3RP-414

Annual Groundwater Remediation Reports

Volume 1

January 2007

XTO ENERGY

RECEIVED

MAR 05 2007

Oil Conservation Division
Environmental Bureau

March 2, 2007

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:

- Baca Gas Com A #1A 3R0104
- Bruington Gas Com #1 3R0106
- Carson Gas Com #1E 3R415
- EJ Johnson C #1E 3R0385
- Federal Gas Com #H1 3R0110
- Frost, Jack B #2 3R416
- Garcia Gas Com B #1 3R0111
- Haney Gas Com B #1E 3R0113
- Hare Gas Com B #1 3R413
- Hare Gas Com B #1E 3R0384
- Hare Gas Com I #1 3R412
- Masden Gas Com #1E 3R0120
- McDaniel Gas Com B #1E 3R0121
- OH Randel #7 3R0386
- PO Pipken #3E 3R409
- Romero Gas Com A #1 3R0123
- Rowland Gas Com #1 3R124
- Snyder Gas Com #1A 3R0126
- Stedje Gas Com #1 3R0128
- Sullivan Frame A #1A
- Sullivan Gas Com D #1 3R0131
- Valdez A #1E 3R0134

We have also enclosed an Annual Report for one site that meets the closure requirements outlined in the GMP. XTO respectfully requests closure of:

- Abrams J #1 3R0100

In previously submitted reports three sites met the closure requirements outlined in the GMP and XTO requested closure on those sites in January 2006. Per your request reports for the below listed sites are being submitted again.

- Armenta Gas Com #1E 3R0394
- Bergin Gas Com #1E 3R0105
- State Gas Com BS #1 3R0127

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) 566-7942.

Respectfully,

Lisa Winn
Environmental Coordinator
San Juan Division

cc: Mr. Brandon Powell, Environmental, NMOCD District III Office, Aztec, NM
Mr. Martin Nee, Lodestar Services Inc.
File- San Juan Groundwater

McCOY GC D #1E

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2006

McCoy Gas Com D #1E
(E) SECTION 28 – T30N – R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

January 2007

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2006 XTO GROUNDWATER REPORT

McCOY GAS COM D #1E

SITE DETAILS

Legals - Twn: 30N **Rng:** 12W **Sec:** 28 **Unit:** E
NMOCD Hazard Ranking: 30 **Land Type:** FEE

PREVIOUS ACTIVITIES

Excavation: Apr-92
Additional Excavation: Feb-06 (750 cy)
Soil Borings: Sep-06
Monitor Wells: Sep-06
Sampled: Oct-06

SITE MAP

A site map is not available at this time.

SUMMARY TABLES

A summary of groundwater laboratory results for monitor well MW-1 is presented in Table 1. General water quality data is presented in Table 2. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented as Attachment 1.

POTENTIOMETRIC SURFACE DIAGRAMS

Only one well has been installed to date. No potentiometric surface diagrams are available at this time.

2006 ACTIVITIES

Groundwater Monitoring – In February 2006, while removing a 95 barrel steel tank, an existing earthen pit was discovered. Approximately 750 cubic yards of impacted soil was excavated in February 2006. Monitor well, MW-1 was installed in September and sampled in October 2006. Laboratory results for groundwater samples from MW-1 revealed benzene, toluene, ethyl benzene, total xylenes (BTEX) constituents above New Mexico Water Quality Control Commission (NMWQCC) standards.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Bore/Test Hole Reports are presented as Figures 1 – 3 representing drilling that occurred on site in September 2006.

DISPOSITION OF GENERATED WASTES

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

CONCLUSIONS

The McCoy Gas Com D #1E was acquired from Amoco Production Company in January 1998. In February 2006, while removing a 95 barrel steel separator pit tank, XTO discovered a historical earthen separator pit that was included in a 1992 site assessment (Attachment 2). The area was excavated and sampled (Attachment 3). A groundwater monitoring well was installed in the source area and sampled. Laboratory results reveal elevated levels of BTEX but the full extent of groundwater impact is not know at this time.

XTO proposes to install two down gradient monitoring wells to further delineate any impact to groundwater. All three monitoring wells will be sampled in accordance with NMOCD approved Groundwater Management Plan.

RECOMMENDATIONS

- Install two down gradient monitoring wells.
- Begin sampling in accordance with Groundwater Management Plan.

TABLE 1
XTO ENERGY INC. GROUNDWATER LAB RESULTS

MCCOY GC D #1E- SEPARATOR PIT
UNIT E, SEC. 28, T30N, R12W

Revised Date: February 6, 2007

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
16-Oct-06	MW #1	32.86	40		22	2500	2700	19000
	MW #2							
	MW #3							
NMWQCC GROUNDWATER STANDARDS					10	750	750	620

TABLE 2
XTO ENERGY INC. GROUNDWATER LAB RESULTS

McCOY GAS COM D #1E
UNIT E SEC. 28, T30N, R12W

Revised Date: November 10, 2006
Sample Date: October 16, 2006

PARAMETERS	MW #1			UNITS
LAB Ph				s.u.
LAB CONDUCTIVITY @ 25 C	580			umhos/cm
TOTAL DISSOLVED SOLIDS @ 180 C	360			mg/L
TOTAL DISSOLVED SOLIDS (Calc)				mg/L
SODIUM ABSORPTION RATIO				ratio
TOTAL ALKALINITY AS CaCO3	290			mg/L
TOTAL HARDNESS AS CaCO3				mg/L
BICARBONATE AS HCO3	290			mg/L
CARBONATE AS CO3	ND			mg/L
HYDROXIDE AS OH				mg/L
NITRATE NITORGEN	ND			mg/L
NITRITE NITROGEN	ND			mg/L
CHLORIDE	14			mg/L
FLUORIDE	0.62			mg/L
PHOSPHATE	ND			mg/L
SULFATE	11			mg/L
IRON				mg/L
CALCIUM	77			mg/L
MAGNESIUM	13			mg/L
POTASSIUM	1.30			mg/L
SODIUM	20			mg/L
CATION/ANION DIFFERENCE				%

FIGURE 1
RECORD OF SUBSURFACE EXPLORATION

LodeStar Services
P.O. Box 4465
Durango, CO 81302
303-917-6288

Borehole #: 1
Well #: NA
Page: 2 of 2
Project Number:
Project Name: XTO McCoy
Project Location: McCoy Gas Com D 1E

Borehole Location: 36° 47.196' N, 108° 06.469' W
GWL Depth: NA
Drilled By: Envirotech
Well Logged By: Ashley Ager
Date Started: 9/21/2006
Date Completed: 9/21/2006

Drilling Method: Hollow Stem Auger and TUBEX
Air Monitoring Method: PID

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20						Refusal at 20'. Switch to TUBEX
		22-26'	cuttings	Black, coarse, poorly sorted sand with 40% cobbles. Strong HC odor, dry	62.48	Steady Pounding
25					208.5	
		26-28'	cuttings	Gray, coarse, poorly sorted sand with 50% cobbles, dry	169.8	
		28-31.5'	cuttings	Brownish gray, coarse sand and cobble fragments	188.9	
30					83.2	
					71.2	Stop and sample
35						
40						

Comments: All samples warmed for at least 10 mins in truck prior to using PID for air monitoring

Geologist Signature: Ashley L. Ager

FIGURE 2
RECORD OF SUBSURFACE EXPLORATION

LodeStar Services
P.O. Box 4465
Durango, CO 81302
303-917-6288

Borehole #: 2
Well #: NA
Page: 2 of 2
Project Number:
Project Name: XTO McCoy
Project Location: McCoy Gas Com D 1E

Borehole Location: 36° 47.196' N, 108° 06.469' W
GWL Depth: 34'
Drilled By: Envirotech
Well Logged By: Ashley Ager
Date Started: 9/21/2006
Date Completed: 9/22/2006

Drilling Method: TUBEX
Air Monitoring Method: PID

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20						
					302.9	
					180.4	
25					136.5	
					202.3	
					219.0	
30					452.9	
		32.5-37'	cuttings	Grayish green coarse sand w/gravel, poorly sorted sub-rounded, very strong odor	429.7	Fast
35				Wet soil at 34'. Saturated cuttings at 35', water		Water spraying out of hole
		37-40'	cuttings	V. Coarse sand, poorly sorted, sub-rounded to sub-angular, wet, varying mineralogies, no cobbles	274	Fast
40						

Comments:

Geologist Signature: Ashley L. Ager

FIGURE 3
MONITORING WELL INSTALLATION RECORD

Borehole # 2
Well # MW-1
Page 1 of 1

Lodestar Services, Inc
PO Box 3861
Farmington, New Mexico 87499
(505) 334-2791

Project Name XTO Ground Water
Project Number _____ Cost Code _____
Project Location McCoy Gas Com D 1E

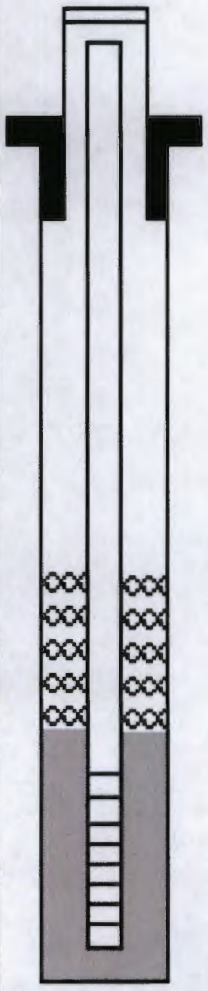
Elevation 5532
Well Location 36° 47.196' N, 108° 06.468' W
GWL Depth 34'
Installed By Envirotech

On-Site Geologist Ashley Ager
Personnel On-Site
Contractors On-Site Kelly Padilla and assistant
Client Personnel On-Site

Date/Time Started 09/21/06, 15:23
Date/Time Completed 09/22/06, 10:35

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		2.9
Bottom of Protective Casing		-0.9
Top of Permanent Borehole Casing	Sch. 40 PVC	2.8
Bottom of Permanent Borehole Casing		-40.40
Top of Concrete	Concrete	.25
Bottom of Concrete		-5.0
Top of Grout		-5.0
Bottom of Grout		-16.0
Top of Well Riser	Sch. 40 PVC	2.8
Bottom of Well Riser		-39.95
Top of Well Screen	Sch. 40 PVC	-19.9
Bottom of Well Screen		-39.9
Top of Peltonite Seal	Bentonite	-16.0
Bottom of Peltonite Seal		-18.0
Top of Gravel Pack	Sand	-18.0
Bottom of Gravel Pack		-39.95
Top of Natural Cave-In	Sand	-39.95
Bottom of Natural Cave-In		-40
Top of Groundwater		-34.0
Total Depth of Borehole		-40



Top of Protective Casing 2.9
Top of Riser 2.8
Ground Surface 0

Top of Seal -16

Top of Gravel Pack -18
Top of Screen -19.9

Bottom of Screen -39.9
Bottom of Borehole -40

Comments: 50 lb bags of sand used: 18 ea.
50 lb bags of bentontie used: 6 ea.

Geologist Signature Ashley L. Ager

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Nov-06*

CLIENT:	XTO Energy	**Client Sample ID:**	McCoy Gas COM DIE MW-1
Lab Order:	0610211	**Collection Date:**	10/16/2006 2:58:00 PM
Project:	XTO Ground Water	**Date Received:**	10/19/2006
Lab ID:	0610211-07	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8310: PAHS						Analyst: JMP
Naphthalene	330	12		µg/L	5	11/4/2006 11:14:13 AM
1-Methylnaphthalene	140	12		µg/L	5	11/4/2006 11:14:13 AM
2-Methylnaphthalene	280	12		µg/L	5	11/4/2006 11:14:13 AM
Acenaphthylene	ND	2.5		µg/L	1	11/2/2006 1:46:19 AM
Acenaphthene	ND	2.5		µg/L	1	11/2/2006 1:46:19 AM
Fluorene	5.4	0.040		µg/L	1	11/2/2006 1:46:19 AM
Phenanthrene	4.7	0.020		µg/L	1	11/2/2006 1:46:19 AM
Anthracene	ND	0.020		µg/L	1	11/2/2006 1:46:19 AM
Fluoranthene	ND	0.30		µg/L	1	11/2/2006 1:46:19 AM
Pyrene	ND	0.30		µg/L	1	11/2/2006 1:46:19 AM
Benz(a)anthracene	ND	0.020		µg/L	1	11/2/2006 1:46:19 AM
Chrysene	ND	0.20		µg/L	1	11/2/2006 1:46:19 AM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/2/2006 1:46:19 AM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/2/2006 1:46:19 AM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/2/2006 1:46:19 AM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/2/2006 1:46:19 AM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/2/2006 1:46:19 AM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/2/2006 1:46:19 AM
Surr: Benzo(e)pyrene	90.4	68-116		%REC	1	11/2/2006 1:46:19 AM
EPA METHOD 300.0: ANIONS						Analyst: TES
Fluoride	0.62	0.10		mg/L	1	10/20/2006 8:33:01 PM
Chloride	14	0.10		mg/L	1	10/20/2006 8:33:01 PM
Bromide	ND	0.10		mg/L	1	10/20/2006 8:33:01 PM
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	10/19/2006 8:59:42 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/20/2006 8:33:01 PM
Sulfate	11	0.50		mg/L	1	10/20/2006 8:33:01 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: NMO
Calcium	77	1.0		mg/L	1	10/24/2006 2:52:22 PM
Magnesium	13	1.0		mg/L	1	10/24/2006 2:52:22 PM
Potassium	1.3	1.0		mg/L	1	10/24/2006 2:52:22 PM
Sodium	20	1.0		mg/L	1	10/24/2006 2:52:22 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: SMP
Benzene	22	10		µg/L	10	10/23/2006
Toluene	2500	100		µg/L	100	10/21/2006
Ethylbenzene	2700	100		µg/L	100	10/21/2006
Xylenes, Total	19000	750		µg/L	250	10/23/2006

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Nov-06*

CLIENT:	XTO Energy	**Client Sample ID:**	McCoy Gas COM DIE MW-1
Lab Order:	0610211	**Collection Date:**	10/16/2006 2:58:00 PM
Project:	XTO Ground Water	**Date Received:**	10/19/2006
Lab ID:	0610211-07	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: SMP
Surr: 1,2-Dichloroethane-d4	85.1	69.9-130		%REC	100	10/21/2006
Surr: 4-Bromofluorobenzene	106	71.2-123		%REC	100	10/21/2006
Surr: Dibromofluoromethane	92.2	73.9-134		%REC	100	10/21/2006
Surr: Toluene-d8	99.7	81.9-122		%REC	100	10/21/2006
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	290	2.0		mg/L CaCO3	1	10/24/2006
Carbonate	ND	2.0		mg/L CaCO3	1	10/24/2006
Bicarbonate	290	2.0		mg/L CaCO3	1	10/24/2006
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	580	0.010		µmhos/cm	1	10/26/2006
EPA METHOD 160.1: TDS						Analyst: KS
Total Dissolved Solids	360	40		mg/L	1	10/23/2006

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *07-Nov-06*

CLIENT:	XTO Energy	**Client Sample ID:**	16102006TB01
Lab Order:	0610211	**Collection Date:**	
Project:	XTO Ground Water	**Date Received:**	10/19/2006
Lab ID:	0610211-08	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: SMP
Benzene	ND	1.0		µg/L	1	10/23/2006
Toluene	ND	1.0		µg/L	1	10/23/2006
Ethylbenzene	ND	1.0		µg/L	1	10/23/2006
Xylenes, Total	ND	3.0		µg/L	1	10/23/2006
Surr: 1,2-Dichloroethane-d4	90.4	69.9-130		%REC	1	10/23/2006
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	1	10/23/2006
Surr: Dibromofluoromethane	97.7	73.9-134		%REC	1	10/23/2006
Surr: Toluene-d8	93.7	81.9-122		%REC	1	10/23/2006

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XTO Ground Water **Work Order:** 0610211

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: E300									
Sample ID: MBLK		*MBLK*			Batch ID: R21108		Analysis Date: 10/19/2006 11:42:41 AM		
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10						
Bromide	ND	mg/L	0.10						
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.10						
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50						
Sulfate	ND	mg/L	0.50						
Sample ID: MBLK		*MBLK*			Batch ID: R21130		Analysis Date: 10/20/2006 10:58:33 AM		
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10						
Bromide	ND	mg/L	0.10						
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.10						
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50						
Sulfate	ND	mg/L	0.50						
Sample ID: LCS ST300-06008		*LCS*			Batch ID: R21108		Analysis Date: 10/19/2006 12:00:05 PM		
Fluoride	0.5223	mg/L	0.10	104	90	110			
Chloride	4.928	mg/L	0.10	98.6	90	110			
Bromide	2.561	mg/L	0.10	102	90	110			
Nitrate (As N)+Nitrite (As N)	3.444	mg/L	0.10	98.4	90	110			
Phosphorus, Orthophosphate (As P)	5.087	mg/L	0.50	102	90	110			
Sulfate	9.862	mg/L	0.50	98.6	90	110			
Sample ID: LCS ST300-06008		*LCS*			Batch ID: R21130		Analysis Date: 10/20/2006 11:15:58 AM		
Fluoride	0.5133	mg/L	0.10	103	90	110			
Chloride	4.818	mg/L	0.10	96.4	90	110			
Bromide	2.445	mg/L	0.10	97.8	90	110			
Nitrate (As N)+Nitrite (As N)	3.467	mg/L	0.10	99.1	90	110			
Phosphorus, Orthophosphate (As P)	4.875	mg/L	0.50	97.5	90	110			
Sulfate	9.612	mg/L	0.50	96.1	90	110			
Method: E310.1									
Sample ID: MB		*MBLK*			Batch ID: R21146		Analysis Date: 10/24/2006		
Alkalinity, Total (As CaCO3)	ND	mg/L CaC	2.0						
Carbonate	ND	mg/L CaC	2.0						
Bicarbonate	ND	mg/L CaC	2.0						

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 Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XTO Ground Water **Work Order:** 0610211

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8310									
Sample ID: 0610211-07BMSD		*MSD*			Batch ID:	11533	Analysis Date:		11/2/2006 6:34:13 AM
Naphthalene	314.5	µg/L	2.5	15.2	33.9	87.9	6.44	37.6	SE
1-Methylnaphthalene	140.4	µg/L	2.5	36.5	35.2	85	3.49	35.4	E
2-Methylnaphthalene	266.5	µg/L	2.5	0.340	33.7	83.9	4.37	36.7	SE
Acenaphthylene	19.41	µg/L	2.5	48.4	47.8	85.4	2.36	30.5	
Acenaphthene	28.99	µg/L	2.5	72.5	42.2	86.6	5.45	29.7	
Fluorene	7.901	µg/L	0.040	63.3	47.3	85.1	4.74	25.2	
Phenanthrene	5.291	µg/L	0.020	31.7	53.5	97.3	6.58	19.2	S
Anthracene	1.648	µg/L	0.020	82.0	53.6	93.7	7.14	18.9	
Fluoranthene	3.290	µg/L	0.30	82.0	60.1	98.5	8.36	14.6	
Pyrene	3.399	µg/L	0.30	84.8	57.5	108	3.87	14.7	
Benz(a)anthracene	0.3570	µg/L	0.020	89.0	57.7	106	3.85	15.3	
Chrysene	1.739	µg/L	0.20	86.5	59.1	112	4.28	13.7	
Benzo(b)fluoranthene	0.4230	µg/L	0.050	79.6	58.8	102	11.6	15	
Benzo(k)fluoranthene	0.2210	µg/L	0.020	88.4	58.8	100	5.71	15.9	
Benzo(a)pyrene	0.2040	µg/L	0.020	81.3	49.7	109	8.45	20	
Dibenz(a,h)anthracene	0.4340	µg/L	0.040	86.6	54.1	111	2.73	14.3	
Benzo(g,h,i)perylene	0.4460	µg/L	0.030	89.2	51.3	111	3.74	14.3	
Indeno(1,2,3-cd)pyrene	0.7990	µg/L	0.080	79.7	55	99.9	6.42	15	
Sample ID: MB-11533		*MBLK*			Batch ID:	11533	Analysis Date:		11/1/2006 11:22:21 PM
Naphthalene	ND	µg/L	2.5						
1-Methylnaphthalene	ND	µg/L	2.5						
2-Methylnaphthalene	ND	µg/L	2.5						
Acenaphthylene	ND	µg/L	2.5						
Acenaphthene	ND	µg/L	2.5						
Fluorene	ND	µg/L	0.040						
Phenanthrene	ND	µg/L	0.020						
Anthracene	ND	µg/L	0.020						
Fluoranthene	ND	µg/L	0.30						
Pyrene	ND	µg/L	0.30						
Benz(a)anthracene	ND	µg/L	0.020						
Chrysene	ND	µg/L	0.20						
Benzo(b)fluoranthene	ND	µg/L	0.050						
Benzo(k)fluoranthene	ND	µg/L	0.020						
Benzo(a)pyrene	ND	µg/L	0.020						
Dibenz(a,h)anthracene	ND	µg/L	0.040						
Benzo(g,h,i)perylene	ND	µg/L	0.030						
Indeno(1,2,3-cd)pyrene	ND	µg/L	0.080						
Sample ID: LCS-11533		*LCS*			Batch ID:	11533	Analysis Date:		11/2/2006 12:10:19 AM
Naphthalene	27.49	µg/L	2.5	68.7	33.9	87.9			
1-Methylnaphthalene	25.61	µg/L	2.5	63.9	35.2	85			
2-Methylnaphthalene	26.61	µg/L	2.5	66.5	33.7	83.9			
Acenaphthylene	30.58	µg/L	2.5	76.3	55	97.9			
Acenaphthene	26.80	µg/L	2.5	67.0	42.2	86.6			
Fluorene	2.691	µg/L	0.040	67.1	47.3	85.1			

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XTO Ground Water **Work Order:** 0610211

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8310									
Sample ID: LCS-11533		*LCS*			Batch ID:	11533	Analysis Date:	11/2/2006 12:10:19 AM	
Phenanthrene	1.462	µg/L	0.020	72.7	53.5	97.3			
Anthracene	1.446	µg/L	0.020	71.9	53.6	93.7			
Fluoranthene	3.060	µg/L	0.30	76.3	60.1	98.5			
Pyrene	3.216	µg/L	0.30	80.2	57.5	108			
Benz(a)anthracene	0.3600	µg/L	0.020	89.8	57.7	106			
Chrysene	1.681	µg/L	0.20	83.6	59.1	112			
Benzo(b)fluoranthene	0.4080	µg/L	0.050	81.4	67	110			
Benzo(k)fluoranthene	0.2110	µg/L	0.020	84.4	63.2	106			
Benzo(a)pyrene	0.2040	µg/L	0.020	81.3	49.7	109			
Dibenz(a,h)anthracene	0.4140	µg/L	0.040	82.6	54.1	111			
Benzo(g,h,i)perylene	0.4230	µg/L	0.030	84.6	51.3	111			
Indeno(1,2,3-cd)pyrene	0.7790	µg/L	0.080	77.7	52.3	103			
Sample ID: LCSD-11533		*LCSD*			Batch ID:	11533	Analysis Date:	11/2/2006 12:58:17 AM	
Naphthalene	29.15	µg/L	2.5	72.9	33.9	87.9	5.86	32.1	
1-Methylnaphthalene	26.76	µg/L	2.5	66.7	35.2	85	4.40	32.7	
2-Methylnaphthalene	28.00	µg/L	2.5	70.0	33.7	83.9	5.10	34	
Acenaphthylene	33.47	µg/L	2.5	83.5	55	97.9	9.02	38.8	
Acenaphthene	28.92	µg/L	2.5	72.3	42.2	86.6	7.60	38.6	
Fluorene	2.927	µg/L	0.040	73.0	47.3	85.1	8.40	29.3	
Phenanthrene	1.567	µg/L	0.020	78.0	53.5	97.3	6.93	25	
Anthracene	1.595	µg/L	0.020	79.4	53.6	93.7	9.80	23.9	
Fluoranthene	3.368	µg/L	0.30	84.0	60.1	98.5	9.58	15.7	
Pyrene	3.404	µg/L	0.30	84.9	57.5	108	5.68	15.3	
Benz(a)anthracene	0.3420	µg/L	0.020	85.3	57.7	106	5.13	19	
Chrysene	1.718	µg/L	0.20	85.5	59.1	112	2.18	16.6	
Benzo(b)fluoranthene	0.4210	µg/L	0.050	84.0	67	110	3.14	21.7	
Benzo(k)fluoranthene	0.2160	µg/L	0.020	86.4	63.2	106	2.34	19.4	
Benzo(a)pyrene	0.2170	µg/L	0.020	86.5	49.7	109	6.18	16.7	
Dibenz(a,h)anthracene	0.4510	µg/L	0.040	90.0	54.1	111	8.55	17.3	
Benzo(g,h,i)perylene	0.4430	µg/L	0.030	88.6	51.3	111	4.62	18	
Indeno(1,2,3-cd)pyrene	0.8340	µg/L	0.080	83.2	52.3	103	6.82	17.7	
Sample ID: 0610211-07BMS		*MS*			Batch ID:	11533	Analysis Date:	11/2/2006 5:46:15 AM	
Naphthalene	335.5	µg/L	2.5	67.6	33.9	87.9			E
1-Methylnaphthalene	145.3	µg/L	2.5	48.9	35.2	85			E
2-Methylnaphthalene	278.4	µg/L	2.5	30.1	33.7	83.9			SE
Acenaphthylene	19.88	µg/L	2.5	49.6	47.8	85.4			
Acenaphthene	30.62	µg/L	2.5	76.5	42.2	86.6			
Fluorene	8.285	µg/L	0.040	72.8	47.3	85.1			
Phenanthrene	4.954	µg/L	0.020	15.0	53.5	97.3			S
Anthracene	1.770	µg/L	0.020	88.1	53.6	93.7			
Fluoranthene	3.577	µg/L	0.30	89.2	60.1	98.5			
Pyrene	3.533	µg/L	0.30	88.1	57.5	108			
Benz(a)anthracene	0.3710	µg/L	0.020	92.5	57.7	106			
Chrysene	1.815	µg/L	0.20	90.3	59.1	112			

Qualifiers:

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- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XTO Ground Water **Work Order:** 0610211

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8310									
Sample ID: 0610211-07BMS		*MS*			Batch ID: 11533		Analysis Date: 11/2/2006 5:46:15 AM		
Benzo(b)fluoranthene	0.4750	µg/L	0.050	90.0	58.8	102			
Benzo(k)fluoranthene	0.2340	µg/L	0.020	93.6	58.8	100			
Benzo(a)pyrene	0.2220	µg/L	0.020	88.4	49.7	109			
Dibenz(a,h)anthracene	0.4460	µg/L	0.040	89.0	54.1	111			
Benzo(g,h,i)perylene	0.4630	µg/L	0.030	92.6	51.3	111			
Indeno(1,2,3-cd)pyrene	0.8520	µg/L	0.080	85.0	55	99.9			
Method: SW6010A									
Sample ID: 0610211-07C MSD		*MSD*			Batch ID: R21153		Analysis Date: 10/24/2006 2:56:51 PM		
Magnesium	57.93	mg/L	1.0	88.5	75	125	5.78	20	
Potassium	53.50	mg/L	1.0	94.9	75	125	2.77	20	
Sodium	67.85	mg/L	1.0	94.3	75	125	6.01	20	
Sample ID: 0610211-07C MSD		*MSD*			Batch ID: R21153		Analysis Date: 10/24/2006 3:09:54 PM		
Calcium	115.5	mg/L	2.0	85.9	75	125	3.08	20	
Sample ID: MB		*MBLK*			Batch ID: R21153		Analysis Date: 10/24/2006 2:34:31 PM		
Calcium	ND	mg/L	1.0						
Magnesium	ND	mg/L	1.0						
Potassium	ND	mg/L	1.0						
Sodium	ND	mg/L	1.0						
Sample ID: LCS		*LCS*			Batch ID: R21153		Analysis Date: 10/24/2006 2:37:37 PM		
Calcium	49.33	mg/L	1.0	97.7	80	120			
Magnesium	49.66	mg/L	1.0	98.3	80	120			
Potassium	53.75	mg/L	1.0	97.7	80	120			
Sodium	53.37	mg/L	1.0	106	80	120			
Sample ID: 0610211-07C MS		*MS*			Batch ID: R21153		Analysis Date: 10/24/2006 2:54:38 PM		
Magnesium	61.38	mg/L	1.0	95.3	75	125			
Potassium	55.00	mg/L	1.0	97.6	75	125			
Sodium	72.06	mg/L	1.0	103	75	125			
Sample ID: 0610211-07C MS		*MS*			Batch ID: R21153		Analysis Date: 10/24/2006 3:12:56 PM		
Calcium	119.1	mg/L	2.0	93.1	75	125	0	0	
Method: E160.1									
Sample ID: MB-11549		*MBLK*			Batch ID: 11549		Analysis Date: 10/23/2006		
Total Dissolved Solids	ND	mg/L	20						
Sample ID: LCS-11549		*LCS*			Batch ID: 11549		Analysis Date: 10/23/2006		
Total Dissolved Solids	1000	mg/L	20	100	80	120			

Qualifiers:

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- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: XTO Ground Water **Work Order:** 0610211

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8260B									
Sample ID: 5ml rb		*MBLK*			Batch ID: R21123		Analysis Date:		10/20/2006
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: bk2		*MBLK*			Batch ID: R21129		Analysis Date:		10/23/2006
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 lcs b		*LCS*			Batch ID: R21123		Analysis Date:		10/20/2006
Benzene	20.72	µg/L	1.0	104	74.9	113			
Toluene	18.95	µg/L	1.0	94.7	77	121			
Sample ID: 100ng lcs b		*LCS*			Batch ID: R21129		Analysis Date:		10/24/2006
Benzene	19.92	µg/L	1.0	99.6	74.9	113			
Toluene	17.79	µg/L	1.0	88.9	77	121			
Sample ID: 100ng lcsd b		*LCSD*			Batch ID: R21123		Analysis Date:		10/21/2006
Benzene	20.15	µg/L	1.0	101	74.9	113	2.78	20	

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date and Time Received: 10/19/2006

Work Order Number 0610211 | Received by AT

Checklist completed by _____ 10/19/06
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☐	No ☑		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐	

Container/Temp Blank temperature? 3° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action

CHAIN-OF-CUSTODY RECORD

QA/QC Package: Std [X] Level 4 [ ]
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: XTO Energy
Kim Champlain

Address: 2700 Farmington Blvd
Ste K, Bldg 1
Farmington, NM

Phone #: 505-566-7954

Fax #:

Project Name: XTO Ground Water

Project #:

Project Manager: Lisa Winn

Sampler: Ashley Ager

Sample Temperature: 3°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative H_2SO_4	HEAL No. 0610211
10-13-06	0800	GW	Hare Gas Com B1E	MW-1	✓			-1
10-13-06	0848	GW	Hare Gas Com B1E	MW-2	✓			-2
10-13-06	0859	GW	Hare Gas Com B1E	MW-3	✓			-3
10-16-06	1022	GW	Sullivan Frame A1E	MW-3	✓			-4
10-16-06	1054	GW	Sullivan Frame A1E	MW-2	✓			-5
10-16-06	1123	GW	Sullivan Frame A1E	MW-1	✓			-6
10-16-06	1458	GW	McCoy Gas Com D1E	MW-1	✓			-7
10-16-06	1458	GW	McCoy Gas Com D1E	MW-1				-7-8
10-16-06	1458	GW	McCoy Gas Com D1E	MW-1			✓	-7
10-16-06	0700	water	16102006TB01		✓			-8
10-16-06	1458	GW	McCoy Gas Com B1E	MW-1		✓		-7

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021B BTEX	Cations	TPH Diesel Temperature		Air Bubbles or Headspace (Y or N)
												✓				
												✓				
												✓				
												✓				
												✓				
												✓				
												✓				
						✓										
								✓								
													✓			
													✓			

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
10-17-06	0830	Ashley L Ager		10/19/06 1240
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: per LW McCoy MW-1 sample analyze for Cat/Anion balance

ENVIROTECH Inc.

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

94022

FIELD REPORT: SITE ASSESSMENT

JOB No: 92140
PAGE No: 1 of 1

PROJECT: PIT ASSESSMENTS & CLOSURE
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: ENVIROTECH, INC.
EQUIPMENT USED: EXTENDAHOE

DATE STARTED: 4-24-92
DATE FINISHED: 4-24-92
ENVIRO. SPCLT: MKL
OPERATOR: MS
ASSISTANT: PV

LOCATION: LSE: McCOY G.C. WELL: "D" 1E QD: SW/4 NW/4 (E)
SEC: 28 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM PIT: SEP. PIT

LAND USE: RURAL RESIDENTIAL & COMMERCIAL (FLEA MARKET TO EAST)
SURFACE CONDITIONS: STEEL DOUBLE LINED TANK W/COVER (12'DIA X 5') BELOW GRADE

FIELD NOTES & REMARKS: LOCATED 70' SOUTH & 30' EAST OF WELL HEAD. SOIL CONDITIONS; BROWN SILTY SAND TO GRAVEL, MOIST, DENSE (POSSIBLE FILL). PIT LOCATED @ SOUTH EAST CORNER OF LOCATION ABOVE DRAINAGE TO SOUTH. APPEARS THAT WELL LOCATION HAS 20± FEET OF FILL. IRRIGATION DITCH UNLINED FLOWING WEST, 150' SOUTH OF LOCATION. TANK BEDDED IN PEA GRAVEL.

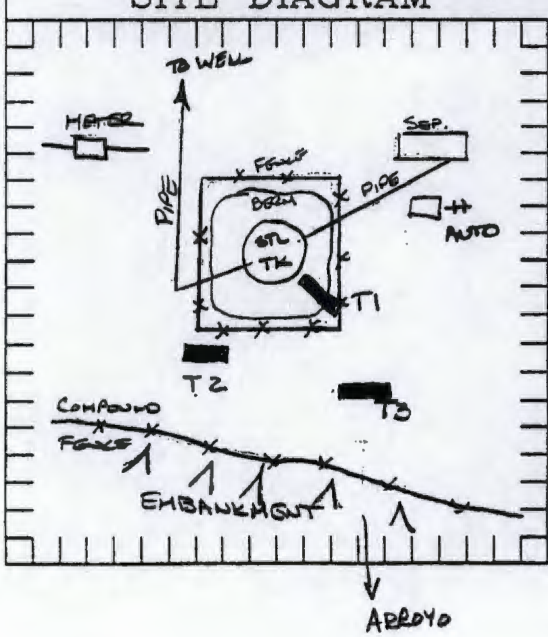
SAMPLE INVENTORY:

SMPL ID:	SMPL TYPE:	LABORATORY ANALYSIS:
T1@5'	SOIL	HEAD
T1@5'	SOIL	8020/TPH

SCALE
0 10 20 FEET

N

SITE DIAGRAM



TEST HOLE LOGS:

TH#: 1 (SOIL TYPE / SMPL TYPE / OVM/TPH)
- 0–1: GM/SM
- TOP DISCOLOR ~4.8
- Sample ~5: 243
- Sample ~8: 188
- 9: TD – 9'
- GW – NR

TH#: 2 (SOIL TYPE / SMPL TYPE / OVM/TPH)
- 0–1: GM/SM
- CALICHE LAYER ~3–4.8
- Sample ~5–6: ND
- Sample ~10–11: ND
- TD – 12
- GW – NOT REACH

TH#: 3 (SOIL TYPE / SMPL TYPE / OVM/TPH)
- 0–1: SM/SC
- Sample ~7: ND
- BOTTOM OF FILL ~9
- GM/SM
- Sample ~12: ND
- TD – 14'
- GW – NR

TH#: (blank)

SOIL TYPE: C – Clay, M – Silt, S – Sand, G – Gravel Plasticity: L – None, H – Plastic Grading: P – Poorly, W – Well

ENVIROTECH LABS

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:	T-1 @ 5'	Date Reported:	06-16-92
Laboratory Number:	0179	Date Sampled:	04-24-92
Sample Matrix:	Soil	Date Received:	NA
Preservative:	Cool	Date Analyzed:	05-26-92
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	780	5.0

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

ND - Parameter not detected at the stated detection limit.

Comments: McCoy D 1E Separator Pit 94022

Tony Trujano
Analyst

Review

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:	T 1 @ 6'	Date Reported:	09-24-92
Laboratory Number:	0178	Date Sampled:	04-24-92
Sample Matrix:	Soil	Date Received:	04-24-92
Preservative:	Cool	Date Extracted:	05-26-92
Condition:	Cool & Intact	Date Analyzed:	09-20-92
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	12,100	129
Toluene	33,600	198
Ethylbenzene	ND	49.6
p,m-Xylene	219,800	129
o-Xylene	40,700	109

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromfluorobenzene	116 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

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

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC D 1E Separator Pit 94022

Analyst

Review

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
HEADSPACE EXTRACTION

Client:	Amoco	Project #:	92140
Sample ID:	T1 @ 6'	Date Reported:	08-05-92
Laboratory Number:	0178	Date Sampled:	04-24-92
Sample Matrix:	Soil	Date Received:	04-24-92
Preservative:	Cool	Date Analyzed:	05-26-92
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	1,890	2.0
Toluene	8,000	2.0
Ethylbenzene	ND	2.0
p,m-Xylene	239,300	2.0
o-Xylene	33,400	2.0

Method: Method 3810, Headspace, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

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

ND - Parameter not detected at the stated detection limit.

Comments: McCoy D 1E---Separator Pit---94022.

Robert M Young
Analyst

David D Young
Review

1115

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
Amoco 192140	McCoy D 1E Sep. Pit	94022

Sampler: (Signature)

Chain of Custody Tape No.

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	EPA 3810 BTEX	EPA 8020 BTEX	BOA 418.1 TPH				Remarks
TI @ 6'	4/24/92	1040	178	Soil	1	✓						
TI @ 11'	↓	1040	179	Soil	1		✓	✓				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/24/92	1540	Tony Tristano	4/24/92	1540
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

FLORA VISTA GWRD. VWL 30045 24873 36.78677 / 108.10784

CLIENT: XTO	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: COCR NO: HALL

S

FIELD REPORT: PIT CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: McCoy GC D WELL #: 1E TYPE: SEP.

QUAD/UNIT: E SEC: 28 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM

QTR/FOOTAGE: 1600'N/1230'W SW/NW CONTRACTOR: HDI (HEBER)

DATE STARTED: 2/17/06

DATE FINISHED:

ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 30 FT. x 30 FT. x 23 FT. DEEP. CUBIC YARDAGE: 750

DISPOSAL FACILITY: JFJ LF - CROUCH MESA REMEDIATION METHOD: LANDFARM

LAND USE: INDUSTRIAL LEASE: FEE FORMATION: DK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 80 FT. S24E FROM WELLHEAD.

DEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1,000' NEAREST SURFACE WATER: <200'

NMOCD RANKING SCORE: 30 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION: ELEV. - 5,524'

OVM CALIB. READ. = 53.3 ppm
OVM CALIB. GAS = 100 ppm RF = 0.52
TIME: 3:20 am/pm DATE: 2/16/06

SOIL TYPE: (SAND) / SILTY SAND / SILT / SILTY CLAY / CLAY / (GRAVEL) / OTHER

SOIL COLOR: DK. YELL. ORANGE TO BLACK

COHESION (ALL OTHERS): (NON COHESIVE) / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE

CONSISTENCY (NON COHESIVE SOILS): (LOOSE) / (FIRM) / DENSE / VERY DENSE

~~PLASTICITY (CLAYS)~~: NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC

~~DENSITY (COHESIVE CLAYS & SILTS)~~: SOFT / FIRM / STIFF / VERY STIFF / HARD

NEED TO ESTABLISH HORIZ. & VERT. EXTENT

MOISTURE: DRY / (SLIGHTLY MOIST) / MOIST / WET / SATURATED / SUPER SATURATED

DISCOLORATION/STAINING OBSERVED: (YES) / NO EXPLANATION - VARYING GRAY TO BLACK STARTING @ 1' BELOW GRADE AROUND TANK PERIMETER

HC ODOR DETECTED: (YES) / NO EXPLANATION - DISCOLORED PORTION ONLY.

SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS.

ADDITIONAL COMMENTS: ORIGINAL PIT DIMENSION 17'x19' w/ STEEL TANK ~ 5' BELOW GRADE.

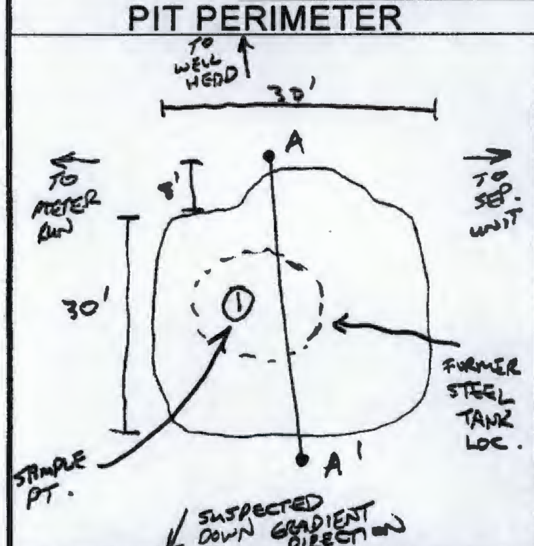
SCALE

0 FT

FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMP. ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (ppm)

PIT PERIMETER



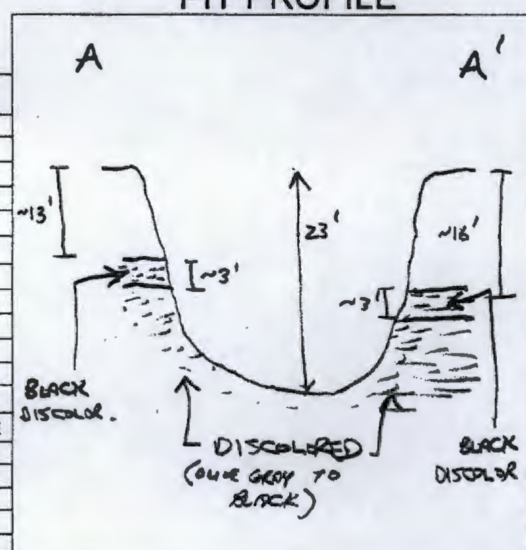
OVM READING

SAMPLE ID	FIELD HEADSPACE (ppm)
1 @ 23'	768
2 @	
3 @	
4 @	
5 @	

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
1 @ 23'	TPH (8015B)	1043
"	BTEX (8021B)	"
"	CHLORIDE	"

PIT PROFILE



P.D. = PIT DEPRESSION; B.G. = BELOW GRADE; B = BELOW
T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM

TRAVEL NOTES: CALLOUT: 2/16/06 - MORN. ONSITE: 2/16/06 - NOON 2/17/06 - MORN. 9AM

revised: 09/04/02 bei1005C.skf

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address	2. Destination Name:
XTO Energy Inc. **2700 Farmington Ave., Bldg. K, Suite 1** **Farmington, NM 87401**	J.F.J. Landfarm c/o Industrial Ecosystems Inc. 420 CR 3100 Aztec, NM 87410
3. Originating Site (name): McCoy GC D#1E attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR): E-28-30-12
4. Source and Description of Waste PRODUCTION TANK STEEL PIT	WATER &/OR CONDENSATE

I, **Nelson Velez** representative for :
Print Name

Blagg Engineering, Inc. c/o XTO Energy Inc. do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,1988, regulatory determination, the above described waste is: (Check appropriate classification)

✓ **EXEMPT** oilfield waste

___ **NON-EXEMPT** oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non –hazardous waste defined above.

For NON-EXEMPT waste the following documentation is attached (check appropriate items):

___MSDS Information
___RCRA Hazardous Waste Analysis
___Chain of Custody
___Other (description

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): Nelson VM 320-3489

Title: Staff Geologist / AGENT for XTO Energy

Date: 2/16/06

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, March 06, 2006

Nelson Velez
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413

TEL: (505) 632-1199
FAX (505) 632-3903

RE: McCoy GC D #1E - Separator Pit

Order No.: 0602202

Dear Nelson Velez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/21/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory

Date: *06-Mar-06*

CLIENT: Blagg Engineering
Project: McCoy GC D #1E - Separator Pit
Lab Order: 0602202

CASE NARRATIVE

Analytical Comments for METHOD 8015GRO_S, SAMPLE 0602202-01A: Elevated surrogate due to matrix interference. Analytical Comments for METHOD 8021BTEX_S, SAMPLE 0602202-01A: Low surrogate due to matrix interference. Sample analyzed twice to confirm.

Hall Environmental Analysis Laboratory

Date: *06-Mar-06*

CLIENT:	Blagg Engineering	**Client Sample ID:**	1 @ 23'
Lab Order:	0602202	**Collection Date:**	2/20/2006 10:43:00 AM
Project:	McCoy GC D #1E - Separator Pit	**Date Received:**	2/21/2006
Lab ID:	0602202-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	100	10		mg/Kg	1	2/27/2006 2:14:11 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/27/2006 2:14:11 PM
Surr: DNOP	117	60-124		%REC	1	2/27/2006 2:14:11 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1600	100		mg/Kg	20	2/27/2006 3:39:42 PM
Surr: BFB	209	79-128	S	%REC	20	2/27/2006 3:39:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		mg/Kg	20	2/27/2006 3:39:42 PM
Toluene	1.3	1.0		mg/Kg	20	2/27/2006 3:39:42 PM
Ethylbenzene	5.6	1.0		mg/Kg	20	2/27/2006 3:39:42 PM
Xylenes, Total	76	1.0		mg/Kg	20	2/27/2006 3:39:42 PM
Surr: 4-Bromofluorobenzene	68.6	87.5-115	S	%REC	20	2/27/2006 3:39:42 PM
EPA METHOD 9056A: ANIONS						Analyst: MAP
Chloride	310	6.0		mg/Kg	20	3/1/2006

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory

Date: *06-Mar-06*

CLIENT: Blagg Engineering
Work Order: 0602202
Project: McCoy GC D #1E - Separator Pit

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_S

Sample ID: MB-9880	SampType: MBLK	TestCode: 300_S	Units: mg/Kg	Prep Date: 2/27/2006	RunNo: 18443
Client ID: ZZZZZ	Batch ID: 9880	TestNo: E300		Analysis Date: 3/1/2006	SeqNo: 454928

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.30									

Sample ID: LCS-9880	SampType: LCS	TestCode: 300_S	Units: mg/Kg	Prep Date: 2/27/2006	RunNo: 18443
Client ID: ZZZZZ	Batch ID: 9880	TestNo: E300		Analysis Date: 3/1/2006	SeqNo: 454929

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	13.33	0.30	14.29	0	93.3	90	110				

3/7

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

CLIENT: Blagg Engineering
Work Order: 0602202
Project: McCoy GC D #1E - Separator Pit

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO_S

Sample ID: MB-9841	SampType: MBLK	TestCode: 8015DRO_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18412
Client ID: ZZZZZ	Batch ID: 9841	TestNo: SW8015		Analysis Date: 2/27/2006	SeqNo: 454242

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									

Sample ID: LCS-9841	SampType: LCS	TestCode: 8015DRO_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18412
Client ID: ZZZZZ	Batch ID: 9841	TestNo: SW8015		Analysis Date: 2/27/2006	SeqNo: 454243

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56.58	10	50	0	113	67.4	117				

Sample ID: LCSD-9841	SampType: LCSD	TestCode: 8015DRO_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18412
Client ID: ZZZZZ	Batch ID: 9841	TestNo: SW8015		Analysis Date: 2/27/2006	SeqNo: 454244

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58.00	10	50	0	116	67.4	117	56.58	2.49	17.4	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

CLIENT: Blagg Engineering
Work Order: 0602202
Project: McCoy GC D #1E - Separator Pit

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GRO_S

Sample ID: MB-9854	SampType: MBLK	TestCode: 8015GRO_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18401
Client ID: ZZZZZ	Batch ID: 9854	TestNo: SW8015	(SW5035)	Analysis Date: 2/24/2006	SeqNo: 454039

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0									

Sample ID: LCS-9854	SampType: LCS	TestCode: 8015GRO_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18401
Client ID: ZZZZZ	Batch ID: 9854	TestNo: SW8015	(SW5035)	Analysis Date: 2/24/2006	SeqNo: 454040

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23.40	5.0	25	0	93.6	84	120				

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Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

CLIENT: Blagg Engineering
Work Order: 0602202
Project: McCoy GC D #1E - Separator Pit

ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX_S

Sample ID: MB-9854	SampType: MBLK	TestCode: 8021BTEX_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18401
Client ID: ZZZZZ	Batch ID: 9854	TestNo: SW8021	(SW5035)	Analysis Date: 2/24/2006	SeqNo: 453994

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.050									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.050									

Sample ID: LCS-9854	SampType: LCS	TestCode: 8021BTEX_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18401
Client ID: ZZZZZ	Batch ID: 9854	TestNo: SW8021	(SW5035)	Analysis Date: 2/24/2006	SeqNo: 453996

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4480	0.050	0.449	0	99.8	85.6	116				
Toluene	1.614	0.050	1.62	0	99.6	82.4	120				
Ethylbenzene	0.4985	0.050	0.508	0	98.1	86.4	111				
Xylenes, Total	1.443	0.050	1.48	0	97.5	78.4	125				

Sample ID: LCSD 9854	SampType: LCSD	TestCode: 8021BTEX_S	Units: mg/Kg	Prep Date: 2/23/2006	RunNo: 18401
Client ID: ZZZZZ	Batch ID: 9854	TestNo: SW8021	(SW5035)	Analysis Date: 2/24/2006	SeqNo: 453997

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4441	0.050	0.449	0	98.9	85.6	116	0.448	0.874	27	
Toluene	1.594	0.050	1.62	0	98.4	82.4	120	1.614	1.23	19	
Ethylbenzene	0.4984	0.050	0.508	0	98.1	86.4	111	0.4985	0.0201	10	
Xylenes, Total	1.429	0.050	1.48	0	96.6	78.4	125	1.443	0.940	13	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 2/21/2006

Work Order Number 0602202 | Received by LMM

Checklist completed by Lisa Hedrick 2/21/06
Signature Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 5° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BLAGG ENER. / XTO ENERGY
Address: P.O. BOX 87 BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: McCoy GC D #1E - SEPARATOR PIT
Project #:
Project Manager: NV
Sampler: NV
Sample Temperature: 60°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative cool	HEAL No.	(BTEX + MTBE + TMB's (8021B))	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)		Chloride				Air Bubbles or Headspace (Y or N)
				1-4 oz.				0602202																		
2/20/06	1043	SOIL	① @ 23'	~~SOIL~~ NV			✓	-1	✓		✓											✓				

Date: 2/21/06 Time: 0730 1045 NV Relinquished By: (Signature) Nelson VH
Received By: (Signature) Lisa Hall 1614 2/21/06
Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks: