3RP-414

Annual Groundwater Remediation Reports For Year 2009

March 2010

XTO ENERGY

March 8, 2010

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) herein submits our Annual Groundwater Remediation Reports for year ending 2009, in accordance with the New Mexico Oil Conservation Division (NMOCD) approved Groundwater Management Plan (GWMP). Enclosed are summary reports with analytical data, summary tables, site maps, topographic maps, potentiometric surface diagrams and recommendations/proposed actions for:

- Bruington Gas Com #1- 3RP106
- Federal Gas Com #H1- 3RP110
- McCoy GC D #1E- 3RP414
- OH Randel #7- 3RP386
- Rowland Gas Com #1- 3RP124
- Valdez A #1E- 3RP134

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

- EJ Johnson C #1E- 3RP385
- Frost, Jack B #2- 3RP416
- PO Pipken #3E- 3RP409

In previously submitted reports, eighteen sites met the closure requirements outlined in the GWMP. XTO has requested closure of these sites annually since 2006. The reports for the below listed sites are being submitted again for your review.

- Abrams J #1- 3RP100
  Closure Requested 01-2007
- Armenta Gas Com C #1E- 3RP394
  Closure Requested 01-2006
- Baca Gas Com A #1A- 3RP104
  Closure Requested 03-2008
- Bergin Gas Com #1E- 3RP105
  Closure Requested 01-2006
- Carson Gas Com #1E- 3RP415
  Closure Requested 04-2009
- Garcia Gas Com B #1- 3RP111
  Closure Requested 03-2008
- Haney Gas Com B #1E- 3RP113
  Closure Requested 03-2008
- Hare Gas Com B #1- 3RP413
  Closure Requested 03-2008
- Hare Gas Com B #1E- 3RP384
  Closure Requested 03-2008
- Hare Gas Com I #1- 3RP412
  Closure Requested 03-2008
- Masden Gas Com #1E- 3RP120
  Closure Requested 03-2008
- McDaniel Gas Com B #1E- 3RP121
  Closure Requested 03-2008
- Romero Gas Com A #1- 3RP123
  Closure Requested 01-2007
- Snyder Gas Com #1A- 3RP126
  Closure Requested 04-2009
- State Gas Com BS #1- 3RP127
  Closure Requested 01-2006
- Stedje Gas Com #1- 3RP128
  Closure Requested 03-2008
- Sullivan Frame A #1E- 3RP130
  Closure Requested 03-2008
- Sullivan Gas Com D #1- 3RP131
  Closure Requested 04-2009

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

Respectfully,

Martin Nee
EH & S Manager
San Juan Division

cc: Mr. Brandon Powell, Environmental, NMOCD District III Office, Aztec, NM
Ms. Ashley Ager, LT Environmental
File- San Juan Groundwater

McCoy Gas Com D
 # 1 E

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2009

McCoy Gas Com D #1E
3RP-414
(E) SECTION 28 – T30N – R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

MARCH 2010

TABLE OF CONTENTS

Appendices

2009 XTO GROUNDWATER REPORT

McCOY GAS COM D #1E
3RP-414

SITE DETAILS

LEGALS - TWN: 30N **RNG:** 12W **SEC:** 28 **UNIT:** E
OCD HAZARD RANKING: 30 **LAND TYPE:** FEE
LATITUDE: 36.78668 **LONGITUDE:** 108.10751

INTRODUCTION

XTO Energy Inc. (XTO) acquired the McCoy Gas Com D #1E well site from Amoco Production Company (Amoco) in January 1998. This is a gas producing well in the Dakota Sandstone and is currently active. There is an irrigation ditch directly south of the location that flows in the summer months while remaining dry in the winter months. A topographic map and site map are presented as Figures 1 and 2.

HISTORY

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 1). Impacted soil was excavated to a depth of approximately 23 feet and an estimated 750 cubic yards of impacted soil was removed (Attachment 2). The floor of the excavation was sampled and no groundwater was encountered. Monitoring well MW-1 was installed in September 2006 and sampled in October 2006. Completion Diagrams and Borehole Logs are presented as Figures 4-5 documenting drilling that occurred on site in 2006. Laboratory results for groundwater samples from monitoring well MW-1 revealed benzene, toluene, ethyl benzene and total xylene (BTEX) constituents above New Mexico Water Quality Control Commission (WQCC) standards.

The 2006 annual groundwater report was submitted to the New Mexico Oil Conservation Division (OCD) in February 2007, proposing the installation of two down gradient monitoring wells to further delineate impact to groundwater in accordance with OCD approved Groundwater Management Plan.

XTO installed two down gradient monitoring wells (MW-2 and MW-3) in May 2007. Completion Diagrams and Borehole Logs for the monitoring wells installed during 2007 are presented in Figures 6-7. All three monitoring wells were sampled in May 2007. Laboratory results of groundwater samples revealed elevated BTEX concentrations in monitoring well MW-1 (source area) but BTEX constituents were not detected above the laboratory equipment detection limits (0.2 ug/L) in monitoring wells MW-2 and MW-3.

In a remediation work plan dated October 31, 2007 and submitted to OCD, XTO proposed installation of ORC socks in monitoring well MW-1 (Attachment 3). In November 2007 ORC socks that produce a controlled release of oxygen into the groundwater for up to 12 months were installed in monitoring well MW-1 the vertical length of the water column within the monitoring well.

2009 XTO GROUNDWATER REPORT

The 2007 annual groundwater report was submitted to the OCD in February 2008, proposing annual sampling of monitoring well MW-1 to verify dissolved oxygen concentrations, annual sampling of MW-2 and MW-3 to confirm no migration and continued annual monitoring of water levels to assess gradient.

The 2008 annual groundwater report was submitted to the OCD in April 2009 proposing replacement of the ORC sock in monitoring well MW-1 along with annual sampling of all three monitoring wells.

In January 2009 OCD requested XTO sample monitoring well MW-1 while an OCD representative collected a duplicate sample. This was done on January 21, 2009.

A summary of laboratory results from historical and current groundwater monitoring is presented as Table 1. A summary of general water quality data from 2006 is presented as Table 2. Copies of the laboratory data sheets and associated quality assurance/quality control data for 2009 are presented as Attachment 4.

METHODOLOGY

ORC socks were removed from monitoring well MW-1 and annual samples of groundwater were collected in May 2009. After sampling the ORC socks were replaced.

Water Level Measurements

Static groundwater level monitoring includes recording depth to groundwater measurements with a Keck oil/water interface probe. The interface probe is decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement. These data are recorded as Depth to Water (DTW) and Total Depth (TD) in feet on Table 1.

Groundwater Sampling

Prior to sampling groundwater, depth to groundwater and total depth of wells is measured with a Keck oil/water interface probe. Presence of any free-phase crude oil is also investigated using the interface probe. The interface probe is decontaminated with Alconox™ soap and rinsed with de-ionized water prior to each measurement. The volume of water in the wells is calculated, and a minimum of three casing volumes of water is purged from each well using a disposable bailer or a permanent decontaminated PVC bailer. As water is extracted, pH, electric conductivity and temperature are monitored. Wells are purged until these properties stabilize, indicating that the purge water is representative of aquifer conditions. Stabilization is defined as three consecutive stable readings for each water property (±0.4 units for pH, ±10 percent for electric conductivity and ±2° C for temperature). All purge water is disposed of into tanks on site.

Once each monitoring well is properly purged, groundwater samples are collected by filling at least two 40-millititer (ml) glass vials. The pre-cleaned and pre-preserved (with hydrochloric acid or mercuric chloride) vials are filled and capped with no air inside to prevent degradation of the sample. Samples are labeled with the date and time of collection, well designation, project name, collector's name and parameters to be analyzed. They are immediately sealed and packed on ice. The samples are shipped to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico in a sealed cooler via bus before designated holding times expire. Proper chain-of-custody (COC) procedures are followed with logs documenting the date and time sampled, sample

number, type of sample, sampler's name, preservative used, analyses required and sampler's signature.

Groundwater Contour Maps
Top of casing well elevations were surveyed using a surveyor's level; and groundwater elevations obtained from monitoring wells during site visits were used to draft groundwater contour maps. Contours were inferred based on groundwater elevations obtained and observation of physical characteristics at the site (topography, proximity to irrigation ditches, etc.).

RESULTS

Laboratory analytical results for monitoring well MW-1 indicate concentrations of total xylene exceeding WQCC standards.

The unlined irrigation ditch adjacent to the location controls groundwater behavior at the site. Groundwater flows towards the northeast when the ditch is running and towards the southwest when it is empty. The ditch typically runs at full capacity in May and is dry by November for the winter season. This pattern has been observed yearly since 2007. Figure 7 illustrates the estimated groundwater gradients for May 2009.

CONCLUSIONS

Groundwater analysis from monitoring well MW-1 shows elevated concentrations of BTEX constituents.

RECOMMENDATIONS

XTO proposed replacing the ORC socks in monitoring well MW-1. In addition, XTO will begin quarterly sampling of monitoring well MW-1 and continue annual sampling of monitoring wells MW-2 and MW-3 to confirm no migration.

Table 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

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

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	40.00		22	2500	2700	19000
16-May-07		30.69	39.75		30	760	1700	24000
13-May-08		31.97	39.75		ND	640	540	11000
21-Jan-09		36.88	39.65		ND	1200	1100	12000
26-May-09		30.68	39.65		ND	620	640	11000
16-May-07	MW #2	30.56	36.50		ND	ND	ND	ND
13-May-08		31.98	36.50		ND	ND	ND	ND
16-May-07	MW #3	21.55	32.85		ND	ND	ND	ND
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

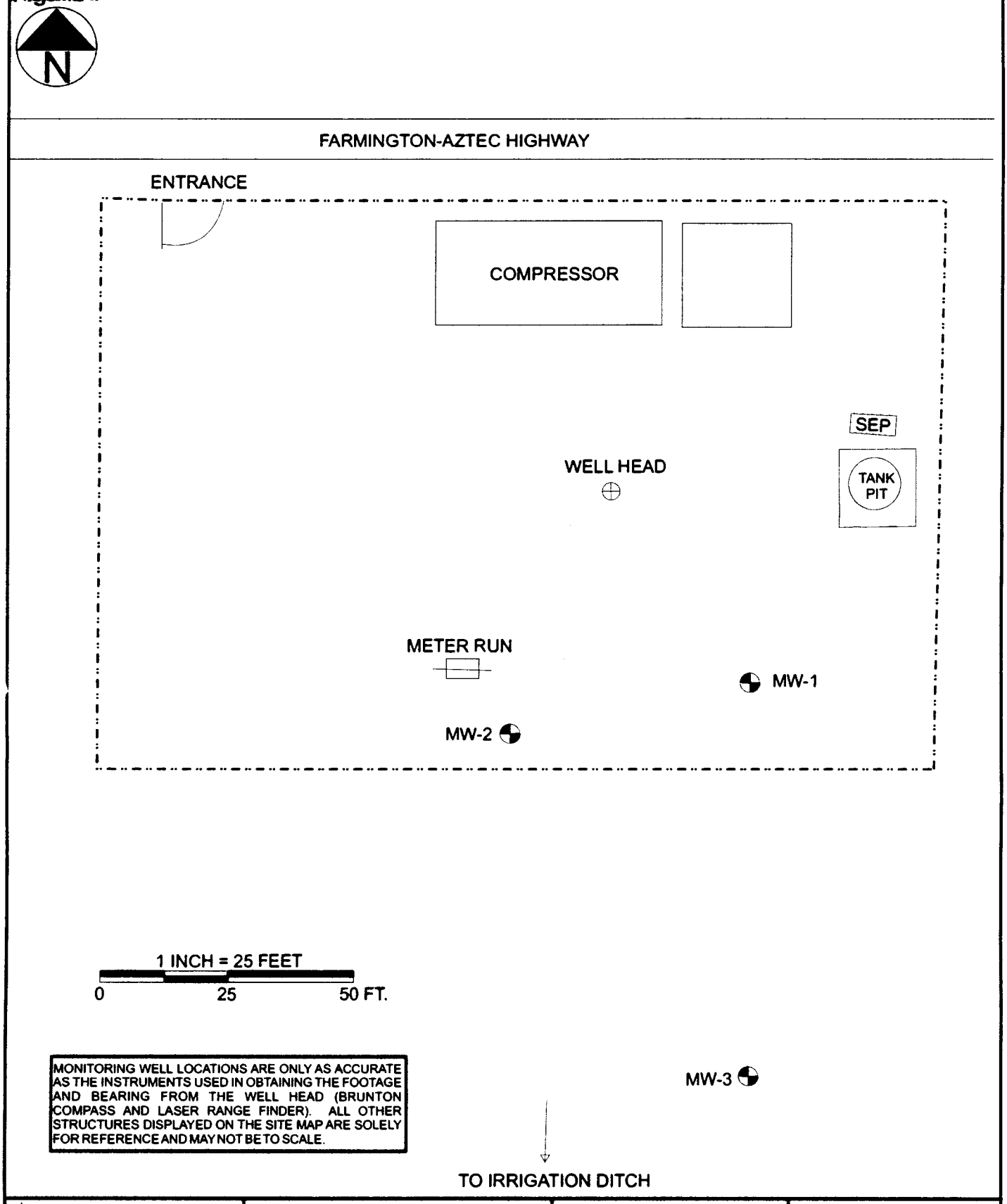
Sample Date: October 16, 2006

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

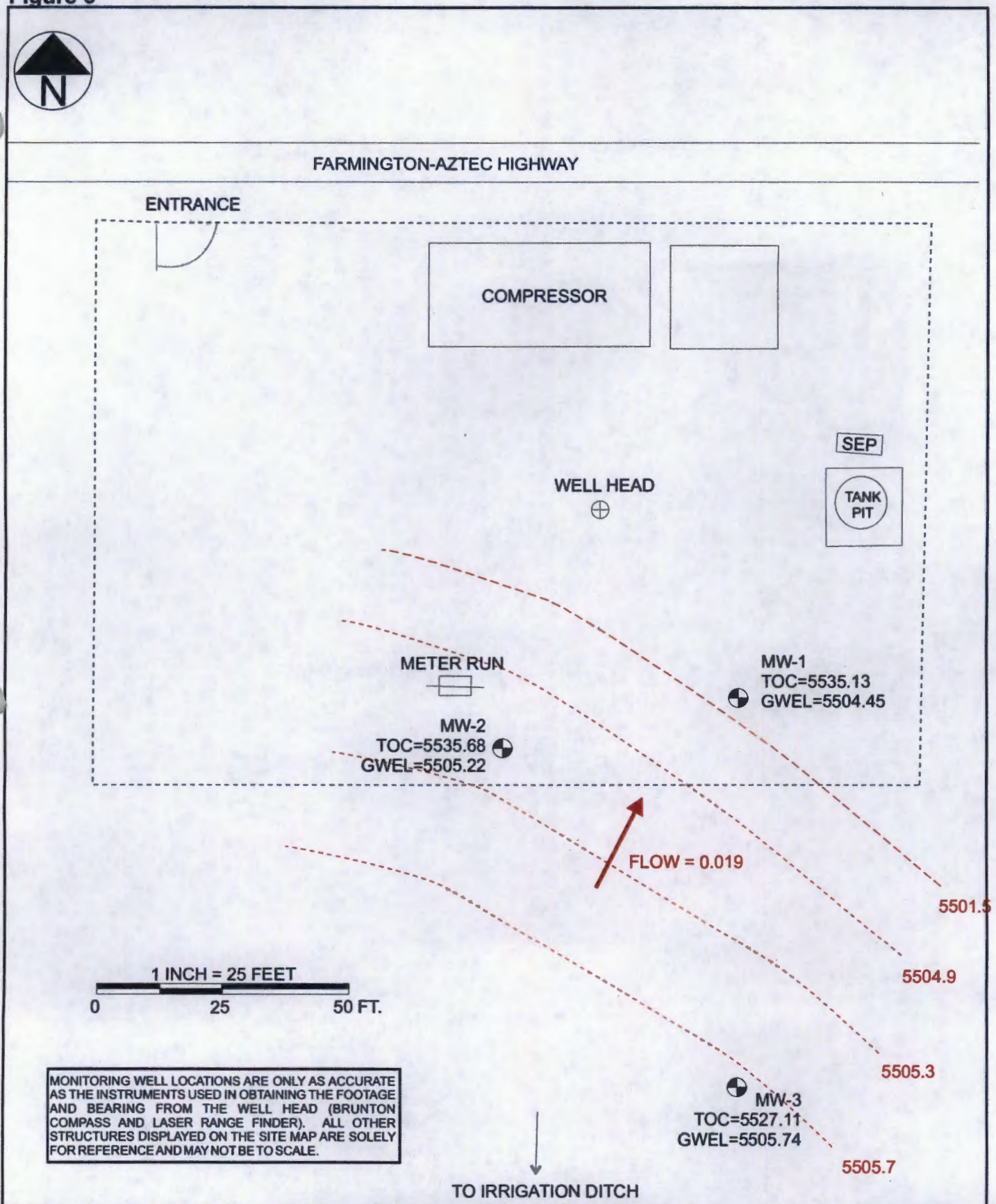
Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

Figure 2



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	MCCOY GAS COM D #1E SW/4 NW/4 SEC. 28, T30N, R12W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 09/28/07	SITE MAP 09/27/07

Figure 3



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	MCCOY GAS COM D #1E SW/4 NW/4 SEC. 28, T30N, R12W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ADH REVISED: 26 May 09	GROUNDWATER GRADIENT MAP 26 May 09

Figure 4

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 1
Well #: NA
Page: 1 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
0		0-22'	cuttings	Brown, poorly sorted gravelly sand with occasional cobbles. Fill.	0	Fast
5		7.5-8'		Large cobble (able to get past with auger)		Slow
10						
15		18'	cuttings	increasing amounts of cobbles		Steady
20						

Comments: No samples collected in fill. Hole bored in center of pit. Previous notes and account from operator (Tony Espinoza) indicate fill to ~22'

Geologist Signature: Ashley L Ager

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
					208.5	
25					169.8	
		26-28'	cuttings	Gray, coarse, poorly sorted sand with 50% cobbles, dry		
					188.9	
		28-31.5'	cuttings	Brownish gray, coarse sand and cobble fragments		
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 5

RECORD OF SUBSURFACE EXPLORATION

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

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

Borehole Location: 36° 47.196' N, 108° 06.468' 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
0		0-5'	cuttings	Brown, poorly sorted gravelly sand, coarse grained, dry w/occasional cobbles (Fill)		Steady and Fast
5		5-5.5'	cuttings	Greenish-gray shale	0	
		5.5-10'	cuttings	Brown, poorly sorted gravelly sand, coarse grained, dry w/occasional cobbles (Fill)	0	
10		10-12'	cuttings	Reddish brown silty sand and gravel, still cobbly, damp, v. poorly sorted sand w/silty matrix	0	Fast
		12-30'	cuttings	Brown, coarse sand, mainly cobbles, damp, some odor, v. poorly sorted	89.2	
15					138.6	
20					296.8	

Comments:

Geologist Signature: Ashley L. Ager

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	
					482.2	
		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 6

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 3
Well #: MW-2
Page: 1 of 3
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.194' N, 108° 06.474' W
GWL Depth: 32.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/02/07
Date Completed: 05/08/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
0		0-9	cuttings	fine to very coarse fragments of cobbles in returns. Very slow progress, small amount of cuttings		Very Slow
5						
		9'		increase in cutting volume, fine to very coarse fragments of cobbles, lighter color		slight increase in penetration rate
10						
		12'		decrease in cutting volume		very slow
15						
20						

Comments: Penetration rate extremely slow trying to pound through cobbles

Geologist Signature: *Ashley L. Ager*

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 3
Well #: MW-2
Page: 2 of 3
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.194' N, 108° 06.474' W
GWL Depth: 32.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/02/07
Date Completed: 05/08/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20		20'	cuttings	finer particles in cuttings, more sand content		Very slow
				significantly more sand content (~40% sand, 60% cobble fragments)		Very slow
25		25'				
				no sand, only cobble fragments, extremely slow penetration rate - hardly any downward progress in 1 hour		Stop for day at 1730; leave equipment in hole on site; begin 05/03/07 at 0830: water in hole at startup, but quickly blown out
		29'				
30				wet sand covering cobble fragments, water coming out of hole		Very slow
		32.5'		no penetration for over 2 hours - removing pipe to assess equipment		1630: bit teeth worn completely down, pipe threads sheared in one section, one bent rod on inner tube.
		33.5'				
35				Use auger to drill out hole beneath cobbles. No cuttings, but occasionally some wet sand		Auger is relatively fast - rig chokes when can't turn on cobbles, but penetration is steady
		35-40'				
40						

Comments: Pulled all pipe at 13:30 on 05/03/07 and discovered damaged equipment. Worked rest of the day repairing equipment. Startup again at 28' on 05/04/07. Moved 1 foot, before fluted disc failed on drill rig - requires machine shop for repair. Leave site at 11:15 and return on 05/08/07: begin drilling at 33', some rod stuck in outer tubing. Inject 14 gallons of water to loosen. Pull all rod and outer tubing and begin augering to finish hole

Geologist Signature: Ashley L Ager

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 3
Well #: MW-2
Page: 3 of 3
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.194' N, 108° 06.474' W
GWL Depth: 32.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/02/07
Date Completed: 05/08/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
40		40-45	cuttings	Wet coarse sand and cobble fragments		Slow, but steady
45						
50						
55						
60						

Comments: TD reached at 45', auger bit missing all four teeth

Geologist Signature: Ashley L. Ager

Figure 7

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 4
Well #: MW-3
Page: 1 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.181' N, 108° 06.462' W
GWL Depth: 24'
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/08/07
Date Completed: 05/09/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
0		0-7'	cuttings	Loose fine to coarse sand and cobbles, tan, poorly sorted, subangular to subrounded, damp		Begin with auger - penetration only to 7'. Switch to ODEX
5		7-12'		sand and cobble fragments in returns		steady, but very hard
10		12-15'		increase in sand content, damp sand		slow
15		15-17'		less sand content, mainly dark cobble fragments, very angular		very slow
20		17-23'		damp sand and cobble fragments. Sand content ~ 50%		slightly fast progress, through most of the cobble layer

Comments:
Penetration rate is very slow trying to pound through cobbles

Geologist Signature: Ashley L. Ager

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 4
Well #: MW-3
Page: 2 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.181' N, 108° 06.462' W
GWL Depth: 24'
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/08/07
Date Completed: 05/09/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20		23-25'		wet sand and cobble fragments, water pouring out of hole at 24'		slow, but steady
25						faster penetration rate
30		30-32'		lots of water and mud, few cobble fragments, mainly silty sand, completely saturated		
35						
40						

Comments: TD at 32', but inner rod stuck in outer tubes. Lost part of hole to cave in while attempting to retrieve outer rod. Set up auger to repair hole. Auger down to 32' again - no cuttings

Geologist Signature: Ashley L Ager

Attachment 1

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

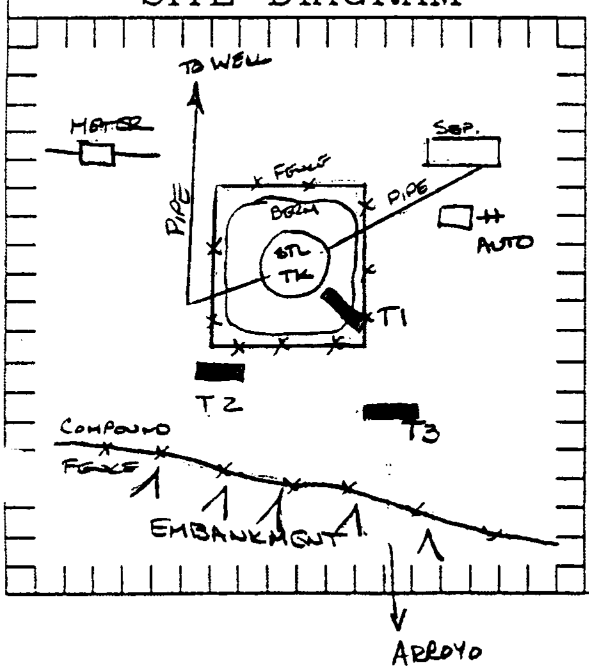
FIELD NOTES & REMARKS: Located 70' South & 30' East of Well Head. Soil Conditions: Brown Silty Sand to Gravel, Moist, Dense (Possible Fill). Pit located in South East corner of location above drainage to south. Appears that well location has 20± feet of fill. Irrigation ditch unlined flowing west, 150' south of location. Tank bedded in pea gravel.

SAMPLE INVENTORY:

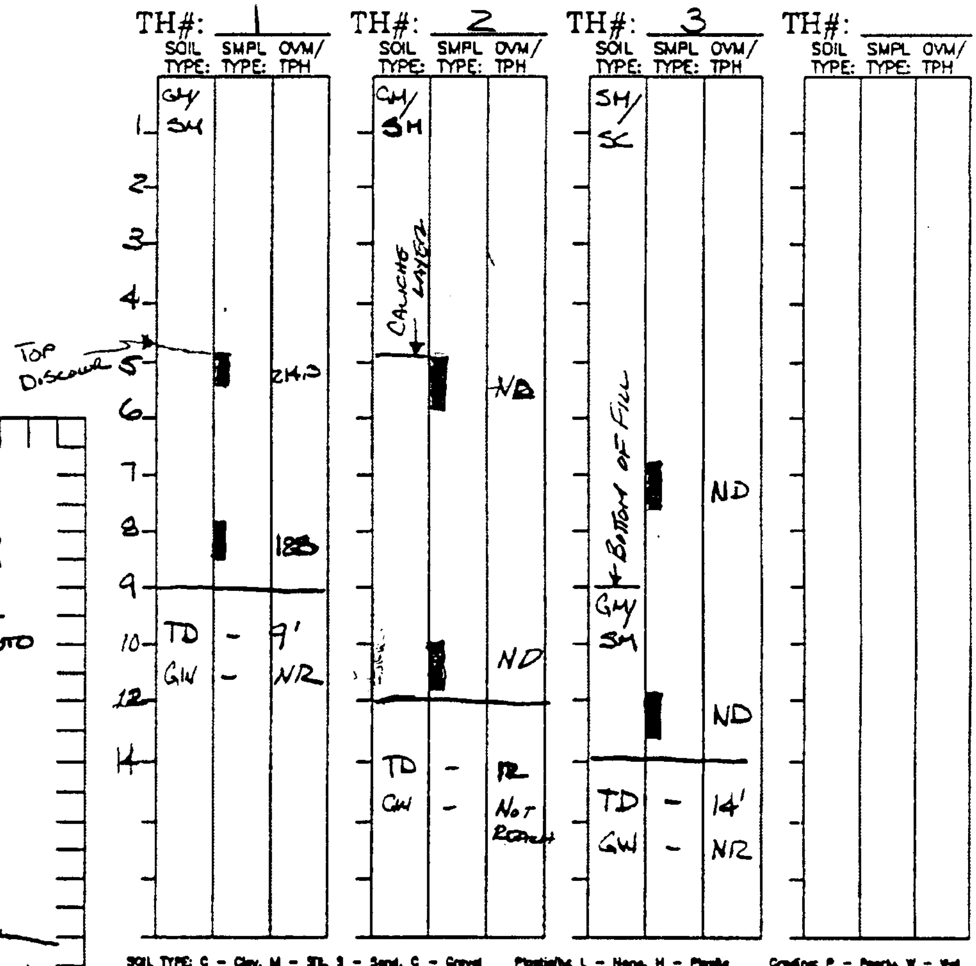
SMPL ID:	SMPL TYPE:	LABORATORY ANALYSIS:
T1@5'	Soil	Head
T1@5'	Soil	8020/TPH

SCALE
0 10 20 FEET

SITE DIAGRAM



TEST HOLE LOGS:



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' NV	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 Tristano
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	EPA 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

Attachment 2

FLORA VISTA QUAD. JUL 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

5

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 (HERGE)

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
MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION - WARMING GRAY TO BLACK STARTING @ 1' BELOW GRADE
HC ODOR DETECTED: YES / NO EXPLANATION - DISCOLORED PORTION ONLY. AROUND TANK PERIMETER
SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS.
ADDITIONAL COMMENTS: ORIGINAL PIT DIMENSION 17'x19' W/ STEEL TANK ~ 5' BELOW GRADE.

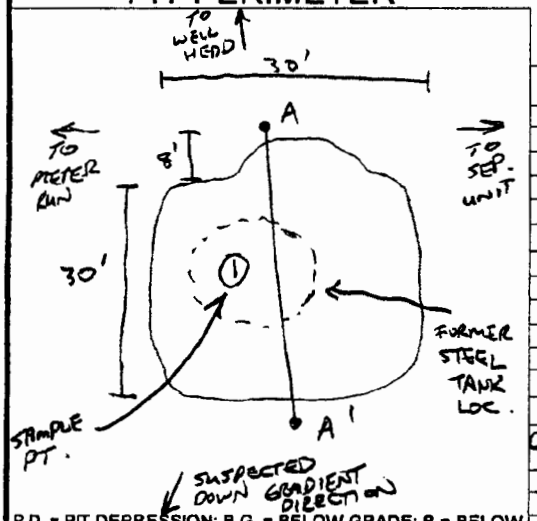
NEED TO ESTABLISH HORIZ. & VERT. EXTENT

FIELD 418.1 CALCULATIONS

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

SCALE 0 FT

PIT PERIMETER



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

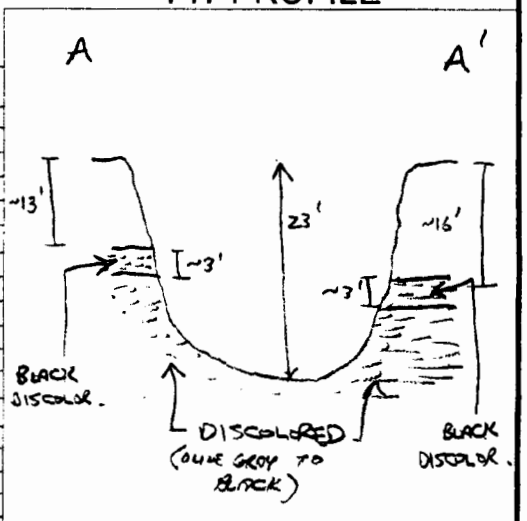
OVM READING

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



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

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				

5 / 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: 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

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 ENGR. / XTO ENERGY

Address: P.O. BOX 87
BLFD., NM 87413

Phone #: 632-1199

Fax #:

QA / QC Package: Std ☐ Level 4 ☐

Other:

Project Name: McCOY GC D #1E - SEPARATOR PIT

Project #: NV

Project Manager: NV

Sampler: NV

Sample Temperature: 5°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl$_2$	Preservative HNO$_3$	Preservative COOL	HEAL No. 0602202	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)
2/20/06	1043	SOIL	① @ 23'	1-4 oz. ~~5 oz 2~~			✓	-1	✓		✓											✓			

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
2/21/06	0730 ~~1045~~	[signature]	[signature] 1614 2/21/06
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Attachment 3

Lodestar Services, Inc.
P.O. Box 3861, Farmington, NM 87499-3861, 505-334-2791

October 31, 2007

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South Francis Drive
Santa Fe, New Mexico 87505

Certified Mail: 7006 2150 0001 7643 8516

RE: McCoy Gas Com D #1E

Dear Mr. Von Gonten,

On behalf of XTO Energy, Inc. (XTO), Lodestar Services, Incorporated (Lodestar) is pleased to present this work plan for installation of oxygen release compound (ORC©) into groundwater monitoring well MW-1 at the McCoy Gas Com D #1E. The site is located in Unit F of Section 28 of Township 30N, Range 12W and includes three groundwater monitoring wells.

Attached for your review is documentation of previous work completed at the site, as well as a current site map. In February 2006, XTO discovered a former earthen production pit while removing a 95-barrel steel tank. Approximately 750 cubic yards of impacted soil were excavated, and a confirmation sample collected from the excavation indicated that total benzene, toluene, ethyl benzene, and xylenes (BTEX) were beneath the New Mexico Oil Conservation Division's (NMOCD) 50 milligrams per kilogram (mg/kg) standard. However, the concentration of Total Petroleum Hydrocarbons (TPH) was above the NMOCD's 100 mg/kg guideline (see attached laboratory reports). In September 2006, XTO completed two soil borings on the downgradient edge of the former pit to investigate the extent of impact. Groundwater was encountered in the second boring, and XTO installed groundwater monitoring well MW-1. Groundwater samples were collected and analyzed for BTEX by USEPA method 8021. Results are shown in the table below and indicate concentrations of BTEX above New Mexico Water Quality Control Commission (NMWQCC) standards.

In May 2007, XTO installed two additional groundwater monitoring wells estimated to be downgradient of MW-1 to determine extent of impact to groundwater. Groundwater samples were collected from the three wells just after installation, and results indicated MW-2 and MW-3 contain very low or no detectable concentrations of BTEX.

MCCOY GAS COM D #1E
GROUNDWATER SAMPLING RESULTS

Sample Date	Groundwater Monitoring Well Number	Benzene µg/L	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)
10/16/2006	MW-1	22	2500	2700	19,000
05/16/2007	MW-1	30	760	1700	24,000
	MW-2	ND	ND	ND	3.1
	MW-3	ND	ND	ND	ND

ND: Not Detected

To reduce concentrations of BTEX in MW-1, XTO will install ORC filter socks, containing magnesium peroxide, throughout the water column to supply oxygen for aerobic degradation of hydrocarbons. The ORC socks will be replaced annually as necessary. MW-1R will continue to be sampled on an annual basis to verify effectiveness of the added nutrients. The ORC socks will be removed at least 24 hours prior to sampling to allow for restoration of static water conditions. Dissolved oxygen will be monitored in MW-1R bi-monthly. Once the dissolved oxygen concentration in MW-1R shows a significant increase, groundwater samples will be collected quarterly. When concentrations of BTEX are beneath NMWQCC standards, the ORC socks will be removed and quarterly sampling will continue for four consecutive quarters. Following four consecutive quarters of clean analytical results, XTO will submit a closure report for the site.

Should you have any questions or require additional information, please do not hesitate to contact Lisa Winn of XTO at (505) 333-3196 or you can call me at (970) 946-1093.

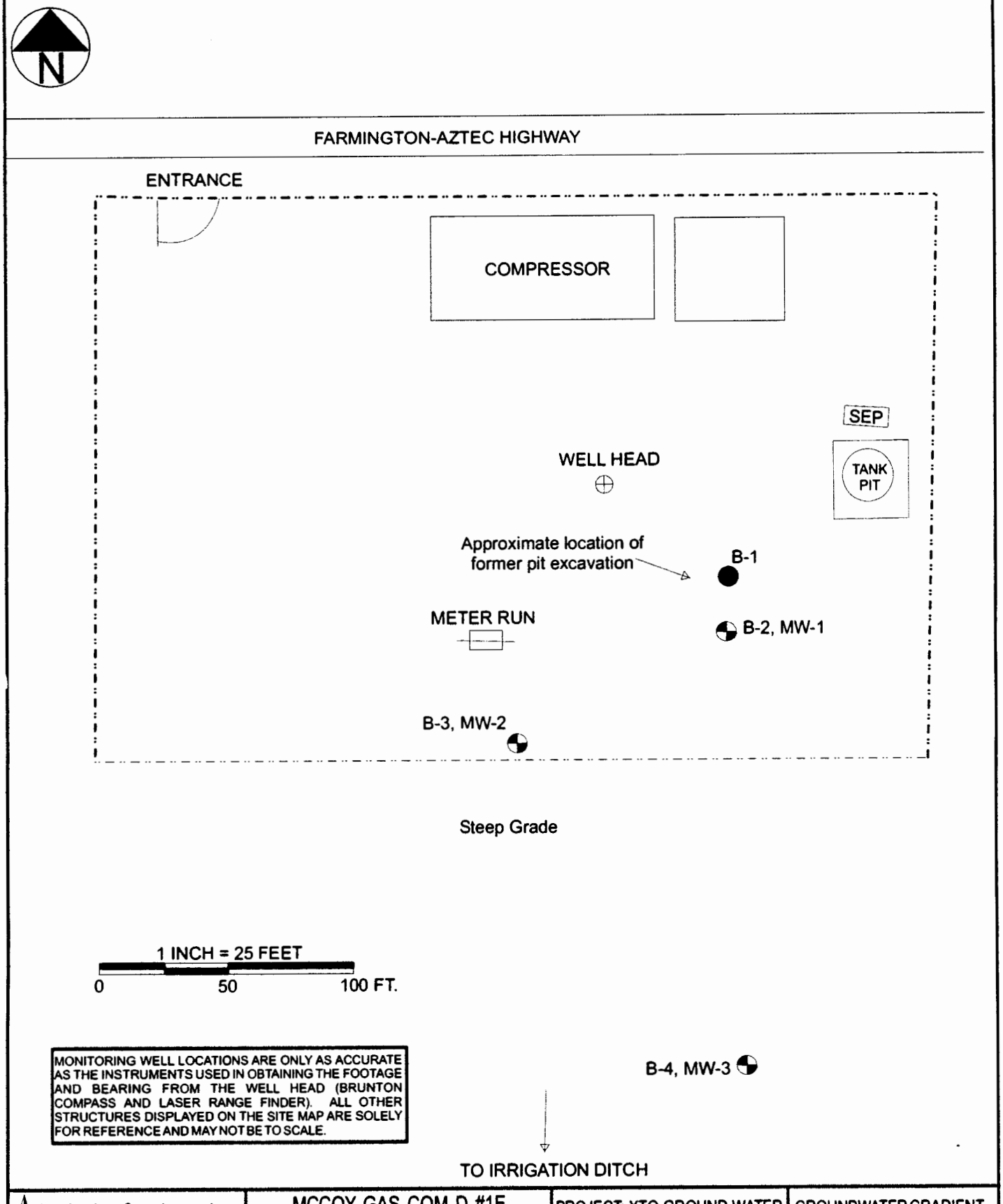
Sincerely,
LODESTAR SERVICES, INC

Ashley Ager

Cc: Lisa Winn, XTO
Kim Champlin, XTO
Martin Nee, Lodestar Services
Brandon Powell, NMOCD
File

Attachments: Site Map
Previous Excavation Files
Soil Boring Logs
Groundwater Monitoring Well Completion Diagrams
Groundwater Sampling Laboratory Results

Attachment 1: Site Map



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	MCCOY GAS COM D #1E SW/4 NW/4 SEC. 28, T30N, R12W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 09/28/07	GROUNDWATER GRADIENT MAP 09/27/07

Attachment 2: Previous Excavation Files

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: EXCAVATION

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/ CONC. (10'DIA x 5') BELOW GRADE

FIELD NOTES & REMARKS: LOCATED 70' SOUTH & 30' EAST OF WELL HEAD. SOIL CONDITIONS: ROCKY SILTY SAND TO GRAVEL, MOIST, DENSE (POSSIBLE FILL). PIT LOCATED IN 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.

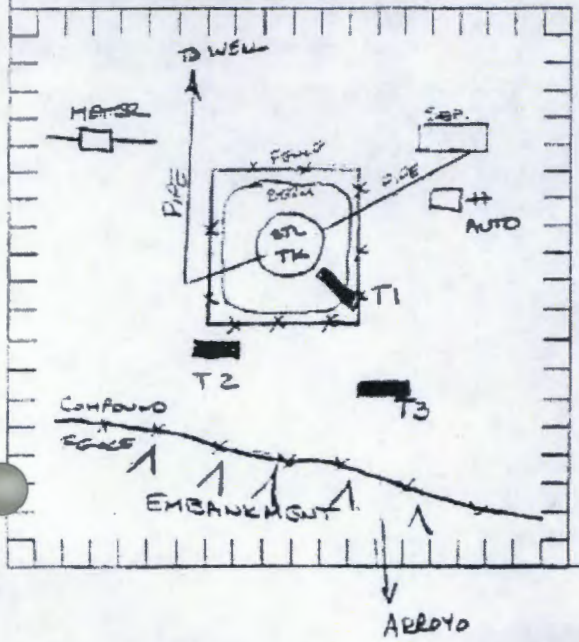
SAMPLE INVENTORY:

SMPL ID:	SMPL TYPE:	LABORATORY ANALYSIS:
T1@5'	Soil	418.1
T1@5'	Soil	BTEX/TPH

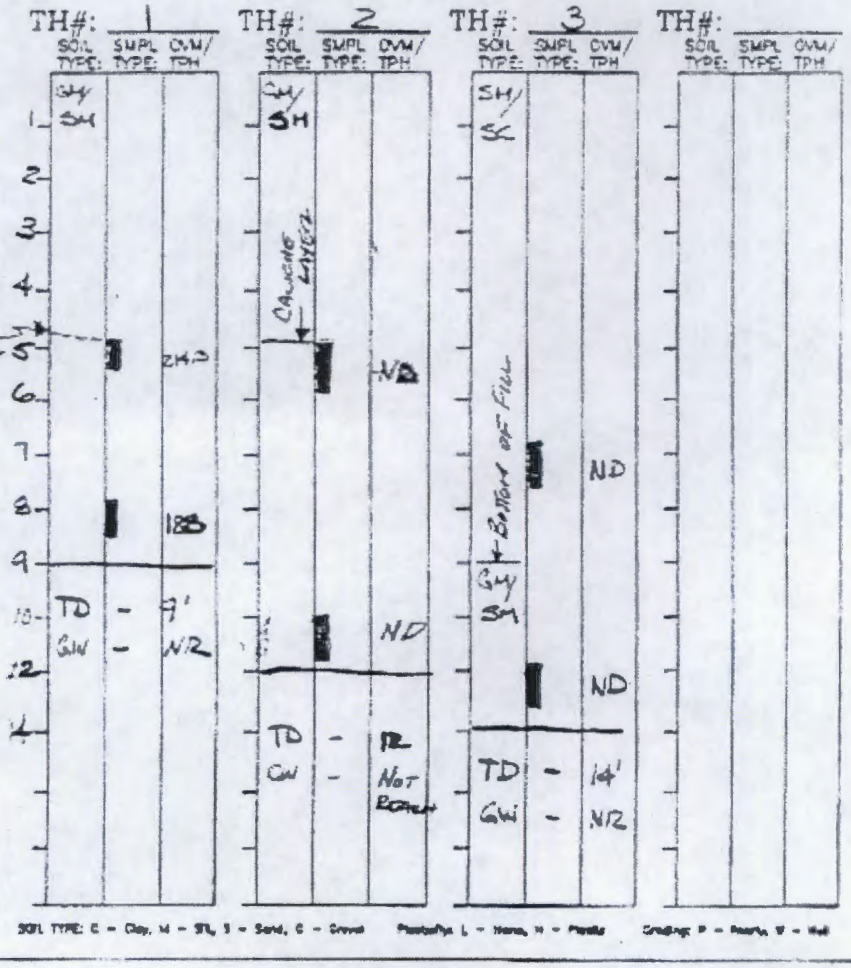
SCALE
0 10 20 FEET

N

SITE DIAGRAM



TEST HOLE LOGS:



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' NV	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	750	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

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.

Analyst

Review

CHAIN OF CUSTODY RECORD

Client/Project Name: Amoco / 92140

Project Location: [illegible]

Sampler (Signature): [signature]

Chain of Custody Tape No.: [illegible]

ANALYSIS/PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	EPA 3510	BTEX	EPA 8020	BTEX	EPA 418.1	TPH			Remarks
7' @ 6'	4/24/92	1040	178	Soil	1	✓	•							
7' @ 4'	4/24/92	1040	179	Soil	1			✓	✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	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

AKA WITH GWID. JWL 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

5

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: JFT 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. = 533 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
MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION - WAVING GRAY TO BLACK STARTING @ 1' BELOW GRADE
HC ODOR DETECTED: YES / NO EXPLANATION - DISCOLORED PORTION ONLY. AROUND TANK PERIMETER
SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS.
ADDITIONAL COMMENTS: ORIGINAL PIT DIMENSION 17x19' W/ STEEL TANK ~ 5' BELOW GRADE.

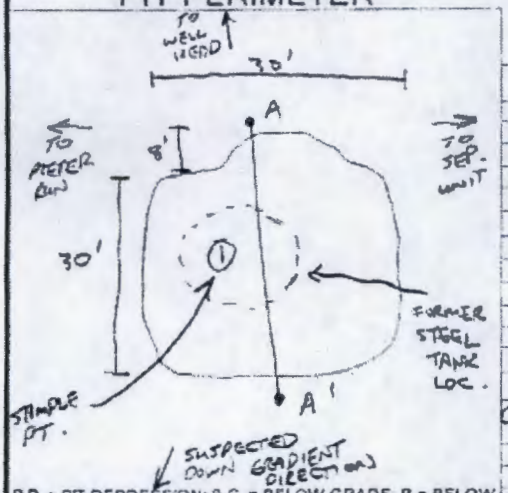
NEED TO ESTABLISH HORIZ. & VERT. EXTENT

FIELD 418.1 CALCULATIONS

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

SCALE 0 FT

PIT PERIMETER



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

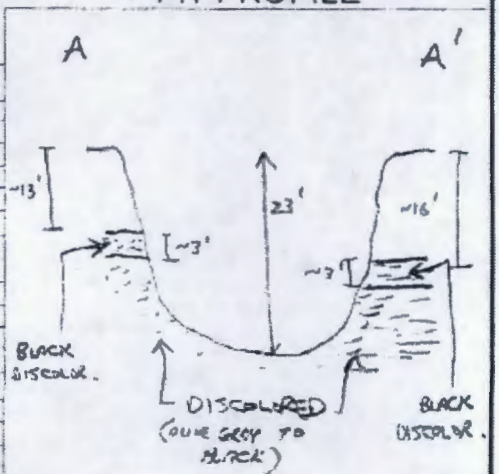
OVM READING

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

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
① @ 23'	TPH (8015B)	1013
"	BTEX (8021B)	"
"	CHLORIDE	"

PIT PROFILE



TRAVEL NOTES: CALLOUT: 2/16/06 - MORN. ONSITE: 2/15/06 - NOON 2/17/06 - MORN. 9am

revised: 09/04/02 bol1005C.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	Location of the Waste (Street address &/or ULSTR): E-28-30-12

attach list of originating sites as appropriate

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 V[illegible] 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 #, E - 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-01E - 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	63-124		%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	203	70-126	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	87.5-116	S	%REC	20	2/27/2006 3:39:42 PM
EPA METHOD 9056A: ANIONS						Analyst: MAP
Chloride	310	8.0		mg/Kg	20	3/1/2006

Qualifiers:

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

Hall En   onmental Analysis Laboratory

Date: 06-A   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
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

CLIENT: Blagg Engineering
Work Order: 0602207
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)	55.58	10	50	0	111	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)	56.99	10	50	0	114	67.4	117	55.58	2.49	17.4	

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

CLIENT: Blagg Engineering
Work Order: 0602208
Project: McCoy GC DRUL - 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				

Qualifiers:
- * Value above quantitation range
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits
- J Analyte detected below quantitation 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, Tota	1.429	0.050	1.48	0	96.6	78.4	125	1.443	0.940	13	

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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received 2/21/2005

Work Order Number 0502282 | Received by LMA

Checklist completed by Lisa Hebenstreit 2/21/05
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

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 ENGR. / XTO ENERGY

Address: P.O. BOX 87
BLFD., NM 87413

Phone #: 632-1199

Fax #:

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

Project Name: McCOY GC D #1E - SEPARATOR PIT

Project #: NV

Project Manager: NV

Sampler: NV

Sample Temperature: 5°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl₂	Preservative HNO₃	Preservative COOL	HEAL No. 0602202	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)
2/20/06	1043	SOIL	① @ 23'	1 - 4 oz. ~~JAR~~			✓	-1	✓		✓											✓			

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
2/21/06	0930 ~~1445~~	Nelson V[illegible]	Lisa [illegible] 2/21/06 1614
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Attachment 3: Soil Boring Logs

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 1
Well #: NA
Page: 1 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
0		0-22'	cuttings	Brown, poorly sorted gravelly sand with occasional cobbles. Fill.	0	Fast
5		7.5-8'		Large cobble (able to get past with auger)		Slow
10						
15		18'	cuttings	increasing amounts of cobbles		Steady
20						

Comments: No samples collected in fill. Hole bored in center of pit. Previous notes and account from operator (Tony Espinoza) indicate fill to ~22'.

Geologist Signature: Ashley L Ager

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

RECORD OF SUBSURFACE EXPLORATION

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

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

Borehole Location: 36° 47.196' N, 108° 06.468' 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
0		0-5'	cuttings	Brown, poorly sorted gravelly sand, coarse grained, dry w/occasional cobbles (Fill)		Steady and Fast
5		5-5.5'	cuttings	Greenish-gray shale	0	
		5.5-10'	cuttings	Brown, poorly sorted gravelly sand, coarse grained, dry w/occasional cobbles (Fill)	0	
10		10-12'	cuttings	Reddish brown silty sand and gravel, still cobbly, damp, v. poorly sorted sand w/silty matrix	0	Fast
		12-30'	cuttings	Brown, coarse sand, mainly cobbles, damp, some odor, v. poorly sorted	89.2	
15					138.6	
20					296.8	

Comments:

Geologist Signature: *Ashley L Ager*

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	
					482.2	
		32.5-37'	cuttings	Grayish green coarse sand w/gravel, poorly sorted sub-rounded, very strong odor Wet soil at 34'.	429.7	Fast
35				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

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 3
Well #: MW-2
Page: 1 of 3
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.194' N, 108° 06.474' W
GWL Depth: 32.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/02/07
Date Completed: 05/08/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
0		0-9	cuttings	fine to very coarse fragments of cobbles in returns. Very slow progress, small amount of cuttings		Very Slow
5						
10		9'		increase in cutting volume, fine to very coarse fragments of cobbles, lighter color		slight increase in penetration rate
		12'		decrease in cutting volume		very slow
15						
20						

Comments: Penetration rate extremely slow trying to pound through cobbles

Geologist Signature: Ashley L. Ager

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 3
Well #: MW-2
Page: 2 of 3
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.194' N, 108° 06.474' W
GWL Depth: 32.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/02/07
Date Completed: 05/08/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20		20'	cuttings	finer particles in cuttings, more sand content		Very slow
				significantly more sand content (~40% sand, 60% cobble fragments)		Very slow
25		25'				
				no sand, only cobble fragments, extremely slow penetration rate - hardly any downward progress in 1 hour		Stop for day at 1730; leave equipment in hole on site; begin 05/03/07 at 0830: water in hole at startup, but quickly blown out
		29'				
30				wet sand covering cobble fragments, water coming out of hole		Very slow
		32.5'		no penetration for over 2 hours - removing pipe to assess equipment		1630: bit teeth worn completely down, pipe threads sheared in one section, one bent rod on inner tube.
		33.5'				
35				Use auger to drill out hole beneath cobbles. No cuttings, but occasionally some wet sand		Auger is relatively fast - rig chokes when can't turn on cobbles, but penetration is steady
		35-40'				
40						

Comments: Pulled all pipe at 13:30 on 05/03/07 and discovered damaged equipment. Worked rest of the day repairing equipment. Startup again at 28' on 05/04/07. Moved 1 foot, before fluted disc failed on drill rig - requires machine shop for repair. Leave site at 11:15 and return on 05/08/07: begin drilling at 33', some rod stuck in outer tubing. Inject 14 gallons of water to loosen. Pull all rod and outer tubing and begin augering to finish hole

Geologist Signature: Ashley L Ager

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 3
Well #: MW-2
Page: 3 of 3
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.194' N, 108° 06.474' W
GWL Depth: 32.5
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/02/07
Date Completed: 05/08/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
40		40-45	cuttings	Wet coarse sand and cobble fragments		Slow, but steady
45						
50						
55						
60						

Comments: TD reached at 45', auger bit missing all four teeth

Geologist Signature: Ashley L. Ager

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 4
Well #: MW-3
Page: 1 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.181' N, 108° 06.462' W
GWL Depth: 24'
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/08/07
Date Completed: 05/09/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
0		0-7'	cuttings	Loose fine to coarse sand and cobbles, tan, poorly sorted, subangular to subrounded, damp		Begin with auger - penetration only to 7'. Switch to ODEX
5		7-12'		sand and cobble fragments in returns		steady, but very hard
10		12-15'		increase in sand content, damp sand		slow
15		15-17'		less sand content, mainly dark cobble fragments, very angular		very slow
20		17-23'		damp sand and cobble fragments. Sand content ~ 50%		slightly fast progress, through most of the cobble layer

Comments: Penetration rate is very slow trying to pound through cobbles

Geologist Signature: Ashley L Ager

RECORD OF SUBSURFACE EXPLORATION

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

Borehole #: 4
Well #: MW-3
Page: 2 of 2
Project Number:
Project Name: XTO Ground Water
Project Location: McCoy Gas Com D #1E

Borehole Location: 36° 47.181' N, 108° 06.462' W
GWL Depth: 24'
Drilled By: Enviro-Drill
Well Logged By: Ashley Ager
Date Started: 05/08/07
Date Completed: 05/09/07

Drilling Method: ODEX and Hollow Stem Auger
Air Monitoring Method: NA

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description	Air Monitoring	Drilling Conditions
20		23-25'		wet sand and cobble fragments, water pouring out of hole at 24'		slow, but steady
25						
						faster penetration rate
30		30-32'		lots of water and mud, few cobble fragments, mainly silty sand, completely saturated		
35						
40						

Comments: TD at 32', but inner rod stuck in outer tubes. Lost part of hole to cave in while attempting to retrieve outer rod. Set up auger to repair hole. Auger down to 32' again - no cuttings

Geologist Signature: Ashley L. Ager

Attachment 4: Groundwater Monitoring Well Completion Diagrams

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

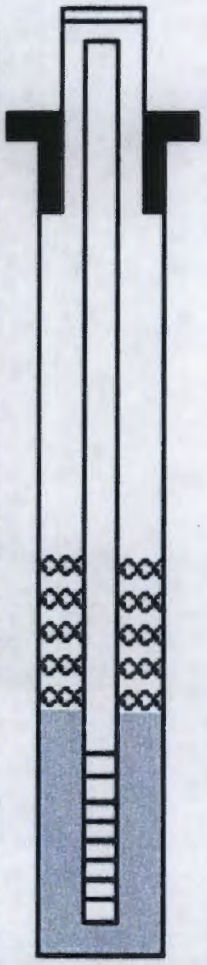
Elevation 5532
Well Location 36° 47.196' N, 108° 06.468' W
GWL Depth 34'
Installed By Envirotech

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

MONITORING WELL INSTALLATION RECORD

Borehole # 3
Well # MW-2
Page 1 of 1

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

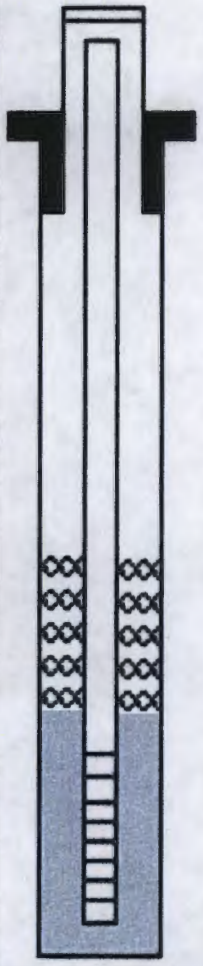
Project Name XTO Ground Water
Project Number _____ Cost Code _____
Project Location McCoy Gas Com D 1E

Elevation 5525
Well Location 36° 47.194' N, 108° 06.474' W
GWL Depth 32.5'
Installed By Enviro-Drill

On-Site Geologist Ashley Ager
Personnel On-Site
Contractors On-Site Shad Betts, Rodney Begay
Client Personnel On-Site

Date/Time Started 05/08/07, 12:27
Date/Time Completed 05/08/07, 13:55

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		3
Bottom of Protective Casing	steel	-2
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete	quikcrete	0.2
Bottom of Concrete		-0.8
Top of Grout	quikcrete and quikgrout	-0.8
Bottom of Grout		-23
Top of Well Riser	Sch. 40 PVC	2.5
Bottom of Well Riser		-42.4
Top of Well Screen	Sch. 40 PVC	-27.2
Bottom of Well Screen		-42.2
Top of Peltonite Seal	3/8" Bentonite hole plug	-23
Bottom of Peltonite Seal		-25
Top of Gravel Pack	10-20 grade silica sand	-25
Bottom of Gravel Pack		-42.4
Top of Natural Cave-In	Sand and cobbles	-42.4
Bottom of Natural Cave-In		-45
Top of Groundwater		-32.5
Total Depth of Borehole		-42.4



Top of Protective Casing 3
Top of Riser 2.5
Ground Surface 0
Top of Seal -23
Top of Gravel Pack -25
Top of Screen -27.2
Bottom of Screen -42.2
Bottom of Borehole -42.4

Comments: PVC riser pulled out of hole 2'8" while pulling auger.
50 lb bags of sand used: 6 ea. , 50 lb bags of bentonite used: 1 ea., Grout: 1 bag bentonite, 1 bag quikcrete; concrete: 1 bag of quikcrete used

Geologist Signature Ashley L. Ager

MONITORING WELL INSTALLATION RECORD

Borehole # 4
Well # MW-3
Page 1 of 1

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

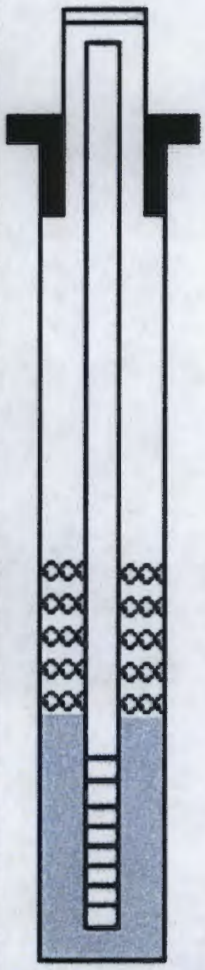
Project Name XTO Ground Water
Project Number _____ Cost Code _____
Project Location McCoy Gas Com D 1E

Elevation 5525
Well Location 36° 47.181' N, 108° 06.462' W
GWL Depth 24'
Installed By Enviro-Drill

On-Site Geologist Ashley Ager
Personnel On-Site
Contractors On-Site Shad Betts, Rodney Begay
Client Personnel On-Site

Date/Time Started 05/09/07, 1209
Date/Time Completed 05/09/07, 1740

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		2.5
Bottom of Protective Casing	steel	-2.5
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete	quikcrete	0.2
Bottom of Concrete		-1
Top of Grout	quikcrete and quikgrout	-1
Bottom of Grout		-17
Top of Well Riser	Sch. 40 PVC	2.2
Bottom of Well Riser		-32
Top of Well Screen	Sch. 40 PVC	-21.8
Bottom of Well Screen		-31.8
Top of Peltonite Seal	3/8" Bentonite hole plug	-17
Bottom of Peltonite Seal		-19
Top of Gravel Pack	10-20 grade silica sand	-19
Bottom of Gravel Pack		-32
Top of Natural Cave-In		NA
Bottom of Natural Cave-In		NA
Top of Groundwater		-24
Total Depth of Borehole		-32



Top of Protective Casing 2.5
Top of Riser 2.2
Ground Surface 0
Top of Seal -17
Top of Gravel Pack -19
Top of Screen -21.8
Bottom of Screen -31.8
Bottom of Borehole -32

Comments: Hole caved in while installing bentonite plug. Had to auger out cave in mixed with bentonite to reform seal. 50 lb bags of sand used: 4.5 ea. . 50 lb bags of bentonite used: 2 ea.. Grout: 2 bags bentonite. 2 bags quikcrete; concrete: 1 bag of quikcrete

Geologist Signature Ashley L. Ager

Attachment 5: Groundwater Sampling Laboratory Results

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
- 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:**	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
- 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: 0610211-07BMSD		*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:

- 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: 0610211-07BMS		*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:

- 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: 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 ☒ 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°

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 -8RA
10-16-06	1458	GW	McCoy Gas Com D1E	MW-1			✓	-7
10-16-06	~~0700~~	water	161020061B01		✓			-8
10-16-06	1458	GW	McCoy Gas Com D1E	MW-1		✓		-7

ANALYSIS REQUEST

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	Temperature		Air Bubbles or Headspace (Y or N)
												✓				
												✓				
												✓				
												✓				
												✓				
												✓				
												✓				
						✓										
								✓								
														✓		
													✓			

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

Remarks: McCoy MW-1 sample per LW analyze for cat/anion balance

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, May 29, 2007

Lisa Winn
XTO Energy
2700 Farmington Ave
Bldg K, Suite 1
Farmington, NM 87401

TEL: (505) 566-7954
FAX

RE: Ground Water

Order No.: 0705289

Dear Lisa Winn:

Hall Environmental Analysis Laboratory, Inc. received 17 sample(s) on 5/19/2007 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

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc.

Date: *29-May-07*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0705289

Lab ID: 0705289-01 **Collection Date:** 5/17/2007 9:11:00 AM
Client Sample ID: OH Randel #7 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	5/23/2007 8:04:23 PM
Toluene	ND	1.0		µg/L	1	5/23/2007 8:04:23 PM
Ethylbenzene	ND	1.0		µg/L	1	5/23/2007 8:04:23 PM
Xylenes, Total	ND	2.0		µg/L	1	5/23/2007 8:04:23 PM
Surr: 4-Bromofluorobenzene	86.4	70.2-105		%REC	1	5/23/2007 8:04:23 PM

Lab ID: 0705289-02 **Collection Date:** 5/17/2007 9:45:00 AM
Client Sample ID: OH Randel #7 MW-4 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	5/23/2007 8:34:28 PM
Toluene	ND	1.0		µg/L	1	5/23/2007 8:34:28 PM
Ethylbenzene	ND	1.0		µg/L	1	5/23/2007 8:34:28 PM
Xylenes, Total	ND	2.0		µg/L	1	5/23/2007 8:34:28 PM
Surr: 4-Bromofluorobenzene	85.8	70.2-105		%REC	1	5/23/2007 8:34:28 PM

Lab ID: 0705289-03 **Collection Date:** 5/17/2007 11:15:00 AM
Client Sample ID: OH Randel #7 MW-7 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	8500	500		µg/L	500	5/25/2007 11:33:11 AM
Toluene	17000	500		µg/L	500	5/25/2007 11:33:11 AM
Ethylbenzene	980	100		µg/L	100	5/24/2007 3:29:30 PM
Xylenes, Total	16000	200		µg/L	100	5/24/2007 3:29:30 PM
Surr: 4-Bromofluorobenzene	87.3	70.2-105		%REC	100	5/24/2007 3:29:30 PM

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		

1 / 9

Hall Environmental Analysis Laboratory, Inc.

Date: *29-May-07*

CLIENT: XTO Energy
Project: Ground Water

Lab Order: 0705289

Lab ID: 0705289-04 **Collection Date:** 5/17/2007 10:46:00 AM
Client Sample ID: OH Randel #7 MW-5 **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 4:29:40 PM
Toluene	ND	1.0		µg/L	1	5/24/2007 4:29:40 PM
Ethylbenzene	ND	1.0		µg/L	1	5/24/2007 4:29:40 PM
Xylenes, Total	ND	2.0		µg/L	1	5/24/2007 4:29:40 PM
Surr: 4-Bromofluorobenzene	87.1	70.2-105		%REC	1	5/24/2007 4:29:40 PM

Lab ID: 0705289-05 **Collection Date:** 5/17/2007 11:35:00 AM
Client Sample ID: OH Randel #7 MW-8 **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 4:59:40 PM
Toluene	1.9	1.0		µg/L	1	5/24/2007 4:59:40 PM
Ethylbenzene	ND	1.0		µg/L	1	5/24/2007 4:59:40 PM
Xylenes, Total	3.7	2.0		µg/L	1	5/24/2007 4:59:40 PM
Surr: 4-Bromofluorobenzene	86.6	70.2-105		%REC	1	5/24/2007 4:59:40 PM

Lab ID: 0705289-06 **Collection Date:** 5/17/2007 12:33:00 PM
Client Sample ID: Garcia GCB #1 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 12:07:24 AM
Toluene	1.5	1.0		µg/L	1	5/24/2007 12:07:24 AM
Ethylbenzene	1.4	1.0		µg/L	1	5/24/2007 12:07:24 AM
Xylenes, Total	74	2.0		µg/L	1	5/24/2007 12:07:24 AM
Surr: 4-Bromofluorobenzene	91.4	70.2-105		%REC	1	5/24/2007 12:07:24 AM

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: *29-May-07*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0705289

Lab ID: 0705289-07 **Collection Date:** 5/17/2007 2:10:00 PM
Client Sample ID: Baca GCA #1A 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	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	ND	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						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		µg/L	1	5/24/2007 1:07:31 AM
Xylenes, Total	ND	2.0		µg/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		µg/L	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		µg/L	1	5/24/2007 1:37:30 AM
Xylenes, Total	ND	2.0		µg/L	1	5/24/2007 1:37:30 AM
Surr: 4-Bromofluorobenzene	87.7	70.2-105		%REC	1	5/24/2007 1:37:30 AM

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		

CLIENT: XTO Energy **Lab Order:** 0705289
Project: Ground Water

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	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	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-Bromofluorobenzene	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	Qual	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	88.0	70.2-105		%REC	1	5/24/2007 6:02:34 PM

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: *29-May-07*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0705289

Lab ID: 0705289-13 **Collection Date:** 5/16/2007 10:42:00 AM
Client Sample ID: McCoy GCD #1E MW-1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	30	10		µg/L	10	5/24/2007 7:07:56 PM
Toluene	760	10		µg/L	10	5/24/2007 7:07:56 PM
Ethylbenzene	1700	100		µg/L	100	5/24/2007 6:35:15 PM
Xylenes, Total	24000	200		µg/L	100	5/24/2007 6:35:15 PM
Surr: 4-Bromofluorobenzene	91.2	70.2-105		%REC	10	5/24/2007 7:07:56 PM

Lab ID: 0705289-14 **Collection Date:** 5/16/2007 2:20:00 PM
Client Sample ID: Masden GC #1E 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	5/25/2007 11:03:08 AM
Toluene	ND	1.0		µg/L	1	5/25/2007 11:03:08 AM
Ethylbenzene	ND	1.0		µg/L	1	5/25/2007 11:03:08 AM
Xylenes, Total	ND	2.0		µg/L	1	5/25/2007 11:03:08 AM
Surr: 4-Bromofluorobenzene	86.0	70.2-105		%REC	1	5/25/2007 11:03:08 AM

Lab ID: 0705289-15 **Collection Date:** 5/16/2007 2:44:00 PM
Client Sample ID: Masden GC #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 10:38:08 PM
Toluene	ND	1.0		µg/L	1	5/24/2007 10:38:08 PM
Ethylbenzene	ND	1.0		µg/L	1	5/24/2007 10:38:08 PM
Xylenes, Total	ND	2.0		µg/L	1	5/24/2007 10:38:08 PM
Surr: 4-Bromofluorobenzene	85.9	70.2-105		%REC	1	5/24/2007 10:38:08 PM

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

CLIENT: XTO Energy **Lab Order:** 0705289
Project: Ground Water

Lab ID: 0705289-16 **Collection Date:** 5/16/2007 3:10:00 PM
Client Sample ID: Masden GC #1E MW-1 **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 11:08:06 PM
Toluene	ND	1.0		µg/L	1	5/24/2007 11:08:06 PM
Ethylbenzene	ND	1.0		µg/L	1	5/24/2007 11:08:06 PM
Xylenes, Total	ND	2.0		µg/L	1	5/24/2007 11:08:06 PM
Surr: 4-Bromofluorobenzene	84.9	70.2-105		%REC	1	5/24/2007 11:08:06 PM

Lab ID: 0705289-17 **Collection Date:**
Client Sample ID: Trip Blank **Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/24/2007 11:38:12 PM
Toluene	ND	1.0		µg/L	1	5/24/2007 11:38:12 PM
Ethylbenzene	ND	1.0		µg/L	1	5/24/2007 11:38:12 PM
Xylenes, Total	ND	2.0		µg/L	1	5/24/2007 11:38:12 PM
Surr: 4-Bromofluorobenzene	86.7	70.2-105		%REC	1	5/24/2007 11:38:12 PM

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: Ground Water **Work Order:** 0705289

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 0705289-02A MSD		*MSD*			Batch ID:	**R23705**	Analysis Date:		5/23/2007 9:34:21 PM
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	118	0.462	10	
Xylenes, Total	56.16	µg/L	2.0	93.6	83.4	122	0.901	13	
Sample ID: 0705289-16A MSD		*MSD*			Batch ID:	**R23752**	Analysis Date:		5/25/2007 10:32:54 AM
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	µg/L	2.0	102	83.4	122	1.79	13	
Sample ID: 5ML RB-II		*MBLK*			Batch ID:	**R23705**	Analysis Date:		5/23/2007 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 ID:	**R23736**	Analysis Date:		5/24/2007 8:33:09 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 ID:	**R23752**	Analysis Date:		5/25/2007 8:32:19 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: 100NG BTEX LCS		*LCS*			Batch ID:	**R23705**	Analysis Date:		5/23/2007 11:04:02 AM
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 ID:	**R23736**	Analysis Date:		5/24/2007 9:38:17 PM
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 ID:	**R23752**	Analysis Date:		5/25/2007 2:03:57 PM
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 ID:	**R23705**	Analysis Date:		5/23/2007 9:04:25 PM
Benzene	19.21	µg/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	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: Ground Water **Work Order:** 0705289

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 0705289-02A MS		*MS*			Batch ID:	**R23705**	Analysis Date:	5/23/2007 9:04:25 PM	
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	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: 5/19/2007

Work Order Number 0705289 | Received by AMF

Checklist completed by Signature Janye Shomo Date May 19, 07

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 - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	6°	*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:

Client: XTO Energy
Kim Champlin

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

Phone #: 505-566-7954
Fax #:

Project Name: Ground Water

Project #:

Project Manager: Lisa Winn

Sampler: Ashley Ager

Sample Temperature: 6°C

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

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative HCl	HEAL No. 0705289	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)	802.1B BTEX				Air Bubbles or Headspace (Y or N)
05-17-07	0911	GW	OH Randel #7 MW-3				✓	1													✓				
05-17-07	0945	GW	OH Randel #7 MW-4				✓	2													✓				
05-17-07	1115	GW	OH Randel #7 MW-7				✓	3													✓				
05-17-07	1046	GW	OH Randel #7 MW-5				✓	4													✓				
05-17-07	1135	GW	OH Randel #7 MW-8				✓	5													✓				
05-17-07	1233	GW	Garcia GCB #1 MW-2				✓	6													✓				
05-17-07	1410	GW	Baca GC A #1A MW-3				✓	7													✓				
05-17-07	1414	GW	Baca GC A #1A MW-2				✓	8													✓				
05-17-07	1422	GW	Baca GC A #1A MW-1				✓	9													✓				
05-17-07	1442	GW	Baca GC A #1A MW-4				✓	10													✓				
05-17-07	1513	GW	McCoy GC D #1E MW-2				✓	11													✓				
05-17-07	1532	GW	McCoy GC D #1E MW-3				✓	12													✓				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
05-18-07	1030	Ashley L Ager		5/19/07 10:00
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:
* Please copy results to ALA@lodestarservices.com

CHAIN-OF-CUSTODY RECORD

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

Client: XTO Energy
Kim Champlin

Address: 2700 Farmington Ave
Bldg I, Ste K
Farmington, NM

Phone #: 505-566-7954

Fax #:

Project Name: Ground Water

Project #:

Project Manager: Lisa Winn

Sampler: Ashley Ager

Sample Temperature: 6°C

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

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative HCl	HEAL No. 0705089
05-16-07	1042	GW	McCoy GCD #1E MW-1	1			✓	13
05-16-07	1420	GW	Masden GC #1E MW-3				✓	14
05-16-07	1444	GW	Masden GC #1E MW-2				✓	15
05-16-07	1510	GW	Masden GC #1E MW-1				✓	16
05-16-07	0700	GW	Trip Blank				✓	17

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				Air Bubbles or Headspace (Y or N)
												✓				
												✓				
												✓				
												✓				
												✓				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
05-18-07	1030	Ashley L Ager		5/19/07 10:00
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:
Please copy results to
ala@lodestarservices.com

Attachment 4

Hall Environmental Analysis Laboratory, Inc.

Date: *27-Jan-09*

CLIENT: XTO Energy
Project: XTO Water McCoy
Lab Order: 0901307

Lab ID: 0901307-01 **Collection Date:** 1/21/2009 10:49:00 AM
Client Sample ID: McCoy Gas Com D #1E **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	100		µg/L	100	1/27/2009 1:22:30 AM
Toluene	1200	100		µg/L	100	1/27/2009 1:22:30 AM
Ethylbenzene	1100	100		µg/L	100	1/27/2009 1:22:30 AM
Xylenes, Total	12000	200		µg/L	100	1/27/2009 1:22:30 AM
Surr: 4-Bromofluorobenzene	100	65.9-130		%REC	100	1/27/2009 1:22:30 AM

Lab ID: 0901307-02 **Collection Date:**
Client Sample ID: TRIP BLANK **Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	1.0		µg/L	1	1/27/2009 2:23:14 AM
Toluene	ND	1.0		µg/L	1	1/27/2009 2:23:14 AM
Ethylbenzene	ND	1.0		µg/L	1	1/27/2009 2:23:14 AM
Xylenes, Total	ND	2.0		µg/L	1	1/27/2009 2:23:14 AM
Surr: 4-Bromofluorobenzene	72.9	65.9-130		%REC	1	1/27/2009 2:23:14 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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 Water McCoy **Work Order:** 0901307

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*				**Batch ID: R32139**	Analysis Date:	1/23/2009 9:48:37 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						

Qualifiers:

E	Estimated value	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 Received: 1/22/2009

Work Order Number 0901307 | Received by: TLS

Checklist completed by: [signature] Signature | 1/22/09 Date | Sample ID labels checked by: [initials] Initials

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 - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	4°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: XTO Energy
Kim Chaplin
Mailing Address: 382 CR 3100
Aztec, NM 87410
Phone #: 505-333-3207
email or Fax#:
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: XTO Water Mcloy
Project #:
Project Manager: Martin Nee
Sampler: Alice Dyke Hutt 303-319-9906
On Ice: ☒ Yes ☐ No
Sample Temperature: 4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0901857
21Jan09	1049	Aq	Mcloy Gas Cond IE	glass/3	HCl	1
		1	Trip Blank	glass/2		2

Analysis Request

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

Date	Time	Relinquished by:	Received by:	Date	Time
22Jan09	0700			1/22/09	1410
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: please email results to Kim Chaplin + adh@lodestarservices.com ala@lodestarservices.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Jun-09*

CLIENT:	XTO Energy	**Client Sample ID:**	McCoy Gas Com D #1E MW-1R
Lab Order:	0905474	**Collection Date:**	5/26/2009 11:04:00 AM
Project:	Ground Water	**Date Received:**	5/27/2009
Lab ID:	0905474-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	10		µg/L	10	6/4/2009 4:57:27 PM
Toluene	620	50		µg/L	50	6/4/2009 3:12:34 AM
Ethylbenzene	640	50		µg/L	50	6/4/2009 3:12:34 AM
Xylenes, Total	11000	100		µg/L	50	6/4/2009 3:12:34 AM
Surr: 4-Bromofluorobenzene	107	65.9-130		%REC	50	6/4/2009 3:12:34 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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: Ground Water **Work Order:** 0905474

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R33943**		Analysis Date:		6/3/2009 8:50:42 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: 100NG BTEX LCS		*LCS*			Batch ID: **R33943**		Analysis Date:		6/3/2009 6:34:47 PM
Benzene	19.78	µg/L	1.0	98.9	85.9	113			
Toluene	20.72	µg/L	1.0	103	86.4	113			
Ethylbenzene	20.15	µg/L	1.0	100	83.5	118			
Xylenes, Total	60.59	µg/L	2.0	101	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID: **R33943**		Analysis Date:		6/3/2009 7:05:22 PM
Benzene	18.84	µg/L	1.0	94.2	85.9	113	4.90	27	
Toluene	19.30	µg/L	1.0	95.6	86.4	113	7.07	19	
Ethylbenzene	18.90	µg/L	1.0	93.8	83.5	118	6.41	10	
Xylenes, Total	56.69	µg/L	2.0	94.5	83.4	122	6.65	13	

Qualifiers:

E	Estimated value	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 Received: 5/27/2009

Work Order Number 0905474 | Received by: TLS

Checklist completed by: _____ 5/27/09 | Sample ID labels checked by: _____

Signature | Date | Initials

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 ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	5.3°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: XTO Energy
Kim Champlin
Mailing Address: 382 CR 3100
Aztec, NM 87410
Phone #: 505.333.3207
email or Fax#:
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Groundwater
Project #:
Project Manager: Ashley Ager
Sampler: adh
On Ice: [illegible]
Sample Temperature: [illegible]

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	[illegible]	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX				Air Bubbles (Y or N)
26May09	1104	Aqu.	McCoy Gas Com D#1E MW-1R	3/40ml	HCl	-1												✓				

Date:	Time:	Relinquished by:	Received by:	Date	Time
26May09	1700	[signature]	[signature]	5/27/09	840
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
please also email results to
ala@hodestarservices.com
adh@hodestarservices.com