

3R - 106

REPORTS

DATE:

JAN 2006



3R0106
RECEIVED

January 30, 2006

JAN 31 2006

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

Oil Conservation Division
Environmental

RE: Annual Groundwater Remediation Reports

Dear Mr. von Gonten:

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

- | | | | |
|--------------------------|--------|-------------------------|--------|
| • Abrams J #1 | 3R0100 | • Rowland Gas Com #1 | 3R0124 |
| • Bruington Gas Com B #1 | 3R0106 | • Sullivan Gas Com D #1 | 3R0131 |
| • EJ Johnson C #1E | 3R0385 | • Valdez A #1E | 3R0134 |
| • PO Pipken #3E | | | |
| • Romero Gas Com A #1 | 3R0123 | | |

Also enclosed in the third volume of our Annual Report are three sites that meet the closure requirements outlined in the GMP. XTO respectfully requests closure of:

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

As we discussed this afternoon, several sites are being reviewed to make sure we have a comprehensive set of reports submitted. An extension will be allowed for reports on the remaining sites to be submitted by April 30, 2006.

Thank you for your review of the reports and allowing some flexibility with this years reporting schedule. If you have any questions please do not hesitate to contact me at (505) 566-7942.

Sincerely,

Lisa Winn
Environmental Specialist
San Juan Division

cc: Mr. Denny Foust, Environmental, NMOCD District III Office, Aztec, NM
Mr. Jeff Blagg, Blagg Engineering Inc.
File – San Juan Groundwater

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XTO ENERGY INC.

JAN 31 2006

Oil Conservation Division
Environmental Bureau

ANNUAL GROUNDWATER REMEDIATION REPORT

2005

**BRUINGTON GC #1
(E) SECTION 14, T29N, R11W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

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

JANUARY 2006

**PREPARED BY:
BLAGG ENGINEERING, INC.**

**Consulting Petroleum / Reclamation Services
P.O. Box 87
Bloomfield, New Mexico 87413**

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Field Sampling Data Summaries

Laboratory Reports

**XTO Energy Inc.
Bruington GC # 1 - Blow Pit
SW/4 NW/4 Sec. 14, T29N, R11W**

Monitor Well Installation Dates:

MW 1, 2, 3 - 4/25/96
MW 2R - 6/5/98
MW 1R - 6/19/98
MW 4, 5, 6 - 2/20/01
MW 7 - 7/10/03

Monitor Well Sampling Dates:

6/7/96, 6/27/97, 6/12/98, 5/5/99, 6/29/00, 5/17/01,
9/24/01, 6/27/02, 8/25/03, 11/19/03, 6/18/04, 6/27/05

Historical Information:

- November 1993 – Initial excavation of impacted soils by Amoco Production Company (Figure 1). Approximately 4,000± cubic yards of impacted soil were removed from the site and transported to Amoco's Crouch Mesa Landfarm. Groundwater was identified at approximately 9 feet below surface grade.
- June 1996 – Investigation of groundwater impacts and groundwater monitoring initiated.
- January 1998 - XTO Energy Inc. (XTO) acquires the Bruington GC #1 from Amoco Production Company.
- February 2001 – Additional investigation of groundwater impacts. Continued quarterly/annual groundwater monitoring.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells (MW) following US EPA: SW-846 protocol. Samples were collected using new disposable bailers and placed in laboratory supplied containers and stored in a cooler on ice. The samples were delivered to an accredited environmental laboratory according to chain-of-custody procedures. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) per US EPA Method 8021B and general water chemistry per US EPA Method 600/4-79-020. Analytical results are summarized on Tables 1 and 2. Waste generated (groundwater) during monitor well sampling and development was placed in the produced water separator tank located on the well site.

Water Quality and Gradient Information:

Since June 2000, groundwater gradients have trended east-northeast (Figures 2 - 7). A nearby irrigation ditch that typically flows between March - November is likely a significant recharge zone in the immediate area. Substantial decreases in the water table elevation are observed during sample events when the ditch has been empty during the winter months. A gradient anomaly was measured in June 2000 when a north trending flow direction was measured. The cause of this anomaly is unknown and speculative.

Groundwater from monitor wells MW 2R, MW 5 and MW 6 have indicated elevated concentrations of BTEX constituents. Laboratory analyses of groundwater from other site wells, including MW 1R and MW 3 show no detectable levels or trace concentrations of dissolved hydrocarbons. BTEX and general chemistry results are presented in Tables 1 and 2.

Summary and Recommendations:

The elevated levels of dissolved phase hydrocarbons may indicate the historically contaminated soils were not fully removed and may continue to contribute hydrocarbons to the groundwater. Additional excavation of an area suspected to still have contaminated soil is warranted.

XTO proposes to conduct additional excavation of the depressed area west of the 1993 excavation during the first quarter of 2006. Pending the results of this investigation, additional delineation of the groundwater plume may be necessary. If the investigative work does not appear to be contributing to the groundwater impacts, XTO would potentially like to pursue an in situ remediation program, still to be determined.

TABLE 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

BRUINGTON GC #1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

REVISED DATE: JANUARY 16, 2006

FILENAME: (BR-2Q-05.WK4) NJV

SAMPLE DATE	MONITOR WELL No.	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8021 (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
07-Jun-96	MW #1	7.00	20.36	5,570	3,200	7.1		ND	ND	ND	ND
05-May-99	MW #1R	10.55	20.00	3,830	7,670	7.0		16.5	26.0	8.1	78.2
29-Jun-00		11.14			2,400	6.7		17	ND	130	455.5
17-May-01		11.33			3,500	6.7		29	19	33	127
24-Sep-01		9.84			3,000	6.79		5.8	0.52	15	36
27-Jun-02		9.93			3,800	7.09		ND	ND	17	52.1
25-Jun-03		11.45			2,900	6.94		3.1	ND	ND	ND
25-Aug-03		12.14			4,100	6.59		ND	ND	2.2	0.90
07-Jun-96	MW #2	10.12	21.74	7,980	5,500	6.7		347	28.5	156	1,580
27-Jun-97		12.65	14.47		4,800	6.9		429	67.9	46.1	402.4
12-Jun-98	MW #2R	11.00	20.95		3,500	7.6		13,440	13,330	1,030	6,040
05-May-99		10.78		7,950	16,000	7.1		1,020	554	175	679
29-Jun-00		11.50			7,000	6.8		7,600	2,600	630	4,210
17-May-01		12.12			8,200	6.77		1,700	320	390	1,620
24-Sep-01		10.08			7,700	6.97		15,000	1,200	880	5,900
27-Jun-02		9.77			6,200	7.29		13,000	1,100	680	4,120
25-Jun-03		11.53			4,700	6.90		3,700	1,000	380	2,500
18-Jun-04		12.07			7,600	6.61		5,500	1,400	710	3,500
27-Jun-05		10.14			6,400	6.81		16,000	1,900	900	5,400
07-Jun-96	MW #3	13.05	21.17	10,300	6,500	6.7		ND	1.8	ND	ND
05-May-99		13.64	18.08	11,100	22,250	7.2		73.2	38.3	31.2	200.1
29-Jun-00		13.52			7,600	7.0		87.0	ND	3.4	8.3
17-May-01		14.51			8,800	6.94		ND	0.6	0.7	ND
24-Sep-01		12.15			6,700	7.08		ND	ND	ND	ND
25-Aug-03	MW #3R	11.81	20.00		8,000	6.86		ND	ND	1.3	ND
19-Nov-03		12.28			6,800	6.98		ND	ND	1.4	ND
17-May-01	MW #4	10.88	20.00		6,700	7.3		ND	ND	ND	ND
17-May-01	MW #5	16.00	25.00		11,000	6.64		25,000	620	870	6,610
24-Sep-01		13.70			7,600	7.20		26,000	110	470	6,900
27-Jun-02		13.83			12,500	7.17		26,000	280	900	6,670
25-Jun-03		15.73			7,600	6.92		26,000	ND	ND	4,400
18-Jun-04		15.82			11,600	6.82		26,000	ND	1,100	3,400
27-Jun-05		14.21			10,400	6.73		29,000	ND	920	3,400
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

TABLE 1 (continued)

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

**BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W**

REVISED DATE: JANUARY 16, 2006

FILENAME: (BR-2Q-05.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8021 (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
17-May-01	MW #6	19.47	25.00		13,200	7.07		28,000	15,000	1,000	9,400
24-Sep-01		14.46			13,800	7.23		22,000	6,000	1,100	6,900
27-Jun-02		16.68			12,000	7.24		28,000	16,000	990	9,800
25-Jun-03		18.94			7,600	6.96		22,000	16,000	ND	6,300
18-Jun-04		18.71			11,700	6.69		23,000	19,000	1,000	8,800
27-Jun-05		17.09			10,100	6.63		28,000	20,000	1,200	9,600
25-Aug-03	MW #7	17.93	25.00		8,200	6.52		18,000	11,000	930	8,200
18-Jun-04		18.87			10,600	6.56		11,000	7,800	670	5,000
27-Jun-05		17.40			9,200	6.54		14,000	8,700	880	5,000
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

NOTES : 1) RESULTS IN BOLD RED TYPE INDICATE - EXCEEDING NMWQCC STANDARDS .

2) RESULTS IN BOLD BLUE TYPE INDICATE - BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS EXCEEDED .

TABLE 2
GENERAL WATER QUALITY
CROSS TIMBERS OIL COMPANY
BRUINGTON GC # 1
SAMPLE DATE : June 29, 2000

PARAMETERS	MW # 1R	MW # 2R	MW # 3	Units
LAB pH	6.72	7.20	6.96	s. u.
LAB CONDUCTIVITY @ 25 C	8,720	15,100	17,600	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	4,350	7,530	8,750	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	4,310	7,490	8,700	mg / L
SODIUM ABSORPTION RATIO	7.4	32.9	25.1	ratio
TOTAL ALKALINITY AS CaCO ₃	562	3,120	1,050	mg / L
TOTAL HARDNESS AS CaCO ₃	1,700	940	1,520	mg / L
BICARBONATE as HCO ₃	562	3,120	1,050	mg / L
CARBONATE AS CO ₃	< 0.1	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	0.6	3.6	0.9	mg / L
NITRITE NITROGEN	0.028	0.284	0.048	mg / L
CHLORIDE	28.2	1,040	118	mg / L
FLUORIDE	1.54	0.76	3.20	mg / L
PHOSPHATE	1.1	2.7	5.6	mg / L
SULFATE	2,610	1,880	5,150	mg / L
IRON	14.4	2.04	16.2	mg / L
CALCIUM	539	295	418	mg / L
MAGNESIUM	85.5	49.3	115	mg / L
POTASSIUM	1.0	2.1	2.9	mg / L
SODIUM	700	2,320	2,250	mg / L
CATION / ANION DIFFERENCE	0.10	0.05	0.12	%

TABLE 3

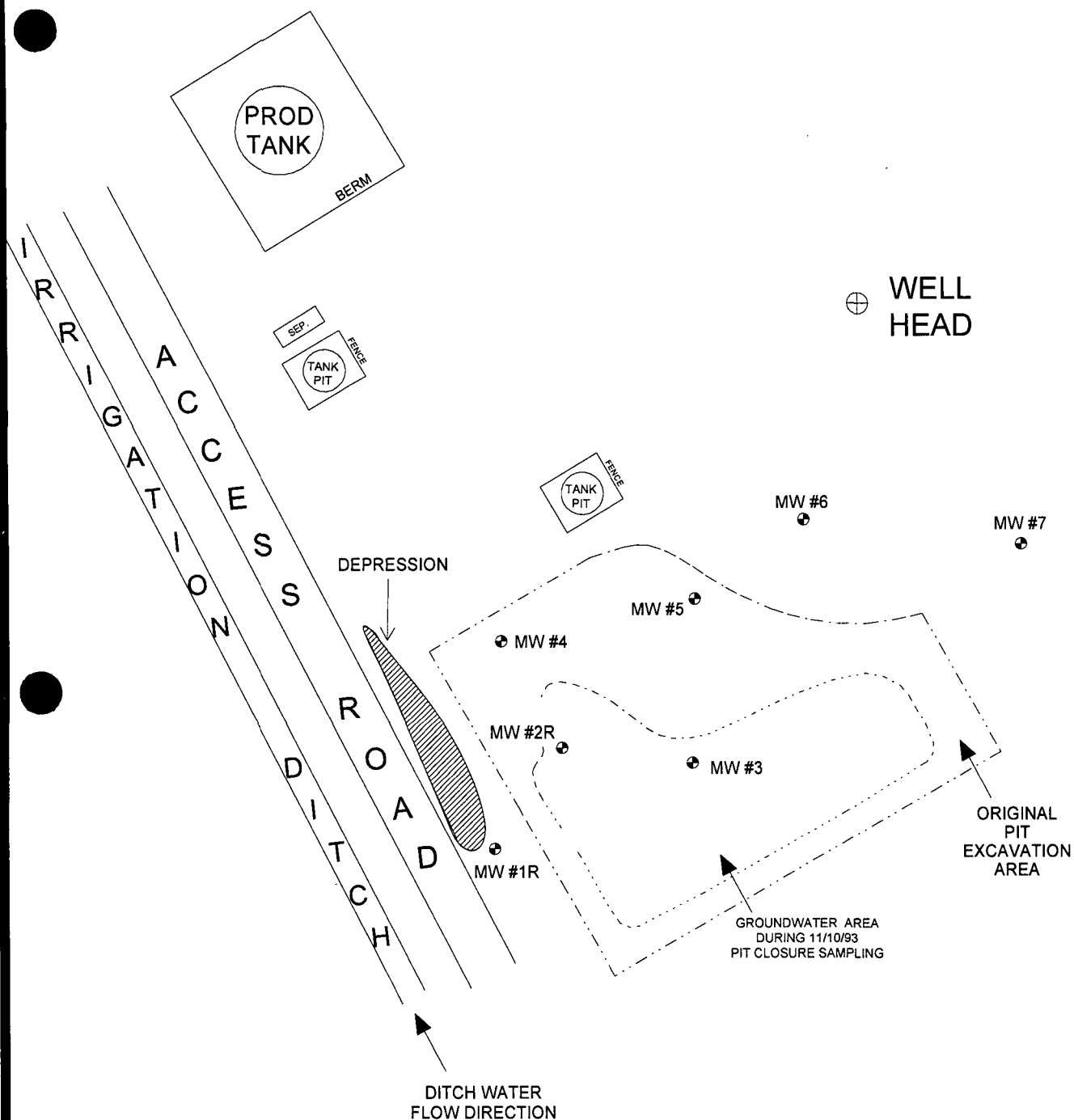
XTO Energy Inc.

Bruington GC # 1
Unit E, Section 14, T29N, R11W, NMPM

Depth to Water Information

Date	MW # 1R	MW # 2R	MW # 3	MW # 4	MW # 5	MW # 6
3/21/01	DRY	15.97	17.67	18.79	21.28	22.57
4/27/01	15.51	14.73	17.40	15.35	19.70	22.43
4/30/01	14.81	14.37	16.92	14.52	19.08	21.97
5/07/01	13.18	-	-	-	-	-
T.D.	20.00	20.95	18.08	20.00	25.00	25.00
SCREEN INTERVAL	10.00-20.00	10.95-20.95	13.08-18.08	10.00-20.00	15.00-25.00	15.00-25.00

FIGURE 1



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

ONE INCH = 50 FEET

0 50 100 FT.

XTO ENERGY INC.

BRUINGTON GC 1

SW/4 NW/4 SEC. 14, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, Inc.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: GW Investigation

DRAWN BY: NJV

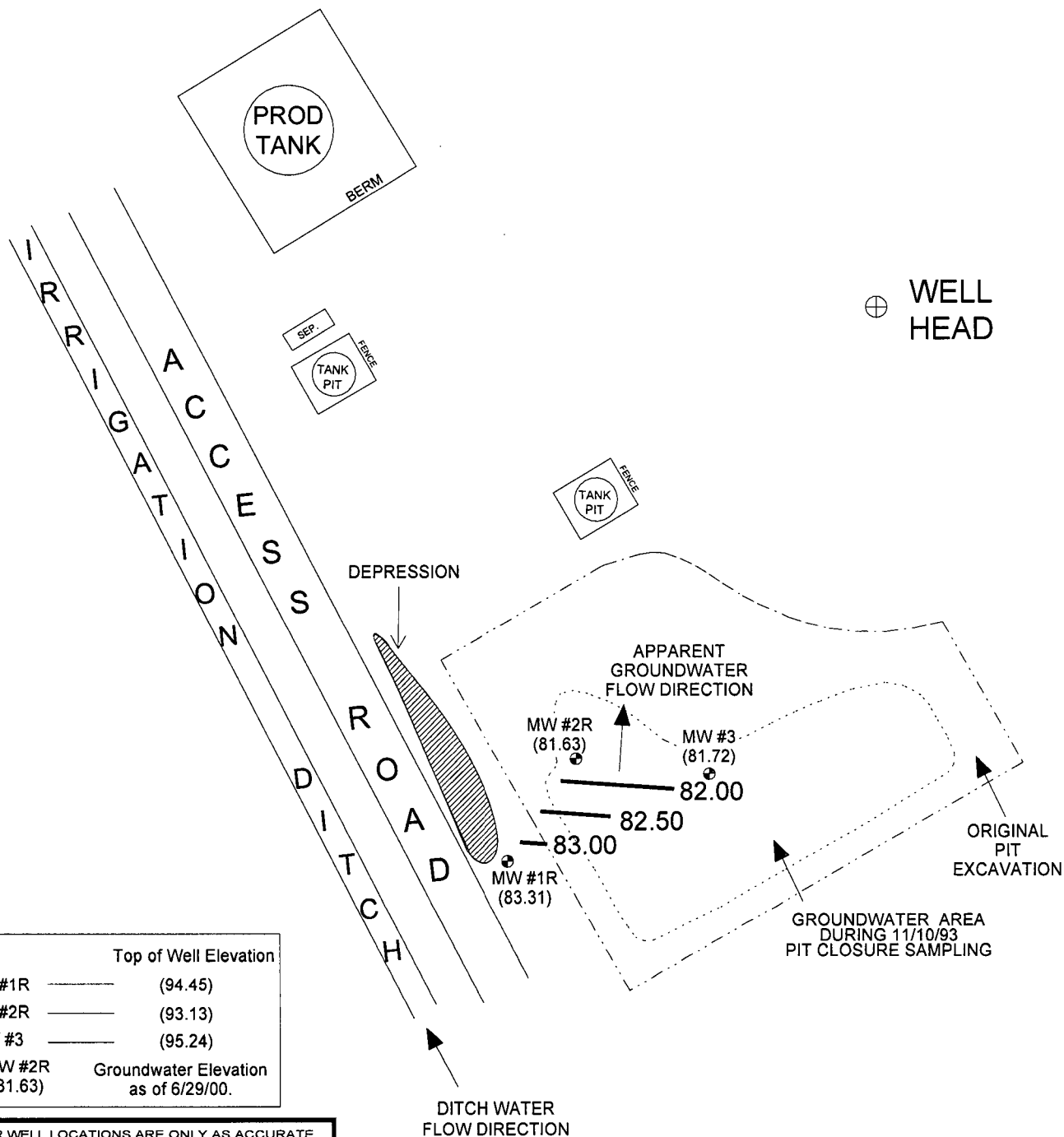
FILENAME: BRUINGTON-SM.SKF

REVISED: 10/11/05 NJV

**SITE
MAP**

07/03

FIGURE 2
(2nd 1/4, 2000)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

ONE INCH = 50 FEET

0 50 100 FT.

CROSS TIMBERS OIL COMPANY

BRUINGTON GC 1

SW/4 NW/4 SEC. 14, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW Sampling

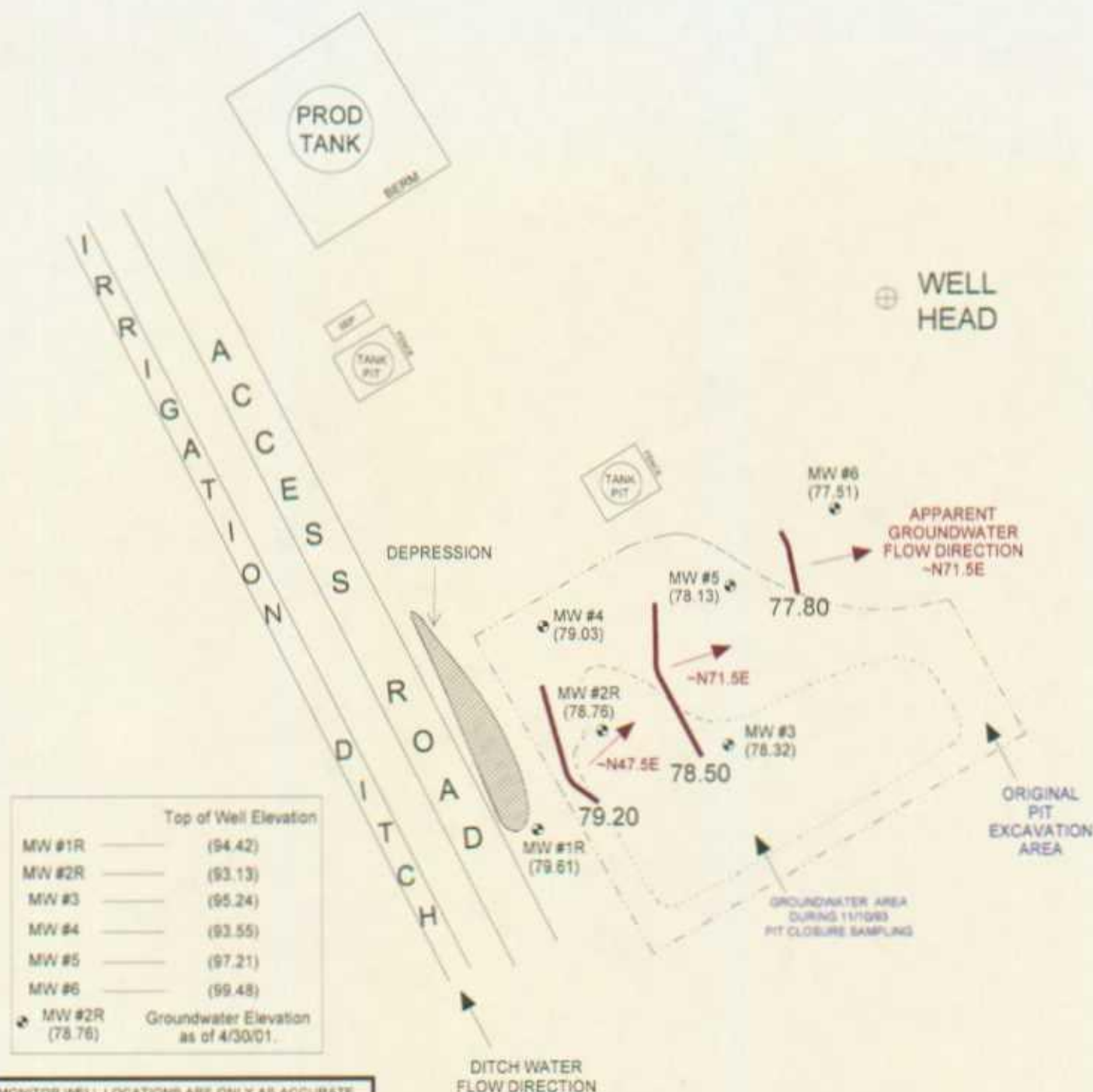
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FILENAME: 06-29-GW.SKF

REVISED: 02/20/01 NJV

**GROUNDWATER
CONTOUR
MAP**
06/00

FIGURE 3
(1st 1/4, 2001)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.

ONE INCH = 50 FEET

0 50 100 FT.

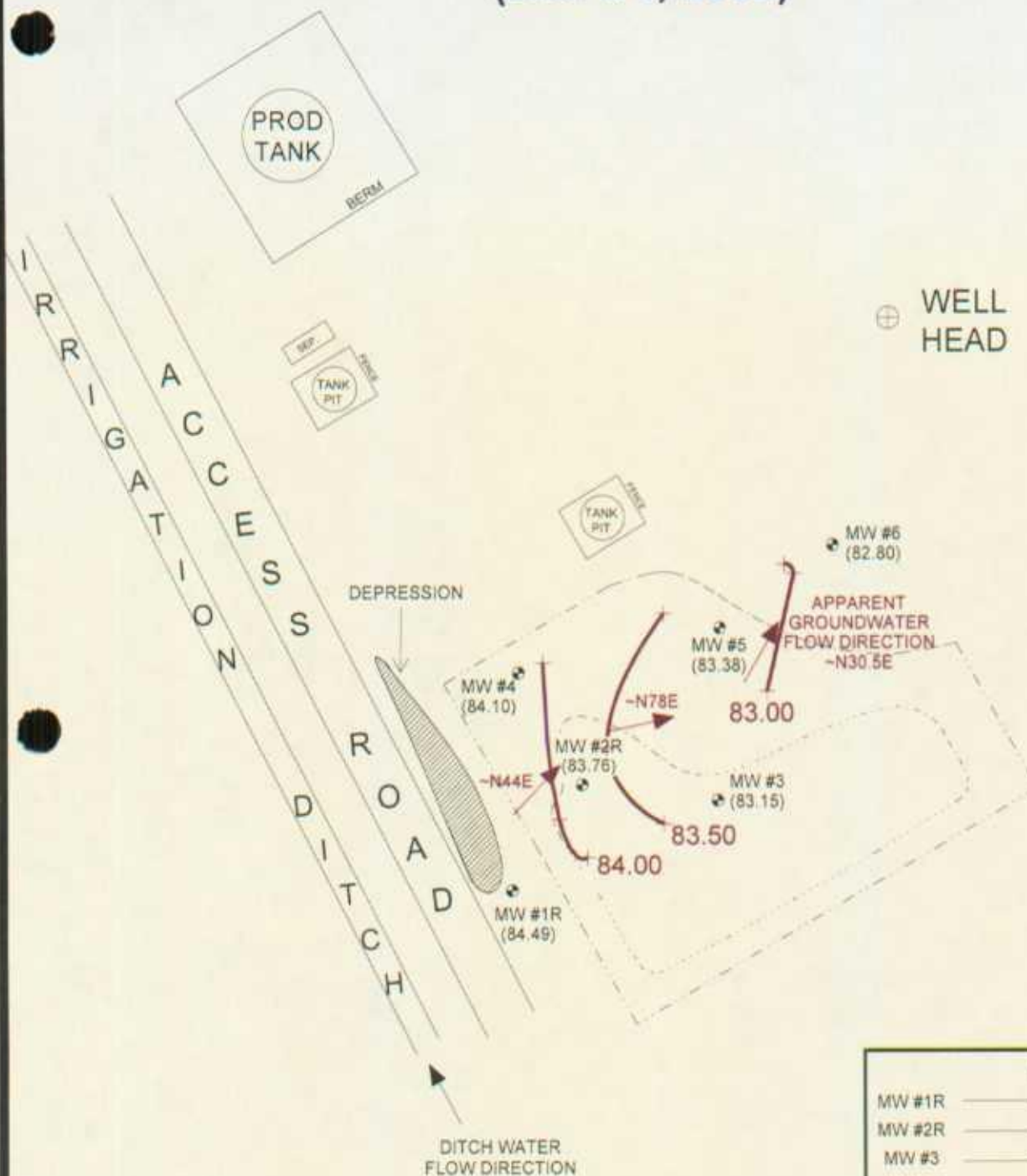
CROSS TIMBERS OIL COMPANY
BRUINGTON GC 1
SW/4 NW/4 SEC. 14, T29N, R11W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: GW Investigation
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FILENAME: 04-30-01.BKF
REVISED: 5/02/01 NJV

**GROUNDWATER
FLOW
DIRECTION**
04/01

FIGURE 4
(2nd 1/4, 2002)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

Top of Well Elevation	
MW #1R	(94.42)
MW #2R	(93.13)
MW #3	(95.24)
MW #4	(93.55)
MW #5	(97.21)
MW #6	(99.48)
MW #2R (83.36)	Groundwater Elevation as of 6/27/02.

ONE INCH = 50 FEET

0 50 100 FT.

XTO ENERGY INC.

BRUINGTON GC 1

SW/4 NW/4 SEC. 14, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, Inc.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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BLOOMFIELD, NEW MEXICO 87413

PHONE: (808) 832-1199

PROJECT: GW Investigation

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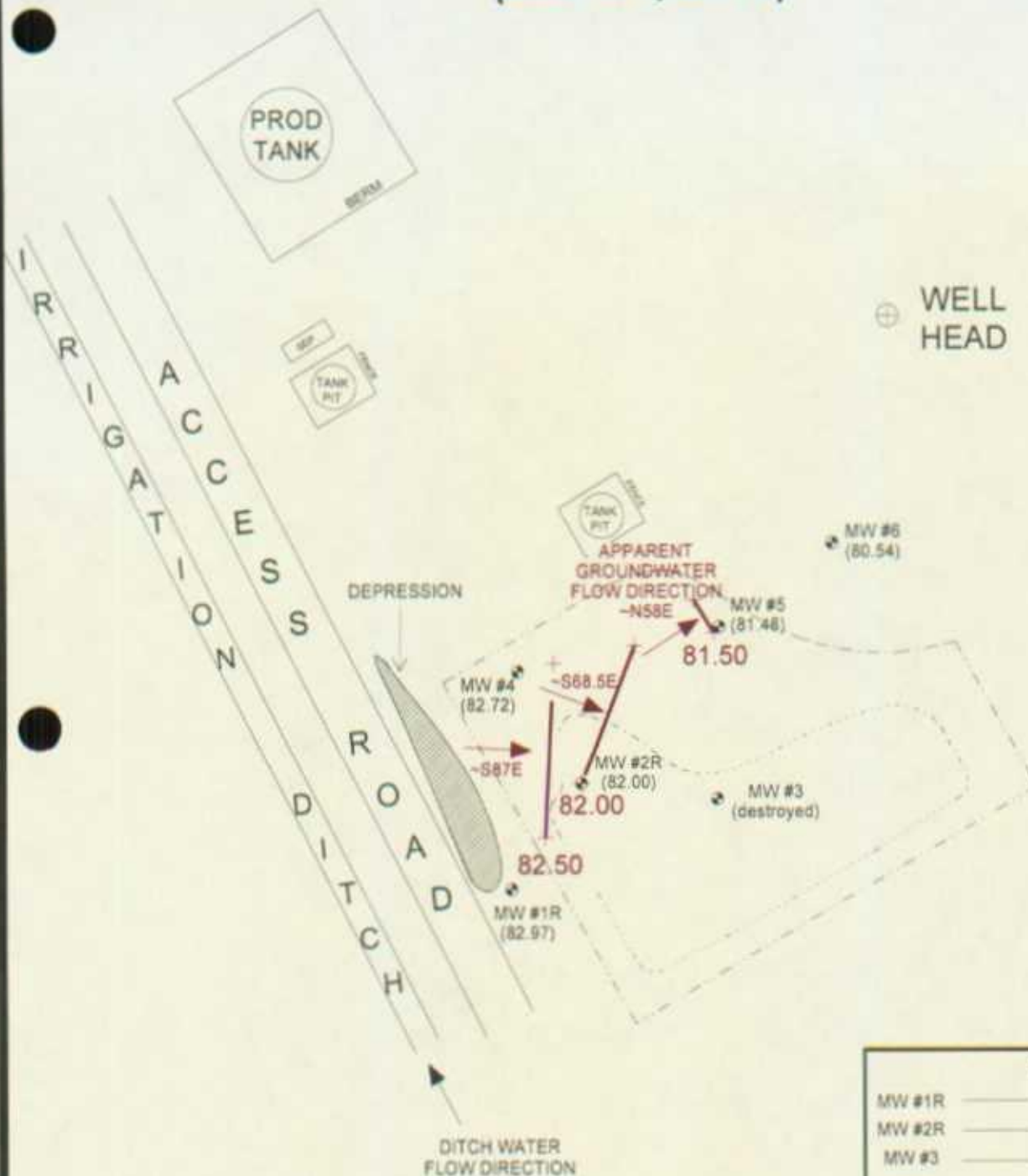
FILENAME: 05-27-02-GW SKF

REVISED: 10/11/05 NJV

**GROUNDWATER
CONTOUR
MAP**

06/02

FIGURE 5
(2nd 1/4, 2003)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

Top of Well Elevation	
MW #1R	(94.42)
MW #2R	(93.13)
MW #3	(95.24)
MW #4	(93.55)
MW #5	(97.21)
MW #6	(99.48)
MW #2R (82.00)	Groundwater Elevation as of 6/25/03.

ONE INCH = 50 FEET

0 50 100 FT.

XTO ENERGY INC.

BRUINGTON GC 1

SW/4 NW/4 SEC. 14, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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PROJECT: GW Investigation

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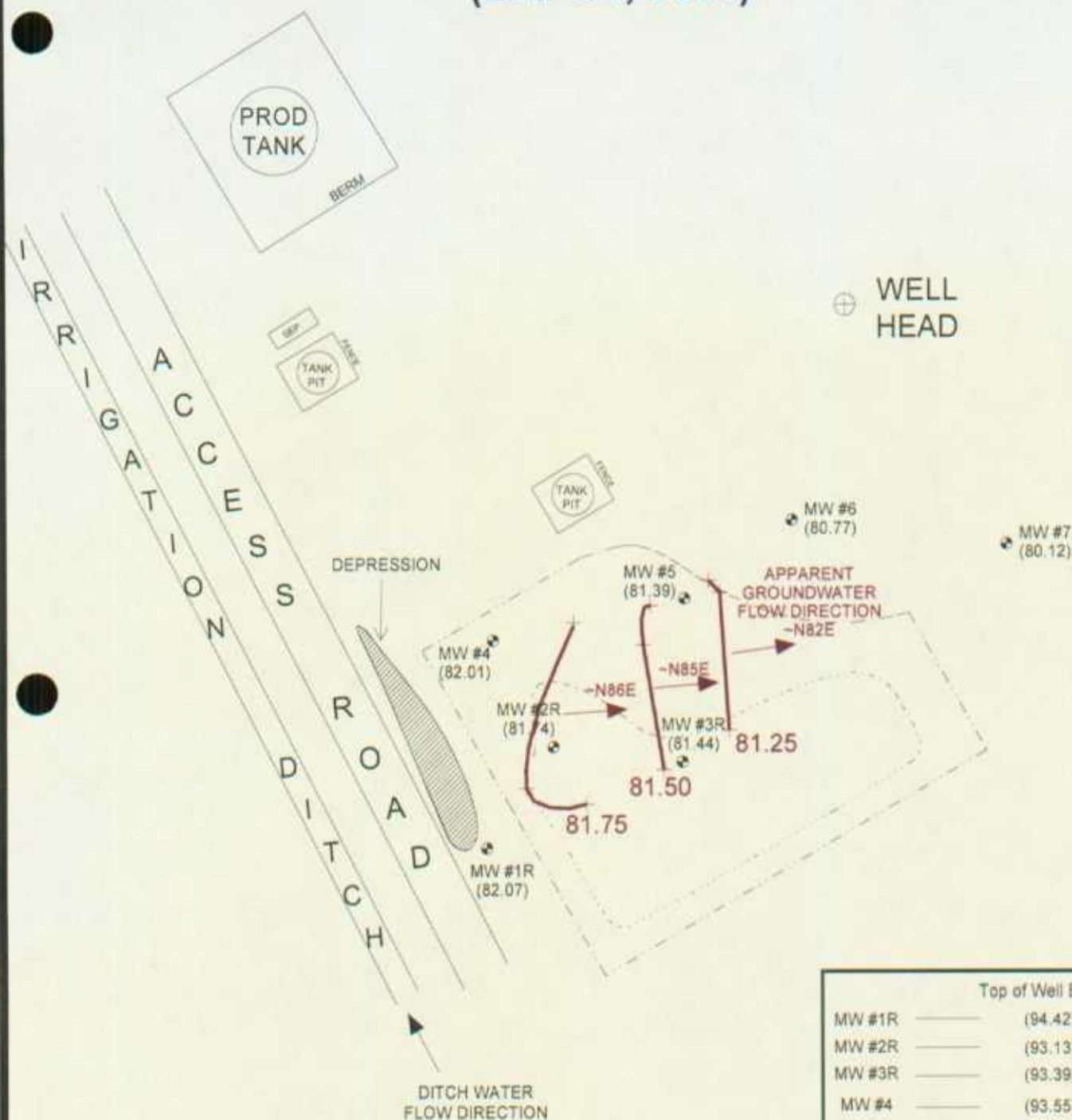
FILENAME: 06-25-03-GW SKF

REVISED: 10/11/05 NJV

**GROUNDWATER
CONTOUR
MAP**

06/03

FIGURE 6
(2nd 1/4, 2004)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

Top of Well Elevation	
MW #1R	(94.42)
MW #2R	(93.13)
MW #3R	(93.39)
MW #4	(93.55)
MW #5	(97.21)
MW #6	(99.48)
MW #7	(98.99)
MW #2R	Groundwater Elevation as of 6/18/04.

ONE INCH = 50 FEET

0 50 100 FT.

XTO ENERGY INC.

BRUINGTON GC 1

SW/4 NW/4 SEC. 14, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: GW Investigation

DRAWN BY: NJV

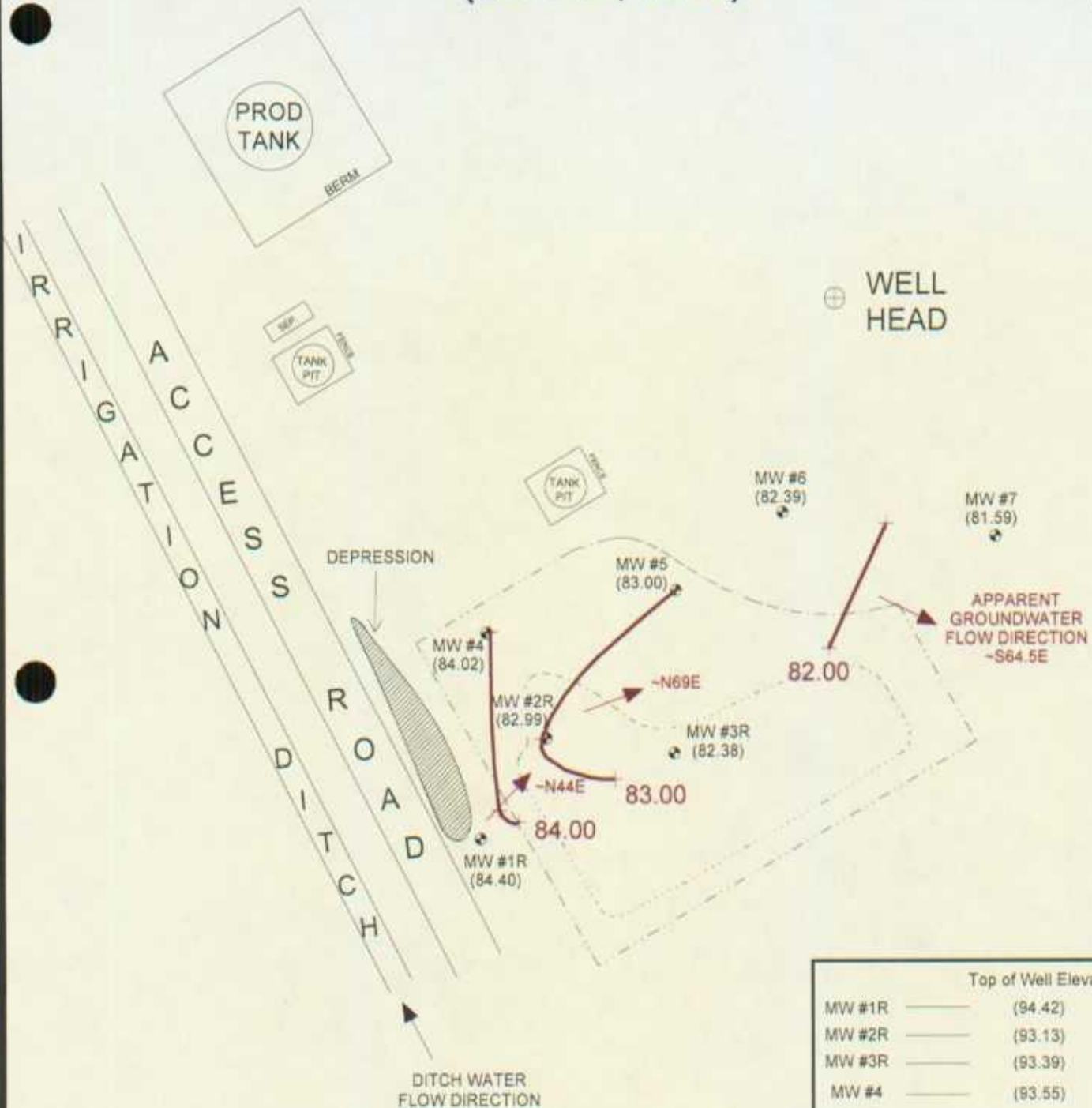
FILENAME: 06-18-04-GW SKF

REVISED: 10/11/05 NJV

**GROUNDWATER
CONTOUR
MAP**

06/04

FIGURE 7
(2nd 1/4, 2005)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

Top of Well Elevation	
MW #1R	(94.42)
MW #2R	(93.13)
MW #3R	(93.39)
MW #4	(93.55)
MW #5	(97.21)
MW #6	(99.48)
MW #7	(98.99)
MW #2R (82.99)	Groundwater Elevation as of 6/27/05.

ONE INCH = 50 FEET

0 50 100 FT.

XTO ENERGY INC.

BRUINGTON GC 1

SW/4 NW/4 SEC. 14, T29N, R11W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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PROJECT: GW Investigation

DRAWN BY: NJV

FILENAME: 06-27-05-GW SKF

REVISED: 10/11/05 NJV

**GROUNDWATER
CONTOUR
MAP**

06/05

FIGURE 8

BLAGG ENGINEERING, INC.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: **BRUINGTON GC # 1**
 CLIENT: **XTO ENERGY INC.**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **MOBILE DRILL RIG (EARTHPROBE)**
 BORING LOCATION: **N30W, 39.5 FEET FROM MW # 2R.**

BORING #..... **BH - 4**
 MW #..... **4**
 PAGE #..... **4**
 DATE STARTED **2/20/01**
 DATE FINISHED **2/20/01**
 OPERATOR..... **JCB**
 PREPARED BY **NJV**

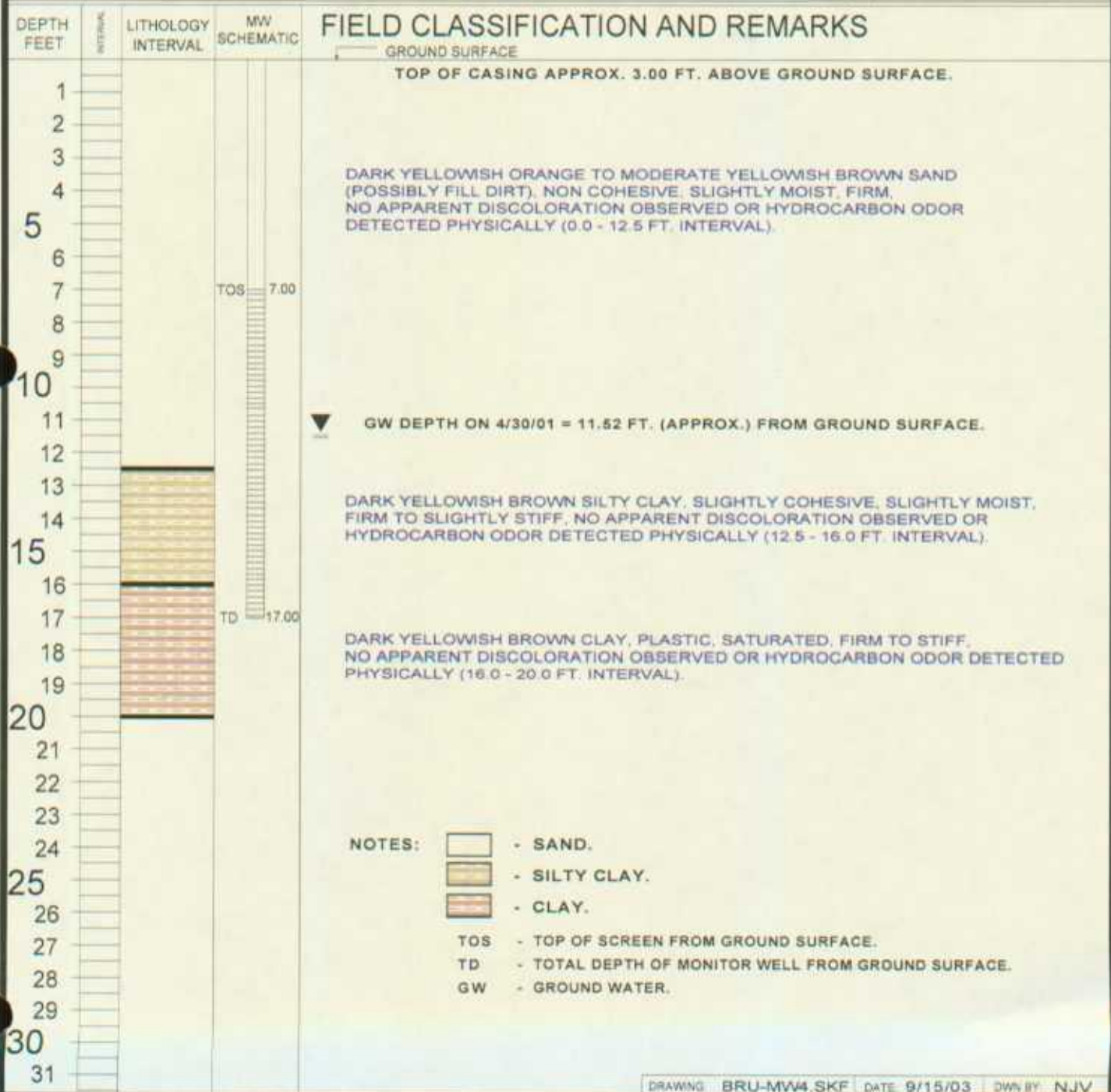


FIGURE 9

BLAGG ENGINEERING, INC.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: **BRUINGTON GC # 1**
 CLIENT: **XTO ENERGY INC.**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **MOBILE DRILL RIG (EARTH PROBE)**
 BORING LOCATION: **N42E, 64.2 FEET FROM MW # 2R.**

BORING #..... **BH - 5**
 MW #..... **5**
 PAGE #..... **5**
 DATE STARTED **2/20/01**
 DATE FINISHED **2/20/01**
 OPERATOR **JCB**
 PREPARED BY **NJV**

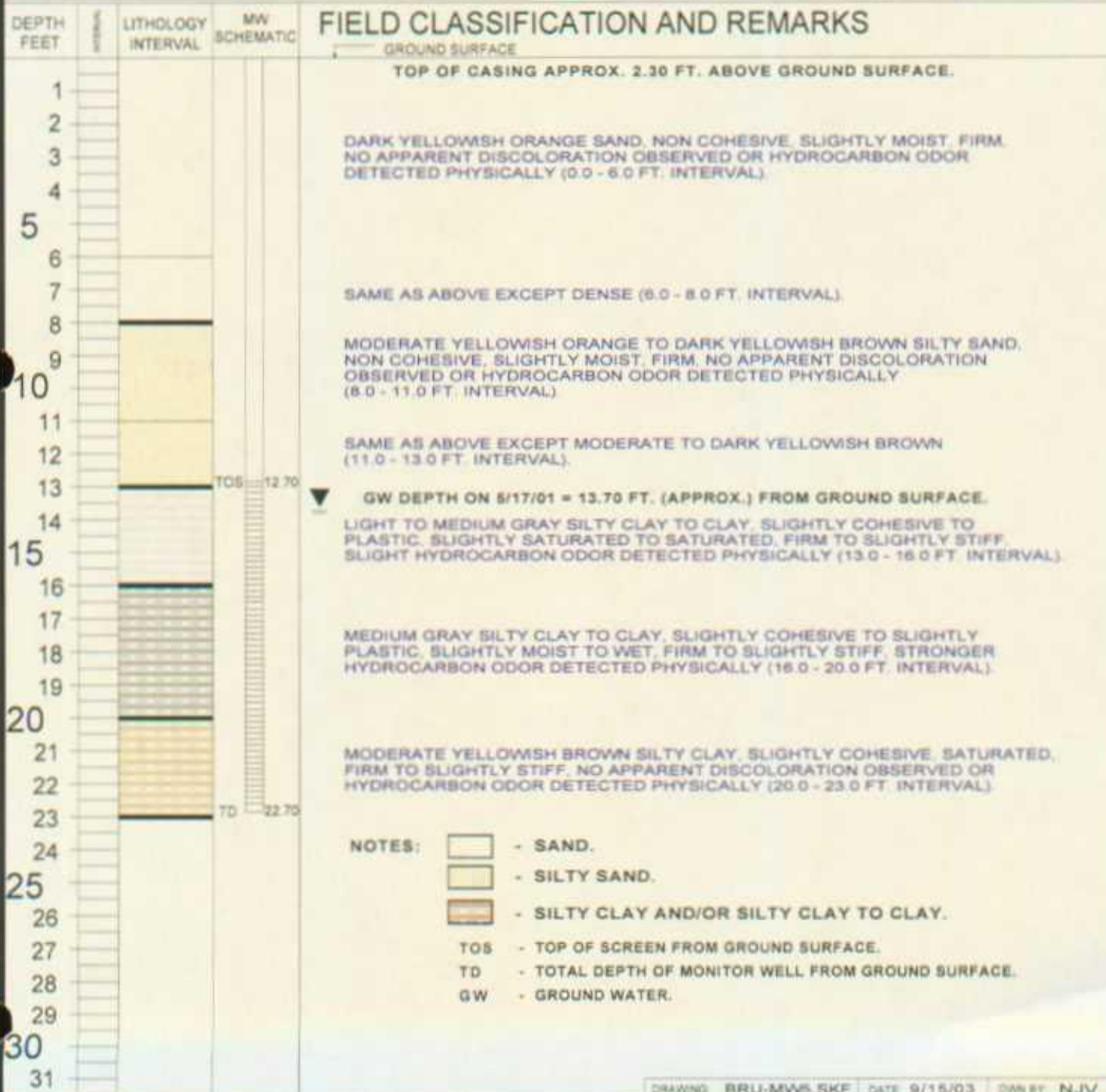


FIGURE 10

BLAGG ENGINEERING, INC.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: **BRUINGTON GC # 1**
 CLIENT: **XTO ENERGY INC.**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **MOBILE DRILL RIG (EARTHPROBE)**
 BORING LOCATION: **N47E, 106.8 FEET FROM MW # 2R.**

BORING #..... **BH - 6**
 MW #..... **6**
 PAGE #..... **8**
 DATE STARTED **2/20/01**
 DATE FINISHED **2/20/01**
 OPERATOR **JCB**
 PREPARED BY **NJV**

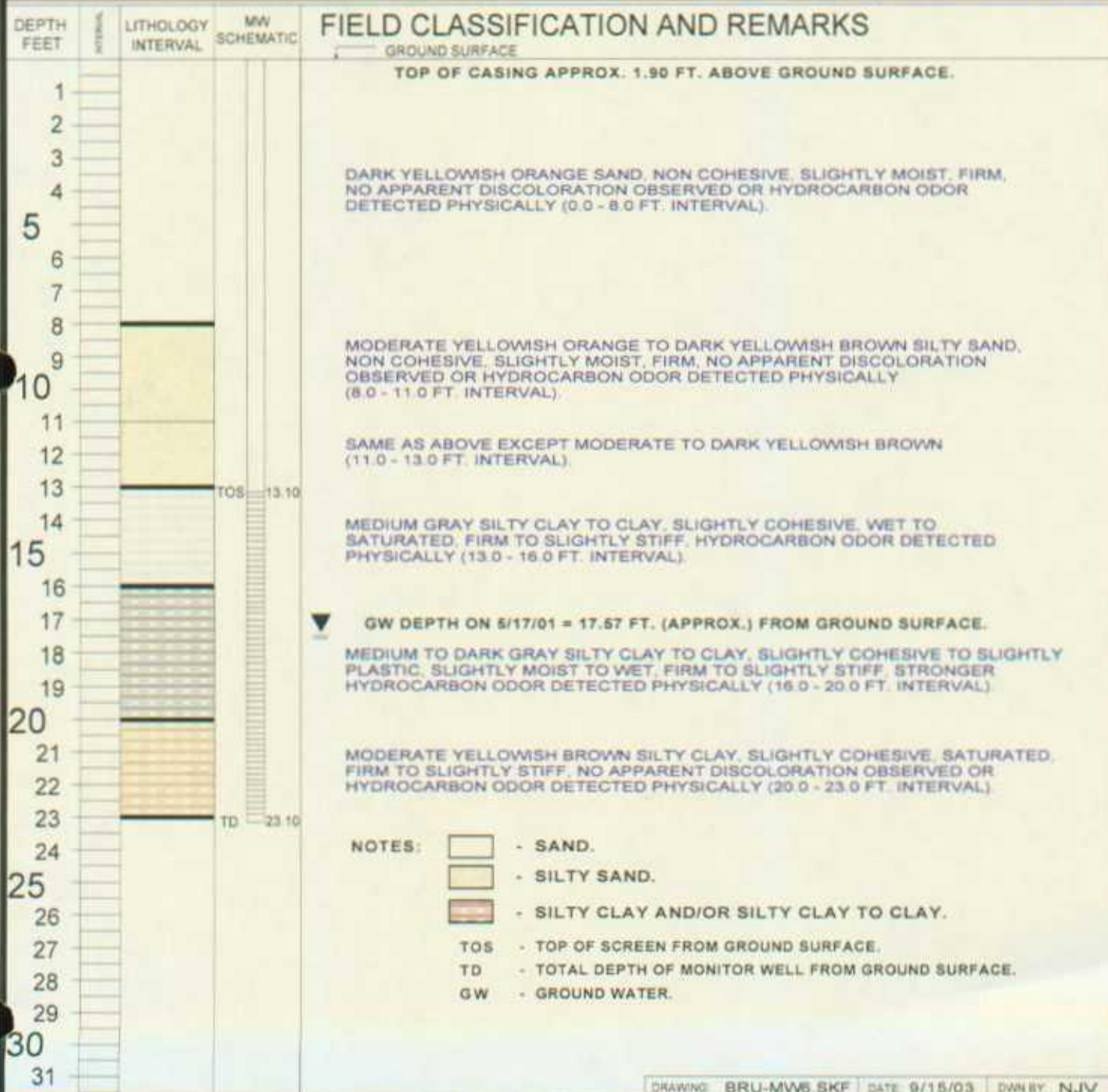


FIGURE 11

BLAGG ENGINEERING, INC.

P.O. BOX 87

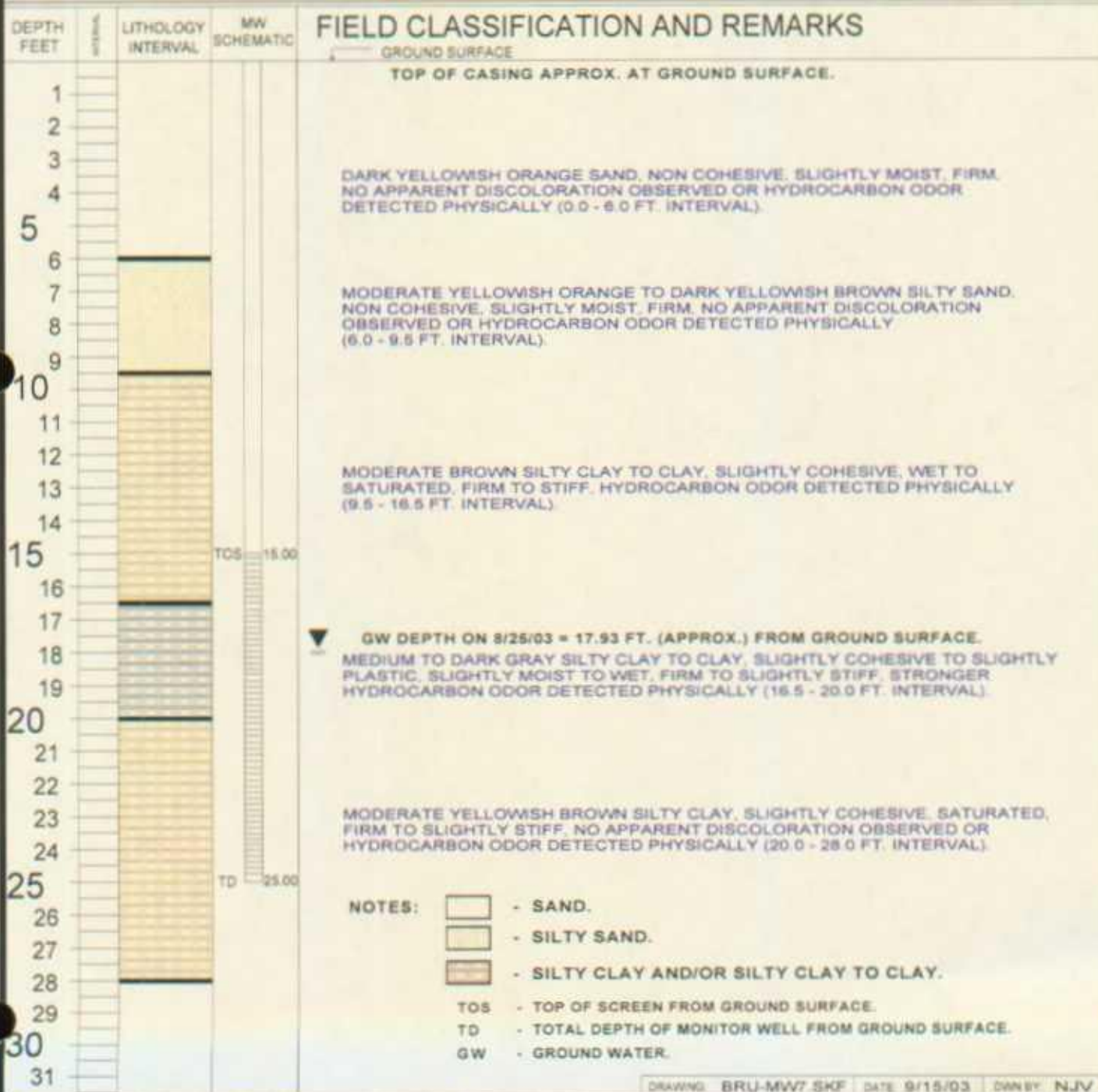
BLOOMFIELD, NM 87413

(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: **BRUINGTON GC # 1**
 CLIENT: **XTO ENERGY INC.**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **MOBILE DRILL RIG (EARTH PROBE)**
 BORING LOCATION: **S34.5E, 93 FEET FROM WELL HEAD.**

BORING # **BH - 7**
 MW # **7**
 PAGE # **7**
 DATE STARTED **7/10/03**
 DATE FINISHED **7/10/03**
 OPERATOR **JCB**
 PREPARED BY **NJV**



BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 10607

BRUINGTON GC #1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

7024

LABORATORY (S) USED : ON - SITE TECH.

ENVIROTECH, INC.

Date : June 29, 2000

SAMPLER : N J V

Filename : 06-29-00.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.45	83.31	11.14	20.00	0800	6.7	2,400	4.50	-
2R	93.13	81.63	11.50	20.95	0900	6.8	7,000	4.75	-
3	95.24	81.72	13.52	18.08	0915	7.0	7,600	2.25	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
(i.e. 2" MW $r = (1/12) \text{ ft. } h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft. } h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Collected BTEX & anion / cation samples from all MW's . Very poor recovery in all MW's .

MW #1R - black mud observed @ TD ; MW #2R & #3 - brackish appearance @ TD .

Strong effervescence in MW #2R , slight in MW #3 .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : _____

BRUINGTON GC #1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : _____

Date : April 30, 2001

SAMPLER : N J V

Filename : 04-30-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.42	79.61	14.81	20.00	-	-	-	-	-
2R	93.13	78.76	14.37	20.95	-	-	-	-	-
3	95.24	78.32	16.92	18.08	-	-	-	-	-
4	93.55	79.03	14.52	20.00	-	-	-	-	-
5	97.21	78.13	19.08	25.00	-	-	-	-	-
6	99.48	77.51	21.97	25.00	-	-	-	-	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Survey conducted on 2 / 20 / 01 by BEI . Depth to water check only .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : 11783

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : ON - SITE TECH.

Date : June 27, 2002

SAMPLER : N J V

Filename : 06-27-02.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.42	84.49	9.93	20.00	1220	7.09	3,800	3.00	-
2R	93.13	83.76	9.37	20.95	1230	7.29	6,200	3.00	-
3	95.24	83.15	12.09	18.08	-	-	-	-	-
4	93.55	84.10	9.45	20.00	-	-	-	-	-
5	97.21	83.38	13.83	25.00	1240	7.17	12,500	3.00	-
6	99.48	82.80	16.68	25.00	1255	7.24	12,000	2.50	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft. } h = 1 \text{ ft.}$ (i.e. 4" MW $r = (2/12) \text{ ft. } h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Poor recovery in all MW's sampled . Blackish water in bottom of MW # 1R , 2R , 5 , & 6 .

Effervescence in # 2R , 5 , & 6 ; also contained sewer like odor . Purged all MW's first , allowed

recovery to within 1 ft. of original static level , then sampled .

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 25, 2003

SAMPLER : N J V

Filename : 06-25-03.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42	82.97	11.45	20.00	0933	6.94	2,900	20.5	2.00
2R	93.13	82.00	11.13	20.95	0940	6.90	4,700	19.3	2.25
3	-	-	-	18.08	-	-	-	-	-
4	93.55	82.72	10.83	20.00	-	-	-	-	-
5	97.21	81.48	15.73	25.00	0947	6.92	7,600	19.4	2.25
6	99.48	80.54	18.94	25.00	0953	6.96	7,600	19.3	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/25/03	09:25

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
 (i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Poor recovery in all MW 's sampled . Blackish water in bottom of MW # 2R , # 5 , & # 6 .

Purged all MW 's first , allowed recovery , then sampled . Collected BTEX from MW # 1R , # 2R , # 5 , # 6 . MW # 3 destroyed / missing .

MW #	DTW
1R	11.45
2R	11.53
3	-
5	15.73
6	18.94

(prior to purging -
in ft.)

MW #	DTW
1R	11.52
2R	11.57
3	-
5	20.45
6	21.25

(@ time of sampling -
in ft.)

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 18, 2004

SAMPLER : N J V

Filename : 06-18-04.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42	82.07	12.35	20.00	-	-	-	-	-
2R	93.13	81.74	11.39	20.95	1235	6.61	7,600	24.4	3.00
3R	93.39	81.44	11.95	20.00	-	-	-	-	-
4	93.55	82.01	11.54	20.00	-	-	-	-	-
5	97.21	81.39	15.82	25.00	1250	6.82	11,600	21.8	1.50
6	99.48	80.77	18.71	25.00	1307	6.69	11,700	22.0	1.50
7	98.99	80.12	18.87	25.00	1318	6.56	10,600	23.2	1.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/18/04 1230

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
(i.e. 2" MW $r = (1/12) \text{ ft. } h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft. } h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Poor recovery in all MW's sampled . Blackish appearance with apparent sewage odor in all MW's .

Collected BTEX samples from MW # 2R , # 5 , # 6 , & # 7 .

BLAGG ENGINEERING, INC.
MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 27, 2005

SAMPLER : N J V

Filename : 06-27-05.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42	84.40	10.02	20.00	-	-	-	-	-
2R	93.13	82.99	10.14	20.95	1630	6.81	6,400	24.5	2.50
3R	93.39	82.38	11.01	20.00	-	-	-	-	-
4	93.55	84.02	9.53	20.00	-	-	-	-	-
5	97.21	83.00	14.21	25.00	1640	6.73	10,400	22.9	2.25
6	99.48	82.39	17.09	25.00	1650	6.63	10,100	22.1	1.75
7	98.99	81.59	17.40	25.00	1318	6.54	9,200	21.9	1.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/27/05	0655

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Poor recovery in all MW's sampled. Blackish appearance with apparent sewage odor in all MW's.

Collected BTEX samples from MW # 2R, # 5, # 6, & # 7.

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 10607

7024

LABORATORY (S) USED : ON - SITE TECH.

ENVIROTECH, INC.

BRUINGTON GC #1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

Date : June 29, 2000

SAMPLER : N J V

Filename : 06-29-00.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.45	83.31	11.14	20.00	0800	6.7	2,400	4.50	-
2R	93.13	81.63	11.50	20.95	0900	6.8	7,000	4.75	-
3	95.24	81.72	13.52	18.08	0915	7.0	7,600	2.25	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.

(i.e. 2" MW $r = (1/12) \text{ ft. } h = 1 \text{ ft.}$ (i.e. 4" MW $r = (2/12) \text{ ft. } h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected BTEX & anion / cation samples from all MW's . Very poor recovery in all MW's .

MW #1R - black mud observed @ TD ; MW #2R & #3 - brackish appearance @ TD .

Strong effervescence in MW #2R , slight in MW #3 .

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 12-Jul-00

Client:	Blagg Engineering	Client Sample Info:	Bruineton GC #1
Work Order:	0006068	Client Sample ID:	MW #1R
Lab ID:	0006068-01A	Matrix:	AQUEOUS
Project:	Cross Timbers - Bruineton GC #1	Collection Date:	6/29/2000 8:00:00 AM
		COC Record:	10607

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	17	2.5		µg/L	5	7/5/2000
Toluene	ND	2.5		µg/L	5	7/5/2000
Ethylbenzene	130	2.5		µg/L	5	7/5/2000
m,p-Xylene	450	5		µg/L	5	7/5/2000
o-Xylene	5.5	2.5		µg/L	5	7/5/2000

Qualifier	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	L - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surrogate - Surrogate

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1 of 3

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 12-Jul-00

Client:	Blagg Engineering	Client Sample Info:	Bruineton GC #1
Work Order:	0006068	Client Sample ID:	MW #2R
Lab ID:	0006068-02A	Matrix:	AQUEOUS
Project:	Cross Timbers - Bruineton GC #1	Collection Date:	6/29/2000 9:00:00 AM
		COC Record:	10607

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	7600	50		µg/L	100	6/30/2000
Toluene	2600	50		µg/L	100	6/30/2000
Ethylbenzene	630	50		µg/L	100	6/30/2000
m,p-Xylene	3600	100		µg/L	100	6/30/2000
o-Xylene	610	50		µg/L	100	6/30/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

2 of 3

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TECHNICAL SUPPORT GROUP • 505-327-1496 • FAX 505-327-1496

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 12-Jul-00

Client:	Blagg Engineering	Client Sample Info:	Bruineton GC #1
Work Order:	0006068	Client Sample ID:	MW #3
Lab ID:	0006068-03A	Matrix:	AQUEOUS
Project:	Cross Timbers - Bruineton GC #1	Collection Date:	6/29/2000 9:15:00 AM
		COC Record:	10607

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	87	0.5		µg/L	1	6/30/2000
Toluene	ND	0.5		µg/L	1	6/30/2000
Ethylbenzene	3.4	0.5		µg/L	1	6/30/2000
m,p-Xylene	8.3	1		µg/L	1	6/30/2000
o-Xylene	ND	0.5		µg/L	1	6/30/2000

Qualifiers: PQL - Practical Quantitation Limit S - Spike Recovery outside acceptable recovery limits
ND - Not Detected at Practical Quantitation Limit R - RPD outside accepted recovery limits
J - Analyte detected below Practical Quantitation Limit E - Value above quantitation range
B - Analyte detected in the associated Method Blank Surr - Surrogate

P.O. BOX 2606 • FARMINGTON NM 87499

3 of 3

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

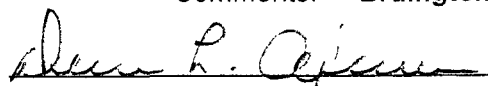
CATION / ANION ANALYSIS

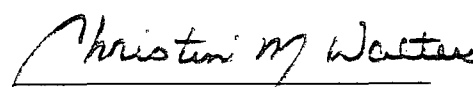
Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	MW # 1R	Date Reported:	06-30-00
Laboratory Number:	H629	Date Sampled:	06-29-00
Chain of Custody:	7024	Date Received:	06-29-00
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	06-30-00
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	6.72	s.u.		
Conductivity @ 25° C	8,720	umhos/cm		
Total Dissolved Solids @ 180C	4,350	mg/L		
Total Dissolved Solids (Calc)	4,310	mg/L		
SAR	7.4	ratio		
Total Alkalinity as CaCO3	562	mg/L		
Total Hardness as CaCO3	1,700	mg/L		
Bicarbonate as HCO3	562	mg/L	9.21	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.6	mg/L	0.01	meq/L
Nitrite Nitrogen	0.028	mg/L	0.00	meq/L
Chloride	28.2	mg/L	0.80	meq/L
Fluoride	1.54	mg/L	0.08	meq/L
Phosphate	1.1	mg/L	0.03	meq/L
Sulfate	2,610	mg/L	54.34	meq/L
Iron	14.4	mg/L		
Calcium	539	mg/L	26.90	meq/L
Magnesium	85.5	mg/L	7.04	meq/L
Potassium	1.0	mg/L	0.03	meq/L
Sodium	700	mg/L	30.45	meq/L
Cations			64.41	meq/L
Anions			64.47	meq/L
Cation/Anion Difference			0.10%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Bruington GC #1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	MW # 2R	Date Reported:	06-30-00
Laboratory Number:	H630	Date Sampled:	06-29-00
Chain of Custody:	7024	Date Received:	06-29-00
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	06-30-00
Condition:	Cool & Intact		

Parameter	Analytical Result	Units	Units
pH	7.20	s.u.	
Conductivity @ 25° C	15,100	umhos/cm	
Total Dissolved Solids @ 180C	7,530	mg/L	
Total Dissolved Solids (Calc)	7,490	mg/L	
SAR	32.9	ratio	
Total Alkalinity as CaCO3	3,120	mg/L	
Total Hardness as CaCO3	940	mg/L	
Bicarbonate as HCO3	3,120	mg/L	51.14 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	3.6	mg/L	0.06 meq/L
Nitrite Nitrogen	0.284	mg/L	0.01 meq/L
Chloride	1,040	mg/L	29.34 meq/L
Fluoride	0.76	mg/L	0.04 meq/L
Phosphate	2.7	mg/L	0.09 meq/L
Sulfate	1,880	mg/L	39.14 meq/L
Iron	2.04	mg/L	
Calcium	295	mg/L	14.72 meq/L
Magnesium	49.3	mg/L	4.06 meq/L
Potassium	2.1	mg/L	0.05 meq/L
Sodium	2,320	mg/L	100.92 meq/L
Cations			119.75 meq/L
Anions			119.81 meq/L
Cation/Anion Difference			0.05%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Bruington GC #1.

Analys:

Review

ENVIROTECH LABS

PROFESSIONAL SOLUTIONS FOR A BETTER TOMORROW

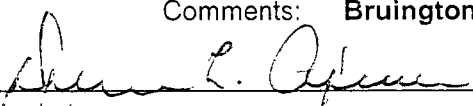
CATION / ANION ANALYSIS

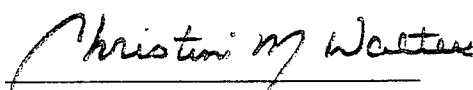
Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	MW # 3	Date Reported:	06-30-00
Laboratory Number:	H631	Date Sampled:	06-29-00
Chain of Custody:	7024	Date Received:	06-29-00
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	06-30-00
Condition:	Cool & Intact		

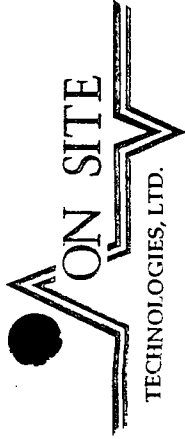
Parameter	Analytical Result	Units	Units
pH	6.96	s.u.	
Conductivity @ 25° C	17,600	umhos/cm	
Total Dissolved Solids @ 180C	8,750	mg/L	
Total Dissolved Solids (Calc)	8,700	mg/L	
SAR	25.1	ratio	
Total Alkalinity as CaCO3	1,050	mg/L	
Total Hardness as CaCO3	1,520	mg/L	
Bicarbonate as HCO3	1,050	mg/L	17.21 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	0.9	mg/L	0.01 meq/L
Nitrite Nitrogen	0.048	mg/L	0.00 meq/L
Chloride	118	mg/L	3.33 meq/L
Fluoride	3.20	mg/L	0.17 meq/L
Phosphate	5.6	mg/L	0.18 meq/L
Sulfate	5,150	mg/L	107.22 meq/L
Iron	16.2	mg/L	
Calcium	418	mg/L	20.86 meq/L
Magnesium	115	mg/L	9.46 meq/L
Potassium	2.9	mg/L	0.07 meq/L
Sodium	2,250	mg/L	97.88 meq/L
Cations			128.27 meq/L
Anions			128.12 meq/L
Cation/Anion Difference			0.12%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Bruington GC #1.


Analyst


Review



CHAIN OF CUSTODY RECORD

10607

Date: 6/29/00

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Purchase Order No.:		Project No.	
Name: J. BLACE		Title:	
Company: BLACE ENGINEERING, INC.		Company: SAME	
Address:		Mailing Address:	
City, State, Zip:		City, State, Zip:	
Telephone No. 632-1199		Telephone No. 632-3903	
Fax No. 632-3903		Fax No. 632-3903	
PROJECT LOCATION:		ANALYSIS REQUESTED	
CHART TIMBERS - BRUNETON CC #1			
SAMPLER'S SIGNATURE: <i>John Velazquez</i>			
SAMPLE IDENTIFICATION		LAB ID	
DATE	TIME	MATRIX	PRES.
6/29/00	0800	HEI + COOL	WATER
6/29/00	0900	HEI + COOL	WATER
6/29/00	0915	HEI + COOL	WATER
RELINQUISHED BY: <i>John Velazquez</i>		Date/Time: 6/29/00 11:23	
RELINQUISHED BY:		Date/Time:	
RELINQUISHED BY:		Date/Time:	
Method of Shipment:		Rush 24-48 Hours 10 Working Days By Date	
Authorized by:		Special Instructions / Remarks:	
(Client Signature Must Accompany Request)			

7024

[illegible]

On Site Technologies, LTD.

Date: 12-Jul-00

Client: Blagg Engineering
Work Order: 0006068
Project: Cross Timbers - Bruineton GC #1

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/30/2000	Prep Date:
Client ID:	0006068	Run ID: GC-1_000630A		SeqNo: 29660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0662	0.5			J
Ethylbenzene	.0926	0.5			J
m,p-Xylene	.1955	1			J
Methyl tert Butyl Ether	ND	1			
o-Xylene	.1915	0.5			J
Toluene	.2052	0.5			J

Sample ID: MB1	Batch ID: GC-1_000705	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/5/2000	Prep Date:
Client ID:	0006068	Run ID: GC-1_000705A		SeqNo: 29716	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0469	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	.1105	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0849	0.5			J

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

CLIENT: Blagg Engineering
 Work Order: 0006068
 Project: Cross Timbers - Bruinerton GC #1

Date: 12-Jul-00

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006067-02AMS	Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/30/2000	Prep Date:
Client ID: 0006068	Run ID: GC-1_000630A	PQL	SPK value	SeqNo: 29661	
Analyte	Result			LowLimit	HighLimit
Benzene	6142	50	4000	73	126
Ethylbenzene	4770	50	4000	88	113
m,p-Xylene	10130	100	8000	83	112
Methyl tert-Butyl Ether	4269	100	4000	81	125
o-Xylene	4523	50	4000	93	110
Toluene	6361	50	4000	76	126
				%REC	%RPD
				99.6%	
				100.2%	
				94.9%	
				101.9%	
				101.2%	
				100.9%	
				RPD Ref Val	RPDLimit
					Qual

Sample ID: 0006067-02AMSD	Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/30/2000	Prep Date:
Client ID: 0006068	Run ID: GC-1_000630A	PQL	SPK value	SeqNo: 29662	
Analyte	Result			LowLimit	HighLimit
Benzene	6030	50	4000	73	126
Ethylbenzene	4686	50	4000	88	113
m,p-Xylene	9959	100	8000	83	112
Methyl tert-Butyl Ether	4256	100	4000	81	125
o-Xylene	4455	50	4000	93	110
Toluene	6245	50	4000	76	126
				%REC	%RPD
				96.7%	1.9%
				98.1%	1.8%
				92.7%	1.7%
				101.6%	0.3%
				99.5%	1.5%
				98.0%	1.8%
				RPD Ref Val	RPDLimit
					Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0006068

Project: Cross Timbers - Brimmeton GC #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006056-01AMS	Batch ID: GC-1_000705	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/5/2000	Prep Date:
Client ID: 0006068	Run ID: GC-1_000705A	PQL	SPK value	SeqNo: 29717	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	227.9	2.5	26	73	126
Ethylbenzene	299.6	2.5	94	88	113
m,p-Xylene	892.1	5	500	83	112
Methyl tert-Butyl Ether	202.4	5	0	81	125
o-Xylene	347	2.5	140	93	110
Toluene	208.7	2.5	2.5	76	126

Sample ID: 0006056-01AMSD	Batch ID: GC-1_000705	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/5/2000	Prep Date:
Client ID: 0006068	Run ID: GC-1_000705A	PQL	SPK value	SeqNo: 29718	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	223.9	2.5	26	73	126
Ethylbenzene	295	2.5	94	88	113
m,p-Xylene	879.8	5	500	83	112
Methyl tert-Butyl Ether	204.4	5	0	81	125
o-Xylene	342.5	2.5	140	93	110
Toluene	205.5	2.5	2.5	76	126

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 12-Jul-00

CLIENT: Blagg Engineering
Work Order: 0006068
Project: Cross Timbers - Brunetton GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date 6/30/2000		Prep Date:				
Client ID:	0006068	Run ID:	GC-1_000630A		SeqNo:	29659					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.35	0.5	40	0.0662	100.7%	89	112				
Ethylbenzene	40.86	0.5	40	0.0926	101.9%	93	112				
m,p-Xylene	77.5	1	80	0.1955	96.6%	88	108				
Methyl tert-Butyl Ether	40.23	1	40	0	100.6%	87	115				
o-Xylene	41.16	0.5	40	0.1915	102.4%	93	112				
Toluene	41.01	0.5	40	0.2052	102.0%	92	111				

Sample ID: LCS WATER	Batch ID: GC-1_000705	Test Code: SW8021B	Units: µg/L	Analysis Date 7/5/2000	Prep Date:						
Client ID:	0006068	Run ID:	GC-1_000705A	SeqNo: 29715							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.5	0.5	40	0.0469	106.1%	89	112				
Ethylbenzene	43.3	0.5	40	0	108.3%	93	112				
m,p-Xylene	82.02	1	80	0.1105	102.4%	88	108				
Methyl tert-Butyl Ether	42.23	1	40	0	105.6%	87	115				
o-Xylene	43.47	0.5	40	0	108.7%	93	112				
Toluene	43.22	0.5	40	0.0849	107.8%	92	111				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 12-Jul-00

CLIENT: Blagg Engineering
Work Order: 0006068
Project: Cross Timbers - Bruinerton GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date 6/30/2000		Prep Date:
Client ID: 0006068		Run ID: GC-1_000630A	PQL	SPK value	SPK Ref Val	SeqNo: 29656	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	20.74	0.5	20	0	103.7%	85	115
Ethylbenzene	21	0.5	20	0	105.0%	85	115
m,p-Xylene	39.95	1	40	0	99.9%	85	115
Methyl tert-Butyl Ether	20.49	1	20	0	102.5%	85	115
o-Xylene	21.27	0.5	20	0	106.4%	85	115
Toluene	21.05	0.5	20	0	105.3%	85	115
1,4-Difluorobenzene	89.85	0	100	0	89.9%	80	105
4-Bromochlorobenzene	84.68	0	100	0	84.7%	78	108
Fluorobenzene	88.46	0	100	0	88.5%	78	108

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date 6/30/2000		Prep Date:
Client ID: 0006068		Run ID: GC-1_000630A	PQL	SPK value	SPK Ref Val	SeqNo: 29657	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	20.07	0.5	20	0	100.4%	85	115
Ethylbenzene	20.26	0.5	20	0	101.3%	85	115
m,p-Xylene	38.7	1	40	0	96.7%	85	115
Methyl tert-Butyl Ether	20.64	1	20	0	103.2%	85	115
o-Xylene	20.52	0.5	20	0	102.6%	85	115
Toluene	20.42	0.5	20	0	102.1%	85	115
1,4-Difluorobenzene	90.15	0	100	0	90.1%	80	105
4-Bromochlorobenzene	85.09	0	100	0	85.1%	78	108
Fluorobenzene	88.6	0	100	0	88.6%	78	108

Qualifiers: NID - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0006068

Project: Cross Timbers - Bruneton GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000630	Test Code: SW8021B		Units: µg/L	Analysis Date 6/30/2000			Prep Date:					
Client ID:		0006068	Run ID:	GC-1_000630A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result													
Benzene	40.36				0.5	40	0	100.9%	85	115				
Ethylbenzene	40.66				0.5	40	0	101.7%	85	115				
m,p-Xylene	77.16				1	80	0	96.4%	85	115				
Methyl tert-Butyl Ether	41.35				1	40	0	103.4%	85	115				
o-Xylene	41.21				0.5	40	0	103.0%	85	115				
Toluene	40.98				0.5	40	0	102.4%	85	115				
1,4-Difluorobenzene	89.84				0	100	0	89.8%	80	105				
4-Bromochlorobenzene	85.42				0	100	0	85.4%	78	108				
Fluorobenzene	87.99				0	100	0	88.0%	78	108				

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000705	Test Code: SW8021B	Units: µg/L	Analysis Date 7/5/2000				Prep Date:				
Client ID:	0006068	Run ID:	GC-1_000705A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	20.52			0.5	20	0	102.6%	85	115				
Ethylbenzene	20.95			0.5	20	0	104.7%	85	115				
m,p-Xylene	39.92			1	40	0	99.8%	85	115				
Methyl tert-Butyl Ether	20.47			1	20	0	102.4%	85	115				
o-Xylene	21.07			0.5	20	0	105.3%	85	115				
Toluene	20.88			0.5	20	0	104.4%	85	115				
1,4-Difluorobenzene	89.92			0	100	0	89.9%	80	105				
4-Bromochlorobenzene	85.7			0	100	0	85.7%	78	108				
Fluorobenzene	88.5			0	100	0	88.5%	78	108				

Qualifiers: NID - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0006068

Project: Cross Timbers - Bruneton GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004	Batch ID: GC-1_000705	Test Code: SW8021B	Units: µg/L	Analysis Date 7/5/2000	Prep Date:						
Client ID:	0006068	Run ID:	GC-1_000705A	SeqNo:	29713						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.74	0.5	20	0	98.7%	85	115				
Ethylbenzene	20	0.5	20	0	100.0%	85	115				
m,p-Xylene	38.14	1	40	0	95.3%	85	115				
Methyl tert-Butyl Ether	20.63	1	20	0	103.1%	85	115				
o-Xylene	20.26	0.5	20	0	101.3%	85	115				
Toluene	20.05	0.5	20	0	100.2%	85	115				
1,4-Difluorobenzene	90.14	0	100	0	90.1%	80	105				
4-Bromochlorobenzene	83.65	0	100	0	83.7%	78	108				
Fluorobenzene	88.53	0	100	0	88.5%	78	108				

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000705		Test Code: SW8021B		Units: µg/L		Analysis Date 7/5/2000		Prep Date:					
Client ID: 0006068		Run ID: GC-1_000705A		PQL		SPK value		SeqNo: 29714							
Analyte	Result			SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.01	0.5		40		0		100.0%		85		115			
Ethylbenzene	40.66	0.5		40		0		101.6%		85		115			
m,p-Xylene	76.88	1		80		0		96.1%		85		115			
Methyl tert-Butyl Ether	41	1		40		0		102.5%		85		115			
o-Xylene	41.1	0.5		40		0		102.8%		85		115			
Toluene	40.66	0.5		40		0		101.7%		85		115			
1,4-Difluorobenzene	89.53	0		100		0		89.5%		80		105			
4-Bromochlorobenzene	85.63	0		100		0		85.6%		78		108			
Fluorobenzene	88.04	0		100		0		88.0%		78		108			

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0006068
Project: Cross Timbers - Bruineton GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006050-18A	90.2	82.4	89.6
0006054-02A	90.3	85	89.2
0006055-01A	90.7	83.9	89.4
0006055-02A	90.5	85	89.2
0006056-01A	89.6	82.8	88.9
0006056-01AMS	88.9	84.8	87.8
0006056-01AMSD	89.1	84.4	88
0006056-02A	87.4	83	86.9
0006056-03A	90.4	85	89.4
0006061-01A	91	85.2	89.2
0006061-02A	88.8	84	87
0006061-03A	88.5	87	87.4
0006061-04A	90.6	85	89.2
0006061-05A	90.6	84.7	89.1
0006067-01A	90.4	83.8	89.1
0006067-02A	89.6	85	88.6
0006067-02AMS	89.5	85.6	87.8
0006067-02AMSD	89.5	85.7	87.7
0006067-03A	89.8	84.6	89.2
0006068-01A	88.2	80.3	89.8
0006068-02A	89.3	85.2	87.3
0006068-03A	84.3	80.2	83.1
0006071-01A	90.7	83.4	89.1
0006072-01A	90.1	84.6	89.5
0006072-05A	90.1	83.2	89.3
0006072-07A	90.3	84.1	89.2
0006072-08A	90.5	84.2	89.5

Acronym**Surrogate****QC Limits**

14FBZ

= 1,4-Difluorobenzene

80-105

4BCBZ

= 4-Bromochlorobenzene

78-108

FLBZ

= Fluorobenzene

78-108

* Surrogate recovery outside acceptance limits

CLIENT: Blagg Engineering
Work Order: 0006068
Project: Cross Timbers - Bruineton GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006072-09A	88.4	85.6	88.7
0006072-10A	89.4	84	95.2
0006072-11A	94.5	84.6	91.4
0006072-15A	90.2	85.3	89.4
0006072-17A	90.4	85.3	89.2
0006072-18A	90.2	85	89.2
0006072-28A	89.4	83.9	89.1
0006072-31A	90.2	84.7	89.5
CCV1 BTEX_00040	89.9	85.7	88.5
CCV2 BTEX_00040	90.1	83.6	88.5
CCV3 BTEX_00040	89.5	85.6	88
LCS WATER	89.4	85.3	88.4
MB1	90.5	84.8	89.4

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

BLAGG ENGINEERING, INC.**MONITOR WELL SAMPLING DATA**CLIENT : CROSS TIMBERS OPER. CO.CHAIN-OF-CUSTODY # : 11051**BRUINGTON GC #1 - BLOW PIT**
UNIT E, SEC. 14, T29N, R11WLABORATORY (S) USED : ON - SITE TECH.Date : May 17, 2001SAMPLER : N J VFilename : 05-17-01.WK4PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.42	83.09	11.33	20.00	1215	6.70	3,500	2.00	-
2R	93.13	81.01	12.12	20.95	1250	6.77	8,200	2.00	-
3	95.24	80.73	14.51	18.08	1225	6.94	8,800	1.00	-
4	93.55	82.67	10.88	20.00	1155	7.31	6,700	2.00	-
5	97.21	81.21	16.00	25.00	1200	6.64	11,000	2.00	-
6	99.48	80.01	19.47	25.00	1240	7.07	13,200	1.50	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "Poor recovery in all MW 's. Blackish water in bottom of MW #1R, 2R, 5, & 6. Brownish in MW #4.Developed MW 's #4, 5, & 6 for first time prior to sampling. Effervescence in #2R, 5, & 6; alsocontained sewer like odor. Purged all MW 's first, allowed recovery, then sampled @ the followingDTW levels : # 1R - 11.43 ft., # 2R - 11.90 ft., # 3 - 14.88 ft., # 4 - 13.95 ft., # 5 - 16.40 ft., # 6 - 20.92 ft.

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FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 31-May-01

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0105045	Client Sample ID:	MW #1R
Lab ID:	0105045-01A	Matrix:	AQUEOUS
Project:	Cross Timbers: Bruington GC #1	Collection Date:	5/17/2001 12:15:00 PM
		COC Record:	11051

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Benzene	29	2.5		µg/L	5	5/27/2001
Toluene	19	2.5		µg/L	5	5/27/2001
Ethylbenzene	33	2.5		µg/L	5	5/27/2001
m,p-Xylene	110	5		µg/L	5	5/27/2001
o-Xylene	17	2.5		µg/L	5	5/27/2001

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surrogate - Surrogate

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ANALYTICAL REPORT

Date: 31-May-01

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0105045	Client Sample ID:	MW #2R
Lab ID:	0105045-02A	Matrix:	AQUEOUS
Project:	Cross Timbers; Bruington GC #1	Collection Date:	5/17/2001 12:50:00 PM
		COC Record:	11051

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	1700	50		µg/L	100	5/27/2001
Toluene	320	50		µg/L	100	5/27/2001
Ethylbenzene	390	50		µg/L	100	5/27/2001
m,p-Xylene	1500	100		µg/L	100	5/27/2001
o-Xylene	120	50		µg/L	100	5/27/2001

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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TECHNOLOGIES, LTD. ANALYTICAL REPORT

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ANALYTICAL REPORT

Date: 31-May-01

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0105045	Client Sample ID:	MW #3
Lab ID:	0105045-03A	Matrix:	AQUEOUS
Project:	Cross Timbers; Bruington GC #1	Collection Date:	5/17/2001 12:25:00 PM
		COC Record:	11051

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	ND	0.5		µg/L	1	5/27/2001
Toluene	0.6	0.5		µg/L	1	5/27/2001
Ethylbenzene	0.7	0.5		µg/L	1	5/27/2001
m,p-Xylene	ND	1		µg/L	1	5/27/2001
o-Xylene	ND	0.5		µg/L	1	5/27/2001

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

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ANALYTICAL REPORT

Date: 31-May-01

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0105045	Client Sample ID:	MW #4
Lab ID:	0105045-04A	Matrix:	AQUEOUS
Project:	Cross Timbers; Bruington GC #1	Collection Date:	5/17/2001 11:55:00 AM
		COC Record:	11051

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Benzene	ND	0.5		µg/L	1	5/29/2001
Toluene	ND	0.5		µg/L	1	5/29/2001
Ethylbenzene	ND	0.5		µg/L	1	5/29/2001
m,p-Xylene	ND	1		µg/L	1	5/29/2001
o-Xylene	ND	0.5		µg/L	1	5/29/2001

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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ANALYTICAL REPORT

Date: 31-May-01

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0105045	Client Sample ID:	MW #5
Lab ID:	0105045-05A	Matrix:	AQUEOUS
Project:	Cross Timbers: Bruington GC #1	Collection Date:	5/17/2001 12:00:00 PM
		COC Record:	11051

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Benzene	25000	100		µg/L	200	5/29/2001
Toluene	620	5		µg/L	10	5/28/2001
Ethylbenzene	870	5		µg/L	10	5/28/2001
m,p-Xylene	6200	200		µg/L	200	5/29/2001
o-Xylene	410	5		µg/L	10	5/28/2001

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surrogate - Surrogate

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ANALYTICAL REPORT

Date: 31-May-01

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0105045	Client Sample ID:	MW #6
Lab ID:	0105045-06A	Matrix:	AQUEOUS
Project:	Cross Timbers; Bruington GC #1	Collection Date:	5/17/2001 12:40:00 PM
		COC Record:	11051

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	28000	120		µg/L	250	5/29/2001
Toluene	15000	120		µg/L	250	5/29/2001
Ethylbenzene	1000	120		µg/L	250	5/29/2001
m,p-Xylene	7600	250		µg/L	250	5/29/2001
o-Xylene	1800	120		µg/L	250	5/29/2001

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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CHAIN OF CUSTODY RECORD

11051

Date: 5/17/01
Page: 1 of 1

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Purchase Order No.:		Project No.		Name Nelson Velazquez		Title	
SEND INVOICE TO		Name Jeff Blagg		Company Blagg Engineering, Inc.		Company same	
		Address		Mailing Address			
		City, State, Zip		City, State, Zip			
		Telephone No. 632-1199		Telephone No. 632-3903			
PROJECT LOCATION:				ANALYSIS REQUESTED			
CDOC - BRINGTON GC #1							
SAMPLER'S SIGNATURE: [Signature]							
SAMPLE IDENTIFICATION				LAB ID			
DATE		TIME		MATRIX		PRES.	
5/17/01		1215		WATER		HELD COOL	
5/17/01		1250		WATER		HELD COOL	
5/17/01		1225		WATER		HELD COOL	
5/17/01		1155		WATER		HELD COOL	
5/17/01		1200		WATER		HELD COOL	
5/17/01		1240		WATER		HELD COOL	
Relinquished by: [Signature]				Date/Time 5/17/01 1352		Date/Time 5/17/01 1352	
Relinquished by:				Date/Time		Date/Time	
Relinquished by:				Date/Time		Date/Time	
Method of Shipment:				Rush		24-48 Hours	
				10 Working Days		By Date	
Authorized by: _____ Date _____				Special Instructions / Remarks:			
(Client Signature Must Accompany Request)							

On Site Technologies, LTD.

Date: 31-May-01

CLIENT: Blagg Engineering
Work Order: 0105045

QC SUMMARY REPORT

Project: Cross Timbers; Bruington GC #1

Method Blank

Sample ID: MB1	Batch ID: GC-1_010527	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/27/2001	Prep Date:
Client ID:	0105045	Run ID: GC-1_010527A		SeqNo: 38441	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	ND	0.5			

Sample ID: MB1	Batch ID: GC-1_010528	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/28/2001	Prep Date:
Client ID:	0105045	Run ID: GC-1_010528A		SeqNo: 38468	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1045	0.5			J

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT:

Blagg Engineering

Work Order:

0105045

Project:

Cross Timbers; Bruntington GC #1

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_010529	Test Code: SW8021B	Units: µg/L	Analysis Date 5/29/2001		Prep Date:					
Client ID:	0105045	Run ID: GC-1_010529A		SeqNo: 38494							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0648	0.5									J
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									J
Toluene	.1722	0.5									

On Site Technologies, LTD.

Date: 31-May-01

CLIENT: Blagg Engineering
 Work Order: 0105045
 Project: Cross Timbers; Bruington GC #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0105046-06AMS		Batch ID: GC-1_010527		Test Code: SW8021B		Units: µg/L		Analysis Date 5/27/2001		Prep Date:	
Client ID:		0105045		Run ID:		GC-1_010527A		SeqNo: 38442			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1017	10	800	248.2	96.1%	70	130				
Ethylbenzene	812.9	10	800	35.36	97.2%	70	130				
m,p-Xylene	1501	20	1600	7.708	93.3%	70	130				
Methyl tert-Butyl Ether	5000	20	800	4283	89.6%	70	130				E
o-Xylene	767.1	10	800	0	95.9%	70	130				
Toluene	771.6	10	800	3.318	96.0%	70	130				

Sample ID: 0105046-06AMSD		Batch ID: GC-1_010527		Test Code: SW8021B		Units: µg/L		Analysis Date 5/27/2001		Prep Date:	
Client ID:		0105045		Run ID:		GC-1_010527A		SeqNo: 38443			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	975.8	10	800	248.2	90.9%	70	130	1017	4.1%	8	
Ethylbenzene	782.6	10	800	35.36	93.4%	70	130	812.9	3.8%	7	
m,p-Xylene	1444	20	1600	7.708	89.8%	70	130	1501	3.9%	7	
Methyl tert-Butyl Ether	4886	20	800	4283	75.4%	70	130	5000	2.3%	6	E
o-Xylene	741.7	10	800	0	92.7%	70	130	767.1	3.4%	6	
Toluene	743.4	10	800	3.318	92.5%	70	130	771.6	3.7%	6	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0105045
Project: Cross Timbers; Bruington GC #1

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID: 0105046-05AMS		Batch ID: GC-1_010528		Test Code: SW8021B		Units: µg/L		Analysis Date 5/28/2001		Prep Date:	
Client ID: 0105045		Run ID: GC-1_010528A						SeqNo: 38469			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2164	25	2000	260	95.2%	70	130				
Ethylbenzene	1972	25	2000	40	96.6%	70	130				
m,p-Xylene	3720	50	4000	20	92.5%	70	130				
Methyl tert-Butyl Ether	6369	50	2000	4600	88.5%	70	130				
o-Xylene	1913	25	2000	0	95.7%	70	130				
Toluene	1905	25	2000	8	94.8%	70	130				

Sample ID: 0105046-05AMSD		Batch ID: GC-1_010528	Test Code: SW8021B	Units: µg/L	Analysis Date 5/28/2001		Prep Date:				
Client ID:		0105045	Run ID: GC-1_010528A		SeqNo: 38470						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2243	25	2000	260	99.1%	70	130	2164	3.6%	8	
Ethylbenzene	2059	25	2000	40	101.0%	70	130	1972	4.3%	7	
m,p-Xylene	3879	50	4000	20	96.5%	70	130	3720	4.2%	7	
Methyl tert-Butyl Ether	6499	50	2000	4600	95.0%	70	130	6369	2.0%	6	
o-Xylene	1985	25	2000	0	99.2%	70	130	1913	3.7%	6	
Toluene	1977	25	2000	8	98.4%	70	130	1905	3.7%	6	

Sample ID: 0105046-17AMS		Batch ID: GC-1_010529		Test Code: SW8021B		Units: µg/L		Analysis Date 5/29/2001		Prep Date:	
Client ID:		0105045		Run ID:		GC-1_010529A		SeqNo: 38495			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	3902	50	4000	120.3	94.5%	70	130				
Ethylbenzene	3830	50	4000	52.46	94.4%	70	130				
m,p-Xylene	7228	100	8000	1.939	90.3%	70	130				
Methyl tert-Butyl Ether	12140	100	4000	7021	128.1%	70	130				
o-Xylene	3733	50	4000	0.8645	93.3%	70	130				
Toluene	3732	50	4000	2.609	93.2%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

CLIENT: Blagg Engineering
 Work Order: 0105045
 Project: Cross Timbers; Bruington GC #1

Sample ID: 0105046-17AMSD		Batch ID: GC-1_010529	Test Code: SW8021B		Units: µg/L		Analysis Date 5/29/2001		Prep Date:		
Client ID: 0105045		Run ID: GC-1_010529A		SeqNo: 38496							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	3961	50	4000	120.3	96.0%	70	130	3902	1.5%	8	
Ethylbenzene	3894	50	4000	52.46	96.0%	70	130	3830	1.7%	7	
m,p-Xylene	7364	100	8000	1.939	92.0%	70	130	7228	1.9%	7	
Methyl tert-Butyl Ether	12190	100	4000	7021	129.3%	70	130	12140	0.4%	6	
o-Xylene	3802	50	4000	0.8645	95.0%	70	130	3733	1.8%	6	
Toluene	3790	50	4000	2.609	94.7%	70	130	3732	1.5%	6	

Qualifiers: NI - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 31-May-01

CLIENT: Blagg Engineering
 Work Order: 0105045
 Project: Cross Timbers; Bruington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_010527	Test Code: SW8021B	Units: µg/L	Analysis Date 5/27/2001		Prep Date:				
Client ID:		0105045	Run ID:	GC-1_010527A	SeqNo: 38440						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.84	0.5	40	0	97.1%	80	120				
Ethylbenzene	38.92	0.5	40	0	97.3%	80	120				
m,p-Xylene	75.2	1	80	0	94.0%	80	120				
Methyl tert-Butyl Ether	40.14	1	40	0	100.4%	80	120				
o-Xylene	38.43	0.5	40	0	96.1%	80	120				
Toluene	38.23	0.5	40	0	95.6%	80	120				

Sample ID: LCS WATER		Batch ID: GC-1_010528	Test Code: SW8021B	Units: µg/L	Analysis Date 5/28/2001				Prep Date:		
Client ID: 0105045		Run ID: GC-1_010528A				SeqNo: 38467					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.85	0.5	40	0	99.6%	80	120				
Ethylbenzene	40.16	0.5	40	0	100.4%	80	120				
m,p-Xylene	76.97	1	80	0	96.2%	80	120				
Methyl tert-Butyl Ether	40.72	1	40	0	101.8%	80	120				
o-Xylene	39.65	0.5	40	0	99.1%	80	120				
Toluene	39.52	0.5	40	0.1045	98.5%	80	120				

Qualifiers: NID - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0105045

Project: Cross Timbers, Bruntington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_010529	Test Code: SW8021B	Units: µg/L	Analysis Date 5/29/2001	Prep Date:						
Client ID:	0105045	Run ID: GC-1_010529A		SeqNo: 38493							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.77	0.5	40	0.0648	99.3%	80	120				
Ethylbenzene	40.41	0.5	40	0	101.0%	80	120				
m,p-Xylene	77.06	1	80	0	96.3%	80	120				
Methyl tert-Butyl Ether	40.77	1	40	0	101.9%	80	120				
o-Xylene	39.25	0.5	40	0	98.1%	80	120				
Toluene	39.3	0.5	40	0.1722	97.8%	80	120				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

CLIENT: Blagg Engineering
Work Order: 0105045
Project: Cross Timbers; Bruntington GC #1

Date: 31-May-01

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010527	Test Code: SW8021B	Units: µg/L	Analysis Date 5/27/2001		Prep Date:
Client ID: 0105045		Run ID: GC-1_010527A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 38437
Analyte	Result						
Benzene	19.6		0.5	20	0	98.0%	85 115
Ethylbenzene	19.72		0.5	20	0	98.6%	85 115
m,p-Xylene	37.9		1	40	0	94.7%	85 115
Methyl tert-Butyl Ether	20.28		1	20	0	101.4%	85 115
o-Xylene	19.4		0.5	20	0	97.0%	85 115
Toluene	19.44		0.5	20	0	97.2%	85 115
1,4-Difluorobenzene	75.27		0	80	0	94.1%	70 130
4-Bromochlorobenzene	82.76		0	80	0	103.5%	70 130
Fluorobenzene	76.11		0	80	0	95.1%	70 130

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010527	Test Code: SW8021B	Units: µg/L	Analysis Date 5/27/2001		Prep Date:
Client ID: 0105045		Run ID: GC-1_010527A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 38438
Analyte	Result						
Benzene	37.34		0.5	40	0	93.4%	85 115
Ethylbenzene	37.68		0.5	40	0	94.2%	85 115
m,p-Xylene	72.16		1	80	0	90.2%	85 115
Methyl tert-Butyl Ether	39.4		1	40	0	98.5%	85 115
o-Xylene	37.08		0.5	40	0	92.7%	85 115
Toluene	37.28		0.5	40	0	93.2%	85 115
1,4-Difluorobenzene	74.17		0	80	0	92.7%	70 130
4-Bromochlorobenzene	79.99		0	80	0	100.0%	70 130
Fluorobenzene	75.27		0	80	0	94.1%	70 130

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0105045
Project: Cross Timbers; Bruington GC #1

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0105		Batch ID: GC-1_010527	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/27/2001	Prep Date:
Client ID: 0105045		Run ID: GC-1_010527A	PQL	SPK value	SeqNo: 38439	
Analyte	Result	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit
Benzene	19.36	0.5	20	0	85	115
Ethylbenzene	19.41	0.5	20	0	85	115
m,p-Xylene	37.26	1	40	0	85	115
Methyl tert-Butyl Ether	20.35	1	20	0	85	115
o-Xylene	19.24	0.5	20	0	85	115
Toluene	19.19	0.5	20	0	85	115
1,4-Difluorobenzene	75.07	0	80	0	70	130
4-Bromochlorobenzene	82.07	0	80	0	70	130
Fluorobenzene	75.65	0	80	0	70	130
					%REC	RPD Ref Val
					96.8%	
					97.1%	
					93.2%	
					101.7%	
					96.2%	
					96.0%	
					93.8%	
					102.6%	
					94.6%	

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010528	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/28/2001	Prep Date:
Client ID: 0105045		Run ID: GC-1_010528A	PQL	SPK value	SeqNo: 38464	
Analyte	Result	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit
Benzene	19.2	0.5	20	0	85	115
Ethylbenzene	19.4	0.5	20	0	85	115
m,p-Xylene	37.34	1	40	0	85	115
Methyl tert-Butyl Ether	20.15	1	20	0	85	115
o-Xylene	19.13	0.5	20	0	85	115
Toluene	19.1	0.5	20	0	85	115
1,4-Difluorobenzene	74.82	0	80	0	70	130
4-Bromochlorobenzene	83.66	0	80	0	70	130
Fluorobenzene	75.7	0	80	0	70	130
					%REC	RPD Ref Val
					96.0%	
					97.0%	
					93.3%	
					100.7%	
					95.6%	
					95.5%	
					93.5%	
					104.6%	
					94.6%	

Qualifiers: NID - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0105045
Project: Cross Timbers, Bruntington GC #1

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010528	Test Code: SW8021B	Units: µg/L	Analysis Date 5/28/2001	Prep Date:
Client ID: 0105045		Run ID: GC-1_010528A	PQL	SPK value	SeqNo: 38465	
Analyte	Result	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit
Benzene	39.14	0.5	40	0	85	115
Ethylbenzene	39.38	0.5	40	0	85	115
m,p-Xylene	75.5	1	80	0	85	115
Methyl tert-Butyl Ether	41.01	1	40	0	85	115
o-Xylene	38.85	0.5	40	0	85	115
Toluene	38.83	0.5	40	0	85	115
1,4-Difluorobenzene	74.6	0	80	0	70	130
4-Bromochlorobenzene	80.22	0	80	0	70	130
Fluorobenzene	74.83	0	80	0	70	130
					%REC	%RPD
					97.8%	
					98.4%	
					94.4%	
					102.5%	
					97.1%	
					97.1%	
					93.2%	
					100.3%	
					93.5%	

Sample ID: CCV3 BTEX_0105		Batch ID: GC-1_010528	Test Code: SW8021B	Units: µg/L	Analysis Date 5/28/2001	Prep Date:
Client ID: 0105045		Run ID: GC-1_010528A	PQL	SPK value	SeqNo: 38466	
Analyte	Result	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit
Benzene	19.66	0.5	20	0	85	115
Ethylbenzene	19.63	0.5	20	0	85	115
m,p-Xylene	37.82	1	40	0	85	115
Methyl tert-Butyl Ether	20.48	1	20	0	85	115
o-Xylene	19.31	0.5	20	0	85	115
Toluene	19.4	0.5	20	0	85	115
1,4-Difluorobenzene	74.61	0	80	0	70	130
4-Bromochlorobenzene	83.44	0	80	0	70	130
Fluorobenzene	75.53	0	80	0	70	130
					%REC	%RPD
					98.3%	
					98.2%	
					94.6%	
					102.4%	
					96.5%	
					97.0%	
					93.3%	
					104.3%	
					94.4%	

Qualifiers: NID - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0105045

Project: Cross Timbers: Bruington GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010529		Test Code: SW8021B		Units: µg/L		Analysis Date 5/29/2001		Prep Date:	
Client ID: 0105045		Run ID: GC-1_010529A		PQL		SPK value		SeqNo: 38491			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.94	0.5	20	0	99.7%	85	115				
Ethylbenzene	20.21	0.5	20	0	101.0%	85	115				
m,p-Xylene	38.76	1	40	0	96.9%	85	115				
Methyl tert-Butyl Ether	21.06	1	20	0	105.3%	85	115				
o-Xylene	19.71	0.5	20	0	98.6%	85	115				
Toluene	19.86	0.5	20	0	99.3%	85	115				
1,4-Difluorobenzene	75.4	0	80	0	94.3%	70	130				
4-Bromochlorobenzene	83.7	0	80	0	104.6%	70	130				
Fluorobenzene	76.03	0	80	0	95.0%	70	130				

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010529		Test Code: SW8021B		Units: µg/L		Analysis Date 5/29/2001		Prep Date:	
Client ID: 0105045		Run ID: GC-1_010529A		PQL		SPK value		SeqNo: 38492			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.45	0.5	40	0	98.6%	85	115				
Ethylbenzene	39.68	0.5	40	0	99.2%	85	115				
m,p-Xylene	75.9	1	80	0	94.9%	85	115				
Methyl tert-Butyl Ether	41	1	40	0	102.5%	85	115				
o-Xylene	38.78	0.5	40	0	97.0%	85	115				
Toluene	39.19	0.5	40	0	98.0%	85	115				
1,4-Difluorobenzene	74.59	0	80	0	93.2%	70	130				
4-Bromochlorobenzene	83.04	0	80	0	103.8%	70	130				
Fluorobenzene	75.64	0	80	0	94.6%	70	130				

Qualifiers: NID - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0105045
Project: Cross Timbers; Bruington GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0105025-01A	92.9	102	93.7
0105026-01A	95.3	100	95.8
0105026-02A	93.1	94.9	95.7
0105045-01A	86.9	91.5	88.4
0105045-02A	92.8	97.3	94.3
0105045-03A	93.2	98.4	94.6
0105045-04A	95.1	104	95.7
0105045-05A	92	105	93.3
0105045-06A	93.1	102	93.2
0105046-05A	93.6	101	95.5
0105046-05AMS	93.7	104	94
0105046-05AMSD	92.5	103	94
0105046-06A	93.7	104	95
0105046-06AMS	92.6	99.5	94.5
0105046-06AMSD	92.5	100	93.8
0105046-14A	94.4	101	101
0105046-15A	96	99.5	99.2
0105046-16A	94.3	105	111
0105046-17A	93.9	104	95.2
0105046-17AMS	92.9	104	94.6
0105046-17AMSD	94.1	106	94.4
0105046-19A	94.4	107	99.2
0105046-23A	104	98	101
0105046-24A	94.6	98.6	95.8
0105046-25A	95.2	97.5	97.5
0105046-26A	93.1	97.4	94.4
0105046-27A	92.4	97.2	93.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

CLIENT: Blagg Engineering
Work Order: 0105045
Project: Cross Timbers; Bruington GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0105046-28A	94.5	105	95.1
0105046-29A	94.8	103	95.9
0105046-30A	94.7	102	95.6
0105047-01A	94.6	102	96.4
0105047-02A	92.9	98.4	94.3
0105047-03A	95	102	96.1
0105047-04A	94	101	95.8
0105049-01A	93.3	102	94
0105049-02A	95.3	101	96.8
0105049-03A	88.2	96.6	89.8
0105049-04A	91.9	102	92.7
0105049-05A	94.1	103	95.3
0105051-01A	87.7	89.7	90.9
0105051-02A	94.8	99.3	96.2
0105051-03A	94.5	102	96.4
0105052-01A	94.9	102	96.4
0105052-02A	93.4	104	94.5
0105053-01A	93.2	107	94.4
CCV1 BTEX_01052	94.2	105	95
CCV2 BTEX_01052	93.2	104	94.6
CCV3 BTEX_01052	93.3	104	94.4
LCS WATER	93.5	105	95.2
MBI	95.1	102	95.2

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : NA

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : Sept. 24, 2001

SAMPLER : N J V

Filename : 09-24-01.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.42	84.58	9.84	20.00	1000	6.79	3,000	3.00	-
2R	93.13	83.05	10.08	20.95	1100	6.97	7,700	3.00	-
3	95.24	83.09	12.15	18.08	1030	7.08	6,700	1.50	-
4	93.55			20.00	-	-	-	-	-
5	97.21	83.51	13.70	25.00	1130	7.20	7,600	3.00	-
6	99.48	85.02	14.46	25.00	1200	7.23	13,800	3.00	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.

(i.e. 2" MW $r = (1/12) \text{ ft. } h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft. } h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Poor recovery in all MW's. Blackish water in bottom of MW # 1R, 2R, 5, & 6.

Effervescence in # 2R, 5, & 6; also contained sewer like odor. Purged all MW's first, allowed

recovery to within 1 ft. of original static level, then sampled.

Hall Environmental Analysis Laboratory

Date: 03-Oct-01

CLIENT: Blagg Engineering
Project: Bruington GC #1

Lab Order: 0109144

Lab ID: 0109144-01

Collection Date: 9/24/01 10:00:00 AM

Client Sample ID: MW #1R

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
BTEX BY EPA 8021B		SW8021		Analyst: JEB		
Benzene	5.8	0.50		µg/L	1	9/27/01 5:15:11 PM
Toluene	0.52	0.50		µg/L	1	9/27/01 5:15:11 PM
Ethylbenzene	15	0.50		µg/L	1	9/27/01 5:15:11 PM
Xylenes, Total	36	0.50		µg/L	1	9/27/01 5:15:11 PM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	1	9/27/01 5:15:11 PM

Lab ID: 0109144-02

Collection Date: 9/24/01 11:00:00 AM

Client Sample ID: MW #2R

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
BTEX BY EPA 8021B		SW8021		Analyst: JEB		
Benzene	15000	250		µg/L	500	10/1/01 2:48:00 PM
Toluene	1200	20		µg/L	40	9/28/01 2:09:13 PM
Ethylbenzene	880	20		µg/L	40	9/28/01 2:09:13 PM
Xylenes, Total	5900	20		µg/L	40	9/28/01 2:09:13 PM
Surr: 4-Bromofluorobenzene	98.3	74-118		%REC	40	9/28/01 2:09:13 PM

Lab ID: 0109144-03

Collection Date: 9/24/01 10:30:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
BTEX BY EPA 8021B		SW8021		Analyst: JEB		
Benzene	ND	0.50		µg/L	1	10/1/01 11:35:37 AM
Toluene	ND	0.50		µg/L	1	10/1/01 11:35:37 AM
Ethylbenzene	ND	0.50		µg/L	1	10/1/01 11:35:37 AM
Xylenes, Total	ND	0.50		µg/L	1	10/1/01 11:35:37 AM
Surr: 4-Bromofluorobenzene	92.2	74-118		%REC	1	10/1/01 11:35:37 AM

Lab ID: 0109144-04

Collection Date: 9/24/01 11:30:00 AM

Client Sample ID: MW #5

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
BTEX BY EPA 8021B		SW8021		Analyst: JEB		
Benzene	26000	250		µg/L	500	10/1/01 12:37:22 PM
Toluene	110	20		µg/L	40	9/28/01 3:14:04 PM
Ethylbenzene	470	20		µg/L	40	9/28/01 3:14:04 PM
Xylenes, Total	6900	250		µg/L	500	10/1/01 12:37:22 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	40	9/28/01 3:14:04 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 03-Oct-01

CLIENT: Blagg Engineering
Project: Bruington GC #1

Lab Order: 0109144

Lab ID: 0109144-05

Collection Date: 9/24/01 12:00:00 PM

Client Sample ID: MW #6

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
BTEX BY EPA 8021B		SW8021		Analyst: JEB		
Benzene	22000	250		µg/L	500	10/1/01 2:16:15 PM
Toluene	6000	250		µg/L	500	10/1/01 2:16:15 PM
Ethylbenzene	1100	20		µg/L	40	9/28/01 3:56:02 PM
Xylenes, Total	6900	250		µg/L	500	10/1/01 2:16:15 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	40	9/28/01 3:56:02 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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

Client: <u>BLAGGS ENGINEERING INC.</u>		Project Name: <u>BRUNINGTON GC #1</u>					
<u>XIO ENERGY, INC.</u>							
Address: <u>P.O. BOX 87</u>		Project #:					
<u>BLOOMFIELD, NM 87413</u>							
Phone #: <u>505-632-1199</u>		Sampler: <u>NELSON VELEZ</u>					
Fax #: <u>505-632-3903</u>		Samples Cold?: ☒ Yes ☐ No					
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HCl	
7/24/01	1000	WATER	MW #1R	2		✓	06944-1
7/24/01	1100	WATER	MW #2R	2		✓	-2
7/24/01	1030	WATER	MW #3	2		✓	-3
7/24/01	1130	WATER	MW #5	2		✓	-4
7/24/01	1200	WATER	MW #6	2		✓	-5
Date: 7/25/01	Time: 0900	Relinquished By: (Signature) <u>Nelson Velez</u>		Relinquished By: (Signature) <u>Nelson Velez</u>	Received By: (Signature) <u>Nelson Velez</u>	9/25/01	
Date:	Time:	Relinquished By: (Signature)		Relinquished By: (Signature)	Received By: (Signature)		

Hall Environmental Analysis Laboratory

Date: 03-Oct-01

CLIENT: Blagg Engineering

Work Order: 0109144

Project: Bruington GC #1

QC SUMMARY REPORT

Method Blank

Sample ID: r blk	Batch ID: R2262	Test Code: SW8021	Units: µg/L	Analysis Date: 9/27/01 10:45:30 AM	Prep Date:						
Client ID:	Run ID: PIDHALL_010927A	SeqNo: 48568									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.4	0	20	0	97.0	74	118	0			

Sample ID: r blk	Batch ID: R2267	Test Code: SW8021	Units: µg/L	Analysis Date: 9/28/01 12:02:58 PM	Prep Date:						
Client ID:	Run ID: PIDHALL_010928A	SeqNo: 48651									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.2536	0.50									J
Toluene	0.2274	0.50									J
Ethylbenzene	0.1068	0.50									J
1,2,4-Trimethylbenzene	0.1986	0.50									J
1,3,5-Trimethylbenzene	0.1432	0.50									J
Xylenes, Total	0.5124	0.50									
Surr: 4-Bromofluorobenzene	19.79	0	20	0	98.9	74	118	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

QC SUMMARY REPORT

Method Blank

CLIENT: Blagg Engineering

Work Order: 0109144

Project: Bruington GC #1

Sample ID: r blk	Batch ID: R2285	Test Code: SW8021	Units: µg/L	Analysis Date: 10/1/01 9:39:25 AM	Prep Date:
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Client ID: Run ID: PIDHALL_011001A SeqNo: 49127

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.05	0	20	0	95.3	74	118	0			

Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
1,2,4-Trimethylbenzene	ND	0.50
1,3,5-Trimethylbenzene	ND	0.50
Xylenes, Total	ND	0.50
Surr: 4-Bromofluorobenzene	19.05	0

Toluene ND 0.50

Compound	ND	0.50
Ethylbenzene		

1,2,4-Trimethylbenzene
ND. 0.501,3,5-Trimethylbenzene
ND 0.50

Xylenes: Total ND 0.50

Surr: 4-Bromofluorobenzene 19.05 0

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 03-Oct-01

CLIENT: Blagg Engineering
Work Order: 0109144
Project: Bruington GC #1

QC SUMMARY REPORT

Sample Matrix Spike

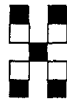
Sample ID: 0109144-03a ms		Batch ID: R2285		Test Code: SW8021		Units: µg/L		Analysis Date: 10/1/01 12:06:28 PM		Prep Date:	
Client ID: MW #3		Run ID: PIDHALL_011001A		PQL		SPK value		SPK Ref Val		SeqNo: 49116	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.88	0.50	20	0.3506	92.6	77	122	0			
Toluene	18.21	0.50	20	0.1596	90.2	81	115	0			
Ethylbenzene	18.3	0.50	20	0	91.5	84	117	0			
1,2,4-Trimethylbenzene	17.66	0.50	20	0	88.3	83	120	0			
1,3,5-Trimethylbenzene	18.58	0.50	20	0.1504	92.2	85	115	0			
Xylenes, Total	52.7	0.50	60	0.1854	87.5	84	116	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
I



Hall Environmental Analysis Laboratory

COVER LETTER

October 03, 2001

Jeff Blagg
Blagg Engineering
110 North 4th St.
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: Bruington GC #1

Order No.: 0109144

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 5 samples on 9/25/01 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

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : XTO ENERGY, INC.

CHAIN-OF-CUSTODY # : 11783

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED : ON - SITE TECH.

Date : June 27, 2002

SAMPLER : N J V

Filename : 06-27-02.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1R	94.42	84.49	9.93	20.00	1220	7.09	3,800	3.00	-
2R	93.13	83.36	9.77	20.95	1230	7.29	6,200	3.00	-
3	95.24	83.15	12.09	18.08	-	-	-	-	-
4	93.55	84.10	9.45	20.00	-	-	-	-	-
5	97.21	83.38	13.83	25.00	1240	7.17	12,500	3.00	-
6	99.48	82.80	16.68	25.00	1255	7.24	12,000	2.50	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Poor recovery in all MW 's sampled . Blackish water in bottom of MW # 1R , 2R , 5 , & 6 .

Effervescence in # 2R , 5 , & 6 ; also contained sewer like odor . Purged all MW 's first , allowed recovery to within 1 ft. of original static level , then sampled .

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 15-Jul-02

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0206054	Client Sample ID:	MW #1R
Lab ID:	0206054-01A	Matrix:	AQUEOUS
Project:	XTO Bruington GC #1	Collection Date:	06/27/2002
		COC Record:	11783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HNR		
Benzene	ND	0.5		µg/L	1	07/07/2002
Toluene	ND	0.5		µg/L	1	07/07/2002
Ethylbenzene	17	0.5		µg/L	1	07/07/2002
m,p-Xylene	51	1		µg/L	1	07/07/2002
o-Xylene	1.1	0.5		µg/L	1	07/07/2002

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted precision limits

L - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 15-Jul-02

Client: Blagg Engineering

Client Sample Info: Bruington GC #1

Work Order: 0206054

Client Sample ID: MW #2R

Lab ID: 0206054-02A Matrix: AQUEOUS

Collection Date: 06/27/2002

Project: XTO Bruington GC #1

COC Record: 11783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Toluene	1100	5		µg/L	10	06/28/2002
Ethylbenzene	680	5		µg/L	10	06/28/2002
m,p-Xylene	3800	10		µg/L	10	06/28/2002
o-Xylene	320	5		µg/L	10	06/28/2002
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HNR		
Benzene	13000	100		µg/L	200	07/07/2002

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted precision limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surrogate

1 of 1

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 15-Jul-02

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0206054	Client Sample ID:	MW #5
Lab ID:	0206054-03A	Matrix:	AQUEOUS
Project:	XTO Bruington GC #1	Collection Date:	06/27/2002
		COC Record:	11783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DWC
Toluene	280	50		µg/L	100	06/28/2002
Ethylbenzene	900	50		µg/L	100	06/28/2002
m,p-Xylene	6500	100		µg/L	100	06/28/2002
o-Xylene	170	50		µg/L	100	06/28/2002
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HNR
Benzene	26000	100		µg/L	200	07/07/2002

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted precision limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Sur - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 15-Jul-02

Client:	Blagg Engineering	Client Sample Info:	Bruington GC #1
Work Order:	0206054	Client Sample ID:	MW #6
Lab ID:	0206054-04A	Matrix:	AQUEOUS
Project:	XTO Bruington GC #1	Collection Date:	06/27/2002
		COC Record:	11783

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Toluene	16000	50		µg/L	100	06/28/2002
Ethylbenzene	990	50		µg/L	100	06/28/2002
m,p-Xylene	8100	100		µg/L	100	06/28/2002
o-Xylene	1700	50		µg/L	100	06/28/2002
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HNR		
Benzene	28000	100		µg/L	200	07/07/2002

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted precision limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

11783

Date: 6/27/02

Page: 1 of 1

Purchase Order No.:		Project No.	
Name: JEFF BUGG		Title:	
Company: BUGG ENGINEERING, INC.		Company: SAME	
Address:		Mailing Address:	
City, State, Zip:		City, State, Zip:	
Telephone No. 632-1199		Telephone No. 632-3903	
FAX No. 632-1199		FAX No. 632-3903	
PROJECT LOCATION:		ANALYSIS REQUESTED	
X70 - BRUNGTON GC #1			
SAMPLER'S SIGNATURE: <i>Nelson Velez</i>			
SAMPLE IDENTIFICATION		LAB ID	
DATE	TIME	MATRIX	PRES.
6/27/02		WATER	HCl d
6/27/02		WATER	HCl d
6/27/02		WATER	HCl d
6/27/02		WATER	HCl d
mw # 1R		2206054-01A	
mw # 2R		-01A	
mw # 5		-03A	
mw # 6		-01A	
Relinquished by: <i>Nelson Velez</i>		Received by: <i>Q. M. A. e</i>	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Method of Shipment:		Rush	
Authorized by: _____		Date: _____	
(Client Signature Must Accompany Request)		Special Instructions / Remarks:	

On Site Technologies, LTD.

Date: 15-Jul-02

CLIENT: Blagg Engineering
Work Order: 0206054
Project: YTO Brimington GC #1

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruington GC #1

Sample ID:	MB_020628	Batch ID:	GC-1_020628	Test Code:	SW8021B	Units:	µg/L	Analysis Date: 06/28/2002				Prep Date: 06/28/2002	
Client ID:				Run ID:	GC-1_020628A			SeqNo:	52913				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene		ND	0.5										
Ethylbenzene		ND	0.5										
m,p-Xylene		ND	1										
Methyl tert-Butyl Ether		ND	1										
o-Xylene		ND	0.5										
Toluene		.1684	0.5										J

Sample ID: MB_020707	Batch ID: GC-1_020707	Test Code: SW8021B	Units: µg/L	Analysis Date: 07/07/2002				Prep Date: 07/07/2002	
Client ID:	0206054	Run ID:	GC-1_020707A	SeqNo:	53643				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Benzene	ND	0.5							
Ethylbenzene	ND	0.5							
m,p-Xylene	ND	1							
Methyl tert-Butyl Ether	ND	1							
o-Xylene	ND	0.5							
Toluene	ND	0.5							

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

1 of 1

On Site Technologies, LTD.

Date: 15-Jul-02

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruntington GC #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0206039-02AMS		Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002		Prep Date: 06/28/2002	
Client ID: 0206054		Run ID: GC-1_020628A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	512.8		2.5	200	312.6	100.1%	70	130
Ethylbenzene	483.4		2.5	200	295.9	93.8%	70	130
m,p-Xylene	897.1		5	400	517.3	94.9%	70	130
Methyl tert-Butyl Ether	202.2		5	200	0	101.1%	70	130
o-Xylene	221.4		2.5	200	30.64	95.4%	70	130
Toluene	212.8		2.5	200	0.7775	106.0%	70	130

Sample ID: 0206039-02AMS		Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002		Prep Date: 06/28/2002	
Client ID: 0206054		Run ID: GC-1_020628A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	495.9		2.5	200	312.6	91.6%	70	130
Ethylbenzene	466.3		2.5	200	295.9	85.2%	70	130
m,p-Xylene	866.1		5	400	517.3	87.2%	70	130
Methyl tert-Butyl Ether	197.8		5	200	0	98.9%	70	130
o-Xylene	216.8		2.5	200	30.64	93.1%	70	130
Toluene	206.5		2.5	200	0.7775	102.9%	70	130

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruington GC #1

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID: 0206054-02AMS		Batch ID: GC-1_020707		Test Code: SW8021B		Units: µg/L		Analysis Date: 07/07/2002			Prep Date: 07/07/2002	
Client ID: MW #2R		0206054		Run ID: GC-1_020707A				SeqNo: 53644				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		21940	100	8000	13000	111.8%	70	130				
Ethylbenzene		9111	100	8000	870	103.0%	70	130				
m,p-Xylene		21270	200	16000	4300	106.1%	70	130				
Methyl tert-Butyl Ether		8016	200	8000	0	100.2%	70	130				
o-Xylene		8270	100	8000	540	96.6%	70	130				
Toluene		9108	100	8000	1300	97.6%	70	130				

Sample ID: 0206054-02AMSD		Batch ID: GC-1_020707		Test Code: SW8021B		Units: µg/L		Analysis Date: 07/07/2002			Prep Date: 07/07/2002	
Client ID: MW #2R		0206054		Run ID: GC-1_020707A				SeqNo: 53645				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		21380	100	8000	13000	104.7%	70	130	21940	2.6%	15	
Ethylbenzene		8878	100	8000	870	100.1%	70	130	9111	2.6%	15	
m,p-Xylene		20730	200	16000	4300	102.7%	70	130	21270	2.6%	15	
Methyl tert-Butyl Ether		7921	200	8000	0	99.0%	70	130	8016	1.2%	15	
o-Xylene		8089	100	8000	540	94.4%	70	130	8270	2.2%	15	
Toluene		8890	100	8000	1300	94.9%	70	130	9108	2.4%	15	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 15-Jul-02

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruntington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002	Prep Date: 06/28/2002				
Client ID: 0206054	Run ID: GC-1_020628A	PQL	SPK value	SeqNo: 52912					
Analyte	Result			LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.44	0.5	40		80	120			
Ethylbenzene	39.99	0.5	40	0	80	120			
m,p-Xylene	79.19	1	80	0	80	120			
Methyl tert-Butyl Ether	38.46	1	40	0	80	120			
o-Xylene	38.22	0.5	40	0	80	120			
Toluene	38.31	0.5	40	0.1684	80	120			

Sample ID: LCS_020707	Batch ID: GC-1_020707	Test Code: SW8021B	Units: µg/L	Analysis Date: 07/07/2002	Prep Date: 07/07/2002						
Client ID: 0206054	Run ID: GC-1_020707A	PQL	SPK value	SeqNo: 53642							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.7	0.5	40	0	99.2%	80	120				
Ethylbenzene	42.05	0.5	40	0	105.1%	80	120				
m,p-Xylene	83.71	1	80	0	104.6%	80	120				
Methyl tert-Butyl Ether	40.78	1	40	0	102.0%	80	120				
o-Xylene	39.9	0.5	40	0	99.8%	80	120				
Toluene	39.58	0.5	40	0	99.0%	80	120				

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 15-Jul-02

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruington GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002				Prep Date: 06/28/2002					
Client ID:	0206054	Run ID:	GC-1_020628A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	20.37			0.5	20	0	101.9%	85	115				
Ethylbenzene	20.56			0.5	20	0	102.8%	85	115				
m,p-Xylene	40.47			1	40	0	101.2%	85	115				
Methyl tert-Butyl Ether	19.98			1	20	0	99.9%	85	115				
o-Xylene	19.67			0.5	20	0	98.4%	85	115				
Toluene	19.69			0.5	20	0	98.5%	85	115				
1,4-Difluorobenzene	108.4			0	110	0	98.5%	70	130				
4-Bromochlorobenzene	121.5			0	110	0	110.4%	70	130				
Fluorobenzene	111.6			0	110	0	101.5%	70	130				

Sample ID: CCV2_020628		Batch ID: GC-1_020628		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/28/2002				Prep Date: 06/28/2002	
Client ID:		0206054		Run ID:		GC-1_020628A		SeqNo: 52909					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	20.06	0.5	20	0	100.3%	85	115						
Ethylbenzene	20.13	0.5	20	0	100.6%	85	115						
m,p-Xylene	39.24	1	40	0	98.1%	85	115						
Methyl tert-Butyl Ether	20.31	1	20	0	101.5%	85	115						
o-Xylene	19.37	0.5	20	0	96.8%	85	115						
Toluene	19.38	0.5	20	0	96.9%	85	115						
1,4-Difluorobenzene	108.7	0	110	0	98.8%	70	130						
4-Bromochlorobenzene	118.9	0	110	0	108.1%	70	130						
Fluorobenzene	111.8	0	110	0	101.7%	70	130						

Qualifiers: NID - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruntington GC #1

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002	Prep Date: 06/28/2002				
Client ID: 0206054	Run ID: GC-1_020628A	PQL	SPK value	SeqNo: 52910					
Analyte	Result		SPK Ref Val	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.19	0.5	40	0	85	115			
Ethylbenzene	38.83	0.5	40	0	85	115			
m,p-Xylene	75.68	1	80	0	85	115			
Methyl tert-Butyl Ether	38.62	1	40	0	85	115			
o-Xylene	37.34	0.5	40	0	85	115			
Toluene	37.3	0.5	40	0	85	115			
1,4-Difluorobenzene	108.5	0	110	0	70	130			
4-Bromochlorobenzene	116.4	0	110	0	70	130			
Fluorobenzene	112.3	0	110	0	70	130			

Sample ID: CCV1_020707	Batch ID: GC-1_020707	Test Code: SW8021B	Units: µg/L	Analysis Date: 07/07/2002	Prep Date: 07/07/2002						
Client ID: 0206054	Run ID: GC-1_020707A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result										
Benzene	19.45	0.5	20	0	97.2%	85	115				
Ethylbenzene	20.74	0.5	20	0	103.7%	85	115				
m,p-Xylene	40.89	1	40	0	102.2%	85	115				
Methyl tert-Butyl Ether	20.36	1	20	0	101.8%	85	115				
o-Xylene	19.8	0.5	20	0	99.0%	85	115				
Toluene	19.45	0.5	20	0	97.3%	85	115				
1,4-Difluorobenzene	109.6	0	110	0	99.6%	70	130				
4-Bromochlorobenzene	122.8	0	110	0	111.6%	70	130				
Fluorobenzene	115	0	110	0	104.6%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruington GC #1

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV2_020707	Batch ID: GC-1_020707	Test Code: SW8021B	Units: µg/L	Analysis Date: 07/07/2002				Prep Date: 07/07/2002					
Client ID:	0206054	Run ID:	GC-1_020707A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.15			0.5	20	0	95.7%	85	115				
Ethylbenzene	20.44			0.5	20	0	102.2%	85	115				
m,p-Xylene	39.92			1	40	0	99.8%	85	115				
Methyl tert-Butyl Ether	19.99			1	20	0	99.9%	85	115				
o-Xylene	19.41			0.5	20	0	97.0%	85	115				
Toluene	19.14			0.5	20	0	95.7%	85	115				
1,4-Difluorobenzene	110.2			0	110	0	100.2%	70	130				
4-Bromochlorobenzene	123.6			0	110	0	112.4%	70	130				
Fluorobenzene	115			0	110	0	104.6%	70	130				

Sample ID: CCV3_020707	Batch ID: GC-1_020707	Test Code: SW8021B	Units: µg/L	Analysis Date: 07/07/2002				Prep Date: 07/07/2002							
Client ID:	0206054	Run ID:	GC-1_020707A	PQL	SPK value	SPK Ref Val	%REC	SeqNo:	53641	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result														
Benzene	38.44			0.5	40	0	96.1%			85	115				
Ethylbenzene	41.15			0.5	40	0	102.9%			85	115				
m,p-Xylene	81.76			1	80	0	102.2%			85	115				
Methyl tert-Butyl Ether	36.42			1	40	0	91.1%			85	115				
o-Xylene	39.25			0.5	40	0	98.1%			85	115				
Toluene	38.63			0.5	40	0	96.6%			85	115				
1,4-Difluorobenzene	109.2			0	110	0	99.3%			70	130				
4-Bromochlorobenzene	134.9			0	110	0	122.6%			70	130				
Fluorobenzene	114			0	110	0	103.7%			70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruington GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0206030-02A	99.4	111	102
0206031-01A	99.4	110	102
0206031-03A	98.2	111	101
0206039-02A	96.5	108	99.6
0206039-02AMS	98	112	101
0206039-02AMSD	96.2	110	99.2
0206050-01A	95.5	109	98.7
0206051-01A	99.2	111	102
0206054-01A	96.4	108	103
0206054-02A	102	113	106
0206054-02AMS	99.2	112	104
0206054-02AMSD	99.6	112	104
0206054-03A	100	113	105
0206054-04A	100	112	105
0206057-01A	99.5	107	102
0206057-02A	99.2	106	103
0206057-03A	99.6	106	103
0206057-04A	99.7	106	103
0206057-05A	99.4	105	103
0206057-06A	99.1	106	103
0206057-07A	99.3	108	102
0206057-08A	99.3	108	103
0206059-01A	101	116	106
0206059-02A	102	112	106
0206059-03A	105	120	113
0206059-04A	101	112	106
0206059-05A	102	140 *	109

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

CLIENT: Blagg Engineering
Work Order: 0206054
Project: XTO Bruington GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0206059-06A	102	114	104
0206059-07A	101	110	104
0206059-09A	98.2	112	102
0206059-11A	101	115	106
0206059-12A	99.8	116	107
0206059-13A	100	116	103
0206059-18A	101	114	106
0206059-20A	102	118	106
0206061-01A	95.4	100	102
CCV1_020628	98.5	110	102
CCV1_020707	99.6	112	104
CCV2_020628	98.8	108	102
CCV2_020707	100	112	104
CCV3_020628	98.6	106	102
CCV3_020707	99.3	123	104
LCS_020628	98.4	111	101
LCS_020707	100	111	104
MB_020628	99.1	111	102
MB_020707	99.6	138 *	104

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: XTO ENERGY INC.

CHAIN-OF-CUSTODY #: N / A

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: June 25, 2003

SAMPLER: N J V

Filename: 06-25-03.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42	82.97	11.45	20.00	0933	6.94	2,900	20.5	2.00
2R	93.13	81.60	11.53	20.95	0940	6.90	4,700	19.3	2.25
3	-	-	-	18.08	-	-	-	-	-
4	93.55	82.72	10.83	20.00	-	-	-	-	-
5	97.21	81.48	15.73	25.00	0947	6.92	7,600	19.4	2.25
6	99.48	80.54	18.94	25.00	0953	6.96	7,600	19.3	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/25/03	09:25

NOTES: Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Poor recovery in all MW's sampled. Blackish water in bottom of MW # 2R, # 5, & # 6.

Purged all MW's first, allowed recovery, then sampled. Collected BTEX from MW # 1R, # 2R, # 5, # 6. MW # 3 destroyed / missing.

MW #	DTW
1R	11.45
2R	11.53
3	-
5	15.73
6	18.94

(prior to purging -
in ft.)

MW #	DTW
1R	11.52
2R	11.57
3	-
5	20.45
6	21.25

(@ time of sampling -
in ft.)

Hall Environmental Analysis Laboratory

Date: 10-Jul-03

CLIENT: Blagg Engineering
Lab Order: 0306183
Project: Bruington GC #1
Lab ID: 0306183-01

Client Sample ID: MW #1R
Collection Date: 6/25/2003 9:33:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Benzene	3.1	1.0		µg/L	1	7/8/2003
Toluene	ND	1.0		µg/L	1	7/8/2003
Ethylbenzene	ND	1.0		µg/L	1	7/8/2003
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/8/2003
1,2,4-Trimethylbenzene	1.2	1.0		µg/L	1	7/8/2003
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/8/2003
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/8/2003
Xylenes, Total	ND	1.0		µg/L	1	7/8/2003
Surr: 1,2-Dichloroethane-d4	102	82.1-124		%REC	1	7/8/2003
Surr: 4-Bromofluorobenzene	105	76.2-122		%REC	1	7/8/2003
Surr: Dibromofluoromethane	92.3	67.2-131		%REC	1	7/8/2003
Surr: Toluene-d8	119	82.1-123		%REC	1	7/8/2003

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 10-Jul-03

CLIENT: Blagg Engineering
Lab Order: 0306183
Project: Bruington GC #1
Lab ID: 0306183-02

Client Sample ID: MW #2R
Collection Date: 6/25/2003 9:40:00 AM

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Benzene	3700	100		µg/L	100	7/9/2003
Toluene	1000	100		µg/L	100	7/9/2003
Ethylbenzene	380	100		µg/L	100	7/9/2003
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	100	7/9/2003
1,2,4-Trimethylbenzene	330	100		µg/L	100	7/9/2003
1,3,5-Trimethylbenzene	120	100		µg/L	100	7/9/2003
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	7/7/2003
Xylenes, Total	2500	100		µg/L	100	7/9/2003
Surr: 1,2-Dichloroethane-d4	97.2	82.1-124		%REC	100	7/9/2003
Surr: 4-Bromofluorobenzene	106	76.2-122		%REC	100	7/9/2003
Surr: Dibromofluoromethane	88.4	67.2-131		%REC	100	7/9/2003
Surr: Toluene-d8	113	82.1-123		%REC	100	7/9/2003

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 10-Jul-03

CLIENT: Blagg Engineering
Lab Order: 0306183
Project: Bruington GC #1
Lab ID: 0306183-03

Client Sample ID: MW #5
Collection Date: 6/25/2003 9:47:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Benzene	26000	1000		µg/L	1000	7/8/2003
Toluene	ND	1000		µg/L	1000	7/8/2003
Ethylbenzene	ND	1000		µg/L	1000	7/8/2003
Methyl tert-butyl ether (MTBE)	ND	1000		µg/L	1000	7/8/2003
1,2,4-Trimethylbenzene	ND	1000		µg/L	1000	7/8/2003
1,3,5-Trimethylbenzene	ND	1000		µg/L	1000	7/8/2003
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	7/7/2003
Xylenes, Total	4400	1000		µg/L	1000	7/8/2003
Surr: 1,2-Dichloroethane-d4	114	82.1-124		%REC	1000	7/8/2003
Surr: 4-Bromofluorobenzene	114	76.2-122		%REC	1000	7/8/2003
Surr: Dibromofluoromethane	103	67.2-131		%REC	1000	7/8/2003
Surr: Toluene-d8	116	82.1-123		%REC	1000	7/8/2003

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 10-Jul-03

CLIENT: Blagg Engineering
Lab Order: 0306183
Project: Bruington GC #1
Lab ID: 0306183-04

Client Sample ID: MW #6
Collection Date: 6/25/2003 9:53:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Benzene	22000	1000		µg/L	1000	7/8/2003
Toluene	16000	1000		µg/L	1000	7/8/2003
Ethylbenzene	ND	1000		µg/L	1000	7/8/2003
Methyl tert-butyl ether (MTBE)	ND	1000		µg/L	1000	7/8/2003
1,2,4-Trimethylbenzene	ND	1000		µg/L	1000	7/8/2003
1,3,5-Trimethylbenzene	ND	1000		µg/L	1000	7/8/2003
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	7/7/2003
Xylenes, Total	6300	1000		µg/L	1000	7/8/2003
Surr: 1,2-Dichloroethane-d4	97.6	82.1-124		%REC	1000	7/8/2003
Surr: 4-Bromofluorobenzene	106	76.2-122		%REC	1000	7/8/2003
Surr: Dibromofluoromethane	92.7	67.2-131		%REC	1000	7/8/2003
Surr: Toluene-d8	117	82.1-123		%REC	1000	7/8/2003

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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

Address:	P.O. Box 87	Project #:	
	BZO, NM 87413	Project Manager:	Nelson Velez
		Sampler:	Nelson Velez
Phone #:	505-632-1199	Samples Col'd?:	8/90 ☒ Yes ☐ No
Fax #:	505-632-3903		

Fax #: 505-632-3903

[illegible]

Date: 6/26/03	Time: 0710	Relinquished By: (Signature) <i>[Signature]</i>	Received By: (Signature) <i>[Signature]</i>
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

[illegible]

Remarks:

Hall Environmental Analysis Laboratory

Date: 10-Jul-03

CLIENT: Blagg Engineering
Work Order: 0306183
Project: Bruington GC #1

QC SUMMARY REPORT
Method Blank

Sample ID	5ml rb	Batch ID: R8785	Test Code: SW8260B	Units: µg/L	Analysis Date	7/8/2003	Prep Date					
Client ID:		Run ID: THOR_030708A			SeqNo:	198240						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	1.0									
Toluene		ND	1.0									
Ethylbenzene		ND	1.0									
Xylenes, Total		ND	1.0									
Surr: 1,2-Dichloroethane-d4		10.03	0	10	0	100	82.1	124	0			
Surr: 4-Bromofluorobenzene		11.28	0	10	0	113	76.2	122	0			
Surr: Dibromofluoromethane		9.57	0	10	0	95.7	67.2	131	0			
Surr: Toluene-d8		10.56	0	10	0	106	82.1	123	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: 10-Jul-03

CLIENT: Blagg Engineering

Work Order: 0306183

Project: Bruington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: 100ng ccv-b	Batch ID: R8829	Test Code: SW8260B	Units: µg/L	Analysis Date: 7/9/2003	Prep Date:						
Client ID:	Run ID: THOR_030708B	SeqNo: 199357									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.61	1.0	20	0	108	85.3	120	0			
Toluene	22.6	1.0	20	0	113	82.5	120	0			

Sample ID: 50ng ccv	Batch ID: R8785	Test Code: SW8260B	Units: µg/L	Analysis Date: 7/8/2003	Prep Date:						
Client ID:	Run ID: THOR_030708A	SeqNo: 199422									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	9.914	1.0	10	0	99.1	85.3	120	0			
Toluene	10.71	1.0	10	0	107	82.5	120	0			
Ethylbenzene	10.38	1.0	10	0	104	80	120	0			
Xylenes, Total	31.28	1.0	30	0	104	80	120	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Receive

6/26/03

Work Order Number **0306183**

Received by **AT**

Checklist completed by

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 ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
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?	8°	4° C ± 2 Acceptable	

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTC ENERGY INC.

CHAIN-OF-CUSTODY # : _____

BRUINGTON GC #1 - BLOW PIT

LABORATORY (S) USED : _____

UNIT E, SEC. 14, T29N, R11W

Date : August 25, 2003

SAMPLER : NJV

Filename : 08-25-03.WK4

PROJECT MANAGER : NJV

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42	82.28	12.14	20.00	1010	6.59	4,100	23.8	1.75
2R	93.13		-	20.95	-	-	-	-	-
3R	93.39	81.58	11.81	20.00	1017	6.86	8,000	22.9	2.00
4	93.55		-	20.00	-	-	-	-	-
5	97.21		-	25.00	-	-	-	-	-
6	99.48		-	25.00	-	-	-	-	-
7	98.99	81.06	17.93	25.00	1027	6.52	8,200	20.9	1.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

08/25/03 0910

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Poor recovery in MW #3R & #7. Distance & bearing for #3R same as #3. MW #7 - 93 ft., S 34.5 E from well head. Tape measured @ 79 ft. 72 ft. N 83.5 W from MW #6. Tape measured @ 69.5 ft.

Collected BTEX samples from MW #1R, #3R, & #7 only.

Hall Environmental Analysis Laboratory

Date: 05-Sep-03

CLIENT: Blagg Engineering
Lab Order: 0308202
Project: Bruington GC #1
Lab ID: 0308202-01

Client Sample ID: MW #1R
Collection Date: 8/25/2003 10:10:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	8/29/2003 3:27:01 PM
Toluene	ND	0.50		µg/L	1	8/29/2003 3:27:01 PM
Ethylbenzene	2.2	0.50		µg/L	1	8/29/2003 3:27:01 PM
Xylenes, Total	0.90	0.50		µg/L	1	8/29/2003 3:27:01 PM
Surr: 4-Bromofluorobenzene	105	74-118		%REC	1	8/29/2003 3:27:01 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory**Date:** 05-Sep-03**CLIENT:** Blagg Engineering**Client Sample ID:** MW #3R**Lab Order:** 0308202**Collection Date:** 8/25/2003 10:17:00 AM**Project:** Bruington GC #1**Lab ID:** 0308202-02**Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	8/29/2003 3:58:46 PM
Toluene	ND	0.50		µg/L	1	8/29/2003 3:58:46 PM
Ethylbenzene	1.3	0.50		µg/L	1	8/29/2003 3:58:46 PM
Xylenes, Total	ND	0.50		µg/L	1	8/29/2003 3:58:46 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	8/29/2003 3:58:46 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 05-Sep-03

CLIENT: Blagg Engineering
Lab Order: 0308202
Project: Bruington GC #1
Lab ID: 0308202-03

Client Sample ID: MW #7
Collection Date: 8/25/2003 10:27:00 AM

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	18000	100		µg/L	200	9/3/2003 2:03:20 PM
Toluene	11000	100		µg/L	200	9/3/2003 2:03:20 PM
Ethylbenzene	930	20		µg/L	40	8/29/2003 4:30:33 PM
Xylenes, Total	8200	100		µg/L	200	9/3/2003 2:03:20 PM
Surr: 4-Bromofluorobenzene	107	74-118		%REC	40	8/29/2003 4:30:33 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Client: EL PASO ENERGY / XTO ENERGY

Address: P.O. BOX 87

Bloomfield, NM 87413

Phone #: (505) 632-1199

Fax #: (505) 632-3903

Date

Time

Matrix

Sample I.D. No.

Number/Volume

Preservative

H₂O₂

HNO₃

HEAL No.

8/25/03 1010 WATER MW # 1R 2-40ml ✓ 0808202-1

8/25/03 1017 WATER MW # 3R 2-40ml ✓ -2

8/25/03 1027 WATER MW # 7 2-40ml ✓ -3

Date: 8/25/03

Time: 0735

Relinquished By: (Signature) Nelson Velez

Remarks: 8/26/03

Date:

Time:

Relinquished By: (Signature)

Remarks: 8/26/03

Accreditation Agency
NEAC ☐ USAUC ☐

Other:

Project Name:

BRUNINGTON GC #1

Project #:

Project Manager:

Nelson Velez

Sampler:

Nelson Velez

Sample Temperature:

12°C

ANALYSIS REQUEST

TPH Method 8015B MOD (Gas/Diesel)

BTX + MTBE + TPH (Gasoline Only)

(BTX) + MTBE + TMB's (8021B)

✓

TPH (Method 418.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Cations (Na, K, Ca, Mg)

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

8260 (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

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

Hall Environmental Analysis Laboratory

Date: 05-Sep-03

CLIENT: Blagg Engineering
Work Order: 0308202
Project: Bruington GC #1

QC SUMMARY REPORT

Method Blank

Sample ID: Reagent Blank 5m	Batch ID: R9418	Test Code: SW8021	Units: µg/L	Analysis Date: 8/29/2003 10:39:46 AM	Prep Date:
Client ID:		Run ID: PIDFID_030829A		SeqNo: 212264	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.50			
Toluene	ND	0.50			
Ethylbenzene	ND	0.50			
Xylenes, Total	ND	0.50			
Surr: 4-Bromofluorobenzene	19.29	0	20	0	96.5 74 118 0

Sample ID: Reagent Blank 5m	Batch ID: R9437	Test Code: SW8021	Units: µg/L	Analysis Date: 9/3/2003 8:59:47 AM	Prep Date:
Client ID:		Run ID: PIDFID_030903A		SeqNo: 212592	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.50			
Toluene	ND	0.50			
Ethylbenzene	ND	0.50			
Xylenes, Total	ND	0.50			
Surr: 4-Bromofluorobenzene	19.95	0	20	0	99.8 74 118 0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 05-Sep-03

CLIENT: Blagg Engineering

Work Order: 0308202

Project: Bruington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: BTEX Std 100ng		Batch ID: R9418		Test Code: SW8021		Units: µg/L		Analysis Date: 8/29/2003 9:12:57 PM		Prep Date:	
Client ID:		Run ID:		PIDFID_030829A				SeqNo: 212317			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.73	0.50	20	0	109	81.3	121	0			
Toluene	21.76	0.50	20	0	109	84.9	118	0			
Ethylbenzene	21.52	0.50	20	0	108	53.8	149	0			
Xylenes, Total	65.57	0.50	60	0	109	83.1	122	0			

Sample ID: BTEX Std 100ng	Batch ID: R9418	Test Code: SW8021	Units: µg/L	Analysis Date: 8/30/2003 3:54:48 AM	Prep Date:						
Client ID:	Run ID:	PIDFID_030829A		SeqNo: 212320							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.05	0.50	20	0	105	81.3	121	21.73	3.19	27	
Toluene	21.57	0.50	20	0	108	84.9	118	21.76	0.894	19	
Ethylbenzene	19.99	0.50	20	0	99.9	53.8	149	21.52	7.37	10	
Xylenes, Total	62.66	0.50	60	0	104	83.1	122	65.57	4.53	13	

Sample ID: BTEX Std 75ng	Batch ID: R9437	Test Code: SW8021	Units: µg/L	Analysis Date: 9/3/2003 10:01:20 AM	Prep Date:						
Client ID:	Run ID:	PIDFID_030903A		SeqNo: 212672							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	15.18	0.50	15	0	101	81.3	121	0			
Toluene	15.19	0.50	15	0	101	84.9	118	0			
Ethylbenzene	14.95	0.50	15	0	99.7	53.8	149	0			
Xylenes, Total	45.68	0.50	45	0	102	83.1	122	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Blagg Engineering
Work Order: 0308202
Project: Bruington GC #1

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID: BTEX Std 75ng	Batch ID: R9437	Test Code: SW8021	Units: µg/L	Analysis Date: 9/3/2003 5:12:07 PM	Prep Date:						
Client ID:		Run ID: PIDFID_030903A		SeqNo: 212673							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	15.52	0.50	15	0	103	81.3	121	15.18	2.24	27	
Toluene	15.46	0.50	15	0	103	84.9	118	15.19	1.77	19	
Ethylbenzene	15.32	0.50	15	0	102	53.8	149	14.95	2.45	10	
Xylenes, Total	47.08	0.50	45	0	105	83.1	122	45.68	3.01	13	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Receive

8/26/03

Work Order Number **0308202**

Received by **AT**

Checklist completed by

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 ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

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?

12°

4° C ± 2 Acceptable

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: XTO ENERGY INC.

CHAIN-OF-CUSTODY #: N / A

BRUINGTON GC # 1 - BLOW PIT
UNIT E, SEC. 14, T29N, R11W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: November 19, 2003

SAMPLER: N J V

Filename: 11-19-03.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42		-	20.00	-	-	-	-	-
2R	93.13		-	20.95	-	-	-	-	-
3R	93.39	81.11	12.28	20.00	1600	6.98	6,800	18.1	1.75
4	93.55		-	20.00	-	-	-	-	-
5	97.21		-	25.00	-	-	-	-	-
6	99.48		-	25.00	-	-	-	-	-
7	98.99		-	25.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS = 7.00 2,800
DATE & TIME = 11/11/03 0730

NOTES: Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2".

Poor recovery in MW # 3R. Distance & bearing for # 3R same as # 3.

Collected BTEX sample from MW # 3R only.

Hall Environmental Analysis Laboratory

Date: 01-Dec-03

CLIENT: Blagg Engineering
Lab Order: 0311158
Project: Bruington GC #1
Lab ID: 0311158-01

Client Sample ID: MW #3R
Collection Date: 11/19/2003 4:00:00 PM

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	12/1/2003 1:40:20 AM
Toluene	ND	0.50		µg/L	1	12/1/2003 1:40:20 AM
Ethylbenzene	1.4	0.50		µg/L	1	12/1/2003 1:40:20 AM
Xylenes, Total	ND	0.50		µg/L	1	12/1/2003 1:40:20 AM
Surr: 4-Bromofluorobenzene	105	74-118		%REC	1	12/1/2003 1:40:20 AM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 01-Dec-03

CLIENT: Blagg Engineering

Work Order: 0311158

Project: Bruington GC #1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R10208	Test Code: SW8021	Units: µg/L	Analysis Date 11/30/2003 1:57:24 PM	Prep Date					
Client ID:		Run ID: PIDFID_031130A			SeqNo: 229168						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.59	0	20	0	97.9	74	118	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 01-Dec-03

CLIENT: Blagg Engineering

Work Order: 0311158

Project: Bruington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX Std	100ng	Batch ID: R10208	Test Code: SW8021	Units: µg/L	Analysis Date	11/30/2003 2:58:49 PM	Prep Date			
Client ID:				Run ID: PIDFID_031130A		SeqNo:	229186				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.23	0.50	20	0	111	81.3	121	0			
Toluene	21.34	0.50	20	0	107	84.9	118	0			
Ethylbenzene	20.48	0.50	20	0	102	53.8	149	0			
1,2,4-Trimethylbenzene	20.56	0.50	20	0	103	79.7	123	0			
1,3,5-Trimethylbenzene	20.34	0.50	20	0	102	82.4	123	0			
Xylenes, Total	62.37	0.50	60	0	104	83.1	122	0			

Sample ID	BTEX Std 100ng	Batch ID: R10208	Test Code: SW8021	Units: µg/L	Analysis Date 12/1/2003 1:09:48 AM	Prep Date					
Client ID:			Run ID: PIDFID_031130A		SeqNo: 229189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.38	0.50	20	0	107	81.3	121	22.23	3.91	27	
Toluene	19.81	0.50	20	0	99.0	84.9	118	21.34	7.44	19	
Ethylbenzene	19.28	0.50	20	0	96.4	53.8	149	20.48	6.05	10	
1,2,4-Trimethylbenzene	19.06	0.50	20	0	95.3	79.7	123	20.56	7.56	21	
1,3,5-Trimethylbenzene	19.28	0.50	20	0	96.4	82.4	123	20.34	5.35	10	
Xylenes, Total	59.67	0.50	60	0	99.5	83.1	122	62.37	4.42	13	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

11/20/2003

Work Order Number **0311158**

Received by **AT**

Checklist completed by

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?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

BRUINGTON GC #1 - BLOW PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT E, SEC. 14, T29N, R11W

Date : June 18, 2004

SAMPLER : N J V

Filename : 06-18-04.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42		-	20.00	-	-	-	-	-
2R	93.13	81.06	12.07	20.95	1235	6.61	7,600	24.4	3.00
3R	93.39		-	20.00	-	-	-	-	-
4	93.55	82.31	11.24	20.00	-	-	-	-	-
5	97.21	81.39	15.82	25.00	1250	6.82	11,600	21.8	1.50
6	99.48	80.77	18.71	25.00	1307	6.69	11,700	22.0	1.50
7	98.99	80.12	18.87	25.00	1318	6.56	10,600	23.2	1.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/18/04 1230

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
 (i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

2.00" well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2"

Poor recovery in all MW's sampled. Blackish appearance with apparent sewage odor in all MW's.

Collected BTEX samples from MW #2R, #5, #6, & #7.

Hall Environmental Analysis Laboratory

Date: 29-Jun-04

CLIENT: Blagg Engineering
Project: Bruington GC #1**Lab Order:** 0406202**Lab ID:** 0406202-01**Collection Date:** 6/18/2004 12:35:00 PM**Client Sample ID:** MW #2R**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	5500	50		µg/L	100	6/28/2004 9:12:38 PM
Toluene	1400	50		µg/L	100	6/28/2004 9:12:38 PM
Ethylbenzene	710	50		µg/L	100	6/28/2004 9:12:38 PM
Xylenes, Total	3500	50		µg/L	100	6/28/2004 9:12:38 PM
Surr: 4-Bromofluorobenzene	97.2	74-118		%REC	100	6/28/2004 9:12:38 PM

Lab ID: 0406202-02**Collection Date:** 6/18/2004 12:50:00 PM**Client Sample ID:** MW #5**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	26000	250		µg/L	500	6/28/2004 9:43:12 PM
Toluene	ND	250		µg/L	500	6/28/2004 9:43:12 PM
Ethylbenzene	1100	250		µg/L	500	6/28/2004 9:43:12 PM
Xylenes, Total	3400	250		µg/L	500	6/28/2004 9:43:12 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	500	6/28/2004 9:43:12 PM

Lab ID: 0406202-03**Collection Date:** 6/18/2004 1:07:00 PM**Client Sample ID:** MW #6**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	23000	250		µg/L	500	6/28/2004 10:13:47 PM
Toluene	19000	250		µg/L	500	6/28/2004 10:13:47 PM
Ethylbenzene	1000	250		µg/L	500	6/28/2004 10:13:47 PM
Xylenes, Total	8800	250		µg/L	500	6/28/2004 10:13:47 PM
Surr: 4-Bromofluorobenzene	99.3	74-118		%REC	500	6/28/2004 10:13:47 PM

Lab ID: 0406202-04**Collection Date:** 6/18/2004 1:18:00 PM**Client Sample ID:** MW #7**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	11000	100		µg/L	200	6/28/2004 10:44:09 PM
Toluene	7800	100		µg/L	200	6/28/2004 10:44:09 PM
Ethylbenzene	670	100		µg/L	200	6/28/2004 10:44:09 PM
Xylenes, Total	5000	100		µg/L	200	6/28/2004 10:44:09 PM
Surr: 4-Bromofluorobenzene	96.3	74-118		%REC	200	6/28/2004 10:44:09 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 29-Jun-04

CLIENT: Blagg Engineering

Work Order: 0406202

Project: Bruington GC #1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R12290	Test Code: SW8021	Units: µg/L	Analysis Date	6/28/2004 9:39:47 AM	Prep Date					
Client ID:			Run ID: PIDFID_040628A		SeqNo:	283085						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		ND	0.5									
Toluene		ND	0.5									
Ethylbenzene		ND	0.5									
Xylenes, Total		ND	0.5									
Surr: 4-Bromofluorobenzene		20.67	0	20	0	103	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 29-Jun-04

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Blagg Engineering
Work Order: 0406202
Project: Bruington GC #1

Sample ID	BTEX std 100ng	Batch ID: R12290	Test Code: SW8021	Units: µg/L	Analysis Date	6/28/2004 7:40:46 PM	Prep Date				
Client ID:		Run ID:	PIDFID_040628A		SeqNo:	283117					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.02	0.5	20	0	100	81.3	121	0			
Toluene	19.54	0.5	20	0	97.7	84.9	118	0			
Ethylbenzene	19.75	0.5	20	0	98.8	53.8	149	0			
Xylenes, Total	60.33	0.5	60	0	101	83.1	122	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
I

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

6/21/2004

Work Order Number 0406202

Received by AT

Checklist completed by

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?

6°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: XTO ENERGY INC.

CHAIN-OF-CUSTODY #: N / A

BRUINGTON GC #1 - BLOW PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT E, SEC. 14, T29N, R11W

Date: June 27, 2005

SAMPLER: N J V

Filename: 06-27-05.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1R	94.42		-	20.00	-	-	-	-	-
2R	93.13	82.99	10.14	20.95	1630	6.81	6,400	24.5	2.50
3R	93.39		-	20.00	-	-	-	-	-
4	93.55	84.02	9.53	20.00	-	-	-	-	-
5	97.21	83.00	14.21	25.00	1640	6.73	10,400	22.9	2.25
6	99.48	82.39	17.09	25.00	1650	6.63	10,100	22.1	1.75
7	98.99	81.59	17.40	25.00	1318	6.54	9,200	21.9	1.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/27/05 0655

NOTES: Volume of water purged from well prior to sampling; $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
 (i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 "

Poor recovery in all MW's sampled. Blackish appearance with apparent sewage odor in all MW's.

Collected BTEX samples from MW # 2R, # 5, # 6, & # 7.

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

CLIENT: Blagg Engineering
Project: Bruington GC #1

Lab Order: 0506271

Lab ID: 0506271-01

Collection Date: 6/27/2005 4:30:00 PM

Client Sample ID: MW #2R

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	16000	100		µg/L	200	6/30/2005 1:48:25 PM
Toluene	1900	25		µg/L	50	6/30/2005 2:35:43 AM
Ethylbenzene	900	25		µg/L	50	6/30/2005 2:35:43 AM
Xylenes, Total	5400	25		µg/L	50	6/30/2005 2:35:43 AM
Surr: 4-Bromofluorobenzene	105	83.3-121		%REC	50	6/30/2005 2:35:43 AM

Lab ID: 0506271-02

Collection Date: 6/27/2005 4:40:00 PM

Client Sample ID: MW #5

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: KTM

Benzene	29000	200		µg/L	400	6/30/2005 3:06:08 AM
Toluene	ND	200		µg/L	400	6/30/2005 3:06:08 AM
Ethylbenzene	920	200		µg/L	400	6/30/2005 3:06:08 AM
Xylenes, Total	3400	200		µg/L	400	6/30/2005 3:06:08 AM
Surr: 4-Bromofluorobenzene	94.1	83.3-121		%REC	400	6/30/2005 3:06:08 AM

Lab ID: 0506271-03

Collection Date: 6/27/2005 4:50:00 PM

Client Sample ID: MW #6

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: KTM

Benzene	28000	130		µg/L	250	6/30/2005 3:36:28 AM
Toluene	20000	130		µg/L	250	6/30/2005 3:36:28 AM
Ethylbenzene	1200	130		µg/L	250	6/30/2005 3:36:28 AM
Xylenes, Total	9600	130		µg/L	250	6/30/2005 3:36:28 AM
Surr: 4-Bromofluorobenzene	100	83.3-121		%REC	250	6/30/2005 3:36:28 AM

Lab ID: 0506271-04

Collection Date: 6/27/2005 5:00:00 PM

Client Sample ID: MW #7

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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EPA METHOD 8021B: VOLATILES

Analyst: KTM

Benzene	14000	100		µg/L	200	6/30/2005 4:06:43 AM
Toluene	8700	100		µg/L	200	6/30/2005 4:06:43 AM
Ethylbenzene	880	100		µg/L	200	6/30/2005 4:06:43 AM
Xylenes, Total	5000	100		µg/L	200	6/30/2005 4:06:43 AM
Surr: 4-Bromofluorobenzene	101	83.3-121		%REC	200	6/30/2005 4:06:43 AM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

CLIENT: Blagg Engineering
Work Order: 0506271
Project: Bruington GC #1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R15847	Test Code: SW8021	Units: µg/L	Analysis Date	6/29/2005 10:41:34 AM	Prep Date				
Client ID:			Run ID: PIDFID_050629A		SeqNo:	375749					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.31	0	20	0	91.6	83.3	121	0			

Sample ID	Reagent Blank 5m	Batch ID: R15863	Test Code: SW8021	Units: µg/L	Analysis Date	6/30/2005 10:30:22 AM	Prep Date				
Client ID:			Run ID: PIDFID_050630A		SeqNo:	376231					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	17.44	0	20	0	87.2	83.3	121	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

CLIENT: Blagg Engineering

Work Order: 0506271

Project: Bruington GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX LCS 100ng	Batch ID: R15847	Test Code: SW8021	Units: µg/L	Analysis Date	6/29/2005 1:30:53 PM	Prep Date				
Client ID:		Run ID:	PIDFID_050629A		SeqNo:	375788					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.22	0.5	20	0	96.1	88.7	114	0			
Toluene	19.77	0.5	20	0	98.9	89.3	112	0			
Ethylbenzene	19.48	0.5	20	0	97.4	88.6	113	0			
Xylenes, Total	59.2	0.5	60	0	98.7	89.4	112	0			

Sample ID	BTEX LCS 100ng	Batch ID: R15863	Test Code: SW8021	Units: µg/L	Analysis Date	6/30/2005 12:03:37 PM	Prep Date				
Client ID:		Run ID:	PIDFID_050630A		SeqNo:	376239					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.58	0.5	20	0	92.9	88.7	114	0			
Toluene	18.93	0.5	20	0	94.6	89.3	112	0			
Ethylbenzene	18.79	0.5	20	0	93.9	88.6	113	0			
Xylenes, Total	57.41	0.5	60	0	95.7	89.4	112	0			

3 / 4

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
I

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

6/29/2005

Work Order Number 0506271

Received by **AMG**

Checklist completed by

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?

6°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____