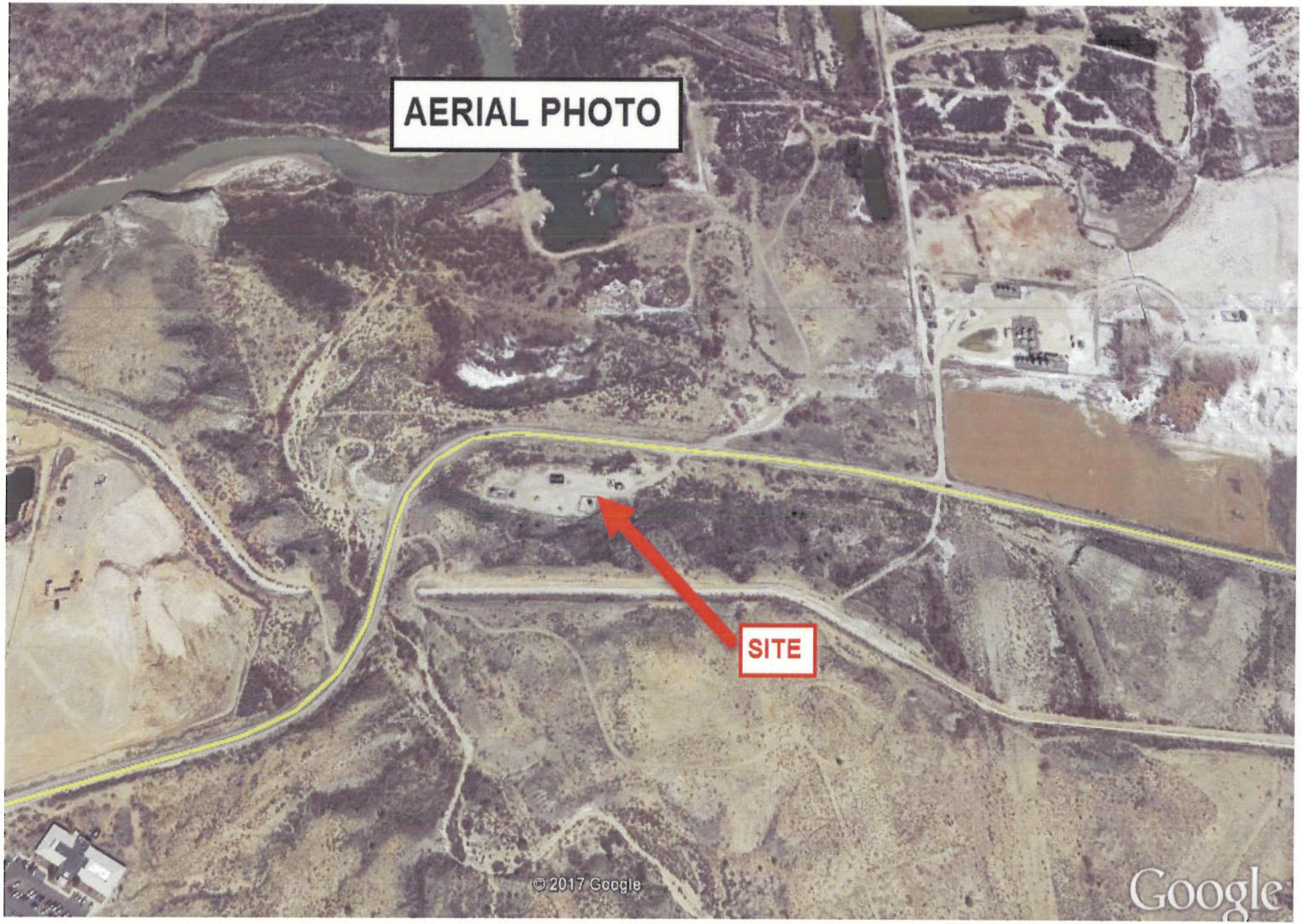
In the recent past, OCD in District III has used option a) above to handle groundwater contamination cases. In the future, OCD will handle new District III groundwater cases using option b). In the transition mode, existing cases may be handled using either option, depending on circumstances and the histories of cases.

After you have reviewed this letter, give me a call (505-476-3084) and we can discuss details. Or if you're in Aztec on my next trip (now scheduled 27-29Jun17), maybe we can talk face-to-face.

Respectfully,

P.E., Hydrologist, District III

cc: Jim Griswold, Charlie Perrin, Brandon Powell, Cory Smith, Vanessa Fields, Jeff Blagg


AERIAL PHOTO
SITE
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Google

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE ORIGIN
- MONITORING WELL
- SOIL BORING (PERFORMED BY LTE)
- ESTIMATED GROUNDWATER FLOW DIRECTION
- POTHOLE (PERFORMED BY XTO)
- HAND AUGER BORING (PERFORMED BY XTO)
- HAND AUGER BORING (PERFORMED BY LTE)

AST: ABOVEGROUND STORAGE TANK

0 40 80
Feet

N

FIGURE 2
SITE MAP
SULLIVAN GC D #1E
SAN JUAN COUNTY, NEW MEXICO

XTO ENERGY, INC.

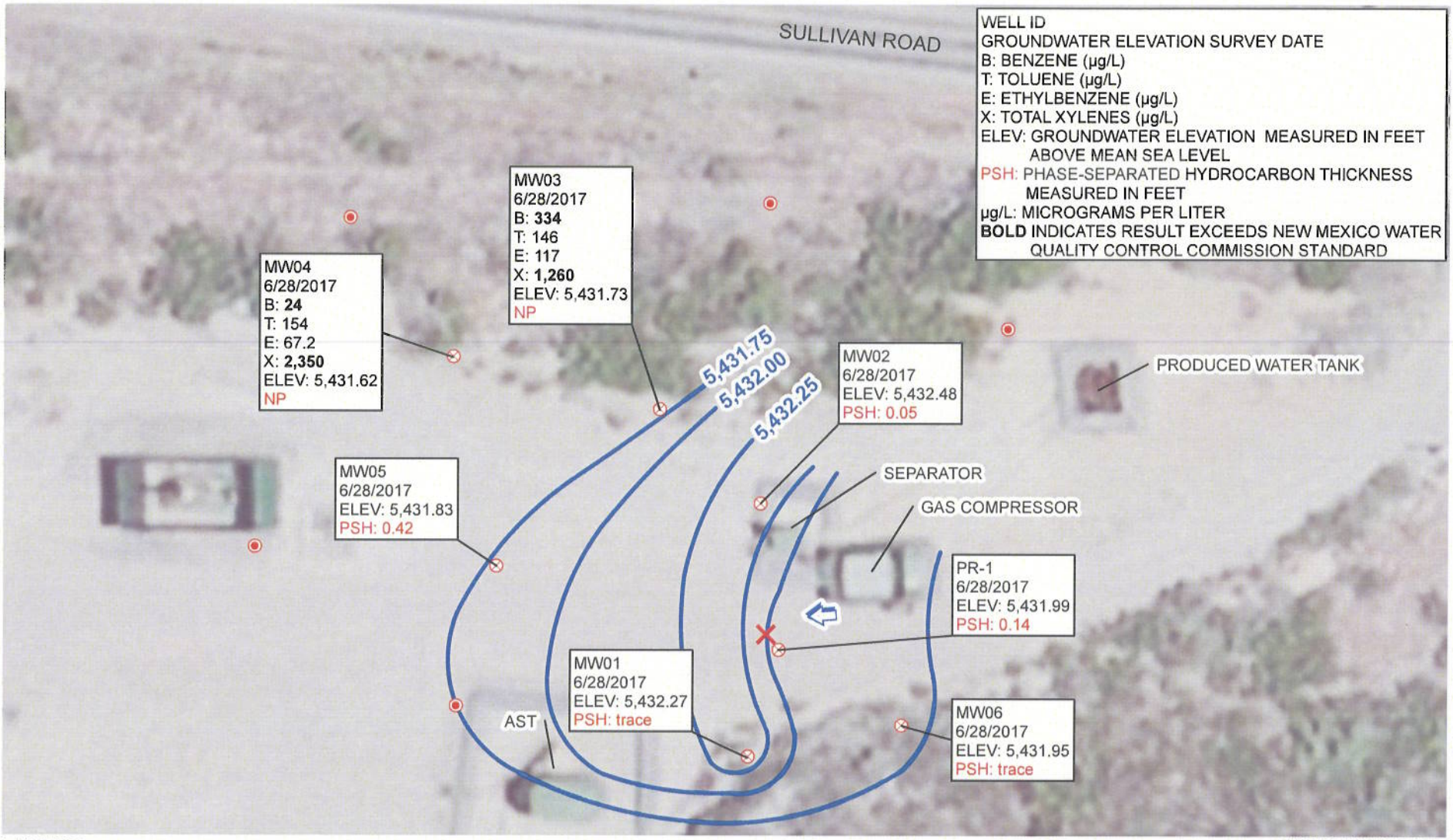

IMAGE COURTESY OF ESRI

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 6
GROUNDWATER POTENTIOMETRIC MAP AND ANALYTICAL RESULTS (JUNE 2017)
SULLIVAN GC D#1E
SAN JUAN COUNTY, NEW MEXICO
XTO ENERGY, INC.

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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
	3/30/2017		NP	19.90	NP	NP	5,432.33
	6/28/2017		20.21	20.35	0.14	1.68	5,431.99
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
	3/30/2017		NP	21.76	NP	NP	5,432.39
	6/28/2017		Trace	21.88	NP	NP	5,432.27
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

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	4/29/2016	5,451.95	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
	7/18/2016		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
	3/30/2017		NP	19.69	NP	NP	5,432.26
	6/28/2017		19.90	19.95	0.05	0.60	5,432.48
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	5,432.68
	3/30/2017		NP	20.36	NP	NP	5,432.14
	6/28/2017		NP	20.77	NP	NP	5,431.73
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	5,432.56
	3/30/2017		NP	19.98	NP	NP	5,431.94
	6/28/2017		NP	20.30	NP	NP	5,431.62

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	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
	10/10/2016		18.39	19.17	0.78	9.36	5,433.34
	12/15/2016		NP	19.24	NP	NP	5,432.65
	3/30/2017		NP	20.42	NP	NP	5,431.47
	6/28/2017		19.98	20.40	0.42	5.04	5,431.83
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	5,433.16
	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	5,432.84
	3/30/2017		NP	22.55	NP	NP	5,432.40
	6/28/2017		Trace	23.00	NP	NP	5,431.95

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
Trace - visible sheen/product in bailer, but not detected by interface probe

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**
	6/28/2017	**334**	146	117	**1,260**
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**
	6/28/2017	**24.0**	154	67.2	**2,350**
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