3R. 104

ANNUAL MONITORING REPORT

03/07/2008



March 7, 2008

Mr. Glenn von Gonten Hydrologist-Groundwater Remediation New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

RE: Annual Groundwater Remediation Reports

Dear Mr. von Gonten,

XTO Energy Inc. (XTO) is submitting the Annual Groundwater Remediation Reports in accordance with the NMOCD approved Groundwater Management Plan (GMP). Enclosed are summary reports with analytical data, summary tables, site maps, potentiometric surface diagrams and recommendations/proposed actions for:

- Bruington Gas Com #1- 3RP106
- Carson Gas Com #1E
- EJ Johnson C #1E- 3RP385
- Federal Gas Com #H1 3R IIo
- Frost, Jack B #2
- McCoy GC D #1E

- OH Randel #7- 3RP386
- PO Pipken #3E 3ในจร
- Rowland Gas Com #1- 3RP124
- Snyder Gas Com #1A- 3RP126
- Sullivan Gas Com D #1- 3RP131
- Valdez A #1E- 3RP134

We have also enclosed an Annual Report for ten sites that meet the closure requirements outlined in the GMP. XTO respectfully requests closure of:

- Baca Gas Com A #1A- 3RP104
 - Garcia Gas Com B #1- 3RP111
 - Haney Gas Com B #1E- 3RP113
 - Hare Gas Com B #1
 - Hare Gas Com B #1E- 3RP384
- Hare Gas Com I #1
- Masden Gas Com #1E- 3RP120
- McDaniel Gas Com B #1E- 3RP121
- Stedje Gas Com #1- 3RP128
- Sullivan Frame A #1E- 3RP130

In previously submitted reports five sites met the closure requirements outlined in the GMP and XTO requested closure on those sites in 2006 and 2007. The reports for the below listed sites are being submitted again for your review.

- Abrams J #1- 3RP100
- Armenta Gas Com C #1E- 3RP394
- Bergin Gas Com #1E- 3RP105
- Romero Gas Com A #1- 3RP123
- State Gas Com BS #1- 3RP127

Thank you for your review of the reports. XTO looks forward to hearing from you regarding closure requests and proposed remediation actions. If you have any questions please do not hesitate to contact me at (505) 333-3100.

Respectfully,

Lisa Winn

EH & S Manager San Juan Division

CC:

Mr. Brandon Powell, Environmental, NMOCD District III Office, Aztec, NM Mr. Martin Nee, Lodestar Services Inc.

File- San Juan Groundwater

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2007

BACA GC A #1A (F) SECTION 26 - T29N - R10W, NMPM SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
MR. GLENN VON GONTEN
NEW MEXICO OIL CONSERVATION DIVISION

January 2008

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Attachment 1:	2006 and 2007 Laboratory Reports	
Attachment 2:	NMOCD Correspondence (12/14/00)	
Attachment 3:	Pit Closure Report (4/94)	

2007 XTO GROUNDWATER REPORT

BACA GAS COM A #1A

SITE DETAILS

LEGALS - TWN: 29N

RNG: 10W

SEC: 26

UNIT: F

NMOCD HAZARD RANKING: 50

LAND TYPE: FEE

PREVIOUS ACTIVITIES

Excavation: Apr-94 (<70 CY)

Additional Monitoring Wells: Aug-06

Monitoring Wells: May-96

Quarterly Sampling Initiated: Aug-06

SITE MAP

A site map is presented as Figure 1.

SUMMARY TABLES

Summary tables of groundwater analytical results are presented as Tables 1 through 3. Table 1 summarizes the benzene, toluene, ethyl benzene and total xylenes (BTEX) concentrations in groundwater from 1994 to present. Analytical results of general water quality parameters from 1996 and 1999 are summarized in Tables 2 and 3. Copies of the laboratory data sheets and associated quality assurance/quality control data for 2006 and 2007 are presented as Attachment 1.

POTENTIOMETRIC SURFACE DIAGRAMS

Field data collected during site monitoring activities indicates a groundwater gradient that trends towards the northwest. Figures 2 – 5 illustrate the estimated groundwater gradients for 2006 and 2007.

ANNUAL GROUNDWATER REMEDIATION REPORTS

The 2005 annual groundwater report was submitted to New Mexico Oil Conservation Division (NMOCD) in April 2006 proposing quarterly sampling of the groundwater monitoring wells as directed by NMOCD in correspondence dated December 14, 2000 (Attachment 2) and in accordance with the NMOCD approved Groundwater Management Plan.

The 2006 annual groundwater report was submitted to NMOCD in February 2007, proposing continued quarterly sampling of the groundwater monitoring wells until analytical results confirm hydrocarbon constituents are below New Mexico Water Quality Control Commission (NMWQCC) standards for four (4) consecutive quarters.

2007 ACTIVITIES

Quarterly groundwater samples were collected from MW-1, MW-2, MW-3, and MW-4 in 2007 and submitted for laboratory analysis of BTEX. Laboratory results indicate BTEX constituents are below standards or not detectable for four quarters.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Bore/Test Hole Reports are presented as Figures 6 - 8 representing drilling that occurred at the site in May 1996.



2007 XTO GROUNDWATER REPORT

DISPOSITION OF GENERATED WASTES

Waste generated (groundwater) during monitoring well sampling and development was placed in the produced water tank located on the well site.

CONCLUSIONS

January 1998 XTO Energy Inc. (XTO) acquired the Baca Gas Com A #1A from Amoco Production Company. XTO understands the initial evaluation of groundwater impact came from samples of groundwater collected from the bottom of the earthen pit in 1994 following excavation of hydrocarbon impacted soil (Attachment 3). Laboratory analysis of the initial samples collected in 2004 indicate elevated levels of dissolved phase BTEX constituents in groundwater, which are included in summary Table 1. In 1996 three groundwater monitoring wells were installed to delineate the extent of hydrocarbon impact to groundwater (Figure 1). Monitoring well numbered MW-2 was installed near the center of the source area, (closed and backfilled earthen blow pit). Monitoring well numbered MW-3 was placed down gradient of MW-2. BTEX constituents were not detected above the laboratory equipment detection limits (0.2 ug/L) in any of the three monitoring wells (Table 1). Sampling was terminated and site closure requests were submitted. Correspondence from the NMOCD, included as Attachment 2, required four (4) consecutive quarters below NMWQCC standards.

Groundwater analytical data from MW-1, MW-2, MW-3 and MW-4 for four (4) consecutive quarters have demonstrated no detectable levels of BTEX constituents and NMWQCC standards have been met. The quarterly sampling has confirmed no rebound of BTEX constituents has occurred, therefore, XTO requests closure of this site.

RECOMMENDATIONS

- XTO requests closure of this site.
- Following OCD approval for closure, all monitoring well locations will be abandoned in accordance with the monitoring well abandonment plan.



TABLE 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

BACA GC A #1A UNIT F, SEC. 26, T29N, R10W

					BTEX EPA Method 801 (PPB)						
Sample Date	Monitor Well No.	DTW (ft)	TD (ft)	Product (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)			
12-Jun-96	MW #1	4.92	7.79		0.67	6	ND	1			
30-Aug-06		6.69	7.7		ND	ND	ND	ND			
28-Nov-06		4.39	7.7		ND	ND	ND	ND			
19-Feb-07		3.79	7.7		ND	ND	ND	ND			
17-May-07		4.34	7.7		ND	ND	ND	ND			
12-Jun-96	MW #2	6.97	10.03		ND	ND	ND	ND			
30-Aug-06		8.48	9.5		ND	ND	ND	ND			
28-Nov-06		6.36	9.5		ND	ND	ND	ND			
19-Feb-07		5.75	9.5		ND	ND	ND	ND			
17-May-07		6.62	9.5		ND	ND	ND	ND			
12-Jun-96	MW #3	6.77	9.24		ND	4	ND	ND			
30-Aug-06		8.2	9.15		ND	ND	ND	ND			
28-Nov-06		7.38	9.15		ND	ND	ND	ND			
19-Feb-07		5.95	9.15		ND	ND	ND	- ND			
17-May-07		6.73	9.15		ND	ND	ND	ND			
30-Aug-06	MW #4	8.34	15.07		ND	ND	ND	ND			
28-Nov-06		6.2	15.07		ND	ND	ND	ND			
19-Feb-07		5.59	15.07		ND	ND	ND	ND			
17-May-07		6.55	15.07		ND	ND	ND	ND			
NMWQCC	GROUND	WATE	RSTAN	IDARDS	10	750	750	620			

NOTE: MW-4 installed 08/06

TABLE 2

XTO ENERGY INC. GROUNDWATER LAB RESULTS

BACA GC A #1A UNIT F, SEC. 26, T29N, R10W

Sample Date: May 25, 1999

PARAMETERS	MW #1	MW #2	MW #3	UNITS
LAB Ph	6.88	7.29	7.19	s.u.
LAB CONDUCTIVITY @ 25 C	10,700	8,800	6,470	umhos/cm
TOTAL DISSOLVED SOLIDS @ 180 C	5,350	4,380	3,230	mg/L
TOTAL DISSOLVED SOLIDS (Calc)	5,317	4,351	3,209	mg/L
SODIUM ABSORPTION RATIO	9.9	7.9	8.7	ratio
TOTAL ALKALINITY AS CaCO3	570	352	326	mg/L
TOTAL HARDNESS AS CaCO3	1,795	975	934	mg/L
BICARBONATE AS HCO3	570	352	326	mg/L
CARBONATE AS CO3	< 1	< 1	< 1	mg/L
HYDROXIDE AS OH	< 1	< 1	< 1	mg/L
NITRATE NITORGEN	0.2	0.4	0.2	mg/L
NITRITE NITROGEN	0.003	0.025	< 0.001	mg/L
CHLORIDE	11.5	58.8	54	mg/L
FLUORIDE	630	1.8	1.55	mg/L
PHOSPHATE	< 0.1	23.2	< 0.1	mg/L
SULFATE	3,300	2,710	1,920	mg/L
IRON	1.15	0.15	0.27	mg/L
CALCIUM	552	520	328	mg/L
MAGNESIUM	101	79.4	27.8	mg/L
POTASSIUM	40.0	14.0	70.0	mg/L
SODIUM	960	730	310	mg/L
CATION/ANION DIFFERENCE	0.09	0.14	0.12	%

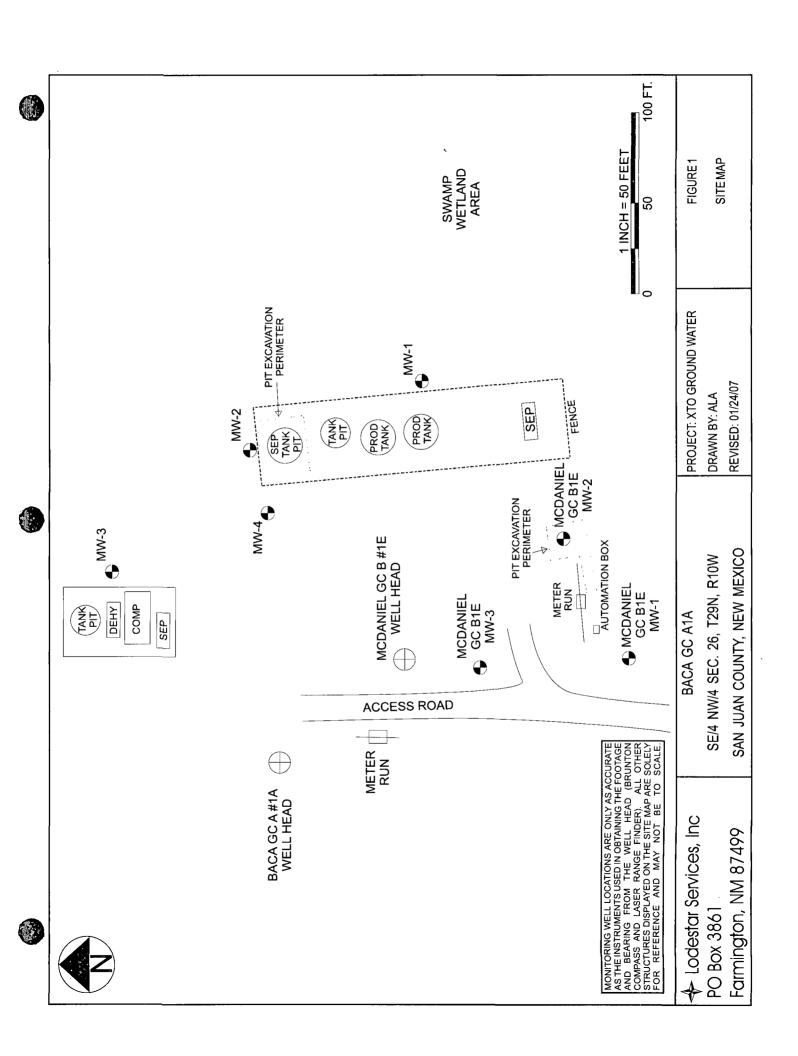
TABLE 3

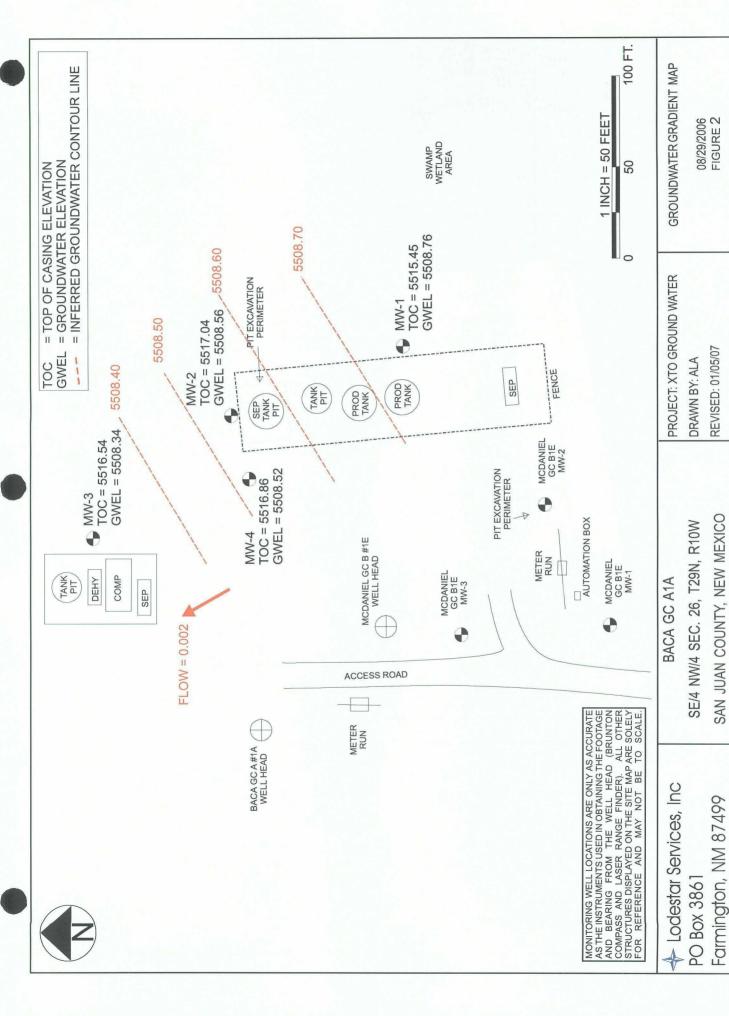
XTO ENERGY INC. GROUNDWATER LAB RESULTS

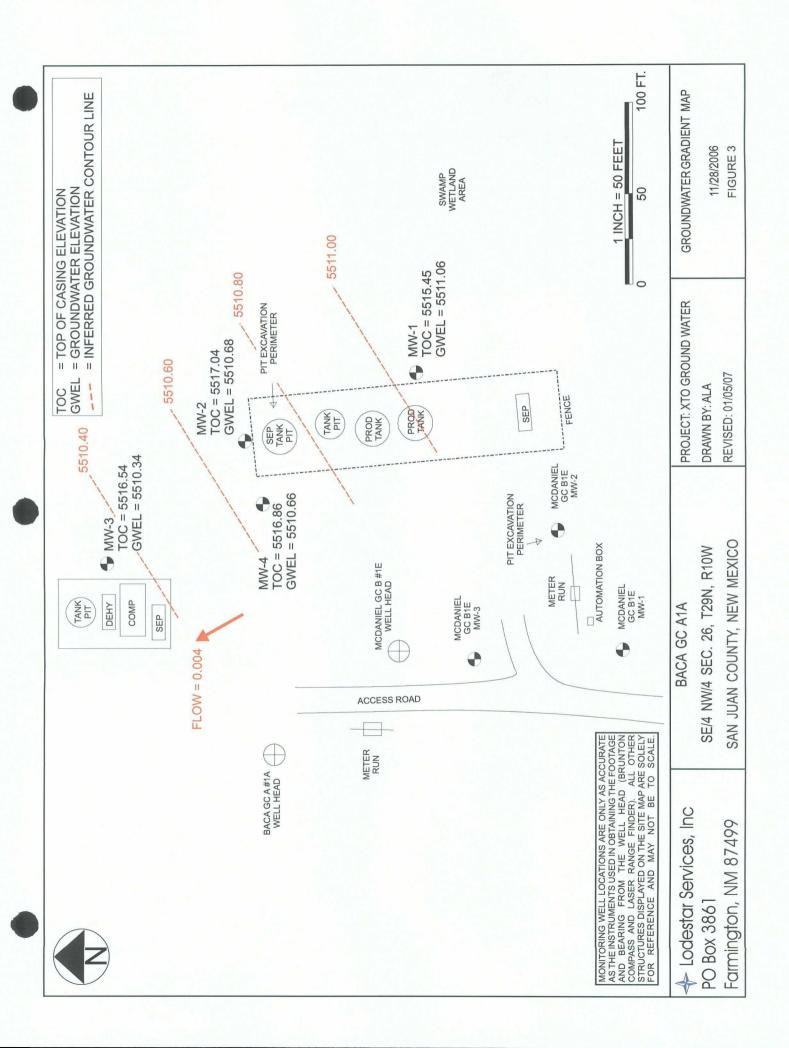
BACA GC A #1A UNIT F, SEC. 26, T29N, R10W

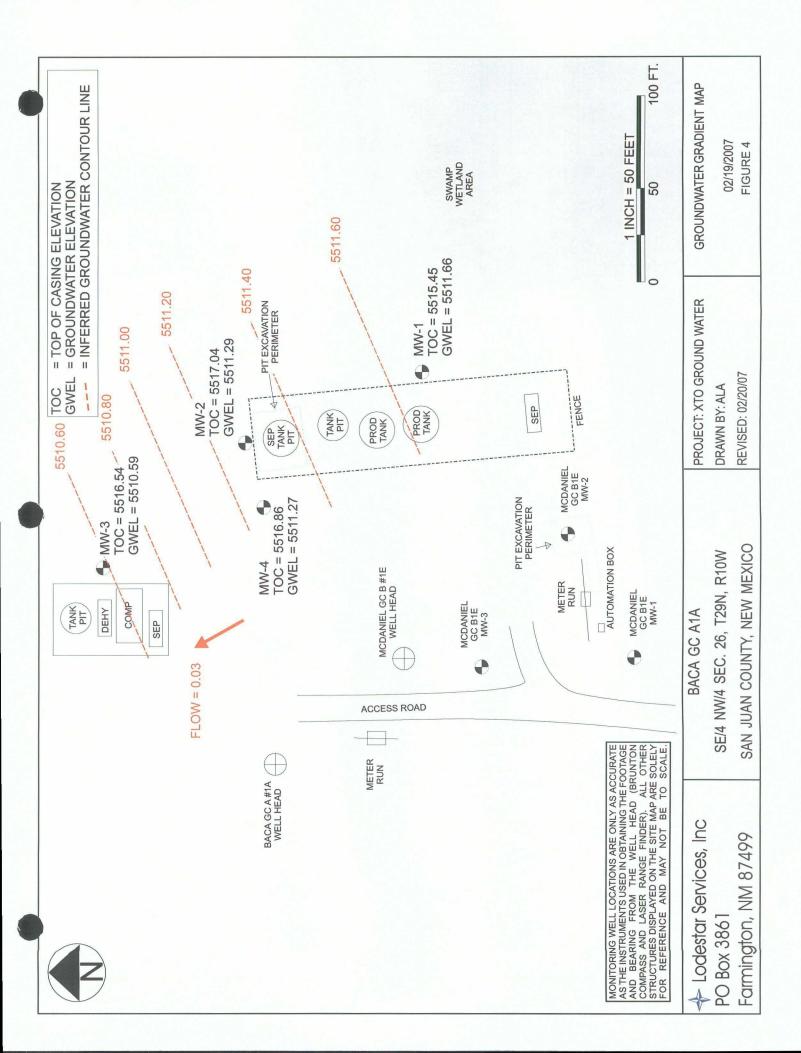
Sample Date: June 12, 1996

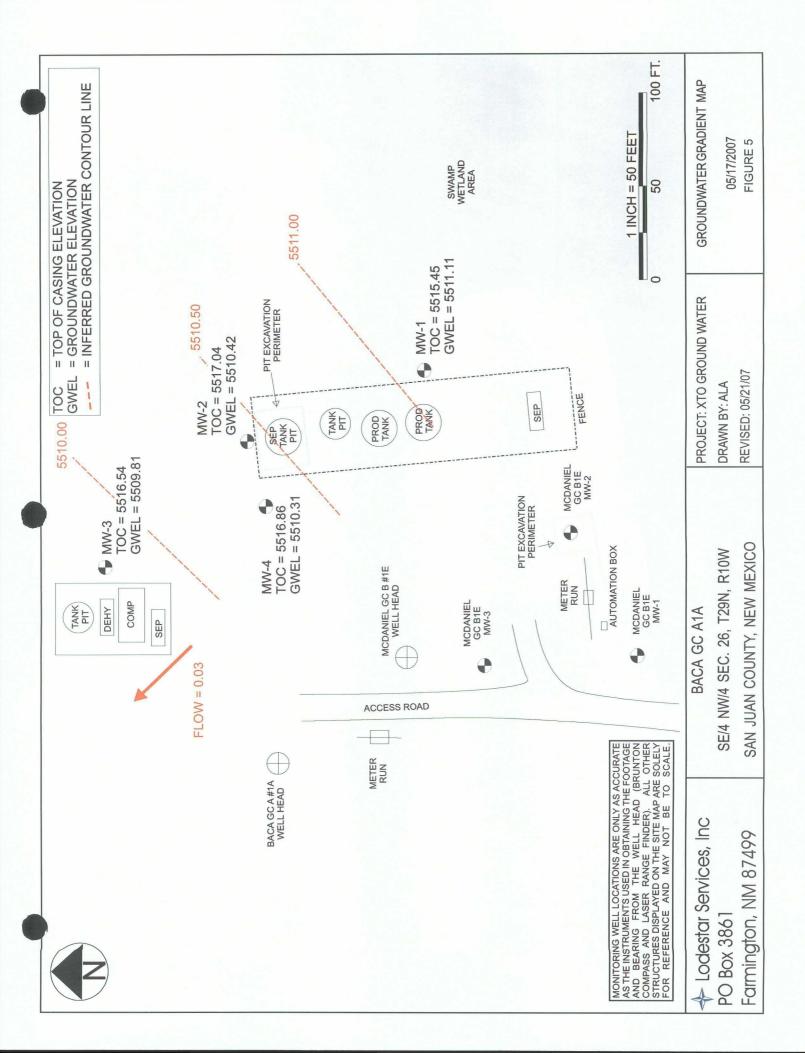
PARAMETERS	MW #1	MW #2	MW #3	UNITS
LAB Ph	7.3	7.5	7.2	s.u.
LAB CONDUCTIVITY @ 25 C	8,210	3,720	5,670	umhos/cm
TOTAL DISSOLVED SOLIDS @ 180 C	8,210	2,860	4,710	mg/L
TOTAL DISSOLVED SOLIDS (Calc)	7,860	2,560	4,130	mg/L
SODIUM ABSORPTION RATIO				ratio
TOTAL ALKALINITY AS CaCO3	764	239	358	mg/L
TOTAL HARDNESS AS CaCO3	4,620	900	1,460	mg/L
BICARBONATE AS HCO3	764	239	358	mg/L
CARBONATE AS CO3	NA	NA	NA	mg/L
HYDROXIDE AS OH	NA	NA	NA	mg/L
NITRATE NITORGEN	NA	NA	NA	mg/L
NITRITE NITROGEN	NA	NA	NA	mg/L
CHLORIDE	40	17.5	342	mg/L
FLUORIDE				mg/L
PHOSPHATE				mg/L
SULFATE	4,960	1,600	2,250	mg/L
IRON			}	mg/L
CALCIUM	497	311	498	mg/L
MAGNESIUM	91.6	30.2	53.2	mg/L
POTASSIUM	17.0	36.0	12.0	mg/L
SODIUM	1,800	420	760	mg/L
CATION/ANION DIFFERENCE	3.75	1.87	0.8	%











BLAGG ENGINEERING, Inc.

P.O. BOX 87 BLOOMFIELD, NM 87413 (505) 632-1199

	BORE /	TEST HOLE REPORT	BORING # <u>BH - 1</u> MW # <u>1</u>
	LOCATION NAME: CLIENT: CONTRACTOR: EQUIPMENT USED: BORING LOCATION:	BACA GC A # 1A AMOCO PRODUCTION COMPANY BLAGG ENGINEERING, INC. / PAUL & SONS BACKHOE S73E. 225 FEET FROM WELL HEAD.	PAGE #
	DEPTH & LITHOLOGY MW FEET E INTERVAL SCHEMATI	FIELD CLASSIFICATION AND REMAR	KS
	FEET INTERVAL SCHEMATI 1 POOLOGO OO	TOP OF CASING APPROX. 1.75 FT. ABOVE GROUND SURFA	ACE. DUGHOUT ENTIRE PROUNDWATER), 98 FT. INTERVAL). SURFACE.
ı		DRAWING BACA-1 D	ATE. 2/25/97 DWN BY: NJV

BLAGG ENGINEERING, Inc.

P.O. BOX 87 BLOOMFIELD, NM 87413 (505) 632-1199

BORE /	TEST HOLE REPORT	BORING # <u>BH - 2</u> MW # 2
LOCATION NAME:	BACA GC A # 1A	PAGE #2
CLIENT:	AMOCO PRODUCTION COMPANY	DATE STARTED 5/17/96
CONTRACTOR:	BLAGG ENGINEERING, INC. / PAUL & SONS	DATE FINISHED 5/17/96
EQUIPMENT USED:	BACKHOE	OPERATORBM
BORING LOCATION:	S86E, 174 FEET FROM WELL HEAD.	PREPARED BY NJV
DEPTH E INTERVAL SCHEMATIC	GREENE SON: MEE	
00000	TOP OF CASING APPROX. 2.80 FT. ABOVE GROUND SURFA	ACE.
1 00000	DADY VEHICURAL PROPER CARE AND AND CRAFF	HOUMIN MOTOR POSS
	DARK YELLOWISH BROWN SAND AND GRAVEL, NON COHESIVE, S NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - 3.5 FT.	INTERVAL)
2 000000	{	
0000 Tos 2.2	1	
3		
4 00000	\blacksquare GW DEPTH ON 6/12/96 = 4.17 FT. (APPROX.) FROM GROUND	SURFACE.
TO T		
5 0 0 0 0 0		
00000	DARK GRAY SAND AND GRAVEL, NON COHESIVE, SATURATED, FI	RM TO LOOSE,
5 00000 g	NO APPARENT HYDROCARBON ODOR OBSERVED (3.5 - 7.2 FT.	INTERVAL).
FOX 0 FO		
7 0 0 0 0 TD 7.2	1	
	NOTES: On - SAND & GRAVEL (VARYING SIZES).	
8	- SAND & GRAVEL (VARYING SIZES) DISC	OLORED.
	TOS - TOP OF SCREEN FROM GROUND SURFA	CE.
9	TD - TOTAL DEPTH OF MONITOR WELL FROM	GROUND SURFACE.
	GW ~ GROUND WATER.	
10		
11		
12		
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12	;	
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14		į
14		
15 🗏	1	
15 🗏		urr. 9 /05 /07
<u> </u>	DRAWING: BACA-2 D	DATE: 2/25/97 DWN BY: NJV

BLAGG ENGINEERING, Inc.

P.O. BOX 87 BLOOMFIELD, NM 87413 (505) 632-1199

BORE / '	TEST HOLE REPORT	BORING # <u>BH - 3</u> MW # <u>3</u>
LOCATION NAME: B	BACA GC A # 1A	PAGE # <u>3</u>
CLIENT: A	MOCO PRODUCTION COMPANY	DATE STARTED 5/17/96
	LAGG ENGINEERING, INC. / PAUL & SONS	DATE FINISHED 5/17/96
	ACKHOE	OPERATOR BM
BORING LOCATION: N	53E, 126 FEET FROM WELL HEAD.	PREPARED BY NJV
DEPTH & LITHOLOGY MW FEET UNITERVAL SCHEMATIC	FIELD CLASSIFICATION AND REMAIN GROUND SURFACE	
2 3 4 5 5 7 7	TOP OF CASING APPROX. 2.15 FT. ABOVE GROUND SUR DARK YELLOWISH BROWN SAND AND GRAVEL CONTINUOUS THI BORING, NON COHESIVE, SLIGHTLY MOIST TO SATURATED (AT FIRM, NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - W GW DEPTH ON 6/12/96 = 4.62 FT. (APPROX.) FROM GROUND NOTES: OG - SAND & GRAVEL (VARYING SIZES).	ROUGHOUT ENTIRE GROUNDWATER), 7.05 FT. INTERVAL).
8	TOS - TOP OF SCREEN FROM GROUND SURF TD - TOTAL DEPTH OF MONITOR WELL FROM GW - GROUND WATER.	
9		
10		
12		
13		,
10		
14		
T '¬	·	
15		
	T-2	0.77 0.707 107 1
	DRAWING BACA-3	DATE. 2/25/97 DWN BY: NJV

Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: Project:

XTO Energy

Ground water

Lab Order:

0609024

Lab ID:

0609024-01

Collection Date: 8/30/2006 7:45:00 AM

Client Sample ID: Baca Gas Com Ala		Matrix: AQUEOUS				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	
EPA METHOD 8021B: VOLATILES					Analyst: NSB	
Benzene	ND	1.0	µg/L	1	9/5/2006 12:28:41 PM	
Toluene	ND	1.0	μg/L	1	9/5/2006 12:28:41 PM	
Ethylbenzene	ND	1.0	μg/L	1	9/5/2006 12:28:41 PM	
Xylenes, Total	ND	3.0	µg/L	1	9/5/2006 12:28:41 PM	
Surr: 4-Bromofluorobenzene	97.0	72.2-125	%REC	1	9/5/2006 12:28:41 PM	

Lab ID:

0609024-02

Client Sample ID: Baca Gas Com AIA MW-1

Collection Date: 8/30/2006 7:48:00 AM

Matrix: AQUEOUS

Analyses	Result,	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	µg/L	1	9/5/2006 11:59:47 AM
Toluene	ND	1.0	µg/L	1	9/5/2006 11:59:47 AM
Ethylbenzene	ND	1.0	μ g /L	1	9/5/2006 11:59:47 AM
Xylenes, Total	ND	3.0	µg/L	1	9/5/2006 11:59:47 AM
Surr: 4-Bromofluorobenzene	99.0	72.2-125	%REC	1	9/5/2006 11:59:47 AM

Lab ID:

0609024-03

Collection Date: 8/30/2006 7:52:00 AM

Client Sample ID: Baca Gas Com AlA MW-3

Matrix: AQUEOUS

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	µg/L	1	9/5/2006 12:57:38 PM
Toluene	ND	1.0	μg/L	1	9/5/2006 12:57:38 PM
Ethylbenzene	ND	1.0	μg/L	1	9/5/2006 12:57:38 PM
Xylenes, Total	ND	3.0	μg/L	1	9/5/2006 12:57:38 PM
Surr: 4-Bromofluorobenzene	97.9	72.2-125	%REC	1	9/5/2006 12:57:38 PM



Value exceeds Maximum Contaminant Level

Value above quantitation range

Analyte detected below quantitation limits

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit



Date: 07-Sep-06

CLIENT: Project:

XTO Energy

Ground water

Lab Order:

0609024

Lab ID:

0609024-04

Collection Date: 8/30/2006 4:57:00 PM

Client Sample ID: Baca Gas Com AI	A MW-4		M	atrix: AQUEC	DUS
Analyses	Result	PQL Qua	d Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	9/6/2006 4:26:52 PM
Toluene	ND	1.0	μg/L	1	9/6/2006 4:26:52 PM
Ethylbenzene	ND	1.0	µg/L	1	9/6/2006 4:26:52 PM
Xylenes, Total	ND	3.0	μg/L	1	9/6/2006 4:26:52 PM
Surr: 4-Bromofluorobenzene	97.6	72.2-125	%REC	1	9/6/2006 4:26:52 PM



Value exceeds Maximum Contaminant Level

Value above quantitation range

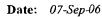
Analyte detected below quantitation limits

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit





QA/QC SUMMARY REPORT

Client:

XTO Energy

Project: Ground water

Work Order:

0609024

Analyte	Result	Units	PQL	%Rec	LowLimit I	HighLimit	%RPD R	PDLimit Qual
Method: SW8021								
Sample ID: 5ML REAGENT BLA		MBLK			Batch ID	R20558	Analysis Date:	9/5/2006 9:05:41 AM
Benzene	ND	μg/L	1.0					
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	µg/L	1.0					
Xylenes, Total	ND	µg/L	3.0					
Sample ID: 5ML REAGENT BLA		MBLK			Batch ID	: R20581	Analysis Date:	9/6/2006 11:07:46 AM
Benzene	ND	μg/L	1.0					
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	µg/L	1.0					
Xylenes, Total	ND	μg/L	3.0					
Sample ID: 100NG BTEX CCV		LCS			Batch ID	R20558	Analysis Date:	9/5/2006 9:34:46 AM
Benzene	18.47	μg/L	1.0	92.4	85	115		
Toluene	18.11	μg/L	1.0	90.6	85	118		
Ethylbenzene	18.79	µg/L	1.0	94.0	85	116		
Xylenes, Total	53.77	μg/L	3.0	88.1	85	119		
Sample ID: 100NG BTEX LCS		LCS			Batch ID): R20581	Analysis Date:	9/6/2006 10:45:52 PM
Benzene	21.00	μg/L	1.0	105	85	115		
Toluene	21.78	µg/L	1.0	109	85	118		
Ethylbenzene	23.42	µg/L	1.0	117	85	116		S
Xylenes, Total	67.49	μg/L	3.0	111	85	119		
Sample ID: 100NG BTEX LCSD		LCSD			Batch ID): R20581	Analysis Date	: 9/6/2006 11:14:40 PM
Benzene	20.84	μg/L	1.0	104	85	115	0.746	27
Toluene	20.71	μg/L	1.0	104	85	118	5.06	19
Ethylbenzene	21.79	μg/L	1.0	109	85	116	7.20	10
Xylenes, Total	64.96	μg/L	3.0	107	85	119	3.83	13



Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- $3/4^{2}$ Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Dec-06

CLIENT:

XTO Energy

-Client Sample ID: Garcia Gas Com B1 MW-2-

Project:

Ground Water

Lab Order:

0611364

Lab ID:

0611364-04

Collection Date: 11/28/2006 8:50:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	11/30/2006 4:27:26 PM
Toluene	2.1	1.0	μg/L	1	11/30/2006 4:27:26 PM
Ethylbenzene	4.8	1.0	μg/L	1	11/30/2006 4:27:26 PM
Xylenes, Total	190	3.0	μg/L	1	11/30/2006 4:27:26 PM
Surr: 4-Bromofluorobenzene	84.3	70.2-105	%REC	1	11/30/2006 4:27:26 PM

Lab ID:

0611364-05

Collection Date: 11/28/2006 10:10:00 AM

Client Sample ID: Baca Gas Com A1A MW-3

Matrix: AQUEOUS

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	11/30/2006 4:57:29 PM
Toluene	ND	1.0	μg/L	1	11/30/2006 4:57:29 PM
Ethylbenzene	ND	1.0	µg/L	1	11/30/2006 4:57:29 PM
Xylenes, Total	ND	3.0	μg/L	1	11/30/2006 4:57:29 PM
Surr: 4-Bromofluorobenzene	81.8	70.2-105	%REC	1	11/30/2006 4:57:29 PM

Lab ID:

0611364-06

Collection Date: 11/28/2006 10:06:00 AM

Client Sample ID: Baca Gas Com A1A MW-2

Matrix: AQUEOUS

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	11/30/2006 5:27:26 PM
Toluene	ND	1.0	μg/L	1	11/30/2006 5:27:26 PM
Ethylbenzene	ND	1.0	μg/L	1	11/30/2006 5:27:26 PM
Xylenes, Total	ND	3.0	hayr	1	11/30/2006 5:27:26 PM
Surr: 4-Bromofluorobenzene	81.9	70.2-105	%REC	1	11/30/2006 5:27:26 PM



Value exceeds Maximum Contaminant Level

E Value above quantitation range

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit



Date: 05-Dec-06

	XTO Energy Ground Water					Lab Orde	r: 0611364
Lab ID:	0611364-07			(Collection D	nte: 11/28/2	2006 10:55:00 AM
Client Sample ID:	Baca Gas Com Al	IA MW-1			Mat	rix: AQUE	ous
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 802	21B: VOLATILES						Analyst: NSE
Вепzепе		ND	1.0		µg/L	1	12/1/2006 8:58:48 AM
Toluene		ND	1.0		µg/L	1	12/1/2006 8:58:48 AM
Ethylbenzene		ND	1.0		µg/L	1	12/1/2006 8:58:48 AM
Xylenes, Total		ИD	3.0		μg/L	1	12/1/2006 8:58:48 AM
Surr: 4-Bromoflu	orobenzene	83.7	70.2-105		%REC	1	12/1/2006 8:58:48 AM
Lab ID:	0611364-08			(Collection D	ate: 11/28/2	2006 10:49:00 AM
Client Sample ID:	: Baca Gas Com A	IA MW-4			Mat	rix: AQUE	ous
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 802	21B: VOLATILES						Analyst: NSI
Benzene		ND	1.0		μg/L	1	12/1/2006 9:30:34 AM
Toluene		ND	1.0		μg/L	1	12/1/2006 9:30:34 AM
Ethylbenzene		ND	1.0		μ g/ L	1	12/1/2006 9:30:34 AM
Xylenes, Total		ND	3.0		μg/L	1	12/1/2006 9:30:34 AM
Surr: 4-Bromoflu	orobenzene	82.3	70.2-105		%REC	1	12/1/2006 9:30:34 AM



Value exceeds Maximum Contaminant Level

E Value above quantitation range

j Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits 3 / 5

B Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 05-Dec-06



QA/QC SUMMARY REPORT

Client:

XTO Energy

Project:

Ground Water

Work Order:

0611364

Analyte	Result	Units	PQL	%Rec	LowLimit Hi	ghLimit	%RPD RP	DLimit Qual
Method: SW8021 Sample ID: 5ML RB		MBLK			Batch ID:	R21633	Analysis Date:	11/30/2006 I:50:27 AM
Benzene	ND	μg/L	1.0					
Toluene	ND	μg/L	1.0					
Ethylbenzene	ND	μg/L	1.0					
Xylenes, Total	ND	μg/L	3.0					
Sample ID: 125NG BTEX CCV-B		LCS			Batch ID:	R21633	Analysis Date:	12/1/2006 8:28:43 AM
Benzene	24.67	μg/L	1.0	98.7	85.9	113		
Toluene	24.24	μg/L	1.0	97.0	86.4	113		
Ethylbenzene	23.65	µg/L	1.0	94.6	83.5	118		
Xylenes, Total	71.15	µg/L	3.0	94.9	83.4	122		





- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Snike recovery outside accepted recovery limits 4 / 5



Hall Environmental Analysis Laboratory, Inc.

Date: 26-Feb-07

CLIENT:

XTO Energy

Client Sample ID: Baca GC AIA MW-2

Project:

Ground Water

Lab Order:

0702229

Lab ID:

0702229-01

Collection Date: 2/19/2007 9:35:00 AM

Matrix: AQUEOUS

Analyses	Result PQL Qual		ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			-		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	2/22/2007 9:54:49 AM
Benzene	ND	1.0	μg/L	1	2/22/2007 9:54:49 AM
Toluene	ND	1.0	μg/L	1	2/22/2007 9:54:49 AM
Ethylbenzene	ND	1.0	μg/L	1	2/22/2007 9:54:49 AM
Xylenes, Total	ND	2.0	µg/L	1	2/22/2007 9:54:49 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 9:54:49 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 9:54:49 AM
Surr. 4-Bromofluorobenzene	85.0	70.2-105	%REC	1	2/22/2007 9:54:49 AM

Lab ID:

0702229-02

Client Sample ID: Baca GC AIA MW-1

Collection Date: 2/19/2007 9:52:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			and the state of t	CALLED S. A. S.	Analyst: NSB
Methyl tert-bulyl ether (MTBE)	ND	2.5	μg/L	1	2/22/2007 10:24:59 AM
Benzene	ND	1.0	μg/L	1	2/22/2007 10:24:59 AM
Toluene	ND	1.0	μg/L	1	2/22/2007 10:24:59 AM
Ethylbenzene	ND	1.0	μg/L	1	2/22/2007 10:24:59 AM
Xylenes, Total	ND	2.0	μg/L	1	2/22/2007 10:24:59 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 10:24:59 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 10:24:59 AM
Surr: 4-Bromofluorobenzene	88.4	70.2-105	%REC	1	2/22/2007 10:24:59 AM

Lab ID:

0702229-03

Collection Date: 2/19/2007 10:05:00 AM

Client Sample ID: Baca GC AIA MW-3

Matrix: AQUEOUS

Analyses	Result	PQL Qua	l Units	DF 1 1 1 1 1	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	2/22/2007 10:55:10 AM
Benzene	ND	. 1.0	μg/L	1	2/22/2007 10:55:10 AM
Toluene	ND	1.0	μg/L	1	2/22/2007 10:55:10 AM
Ethylbenzene	ND	1.0	µg/L	1	2/22/2007 10:55:10 AM
Xylenes, Total	ND	2.0	μg/L	1	2/22/2007 10:55:10 AM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 10:55:10 AM
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 10:55:10 AM
Surr. 4-Bromofluorobenzene	87.4	70.2-105	%REC	1	2/22/2007 10:55:10 AM



- Qualifiers: Value exceeds Maximum Contaminant Level
 - E Value above quantitation range
 - Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits 1/8
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit



Date: 26-Feb-07

CLIENT:

XTO Energy

Project:

Ground Water

Lab Order:

0702229

Lab ID:

0702229-04

Collection Date: 2/19/2007 10:54:00 AM

Client Sample ID: Baca GC AIA MW	<i>1</i> -4		Matrix: AQUEOUS				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed		
EPA METHOD 8021B: VOLATILES					Analyst: NSB		
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	2/22/2007 11:25:14 AM		
Benzene	ND	1.0	μg/L	1	2/22/2007 11:25:14 AM		
Toluene	ND	1.0	µg/∟	1	2/22/2007 11:25:14 AM		
Elhylbenzene	ND	1.0	µg/L	1	2/22/2007 11:25:14 AM		
Xylenes, Total	ND	2.0	μg/ L	1	2/22/2007 11:25:14 AM		
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	2/22/2007 11:25:14 AM		
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	2/22/2007 11:25:14 AM		
Surr: 4-Bromofluorobenzene	85.8	70.2-105	%REC	1	2/22/2007 11:25:14 AM		

Lab ID:

0702229-05

Client Sample ID: -Abrams JI-MW-10-

Collection Date: 2/19/2007 11:24:00 AM

Matrix: AQUEOUS

Analyses	Result PQL Qual Uni		Qual Units	DF	Date Analyzed	
EPA METHOD 8021B: VOLATILES	The second of th				Analyst: NSB	
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	2/22/2007 11:55:15 AM	
Benzene	ND	1.0	μg/L	1	2/22/2007 11:55:15 AM	
Toluene	ND	1.0	μg/L	1	2/22/2007 11:55:15 AM	
Ethylbenzene	ND	1.0	μg/L	1	2/22/2007 11:55:15 AM	
Xylenes, Total	ND	2.0	μg/L	1	2/22/2007 11:55:15 AM	
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 11:55:15 AM	
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	2/22/2007 11:55:15 AM	
Surr: 4-Bromofluorobenzene	87.0	70.2-105	%REC	1	2/22/2007 11:55:15 AM	

Lab ID:

0702229-06

Client Sample ID: Abrams JI MW-11

Collection Date: 2/19/2007 11:36:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	***************************************				Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2,5	µg/L	1	2/22/2007 12:25:21 PM
Benzene	ND	1.0	µg/L	1	2/22/2007 12:25:21 PM
Toluene	ND	1.0	µg/L	1	2/22/2007 12:25:21 PM
Ethylbenzene	ND	1.0	µg/L	1	2/22/2007 12:25:21 PM
Xylenes, Total	ND	2.0	µg/L	1	2/22/2007 12:25:21 PM
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	2/22/2007 12:25:21 PM
1,3,5-Trimethylbenzene	ND	1.0	μ g /L	1	2/22/2007 12:25:21 PM
Surr: 4-Bromofluorobenzene	88.6	70.2-105	%REC	1	2/22/2007 12:25:21 PM



- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits 2/8
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 5

QA/QC SUMMARY REPORT

Client:

XTO Energy

Project: Ground Water

Work Order:

Date: 26-Feb-07

0702229

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDI	_imit (Qual
Method: SW8021										
Sample ID: 0702229-10A MSD		MSD			Batch	ID: R22570	Analysis D	ate:	2/22/20	007 3:25:51 PM
Methyl tert-butyl ether (MTBE)	19.30	μg/L	2.5	96.5	51.2	138	0.897	28		
Benzene	19.64	μg/L	1.0	98.2	85.9	113	2.69	27		
Toluene	19.77	µg/∟	1.0	98.8	86.4	113	1.36	19		
Ethylbenzene	19.78	μg/L	1.0	98.9	83.5	118	2.27	10		
Xylenes, Total	59.88	μg/L	2.0	99.8	83.4	122	2.13	13		
1,2,4-Trimethylbenzene	19,41	μg/L	1.0	97.1	83.5	115	2.48	21		
1,3,5-Trimethylbenzene	19.43	μg/L	1.0	97.2	85.2	113	2.27	10		
Sample ID: 5ML REAGENT BLA		MBLK			Batch	ID: R22570	Analysis Da	ale:	2/22/20	007 8:13:34 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5							
Benzene	ND	μg/L	1.0							
Toluene	ND	μg/∟	1.0							
Ethylbenzene	ND	μg/L	1.0							
Xylenes, Total	ND	μg/L	2.0							
1,2,4-Trimethylbenzene	ND	μg/L	1.0							
1,3,5-Trimelhylbenzene	ND	μg/L	1.0							
Sample ID: 5ML REAGENT BLA		MBLK			Batch	ID: R22594	Analysis D	ate:	2/23/20	007 8:08:20 AM
Methyl tert-butyl ether (MTBE)	ND	μg/L	2.5							
Benzene	ND	μg/L	1.0							
Toluene	ND	μg/L	1.0							
Ethylbenzene	ND	μg/L	1.0							
Xylenes, Total	ND	μg/L	2.0							
1,2,4-Trimelhylbenzene	ND	μg/L	1.0							
1,3,5-Trimethylbenzene	ND	μg/L	1.0							
Sample ID: 100NG BTEX LCS		LCS			Batch	ID: R22570	Analysis D	ale:	2/22/2	007 3:55:54 PN
Methyl tert-bulyl ether (MTBE)	19.74	μg/L	2.5	98.7	51.2	138				
Benzene	20.24	μg/L μg/L	1.0	101	85.9	113				
Toluene	20.24	μg/L	1.0	101	86.4	113				
Ethylbenzene	20.44	μg/L	1.0	102	83.5	118				
Xylenes, Total	61.89	μg/L	2.0	103	83.4	122				
1,2,4-Trimethylbenzene	20.52	μg/L	1.0	103	83.5	115				
1,3,5-Trimethylbenzene	20.33	ha/r	1.0	102	85.2	113				
Sample ID: 100NG BTEX LCS	20.00	LCS		.52	Balch		Analysis D	ate:	2/23/2	007 8:14:12 P!
·	47 69		2 5	00.5			r d to i y d i d	atu.	EI EUI E	00, 0.,
Methyl tert-butyl ether (MTBE)	17.63	μg/L	2.5	88.2	51.2	138				
Benzene Toluene	20.52	µg/L ∕1	1.0	103	85.9	113				
Ethylbenzene	20.30	µg/L	1.0	102 101	86.4 83.5	113				
•	20.25	μg/L	1.0			118				
Xylenes, Total 1,2,4-Trimelhylbenzene	61.56 20.17	µg/L ug/l	2.0 1.0	103 101	83.4 83.5	122				
1,3,5-Trimethylbenzene	20.17	μg/L μg/ L	1.0	100	85.2	115 113				
Sample ID: 0702229-10A MS	20.03		1,0	100	83.2 Batch		Analusia O	ala.	ninnin	007 2.55.46 0
·		MS	. -				Analysis D	ale:	212212	007 2:55:46 Pi
Methyl tert-butyl ether (MTBE)	19.48	µg/∟ 	2.5	97.4	51.2	138				
Benzene	20.17	µg/L	1.0	101	85.9	113				
Toluene	20.04	μg/L	1.0	100	86.4	113				



Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Snike recovery outside accepted recovery limits

Page 1

Date: 26-Feb-97

QA/QC SUMMARY REPORT

Client:

XTO Energy

Project: Ground Water

Work Order:

0702229

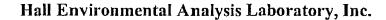
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit Qual
Method: SW8021 Sample ID: 0702229-10A MS		MS	**************************************		Batch I	D: R22570	Analysis D	ate: 2/22/2007 255:46 PM
Ethylbenzene	20.24	µg/L	1.0	101	83.5	118		
Xylenes, Total	61.17	µg/L	2.0	102	83.4	122		
1,2,4-Trimelhylbenzene	19.90	µg/L	1.0	99.5	83.5	115		
1,3,5-Trimethylbenzene	19.88	µg/L	1,0	99.4	85.2	113		



Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S $\frac{\text{Snike}}{7 / 8}$ recovery outside accepted recovery limits



Date: 29-May-07

CLIENT:

XTO Energy

Project:

Ground Water

Lab Order:

0705289

Lab 1D:

0705289-07

Collection Date: 5/17/2007 2:10:00 PM

Client Sample ID: Baca GCA #1A M	W-3		Matrix:	AQUE	OUS
Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	,				Analyst: NSB
Benzene	ND	1.0	µg/L	1	5/24/2007 12:37:28 AM
Toluene	ND	1.0	µg/L	1	5/24/2007 12:37:28 AM
Ethylbenzene	ND	1.0	µg/L	1	5/24/2007 12:37:28 AM
Xylenes, Total	ИD	2.0	µg/L	1	5/24/2007 12:37:28 AM
Surr: 4-Bromofluorobenzene	85.2	70.2-105	%REC	1	5/24/2007 12:37:28 AM

Lab ID:

0705289-08

Collection Date: 5/17/2007 2:14:00 PM

Client Sample ID: Baca GCA #1A MW-2

Matrix: AQUEOUS

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			THE COMMENT OF THE PARTY OF THE		Analyst: NSB
Benzene	ND	1.0	μg/L	1	5/24/2007 1:07:31 AM
Toluene	ND	1.0	μg/L	1	5/24/2007 1:07:31 AM
Ethylbenzene	ND	1.0	μ g/L .	1	5/24/2007 1:07:31 AM
Xylenes, Total	ND	2.0	μ g/ L	1	5/24/2007 1:07:31 AM
Surr: 4-Bromofluorobenzene	86.5	70.2-105	%REC	1	5/24/2007 1:07:31 AM

Lab ID:

0705289-09

Collection Date: 5/17/2007 2:22:00 PM

Client Sample ID: Baca GCA #1A MW-1

Matrix: AQUEOUS

				-	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			***************************************		Analyst: NSB
Benzene	ND	1.0	µ g/ Ľ	1	5/24/2007 1:37:30 AM
Toluene	ND	1.0	µg/L	1	5/24/2007 1:37:30 AM
Ethylbenzene	ND	1.0	µ g/ L	1	5/24/2007 1:37:30 AM
Xylenes, Total	ND	2.0	μ g/ L	1	5/24/2007 1:37:30 AM
Surr: 4-Bromofluorobenzene	87.7	70.2-105	%RFC	1	5/24/2007 1:37:30 AM



- Value exceeds Maximum Contaminant Level
- Е Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 29-May-07

CLIENT:

XTO Energy

Project:

Ground Water

Lab Order:

0705289

Lab ID:

0705289-10

Collection Date: 5/17/2007 2:42:00 PM

Client Sample ID: Baca GCA #1A MW-4

Matrix: AQUEOUS

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ИD	1.0	µg/L	1	5/24/2007 2:07:31 AM
Toluene	ND	1.0	µg/L	1	5/24/2007 2:07:31 AM
Ethylbenzene	ND	1.0	μg/L	1	5/24/2007 2:07:31 AM
Xylenes, Total	ND	2.0	μg/L	1	5/24/2007 2:07:31 AM
Surr: 4-Bromofluorobenzene	85.1	70.2-105	%REC	1	5/24/2007 2:07:31 AM

Lab ID:

0705289-11

Collection Date: 5/17/2007 3:13:00 PM

Client Sample ID: -McCoy GCD #1E MW 2-

Matrix: AQUEOUS

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	5/24/2007 5:32:21 PM
Toluene	ND	1.0	μg/L	1	5/24/2007 5:32:21 PM
Ethylbenzene	ND	1.0	μg/L	1	5/24/2007 5:32:21 PM
Xylenes, Total	3.1	2.0	μg/L	1	5/24/2007 5:32:21 PM
Surr: 4-Bromolluorobenzene	87.8	70.2-105	%REC	1	5/24/2007 5:32:21 PM

Lab ID:

0705289-12

Collection Date: 5/17/2007 3:32:00 PM

Client Sample ID: -McCoy GCD #1E MW-3-

Matrix: AQUEOUS

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	5/24/2007 6:02:34 PM
Toluene	ND	1.0	μg/L	1	5/24/2007 6:02:34 PM
Ethylbenzene	ND	1.0	μg/L	1	5/24/2007 6:02:34 PM
Xylenes, Total	ND	2.0	μg/L	1	5/24/2007 6:02:34 PM
Surr: 4-Bromofluorobenzene	0.88	70.2-105	%REC	1	5/24/2007 6:02:34 PM



- Value exceeds Maximum Contaminant Level
- Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits 4/9
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 29-May-07

QA/QC SUMMARY REPORT

Client:

XTO Energy

Project: Ground Water

Work Order:

0705289

Project: Ground Wa	ter						Wo	ork Order:	0705289
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021 Sample ID: 0705289-02A MSD		MSD			Batch II	D: R23705	Analysis Dati	a. 5/23/2	007 9:34:21 PN
•	40.00		4.0	05.0			· ·		JU1 3.04.211 II
Benzene	19.06	µg/L	1.0	95.3	85.9	113	0.794	27	
Toluene	19.13	μg/L	1.0	95.7	86.4	113	0.812	19	
Ethylbenzene	19.00	µg/L	1.0	95.0	83.5 83.4	118 122	0.462 0.901	10 13	
Xylenes, Total Sample ID: 0705289-16A MSD	56.16	μg/L MSD	2.0	93.6	Batch II		Analysis Dat		07 10:32:54 AN
Benzene	20.43	µg/L	1.0	102	85.9	113	1.85	27	
Toluene	20.97	μg/L	1.0	105	86.4	113	1,52	19	
Ethylbenzene	20.81	μg/L	1.0	104	83.5	118	2.27	10	
Xylenes, Total	61.35	μ g/L	2.0	102	83.4	122	1.79	13	
Sample ID: 5ML RB-II	31.00	MBLK			Batch I		Analysis Dat		07 10:03:56 AM
Benzene	ND	μg/L	1.0				•		
Toluene	ND	μg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	μg/L	2.0						
Sample ID: 5ML REAGENT BLA		MBLK			Batch I	D: R23736	Analysis Dat	e: 5/24/2	007 8:33:09 AI
Benzene	ND	µg/L	1.0						
Toluene	ND	μ g /L	1.0						
Ethylbenzene	ND	µg/∟	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 5ML REAGENT BLA	1	MBLK			Batch I	D: R23752	Analysis Dat	e: 5/25/2	007 8:32:19 A
Benzene	ND	μg/L	1.0						
Toluene	ND	μg/L	1.0						
Ethylbenzene	ND	μ g/ L	1.0						
Xylenes, Total	ND	μg/L	2.0						
Sample ID: 100NG BTEX LCS		LCS			Batch I	D: R23705	Analysis Dat	e: 5/23/20	07 11:04:02 A
Benzene	18.93	μg/L	1.0	94.6	85,9	113			
Toluene .	19.74	μg/L	1.0	98.7	86.4	113			
Ethylbenzene	19.87	µg/L	1.0	99.3	83.5	118			
Xylenes, Total	60.16	µg/L	2.0	100	83.4	122			
Sample ID: 100NG BTEX LCS		LCS			Batch !	D: R23736	Analysis Dat	e: 5/24/2	007 9:38:17 P
Benzene	19.56	μg/L	1.0	97.8	85.9	113			
Toluene	19.93	µg/L	1.0	99.7	86.4	113			
Ethylbenzene	19.97	µg/L	1.0	99.9	83.5	118			
Xylenes, Total	59.82	μg/L	2.0	99.7	83.4	122			
Sample ID: 100NG BTEX LCS		LCS			Batch I	D: R23752	Analysis Dal	e: 5/25/2	007 2:03:57 P
Benzene	19.64	µg/L	1.0	98.2	85.9	113			
Toluene	20.09	μg/L	1.0	100	86.4	113			
Ethylbenzene	19.98	µg/L	1.0	99.9	83.5	118			
Xylenes, Total	59.73	µg/L	2.0	99.5	83.4	122			
Sample ID: 0705289-02A MS		MS			Batch I	D: R23705	Analysis Dat	e: 5/23/2	007 9:04:25 F
Benzene	19.21	μ g/ L	1.0	96.0	85.9	113			
Toluene	19.29	μg/L	1.0	96.4	86.4	113			



Qualifiers:

- E Value above quantitation range
- Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 1

Date: 29-May-07



QA/QC SUMMARY REPORT

Client: Project: XTO Energy

Ground Water

Work Order:

0705289

Analyte	Result	Units	PQL	%Rec	LowLimit I	HighLimit	%RPD RP	DLimit Qual
Method: SW8021	tak makantan termini ti di	440			Datab ID		Applysis Date	5/23/2007 9.04:25 PM
Sample ID: 0705289-02A MS		MS			Batch IC): R23705	Analysis Date:	5/23/2007 9.04.25 FW
Ethylbenzene	19.09	μg/L	1.0	95.4	83.5	118		
Xylenes, Total	56.66	μg/L	2.0	94.4	83.4	122		
Sample ID: 0705289-16A MS		MS			Batch ID): R23752	Analysis Date:	5/25/2007 10:02:41 AM
Benzene	20.05	μg/L	1.0	100	85.9	113		
Toluene	20.66	µg/L	1.0	103	86.4	113		
Ethylbenzene	20.34	μg/L	1.0	102	83.5	118		
Xylenes, Total	60.26	µg/l_	2.0	99.8	83.4	122		



Qualifiers:

- E Value above quantitation range
- Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 2



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 14, 2000

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-3983

6 2

Mis. Nina Hutton Cross Timbers Oil Company 810 Houston St., Suite 2000 Fort Worth, Texas 76102-6298

RE: PIT CLOSURE/GROUND WATER MONITORING REPORTS

Dear Ms. Hutton:

The New Mexico Oil Conservation Division (OCD) has reviewed Cross Timbers Oil Company's (CTOC) February 21, 2000 "1999 ANNUAL GROUNDWATER REPORTS, SAN JUAN COUNTY, NEW MEXICO, PERMANENT CLOSURE REQUESTED" which was submitted on behalf of CTOC by their consultant Blagg Engineering, Inc. This document contains the results of CTOC's investigation, remediation and monitoring of soil and ground water contamination related to the disposal of oilfield wastes in unlined pits at 10 sites in the San Juan Basin and requests closure of the remedial actions.

Below is the OCD's review of the above referenced document:

A. The soil and ground water remedial actions at the sites listed below are satisfactory and the OCD approves of the closure of these pit sites. Please be advised that OCD approval does not relieve CTOC of responsibility if remaining contaminants pose a future threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve CTOC of responsibility for compliance with any other federal, state, tribal or local laws and regulations.

1. Hare GC C #1 (Blow pit)

Unit M. Sec. 25, T29N, R10W.

2. Pearce GC #1E (Blow pit)

Unit J, Sec. 23, T29N, R11W.

3. Sanchez GC #1 (Blow pit)

Unit G, Scc. 28, T29N, R10W.

4. Texas National GC #1 (Blow pit)

Unit L. Sec. 19, T29N, R09W.

Oil Conservation Division * 2040 South Pacheco Street * Santa Fc, New Mexico 87505 Phone: (505) 827-7131 * Fax (505) 827-8177 * http://www.emnrd.state.nm.us B. The sites listed below were initially found to have ground water contaminated with benzene, toluene, ethylbenzene and xylene (BTEX) in excess of New Mexico Water Quality Control Commission (WQCC) standards. The reports for these sites contain only one subsequent round of water quality sampling events demonstrating that ground water currently meets WQCC standards. CTOC's approved ground water management plan required that all sites contaminated in excess of the WQCC standards would not be submitted for final closure until ground water quality at all monitoring points were below WQCC standards for a minimum of 4 consecutive quarters. Therefore, approval of the closure actions at these sites is denied. The OCD requires that CTOC continue ground water quality monitoring at these sites. Pursuant to the previously approved ground water management plan, the OCD will reconsider issuing final closure approval after CTOC demonstrates that ground water quality at all monitoring points are below WQCC standards for a minimum of 4 consecutive quarters.

In addition, the OCD could not find that any analytical results have been submitted for the landfarm activities at the Hancy GC B#1E site. Please include these results in all future final closure requests.

1.	Baca GC A #1A (Blow/separator pit)	Unit F, Sec. 26, T29N, R10W.
2.	Haney GC B#1E (Separator pit)	Unit M, Sec. 20, T29N, R10W.
3.	Masden GC #1E (Blow pit)	Unit D, Sec. 28, T29N, R11W.
4.	McDaniel GC B#1E (Dehy pit)	Unit F, Sec. 26, T29N, R10W.
5.	Snyder GC #1A (Blow pit)	Unit E, Sec. 19, T29N, R09W.
6.	Sullivan Frame A#1E (Dehy pit)	Unit A, Sec. 30, T29N, R10W.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson Hydrologist

Environmental Bureau

xc: D

Denny Foust, OCD Aztec District Office Bill Liess, BLM Farmington District Office Nelson Velez, Blagg Engineering, Inc.

Water Shut-Off

Conversion to Injection

(Note: Report results of multiple completion on Well

Form 3160-5 (June 1990)	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 5. Lease Designation and Serial No.			
Do not use this for	m for proposals to drill	ND REPORTS ON WELLS or to deepen or reentry to a different reservoir. PERMIT—" for such proposals	6. If Indian, Allottee or Tribe Name	
1. Type of Well	SUBMIT I	N TRIPLICATE	7. If Unit or CA, Agreement Designation COM, AGMT! NAOIS P3586	
Oil Gas Well 2. Name of Operator	Other		8. Well Name and No. BACA 6C A *IA	
	Amoco Production	Company	9. API WELL NO. 3004526 180	
	urt, Farmington,	N.M. 87401 Tel: (505) 326-9200	10. Field and Pool, or Exploratory Area MESA VEROE	
-		29N RIOW NMAM	11. County or Phrish, State SAN TRANS, NM	
12. CHECK A	PPROPRIATE BOX(s)	TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA	
TYPE OF S	UBMISSION	TYPE OF ACTION		
Notice of		Abandonment Recompletion	Change of Plans New Construction	
Subsequen	t Report	Plugging Back	Non-Routine Fracturing	

Completion or Recumpletion Report and Log form) 13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

CLOSUFE MERCELGATION SEE ATTACHED BOCKMENTS

Final Abandonment Notice

(SEC. 2.3) - REUSED 5/11/98.

			7/19/98 AV
14. I hereby coffift that the foligoing is true and correct Signed	TOUENVIRO. COORDINATER	Date	4/25/44 900
(This space for Federal or State office use) pproved by	Title	Date	
Londitions of approval, if any:			-

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

P.O. Box 1980, Hobbs, NM

District II

O. Drawer DD, Arlesia, NM 84211

Strict III

...O Rio Brazos Rd, Azien, NM 87410

State of New Mexico Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

OIL CONSERVATION DIVISION

P.O. Box 2088 Santa Fe, New Mexico 87504-2088

PIT REMEDIATION AND CLOSURE REPORT

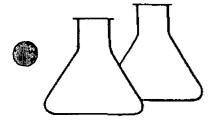
Operator:	Amoco Production Company	Teleph	one: (50)5) - 326 - 9	200
<u> </u>			AMA (
	200 Amoco Court, Farmingto	n, New Mexico 8/401			
Facility Or:	BACA GC A # IA			<u> </u>	
Location: Unit	or Qtr/Qtr Sec F	ec 26 T29N R 10 W Cour	ity SAL	JUHN	
Pit Type: Sepa	rator \underline{X} Dehydrator $\underline{\hspace{0.1cm}}$	Other 8600			
Land Type: BL	M, State, Fee	, Other (om. A6	mT.		
rit Location:	Pit dimensions: lengt	-	5	depth 3	
	Footage from reference		-		
		_		,	10
	Direction from reference	e: 13 Degrees)	East	North <u>/</u>	<u>X</u>
	· · · · · · · · · · · · · · · · · · ·	***************************************	_ West	South _	<u> </u>
Depth To Groun (Vertical distance contaminants to s high water elevat ground water)	s from easonal	Less than 50 feet 50 feet to 99 feet Greater than 100 fe	(10	points)	
domestic water so	ction Area: et from a private urce, or; less than l other water sources)			points) points)	
	nce to perennial ers, streams, creeks,	Less than 200 feet 200 feet to 1000 fe Greater than 1000 f	et (10	points) points) points)	20
		RANKING SCORE (TOT)	L POINT	'8):	40

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Date Remediation St	arted:	Date Completed: 4/1/99
Remediation Method:	Excavation X	Approx. cubic yards 69
(Check all appropriate sections)	Landfarmed X	Insitu Bioremediation
	Other	
Remediation Location (ie. landfarmed onsite name and location of offsite facility)	,	fsite
General Description	of Remedial Actio	n:
Excavati	on	
MAN. 49.		-,
	<u> </u>	
Final Pit: Closure Sampling: (if multiple samples,	Sample location _	Yes X Depth 3 see Attached Documents
attach sample results and diagram of sample		
locations and depths)	Sample date	
	Sample Results	
	Benzene (ppm)	
.a	Total BTEX(p	
	Field headsp	
	трн	14 6 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	***************************************	·····
Ground Water Sample		
	Yes X NO _	(If yes, attach sample results)
	NAT THE INFORMATION	(If yes, attach sample results) ABOVE IS TRUE AND COMPLETE TO THE BES
I HEREBY CERTIFY TH	AT THE INFORMATION BELIEF	

B - 14.8 T - 68 E - 20.2 X - 337.8

76H= hD

MERC! MLDENIEL GC 8" #1E ENVIROTECH INC	FIT 116 C4961 MEN
5796 US HWY. 64, FARMINGTON, NM 87401 (505) 632-0615	156 No. <u>3472</u>
FIELD REPORT: CLOSURE VERIFICATION	106 to 42140 PAGE to 1 of 1
LOCATION: LEASE BACA GC A' WELL IA OD SE/4, NW/4 (F) SEC. 26 TWP: 29N RNG: IOW BM NM CNTY SO ST NM PIT BLOW /S. CONTRACTOR: PAGE VELASPUEZ- EQUIPMENT USED: EXCAPATOR	ENVIRONMENTAL RES
SOIL PEMEDIATION: QUANTITY: PIT ~ ZS x ZS x 3 DOG DISPOSAL FACILITY: LAND FACE ON SITE LAND USE: SWAY LAND SUPFACE CONDITIONS: EXCAUNTED PRIOR TO MARINAL.	SPE. MILST
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 160 FEET A PIT EX CAUARD TO GROUNDWATER @ 3' ATTEMPS TO SERVICE 3 SEMMENT OF THE BLOW FOR POSSIBLY GAS BLOWING IMO PIT AT APPRICAL. LAIRD FOR CAU TO THE PRICE TO SAMPLING	İ
TIEAREST TIEAREST TOTAL	TO GROUNDWATER 3 TO JUNE & WOMEN TO WATER DESIRES AND JUNE & WOMEN TO WATER DESIRES SAME 20 EAST TO FINE DAG LOTTE > 20 THE WAS LOTTE DAG LOO JUNE AND
O 20 40 FEET PIT PERIMETER RESULTS SAMPLE PLE MEADSENIE SOL PIT SIL PIT SIL PIT TH TH TH TH TH TH TH TH TH	PROFILE
TRAVEL NOTES 7 3-31-44 3METE 4-1-44 300) H&C



ENVIROTECH LABS

5796 US Highway 64-3014 • Farmington, New Mexico 87401 Phone: (505) 632-0615 • Fax: (505) 632-1865

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	3 @ 3 ′	Date Reported:	04-05-94
Laboratory Number:	7140	Date Sampled:	04-01-94
Sample Matrix:	Water	Date Received:	04-04-94
Preservative:	HgCl & Cool	Date Analyzed:	04-04-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Limit (ug/L)
	*	
Benzene	14.8	0.2
Toluene	68	0.4
Ethylbenzene	20.2	0.2
p.m-Xylene	298	0.2
o-Xylene	39.8	0.2

SURROGATE	RECOVERIES:	Parameter	Percent	Recove	ry	,
		Trifluorotoluene		9	7	£
		Bromofluorobenzene		8	6	8

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

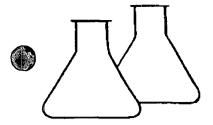
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

Det

ND - Parameter not detected at the stated detection limit.

Comments: Baca GC "A" #1A Blow/Sep C4961

alvat



ENVIROTECH LABS

5706 LIS HIGHWAY 64.3014 A FARMINGTON NEW MEXICO 87401

5796 US Highway 64-3014 • Farmington, New Mexico 87401 Phone: (505) 632-0615 • Fax: (505) 632-1865

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Amoco Project #: 92140 Sample ID: 2 SWS @ 2' Date Sampled: 04-01-94 Laboratory Number: 7139 Date Received: 04-04-94 Sample Matrix: Soil Date Analyzed: 04-08-94 Preservative: Cool Date Reported: 04-08-94 Condition: Cool & Intact Analysis Needed: TPH

Concentration Limit
Parameter (mg/kg) (mg/kg)

Total Petroleum
Hydrocarbons ND 20.0

ND = Parameter not detected at the stated detection limit. N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total

Recoverable, Chemical Analysis of Water and

Waste, USEPA Storet No.4551, 1978

Comments: Baca GC "A" #1A Blow/Sep Pit C4961

Review

Analys

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Client/Project Name Autoco # 92	42140		Project Location &NCA GC	"A" # 1A SEC	Rec./) U		ANALYSIS/PARAMETERS	ERS	C4461	/9
Sampler: (Signature) R. E. Orlad	(call)		Chain of Custody Tape No.			Sieu Sieu	—			Remarks	=
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix		Contain	318				:
(Z) S C S (E)	hb-1-h	1320	7139	SOIL		7				Bush	
(3) @ 3'	hb-1-h	1320	0117	WATER		7	7			=	
				-							
	ļ										
Relinquished by: (Signature)	(D)*			Dete Time	Received	Received by: (Signature)	= 1,	-		 	Time
2	\$			十	ج ا	7	anexan			1/4/61	0/35
Relinquished by: (Signature)			-		Received	Received Ar. (Signature)	6				
Relinquished by: (Signature)					Received	Received by: (Signature)	(P				
				ENVIROTECH INC. 5796 U.S. Highway 64-3014 Farmington, New Mexico 87401 (505) 632-0615	IROTECH I.S. Highway 64.: on, New Mexico (505) 632-0615	NC. 3014 87401				n neu-	en juan repro Form 579-61