

3R - 385

REPORTS

DATE:

2005



3R0385
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

RECEIVED

XTO ENERGY INC.

JAN 31 2006

Oil Conservation Division
Environmental Bureau

ANNUAL GROUNDWATER REMEDIATION REPORT

2005

**E.J. JOHNSON C #1E
(C) SECTION 21, T27N, R10W, 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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Table 2: General Water Chemistry Lab Results

Figure 1: Site Location Map

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Figure 8-9: Boring Logs/Well Schematics

Field Sampling Data Summaries

Laboratory Reports

XTO ENERGY INC.
E.J. Johnson C # 1E - Production Tank Pit
NE/4 NW/4 Sec. 21, T27N, R10W

Pit Closure Date: 1/27/95

Monitor Well Installation Dates: MW 1, 2, 3 - 9/22/99
MW 4 - 1/24/02
MW 5 - 7/18/03

Monitor Well Sampling Dates: 9/27/99, 2/18/00, 6/20/00, 2/20/02, 6/23/03, 8/26/03,
11/24/03, 3/26/04, 6/16/04, 6/28/05

Historical Information:

- August 1994 – Amoco Production Company initiates remedial efforts at production pit tank site by excavating approximately 440 cubic yards of impacted soils (Figure 1). Groundwater encountered at approximately 10 feet below surface grade. Remedial efforts included removal of impacted groundwater with pump trucks until test results identified residual hydrocarbon levels at below closure standards.
- January 1998 - XTO Energy Inc. (XTO) acquires the E.J. Johnson C #1E from Amoco Production Company
- September 1999 – XTO conducts follow-up investigations to quantify potential impacts.
- September 1999 to Present – Continued quarterly/annual sampling and analysis

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:

The groundwater gradient appears to consistently trend west-northwest in direction (Figures 2 - 6) since monitoring was initiated in 1999. The estimated groundwater flow has been constant and parallel to the nearby surface drainage (Kutz Wash).

BTEX and general chemistry results for quarterly sampling events are summarized in Tables 1 and 2. Groundwater from MW 1 through MW 4 has been below laboratory detection levels or below the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards. Well MW 5 is the furthest down gradient monitor well (Figures 4 - 6) and laboratory analysis show decreasing concentrations of BTEX constituents. Total dissolved solids (TDS) and chloride levels within MW 4 exceeded NMWQCC standards (1,000 and 250 milligram per liter [mg/L] respectively) during general chemistry analytical testing in February 2002.

Summary:

Additional delineation of potential hydrocarbon impact is needed in the down gradient direction. XTO Energy Inc. (XTO) proposes to install an additional groundwater monitor well northwest of MW 5 to evaluate the migration of hydrocarbon constituents.

Pursuant to the NMOCD approved groundwater management plan, XTO respectfully requests sampling termination of BTEX in all monitor wells except well MW 5, which will be sampled annually at a minimum pending groundwater data from the proposed MW 6. Additional sampling for TDS and chlorides is proposed in all monitoring wells during 2006.

TABLE 1

XTO ENERGY INC. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

JOHNSON, E.J. C # 1E - PROD. TANK PIT
UNIT C, SEC. 21, T27N, R10W

REVISED: JANUARY 18, 2006

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

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
27-Sep-99	MW #1	15.32	20.00	3,440	6,920	7.5		13.9	11.0	17.2	10.0
18-Feb-00		15.39			3,100	7.7		2.4	ND	11.0	ND
20-Jun-00		15.19			2,700	7.6		3.8	1.6	16	ND
23-Jun-03		16.27			2,000	7.30		1.0	0.91	ND	ND
26-Aug-03		16.28			2,500	7.34		0.52	ND	ND	ND
27-Sep-99	MW #2	12.96	20.00	720	1,472	8.1		58.7	39.0	90.2	107.4
18-Feb-00		13.08			1,500	8.2		ND	ND	86	42.6
20-Jun-00		12.86			1,500	8.2		ND	ND	41	12.5
23-Jun-03		13.90			1,400	7.21		ND	11	15	1.3
26-Aug-03		13.89			1,900	7.10		ND	ND	35	2.0
27-Sep-99	MW #3	8.24	20.00	3,410	6,840	8.0		22.7	3.3	2.1	11.6
18-Feb-00		8.51			3,100	8.0		ND	ND	ND	ND
20-Jun-00		8.14			3,100	7.8		ND	ND	ND	ND
23-Jun-03		9.30			2,300	7.50		ND	ND	ND	ND
26-Aug-03		9.28			3,300	7.65		ND	ND	ND	ND
20-Feb-02	MW #4	12.63	19.80	5,810	5,500	7.91		120	33	840	3,540
23-Jun-03		12.38			1,500	7.50		1.1	22	7.3	17
26-Aug-03		12.36			2,000	7.37		2.2	ND	31	15
24-Nov-03		12.15			2,300	7.73		1.3	ND	38	18
26-Mar-04		12.17			2,600	7.51		ND	ND	ND	7.0
16-Jun-04		12.00			2,100	7.40		0.92	ND	9.3	4.2
26-Aug-03	MW #5	15.50	20.00		2,200	7.91		64	1,100	520	4,200
24-Nov-03		12.35			2,400	8.09		100	43	190	940
26-Mar-04		12.39			2,300	8.13		51	ND	61	300
16-Jun-04		12.22			2,200	8.08		61	3.2	76	380
28-Jun-05		12.44			2,100	8.00		23	ND	15	71
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 OPERATING COMPANY
JOHNSON, E.J. C # 1E

SAMPLE DATE : September 27 , 1999

February 20 , 2002 (mw # 4)

PARAMETERS	MW # 1 09/27/99	MW # 2 09/27/99	MW # 3 09/27/99	MW # 4 02/20/02	Units
LAB pH	7.51	8.09	7.85	8.05	s. u.
LAB CONDUCTIVITY @ 25 C	6,920	1,472	6,840	10,600	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	3,440	720	3,410	5,810	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	3,400	710	3,320	5,700	mg / L
SODIUM ABSORPTION RATIO	27.4	11.5	29.3	70.9	ratio
TOTAL ALKALINITY AS CaCO3	648	482	376	1,560	mg / L
TOTAL HARDNESS AS CaCO3	260	72.0	220	152	mg / L
BICARBONATE as HCO3	648	482	376	1,560	mg / L
CARBONATE AS CO3	< 1	< 1	< 1	< 0.1	mg / L
HYDROXIDE AS OH	< 1	< 1	< 1	< 0.1	mg / L
NITRATE NITROGEN	0.2	0.2	0.1	0.8	mg / L
NITRITE NITROGEN	0.005	0.015	0.005	0.064	mg / L
CHLORIDE	5.0	15.0	18.0	1,030	mg / L
FLUORIDE	2.10	0.96	1.66	0.88	mg / L
PHOSPHATE	0.7	3.4	0.5	119	mg / L
SULFATE	1,870	140	1,990	1,540	mg / L
IRON	0.011	0.147	0.008	0.135	mg / L
CALCIUM	88.0	25.6	60.0	46.4	mg / L
MAGNESIUM	9.8	2.0	17.1	8.79	mg / L
POTASSIUM	7.5	7.5	7.5	0.5	mg / L
SODIUM	1,020	225	1,000	2,010	mg / L
CATION / ANION DIFFERENCE	0.14	0.19	0.24	0.02	%

FIGURE 1



Name: EAST FORK KUTZ CANYON
Date: 1/18/2006
Scale: 1 inch equals 2000 feet

Location: 036.5656244° N 107.9039062° W
Caption: E.J. JOHNSON C #1E
(C) SEC. 21, T27N, R10W

FIGURE 2



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

XTO ENERGY INC.
JOHNSON, E.J. C #1E
NE/4 NW/4, SEC. 21, T27N, R10W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
 CONSULTING PETROLEUM / RECLAMATION SERVICES
 P.O. BOX 87
 BLOOMFIELD, NEW MEXICO 87413
 PHONE: (505) 832-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 03-26-04-SM.SKF
REVISED: 03/26/04

SITE MAP
 03/04



WASH FLOW
DIRECTION
DUE WEST
PASSED MW #3

FIGURE 3
(3RD 1/4, 1999)

TO WASH
APPROX.
185 FT.
FROM MW #3

WASH FLOW
DIRECTION
N55W PRIOR
TO MW #3

WELL
HEAD
⊕

METER
RUN

APPARENT
GROUNDWATER
FLOW DIRECTION
- N70.5W



Top of Well Elevation	
MW #1	(104.04)
MW #2	(103.61)
MW #3	(98.02)
MW #1	Groundwater Elevation as of 5/27/99
⊕	(88.72)

1 INCH = 40 FT.



SEP

ACCESS ROAD

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.

CROSS TIMBERS OPERATING CO.

JOHNSON, E.J. C #1E

NE/4 NW/4 SEC. 21, T27N, R10W

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

DRAWN BY: NJV

FILENAME: 09-27-99-GW.SKF

REVISED: 06/23/03

**GROUNDWATER
CONTOUR
MAP**

09/99



WASH FLOW
DIRECTION
DUE WEST
PASSED MW #3

FIGURE 4
(2nd 1/4, 2000)

MW #3
(88.72)

TO WASH
APPROX.
185 FT.
FROM MW #3

WASH FLOW
DIRECTION
NOW PRIOR
TO MW #3

WELL
HEAD



APPARENT
GROUNDWATER
FLOW DIRECTION
- N75.25W

MW #4



ACCESS ROAD

SEP

MW #1
(87.77)



89.5

PROD. TANK
TANK PIT

90.0



90.5

MW #2
(89.71)



PIT EXCAVATION
PERIMETER

Top of Well Elevation	
MW #1	(104.04)
MW #2	(103.61)
MW #3	(98.02)
MW #4	(103.61)
MW #1	Groundwater Elevation as of 6/20/00
	(88.85)

1 INCH = 40 FT.



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE
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SCALE.

CROSS TIMBERS OPERATING CO.

JOHNSON, E.J. C #1E

NE/4 NW/4 SEC. 21, T27N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 832-1199

PROJECT: MW SAMPLING

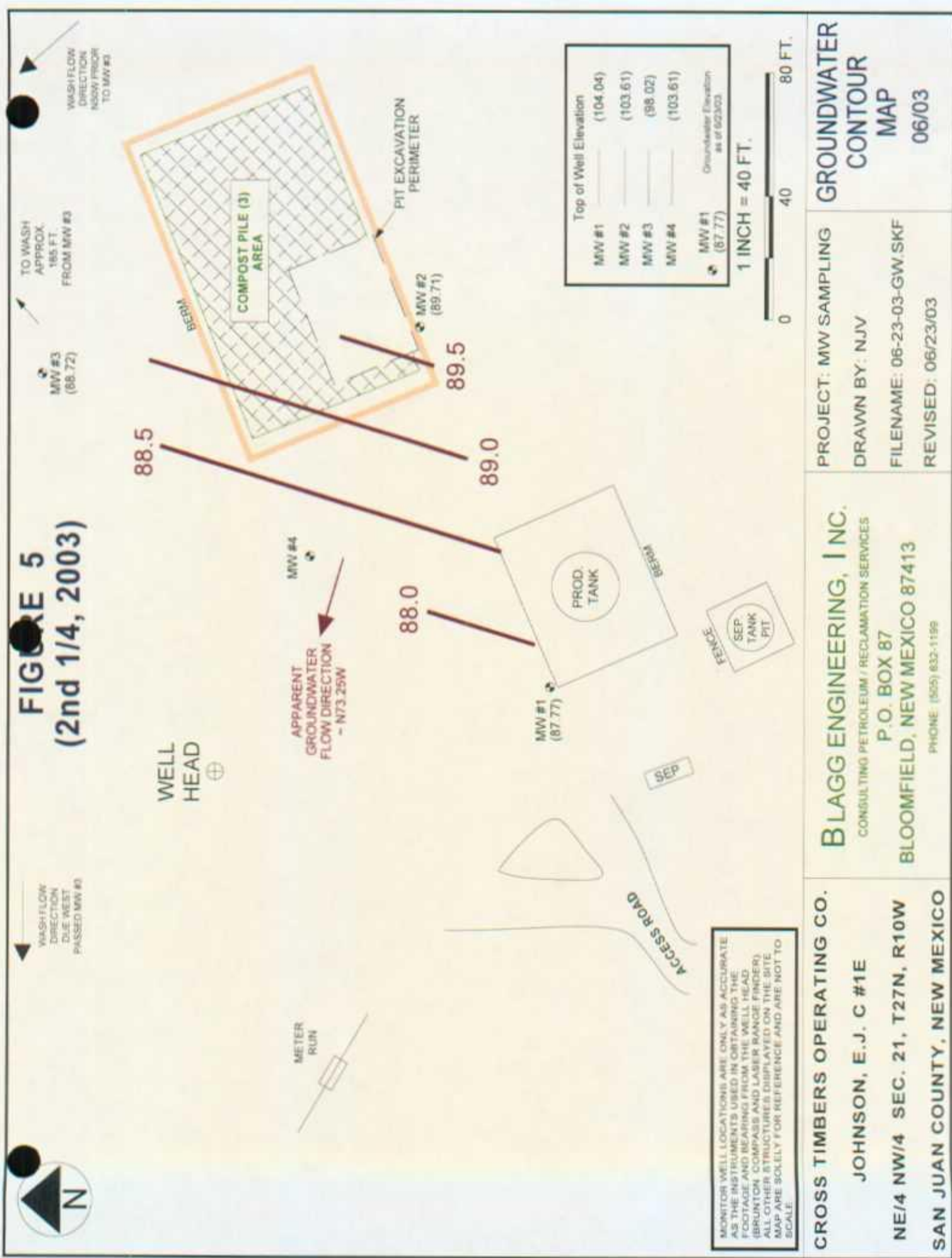
DRAWN BY: NJV

FILENAME: 06-20-00-GW.SKF

REVISED: 06/24/03

**GROUNDWATER
CONTOUR
MAP**

06/00



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.

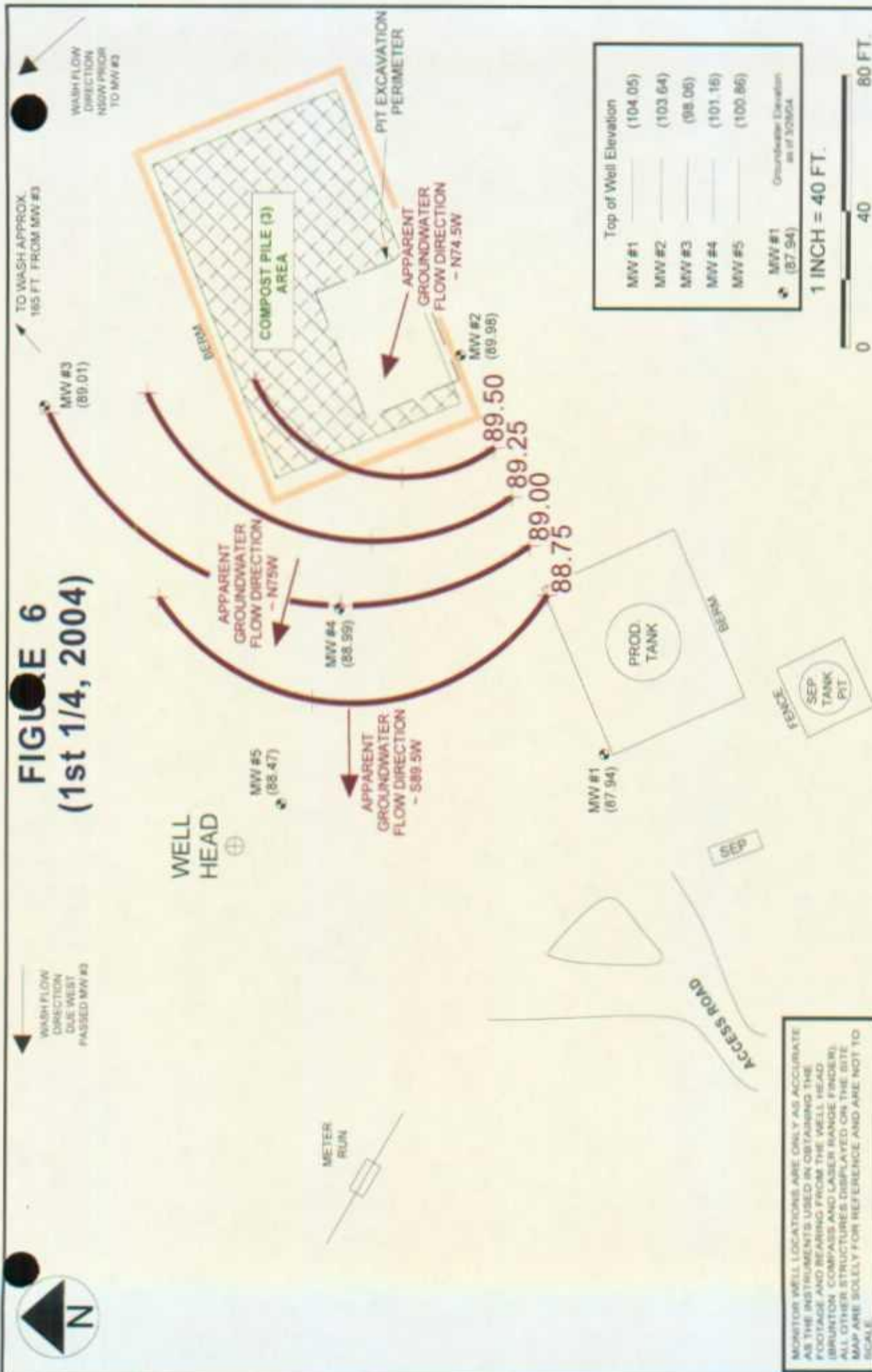
CROSS TIMBERS OPERATING CO.
JOHNSON, E.J. C #1E
 NE/4 NW/4 SEC. 21, T27N, R10W
 SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
 CONSULTING PETROLEUM / RECLAMATION SERVICES
 P.O. BOX 87
 BLOOMFIELD, NEW MEXICO 87413
 PHONE: (505) 832-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 06-23-03-GW-SKF
REVISED: 06/23/03

GROUNDWATER CONTOUR MAP
06/03

FIGURE 6
(1st 1/4, 2004)



Top of Well Elevation	
MW #1	(104.05)
MW #2	(103.64)
MW #3	(98.06)
MW #4	(101.16)
MW #5	(100.86)
MW #1	Groundwater Elevation as of 3/26/04 (87.94)

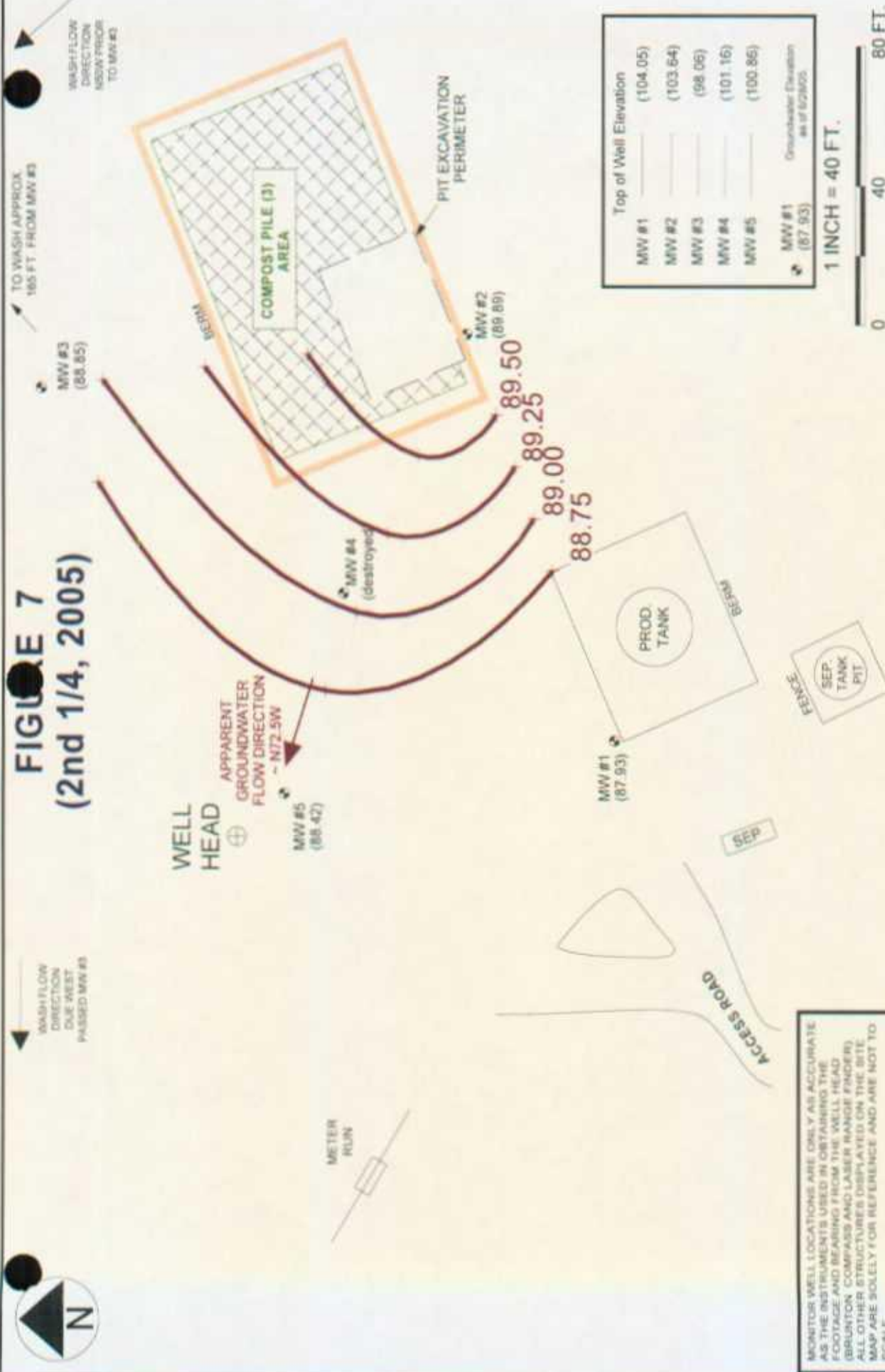
1 INCH = 40 FT.



XTO ENERGY INC. JOHNSON, E.J. C #1E NE/4 NW/4, SEC. 21, T27N, R10W SAN JUAN COUNTY, NEW MEXICO	BLAGG ENGINEERING, INC. CONSULTING PETROLEUM / RECLAMATION SERVICES P.O. BOX 87 BLOOMFIELD, NEW MEXICO 87413 PHONE (505) 633-1199	PROJECT: MW SAMPLING DRAWN BY: NJV FILENAME: 03-26-04-GW.SKF REVISED: 03/26/04	GROUNDWATER CONTOUR MAP 03/04
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MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND READING 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.

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 ARE NOT TO SCALE.

XTO ENERGY INC.
JOHNSON, E.J. C #1E
NE/4 NW/4, SEC. 21, T27N, R10W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1129

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 06-28-05-GW.SKF
REVISED: 10/11/05

GROUNDWATER CONTOUR MAP
06/05

FIGURE 8

BLAGG ENGINEERING, Inc.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199

BORE / TEST HOLE REPORT

CLIENT: **XTO ENERGY INC.**
 LOCATION NAME: **JOHNSON, E.J. C#1E PROD. TANK PIT - UNIT C, SEC. 21, T27N, R10W**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **EARTHPROBE 200**
 BORING LOCATION: **76.5 FEET, S66E FROM WELL HEAD.**

BORING #..... **BH - 4**
 MW #..... **4**
 PAGE #..... **4**
 DATE STARTED **1/24/02**
 DATE FINISHED **1/24/02**
 OPERATOR **JCB**
 PREPARED BY **NJV**

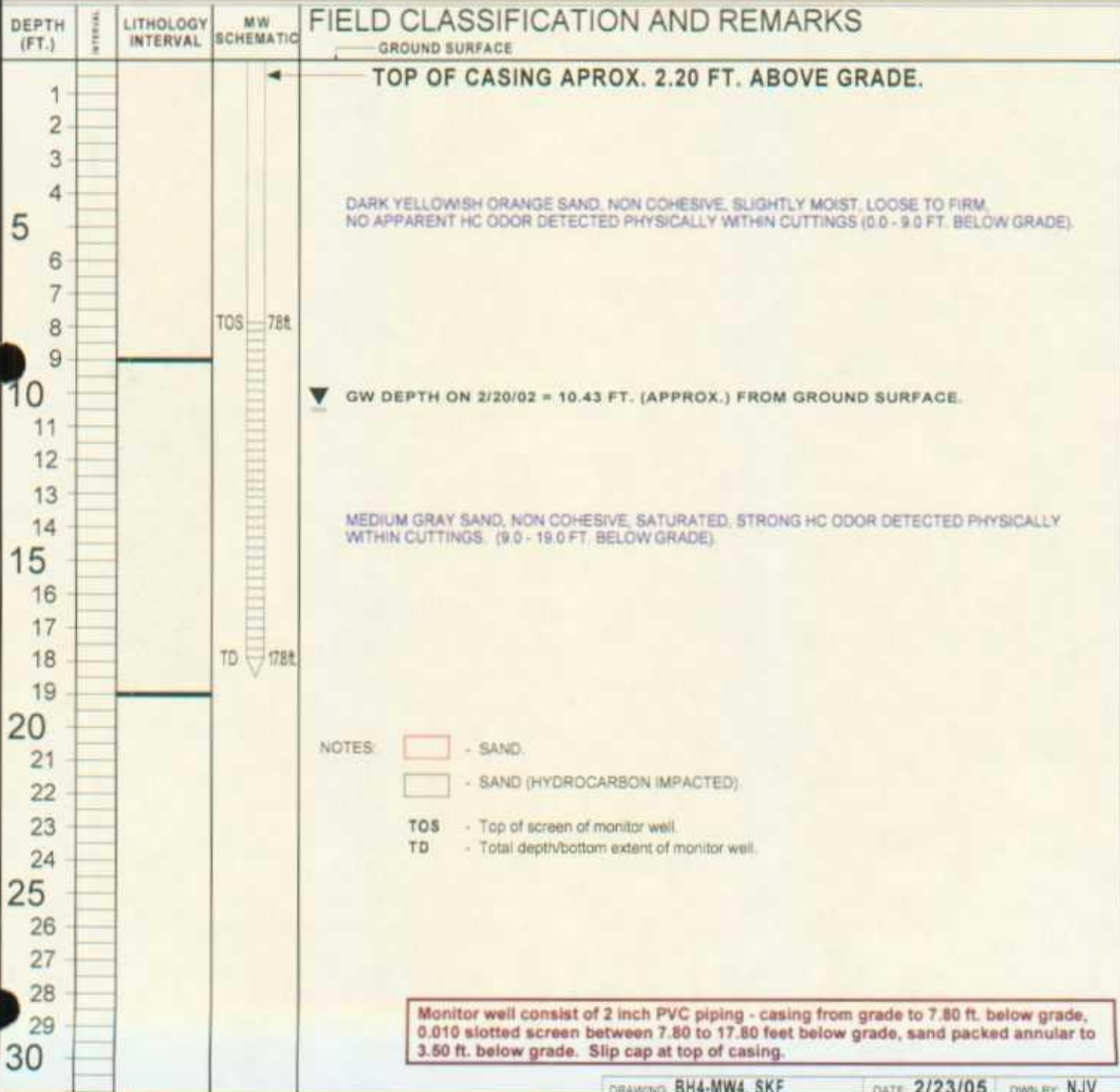


FIGURE 9

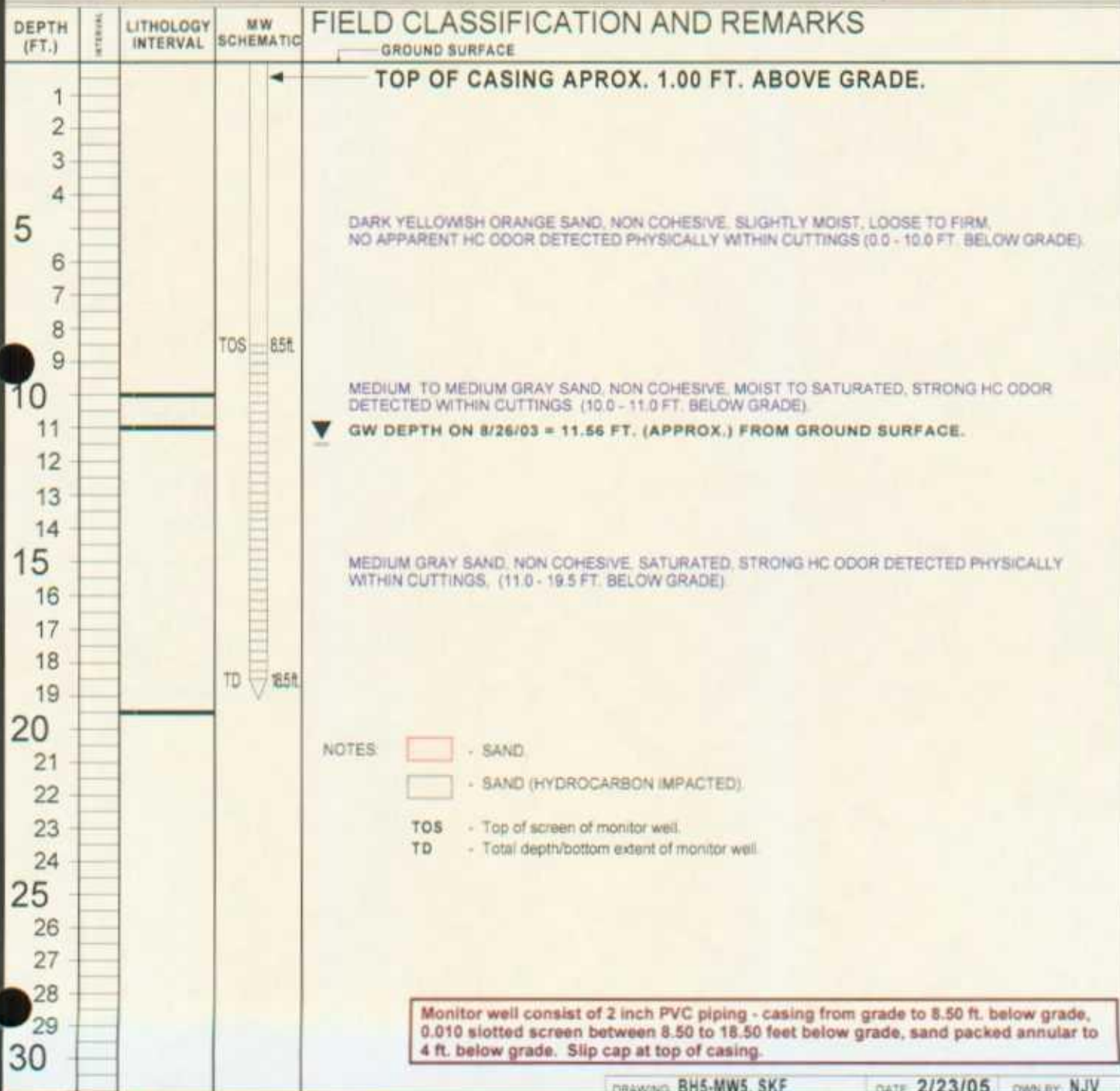
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: **XTO ENERGY INC.**
 LOCATION NAME: **JOHNSON, E.J. C #1E PROD. TANK PIT - UNIT C, SEC. 21, T27N, R10W**
 CONTRACTOR: **BLAGG ENGINEERING, INC.**
 EQUIPMENT USED: **EARTHPROBE 200**
 BORING LOCATION: **18.5 FEET, S42E FROM WELL HEAD.**

BORING #..... **BH - 5**
 MW #..... **5**
 PAGE #..... **5**
 DATE STARTED **7/18/03**
 DATE FINISHED **7/18/03**
 OPERATOR..... **JCB**
 PREPARED BY **NJV**



BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 7300

LOCATION : JOHNSON, E. J. C # 1E

LABORATORY (S) USED : ENVIROTECH, INC.

Date : September 27, 1999

SAMPLER : REP

Filename : 09-27-99.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)
1	104.04	88.72	15.32	20.00	1005	7.5	2000	2.25	-
2	103.61	90.65	12.96	20.00	1040	8.1	1400	3.50	-
3	98.02	89.78	8.24	17.00	1120	8.0	3200	4.25	-

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 "

Poor recovery in MW #'s 1 & 3 . Collected BTEX and anion / cation samples for
all MW's listed above .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 10352

LOCATION : JOHNSON, E. J. C # 1E

LABORATORY (S) USED : ON - SITE TECH.

Date : February 18, 2000

SAMPLER : N J V

Filename : 02-18-00.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)
1	104.04	88.65	15.39	20.00	1110	7.7	3,100	2.25	-
2	103.61	90.53	13.08	20.00	1230	8.2	1,500	3.50	-
3	98.02	89.51	8.51	17.00	1150	8.0	3,100	4.25	-

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 "

Poor recovery in MW #3 . Fair recovery in MW #'s 1 & 2 . Collected BTEX from
all MW 's listed above .

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : CROSS TIMBERS OIL CO.

CHAIN-OF-CUSTODY # : 10600

LOCATION : JOHNSON, E. J. C # 1E

LABORATORY (S) USED : ON - SITE TECH.

Date : June 20, 2000

SAMPLER : N J V

Filename : 06-20-00.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)
1	104.04	88.85	15.19	20.00	1235	7.6	2,700	2.50	-
2	103.61	90.75	12.86	20.00	1305	8.2	1,500	3.50	-
3	98.02	89.88	8.14	17.00	1255	7.8	3,100	4.50	-

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 MW # 3 . Fair recovery in MW #'s 1 & 2 . Collected BTEX from
all MW 's listed above .

BLAGG ENGINEERING, INC.**MONITOR WELL SAMPLING DATA**CLIENT : CROSS TIMBERS OIL CO.CHAIN-OF-CUSTODY # : 11166LOCATION : JOHNSON, E. J. C # 1ELABORATORY (S) USED : ON - SITE TECH.Date : February 20, 2002SAMPLER : N J VFilename : 02-20-02.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)
1	104.04	88.44	15.60	20.00	-	-	-	-	-
2	103.61	90.31	13.30	20.00	-	-	-	-	-
3	98.02	89.15	8.87	17.00	-	-	-	-	-
4			12.63	19.80	0925	7.91	5,500	1.25	-

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 "

Installed MW # 4 on 1 / 24 / 02 . 10 ft. screen interval , 10 ft. casing .

Developed MW # 4 on 2 / 19 / 02 . Poor recovery - rate @ 5.4375 ft. / hr. Blackish

color , very strong hydrocarbon odor , free product type film on bailer . After purging

well to TD , waited approx. 45 minutes for recovery , DTW = 15.91 ft. @ time of

sampling . Cut off 0.8 ft. from top of casing in MW # 4 . Collected BTEX & major

anion / cation samples from MW # 4 only .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C # 1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date : June 23, 2003

SAMPLER : N J V

Filename : 06-23-03.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.)
1	104.04	87.77	16.27	20.00	1000	7.30	2,000	21.5	1.00
2	103.61	89.71	13.90	20.00	1030	7.21	1,400	21.4	1.50
3	98.02	88.72	9.30	17.00	1015	7.50	2,300	21.5	2.00
4		-	12.38	19.80	1040	7.50	1,500	21.7	1.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/23/03 09:55

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"

Bailed all MW's to total depth, then allowed recovery prior to sampling. Fair recovery in MW #1 & #2; fair/poor recovery in MW #3; poor recovery in MW #4. Collected BTEX samples from all MW's.

MW #	DTW
1	16.27
2	13.90
3	9.30
4	12.38

(prior to purging -
in ft.)

MW #	DTW
1	16.26
2	13.92
3	10.92
4	17.22

(@ time of sampling -
in ft.)

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

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C # 1E
UNIT C, SEC. 21, T27N, R10W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : August 26, 2003

SAMPLER : N J V

Filename : 08-26-03.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.)
1	104.05	87.77	16.28	20.00	1130	7.34	2,500	24.5	1.25
2	103.64	89.75	13.89	20.00	1140	7.10	1,900	23.9	1.50
3	98.06	88.78	9.28	17.00	1120	7.65	3,300	25.0	1.50
4	101.16	88.80	12.36	19.80	1150	7.37	2,000	22.8	1.50
5	100.86	88.30	12.56	19.80	1200	7.91	2,200	24.0	1.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
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 ".

Bailed all MW 's to total depth , then allowed recovery prior to sampling . Fair recovery in MW # 1 , # 2 , & # 5 ; fair / poor recovery in MW # 3 ; poor recovery in MW # 4 . Collected BTEX samples from all MW 's .

First time development of MW # 5 - bailed to TD , then remeasured DTW (see results below) .

Utilized second measurement for groundwater contour map schematic .

MW #	DTW
1	16.28
2	13.89
3	9.28
4	12.36
5	15.50

(prior to purging -
in ft.)

MW #	DTW
1	16.28
2	13.89
3	12.22
4	17.59
5	12.56

(@ time of sampling -
in ft.)

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

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C #1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

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.)
1	104.05		-	20.00	-	-	-	-	-
2	103.64		-	20.00	-	-	-	-	-
3	98.06		-	17.00	-	-	-	-	-
4	101.16		12.15	19.80	1410	7.73	2,300	12.3	1.25
5	100.86		12.35	19.80	1420	8.09	2,400	13.1	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
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 "

Bailed MW's #4 & #5 to total depth, then allowed recovery prior to sampling. Fair recovery in MW #5; poor recovery in MW #4. Collected BTEX samples from MW #4 & #5 only.

MW #	DTW
1	-
2	-
3	-
4	12.15
5	12.35

(prior to purging -
in ft.)

MW #	DTW
1	-
2	-
3	-
4	17.67
5	12.56

(@ time of sampling -
in ft.)

BLAGG ENGINEERING, INC.**MONITOR WELL DEVELOPMENT &/OR SAMPLING DATA**CLIENT : XTO ENERGY INC.CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C # 1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date : March 26, 2004SAMPLER : N J VFilename : 03-26-04.WK4PROJECT 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.)
1	104.05	87.94	16.11	20.00	-	-	-	-	-
2	103.64	89.98	13.66	20.00	-	-	-	-	-
3	98.06	89.01	9.05	17.00	-	-	-	-	-
4	101.16	88.99	12.17	19.80	0740	7.51	2,600	12.9	1.25
5	100.86	88.47	12.39	19.80	0730	8.13	2,300	12.5	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
03/25/04	1600

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 ".

Bailed MW # 4 & # 5 to total depth , then allowed recovery prior to sampling . Poor recovery in # 5 ; very poor recovery in MW # 4 . Collected BTEX from MW # 4 & # 5 only .

MW #	DTW
1	-
2	-
3	-
4	12.17
5	12.39

(prior to purging -
in ft.)

MW #	DTW
1	-
2	-
3	-
4	17.10
5	13.80

(@ time of sampling -
in ft.)

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

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C # 1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date : June 16, 2004

SAMPLER : N J V

Filename : 06-16-04.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.)
1	104.05	88.13	15.92	20.00	-	-	-	-	-
2	103.64	90.14	13.50	20.00	-	-	-	-	-
3	98.06	89.10	8.96	17.00	-	-	-	-	-
4	101.16	89.16	12.00	19.80	0820	7.40	2,100	18.9	1.25
5	100.86	88.64	12.22	19.80	0800	8.08	2,200	19.5	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/16/04	0750

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 "

Bailed MW #4 & #5 to total depth, then allowed recovery prior to sampling. Poor recovery in #5; very poor recovery in MW #4. Collected BTEX from MW #4 & #5 only.

MW #	DTW
1	-
2	-
3	-
4	12.00
5	12.22

(prior to purging -
in ft.)

MW #	DTW
1	-
2	-
3	-
4	16.90
5	12.50

(@ time of sampling -
in ft.)

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

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C # 1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date : June 28, 2005

SAMPLER : N J V

Filename : 06-28-05.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.)
1	104.05	87.93	16.12	20.00	-	-	-	-	-
2	103.64	89.89	13.75	20.00	-	-	-	-	-
3	98.06	88.85	9.21	17.00	-	-	-	-	-
4	destroyed			19.80	-	-	-	-	-
5	100.86	88.42	12.44	19.80	0845	8.00	2,100	19.9	1.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/28/04 0830

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".

Bailed MW #5 to total depth , then allowed recovery prior to sampling . Poor recovery
in #5 . Collected BTEX from MW #5 only .

BLAGG ENGINEERING, INC.**MONITOR WELL SAMPLING DATA**CLIENT : CROSS TIMBERS OIL CO.CHAIN-OF-CUSTODY # : 11166LOCATION : JOHNSON, E. J. C # 1ELABORATORY (S) USED : ON - SITE TECH.Date : February 20, 2002SAMPLER : N J VFilename : 02-20-02.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)
1	104.04	88.44	15.60	20.00	-	-	-	-	-
2	103.61	90.31	13.30	20.00	-	-	-	-	-
3	98.02	89.15	8.87	17.00	-	-	-	-	-
4	98.02	85.39	12.63	19.80	0925	7.91	5,500	1.25	-

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".Installed MW #4 on 1 / 24 / 02 . 10 ft. screen interval , 10 ft. casing .

Developed MW #4 on 2 / 19 / 02 . Poor recovery - rate @ 5.4375 ft. / hr. Blackish
color , very strong hydrocarbon odor , free product type film on bailer . After purging
well to TD , waited approx. 45 minutes for recovery , DTW = 15.91 ft. @ time of
sampling . Cut off 0.8 ft. from top of casing in MW #4 . Collected BTEX & major
anion / cation samples from MW #4 only .

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



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

ANALYTICAL REPORT

Date: 28-Feb-02

Client:	Blagg Engineering	Client Sample Info:	E.J. Johnson C #1E
Work Order:	0202016	Client Sample ID:	MW #4
Lab ID:	0202016-01A	Matrix:	AQUEOUS
Project:	XTO Energy - E.J. Johnson C #1E	Collection Date:	02/20/2002 9:25:00 AM
		COC Record:	11166

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DDM		
Benzene	120	25		µg/L	50	02/27/2002
Toluene	33	25		µg/L	50	02/27/2002
Ethylbenzene	840	25		µg/L	50	02/27/2002
m,p-Xylene	2700	50		µg/L	50	02/27/2002
o-Xylene	840	25		µg/L	50	02/27/2002

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

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client: Blagg / XTO Energy
Sample ID: MW #4
Laboratory Number: 22074
Chain of Custody: 9721
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 94034-010
Date Reported: 02-21-02
Date Sampled: 02-20-02
Date Received: 02-20-02
Date Extracted: N/A
Date Analyzed: 02-21-02

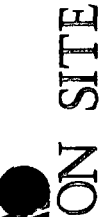
Parameter	Analytical Result	Units	Units
pH	8.05	s.u.	
Conductivity @ 25° C	10,600	umhos/cm	
Total Dissolved Solids @ 180C	5,810	mg/L	
Total Dissolved Solids (Calc)	5,700	mg/L	
SAR	70.9	ratio	
Total Alkalinity as CaCO3	1,560	mg/L	
Total Hardness as CaCO3	152	mg/L	
Bicarbonate as HCO3	1,560	mg/L	25.57 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	0.8	mg/L	0.01 meq/L
Nitrite Nitrogen	0.064	mg/L	0.00 meq/L
Chloride	1,030	mg/L	29.06 meq/L
Fluoride	0.88	mg/L	0.05 meq/L
Phosphate	119	mg/L	3.76 meq/L
Sulfate	1,540	mg/L	32.06 meq/L
Iron	0.135	mg/L	
Calcium	46.4	mg/L	2.32 meq/L
Magnesium	8.79	mg/L	0.72 meq/L
Potassium	0.5	mg/L	0.01 meq/L
Sodium	2,010	mg/L	87.44 meq/L
Cations			90.49 meq/L
Anions			90.51 meq/L
Cation/Anion Difference			0.02%

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: E. J. Johnson C #1E.

Mister M. Waters
Analyst

Dean L. O'Brien
Review



CHAIN OF CUSTODY RECORD

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

Date: _____

Page: _____ of _____

[illegible]

09721

[illegible]

On Site Technologies, LTD.

Date: 28-Feb-02

CLIENT: Blagg Engineering
Work Order: 0202016
Project: XTO Energy - E.J. Johnson C #1E

QC SUMMARY REPORT

Method Blank

Sample ID: MB_020227	Batch ID: GC-1_020227	Test Code: SW8021B	Units: µg/L	Analysis Date: 02/27/2002	Prep Date:						
Client ID:	0202016	Run ID: GC-1_020227A		SeqNo: 48119							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1097	0.5									J
Ethylbenzene	.1164	0.5									J
m,p-Xylene	.1601	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									
Toluene	.2605	0.5									J
1,4-Difluorobenzene	106.7	0									
4-Bromochlorobenzene	120.8	0									
Fluorobenzene	108.2	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

On Site Technologies, LTD.

Date: 28-Feb-02

CLIENT: Blagg Engineering
 Work Order: 0202016
 Project: XTO Energy - E.J. Johnson C #1E

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0202029-05AMS		Batch ID: GC-1_020227		Test Code: SW8021B		Units: µg/L		Analysis Date: 02/27/2002		Prep Date:	
Client ID: 0202016		Run ID: GC-1_020227A		SeqNo: 48120							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	376.1	5	400	1.114	93.7%	70	130				
Ethylbenzene	388.1	5	400	7.019	95.3%	70	130				
m,p-Xylene	798.9	10	800	35.75	95.4%	70	130				
Methyl tert-Butyl Ether	404.4	10	400	0	101.1%	70	130				
o-Xylene	394.2	5	400	17.62	94.2%	70	130				
Toluene	388.8	5	400	20.22	92.2%	70	130				
1,4-Difluorobenzene	1050	0	1100	0	95.4%	70	130				
4-Bromochlorobenzene	1178	0	1100	0	107.1%	70	130				
Fluorobenzene	1067	0	1100	0	97.0%	70	130				

Sample ID: 0202029-05AMSD		Batch ID: GC-1_020227		Test Code: SW8021B		Units: µg/L		Analysis Date: 02/27/2002		Prep Date:	
Client ID: 0202016		Run ID: GC-1_020227A		SeqNo: 48121							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	367.1	5	400	1.114	91.5%	70	130	376.1	2.4%	15	
Ethylbenzene	379.2	5	400	7.019	93.0%	70	130	388.1	2.3%	15	
m,p-Xylene	781.4	10	800	35.75	93.2%	70	130	798.9	2.2%	15	
Methyl tert-Butyl Ether	401.4	10	400	0	100.3%	70	130	404.4	0.8%	15	
o-Xylene	386.5	5	400	17.62	92.2%	70	130	394.2	2.0%	15	
Toluene	379.7	5	400	20.22	89.9%	70	130	388.8	2.4%	15	
1,4-Difluorobenzene	1052	0	1100	0	95.6%	70	130	0	0.0%	0	
4-Bromochlorobenzene	1178	0	1100	0	107.1%	70	130	0	0.0%	0	
Fluorobenzene	1066	0	1100	0	97.0%	70	130	0	0.0%	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

On Site Technologies, LTD.

Date: 28-Feb-02

CLIENT: Blagg Engineering
Work Order: 0202016
Project: XTO Energy - E.J. Johnson C #1E

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS_020227		Batch ID: GC-1_020227		Test Code: SW8021B		Units: µg/L		Analysis Date: 02/27/2002		Prep Date:	
Client ID:		0202016		Run ID: GC-1_020227A				SeqNo: 48118			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.3	0.5	40	0.1097	95.5%	80	120				
Ethylbenzene	39.34	0.5	40	0.1164	98.1%	80	120				
m,p-Xylene	78.72	1	80	0.1601	98.2%	80	120				
Methyl tert-Butyl Ether	40.62	1	40	0	101.6%	80	120				
o-Xylene	38.65	0.5	40	0	96.6%	80	120				
Toluene	37.77	0.5	40	0.2605	93.8%	80	120				
1,4-Difluorobenzene	105.3	0	110	0	95.7%	70	130				
4-Bromochlorobenzene	120.6	0	110	0	109.6%	70	130				
Fluorobenzene	107.2	0	110	0	97.5%	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

On Site Technologies, LTD.

Date: 28-Feb-02

CLIENT: Blagg Engineering
Work Order: 0202016
Project: XTO Energy - E.J. Johnson C #1E

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020227	Batch ID: GC-1_020227	Test Code: SW8021B	Units: µg/L	Analysis Date: 02/27/2002				Prep Date:					
Client ID:	0202016	Run ID:	GC-1_020227A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.72			0.5	20	0	98.6%	85		115			
Ethylbenzene	20.11			0.5	20	0	100.6%	85		115			
m,p-Xylene	40.48			1	40	0	101.2%	85		115			
Methyl tert-Butyl Ether	20.14			1	20	0	100.7%	85		115			
o-Xylene	19.62			0.5	20	0	98.1%	85		115			
Toluene	19.44			0.5	20	0	97.2%	85		115			
1,4-Difluorobenzene	106.5			0	110	0	96.8%	70		130			
4-Bromochlorobenzene	120.7			0	110	0	109.7%	70		130			
Fluorobenzene	107.8			0	110	0	98.0%	70		130			

Sample ID: CCV2_020227	Batch ID: GC-1_020227	Test Code: SW8021B	Units: µg/L	Analysis Date: 02/27/2002		Prep Date:					
Client ID:	0202016	Run ID:	GC-1_020227A	SeqNo:	48115						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.57	0.5	20	0	97.9%	85	115				
Ethylbenzene	19.72	0.5	20	0	98.6%	85	115				
m,p-Xylene	39.64	1	40	0	99.1%	85	115				
Methyl tert-Butyl Ether	20.6	1	20	0	103.0%	85	115				
o-Xylene	19.34	0.5	20	0	96.7%	85	115				
Toluene	19.18	0.5	20	0	95.9%	85	115				
1,4-Difluorobenzene	105.9	0	110	0	96.3%	70	130				
4-Bromochlorobenzene	119.3	0	110	0	108.5%	70	130				
Fluorobenzene	107.4	0	110	0	97.6%	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: 0202016
Project: XTO Energy - E.J. Johnson C #1E

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3_020227		Batch ID: GC-1_020227		Test Code: SW8021B		Units: µg/L		Analysis Date: 02/27/2002		Prep Date:	
Client ID:		0202016		Run ID: GC-1_020227A				SeqNo: 48116			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.68	0.5	40	0	94.2%	85	115				
Ethylbenzene	38.16	0.5	40	0	95.4%	85	115				
m,p-Xylene	76.15	1	80	0	95.2%	85	115				
Methyl tert-Butyl Ether	40.35	1	40	0	100.9%	85	115				
o-Xylene	37.6	0.5	40	0	94.0%	85	115				
Toluene	37.02	0.5	40	0	92.6%	85	115				
1,4-Difluorobenzene	105	0	110	0	95.4%	70	130				
4-Bromochlorobenzene	117.2	0	110	0	106.6%	70	130				
Fluorobenzene	106.8	0	110	0	97.1%	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: 0202016
Project: XTO Energy - E.J. Johnson C #1E
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0202016-01A	95.6	107	97.8
0202017-01A	95.9	107	98.1
0202017-02A	93.8	107	96.1
0202017-03A	94.1	106	95.7
0202017-05A	96.4	113	98.3
0202017-06A	95.3	110	97
0202018-01A	97.1	110	98.9
0202029-01A	96.4	110	98.9
0202029-02A	97.1	109	98.8
0202029-03A	96.5	105	98.6
0202029-04A	96.5	108	99
0202029-05A	97	107	98.6
0202029-05AMS	95.4	107	97
0202029-05AMSD	95.6	107	97
0202029-06A	96.8	108	99.5
0202029-07A	97.5	108	98.7
0202029-08A	96.5	109	98.7
0202029-09A	96.8	109	98.9
0202029-10A	96.6	108	98.3
0202029-11A	95.4	107	97.6
0202029-12A	96.2	107	98.5
CCV1_020227	96.8	110	98
CCV2_020227	96.2	108	97.6
CCV3_020227	95.4	106	97.1
LCS_020227	95.7	110	97.5
MB_020227	97	110	98.4

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****JOHNSON, E. J. C #1E**LABORATORY (S) USED : **HALL ENVIRONMENTAL****UNIT C, SEC. 21, T27N, R10W**Date : **June 23, 2003**SAMPLER : **N J V**Filename : **06-23-03.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.)
1	104.04	87.77	16.27	20.00	1000	7.30	2,000	21.5	1.00
2	103.61	89.71	13.90	20.00	1030	7.21	1,400	21.4	1.50
3	98.02	88.72	9.30	17.00	1015	7.50	2,300	21.5	2.00
4		-	12.38	19.80	1040	7.50	1,500	21.7	1.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/23/03	09:55

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".

Bailed all MW's to total depth, then allowed recovery prior to sampling. Fair recovery in MW #1 & #2; fair / poor recovery in MW #3; poor recovery in MW #4. Collected BTEX samples from all MW's.

MW #	DTW
1	16.27
2	13.90
3	9.30
4	12.38

(prior to purging -
in ft.)

MW #	DTW
1	16.26
2	13.92
3	10.92
4	17.22

(@ time of sampling -
in ft.)

Hall Environmental Analysis Laboratory

Date: 27-Jun-03

CLIENT: Blagg Engineering
Lab Order: 0306164
Project: E. J. Johnson C #1E
Lab ID: 0306164-01

Client Sample ID: MW #1
Collection Date: 6/23/2003 10:00:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1.0	0.50		µg/L	1	6/25/2003 2:37:47 PM
Toluene	0.91	0.50		µg/L	1	6/25/2003 2:37:47 PM
Ethylbenzene	ND	0.50		µg/L	1	6/25/2003 2:37:47 PM
Xylenes, Total	ND	0.50		µg/L	1	6/25/2003 2:37:47 PM
Surr: 4-Bromofluorobenzene	97.8	74-118		%REC	1	6/25/2003 2:37:47 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: 27-Jun-03

CLIENT: Blagg Engineering
Lab Order: 0306164
Project: E. J. Johnson C #1E
Lab ID: 0306164-02

Client Sample ID: MW #2
Collection Date: 6/23/2003 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	6/25/2003 3:10:13 PM
Toluene	11	0.50		µg/L	1	6/25/2003 3:10:13 PM
Ethylbenzene	15	0.50		µg/L	1	6/25/2003 3:10:13 PM
Xylenes, Total	1.3	0.50		µg/L	1	6/25/2003 3:10:13 PM
Surr: 4-Bromofluorobenzene	98.7	74-118		%REC	1	6/25/2003 3:10:13 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: 27-Jun-03

CLIENT: Blagg Engineering
Lab Order: 0306164
Project: E. J. Johnson C #1E
Lab ID: 0306164-03

Client Sample ID: MW #3
Collection Date: 6/23/2003 10:15:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	6/25/2003 3:42:47 PM
Toluene	ND	0.50		µg/L	1	6/25/2003 3:42:47 PM
Ethylbenzene	ND	0.50		µg/L	1	6/25/2003 3:42:47 PM
Xylenes, Total	ND	0.50		µg/L	1	6/25/2003 3:42:47 PM
Surr: 4-Bromofluorobenzene	99.1	74-118		%REC	1	6/25/2003 3:42:47 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: 27-Jun-03

CLIENT: Blagg Engineering
Lab Order: 0306164
Project: E. J. Johnson C #1E
Lab ID: 0306164-04

Client Sample ID: MW #4
Collection Date: 6/23/2003 10:40:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: BDH
Benzene	1.1	0.50		µg/L	1	6/26/2003 2:08:34 PM
Toluene	22	0.50		µg/L	1	6/26/2003 2:08:34 PM
Ethylbenzene	7.3	0.50		µg/L	1	6/26/2003 2:08:34 PM
Xylenes, Total	17	0.50		µg/L	1	6/26/2003 2:08:34 PM
Surr: 4-Bromofluorobenzene	89.3	74-118		%REC	1	6/26/2003 2:08:34 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
4801 Hawkins NE, Suite A
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

E. J. Johnson C #1E

Bloomfield NM 87413

Nelson Velaz

Samples Cold?: 1/2 ☒ Yes ☐ No

Date: 2/4/03	Time: 5:11	Relinquished By: (Signature) <i>[Signature]</i>	Received By: (Signature) <i>[Signature]</i>	Remarks:
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

Hall Environmental Analysis Laboratory

Date: 27-Jun-03

CLIENT: Blagg Engineering
Work Order: 0306164
Project: E. J. Johnson C #1E

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R8664	Test Code: SW8021	Units: µg/L	Analysis Date	6/25/2003 10:12:55 AM	Prep Date				
Client ID:			Run ID: PIDFID_030625A		SeqNo:	195818					
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	19.8	0	20	0	99.0	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R8674	Test Code: SW8021	Units: µg/L	Analysis Date	6/26/2003 9:50:55 AM	Prep Date				
Client ID:			Run ID: PIDFID_030626A		SeqNo:	196047					
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	20.05	0	20	0	100	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: 27-Jun-03

CLIENT: Blagg Engineering

Work Order: 0306164

Project: E. J. Johnson C #1E

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0306164-01aMS	Batch ID: R8664	Test Code: SW8021	Units: µg/L	Analysis Date	6/25/2003 5:20:36 PM	Prep Date				
Client ID: MW #1			Run ID: PIDFID_030625A		SeqNo: 195849						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.72	0.50	20	1.012	114	77	122	0			
Toluene	22.33	0.50	20	0.9108	107	81	115	0			
Ethylbenzene	22.59	0.50	20	0	113	84	117	0			
Xylenes, Total	67.65	0.50	60	0	113	84	116	0			

Sample ID	0306164-01aMSD	Batch ID: R8664	Test Code: SW8021	Units: µg/L	Analysis Date	6/25/2003 5:53:11 PM	Prep Date				
Client ID: MW #1			Run ID: PIDFID_030625A		SeqNo: 195852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.66	0.50	20	1.012	108	77	122	23.72	4.54	27	
Toluene	21.31	0.50	20	0.9108	102	81	115	22.33	4.69	19	
Ethylbenzene	21.44	0.50	20	0	107	84	117	22.59	5.23	10	
Xylenes, Total	64.67	0.50	60	0	108	84	116	67.65	4.52	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

Date: 27-Jun-03

CLIENT: Blagg Engineering
Work Order: 0306164
Project: E. J. Johnson C #1E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	BTEX Std 100ng	Batch ID: R8664	Test Code: SW8021	Units: µg/L	Analysis Date	6/25/2003 6:25:44 PM	Prep Date
Client ID:		Run ID: PIDFID_030625A	PQL	SPK value	SPK Ref Val	SeqNo: 195854	
Analyte	Result						
Benzene	21.44	0.50	20	0	0	81.3	121
Toluene	20.47	0.50	20	0	0	84.9	118
Ethylbenzene	21.07	0.50	20	0	0	53.8	149
Xylenes, Total	63.11	0.50	60	0	0	83.1	122

Sample ID	BTEX STD 100NG	Batch ID: R8674	Test Code: SW8021	Units: µg/L	Analysis Date	6/26/2003 10:53:54 AM	Prep Date
Client ID:		Run ID: PIDFID_030626A	PQL	SPK value	SPK Ref Val	SeqNo: 196076	
Analyte	Result						
Benzene	22.8	0.50	20	0	0	81.3	121
Toluene	21.85	0.50	20	0	0	84.9	118
Ethylbenzene	22.08	0.50	20	0	0	53.8	149
Xylenes, Total	66.34	0.50	60	0	0	83.1	122

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

6/24/03

Work Order Number **0306164**

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?	6°	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

JOHNSON, E. J. C # 1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date : August 26, 2003

SAMPLER : N J V

Filename : 08-26-03.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.)
1	104.05	87.77	16.28	20.00	1130	7.34	2,500	24.5	1.25
2	103.64	89.75	13.89	20.00	1140	7.10	1,900	23.9	1.50
3	98.06	88.78	9.28	17.00	1120	7.65	3,300	25.0	1.50
4	101.16	88.80	12.36	19.80	1150	7.37	2,000	22.8	1.50
5	100.86	88.30	12.56	19.80	1200	7.91	2,200	24.0	1.25

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."

Bailed all MW's to total depth, then allowed recovery prior to sampling. Fair recovery in MW #1, #2, & #5; fair/poor recovery in MW #3; poor recovery in MW #4. Collected BTEX samples from all MW's.

First time development of MW #5 - bailed to TD, then remeasured DTW (see results below).

Utilized second measurement for groundwater contour map schematic.

MW #	DTW
1	16.28
2	13.89
3	9.28
4	12.36
5	15.50

(prior to purging -
in ft.)

MW #	DTW
1	16.28
2	13.89
3	12.22
4	17.59
5	12.56

(@ time of sampling -
in ft.)

Hall Environmental Analysis Laboratory

Date: 05-Sep-03

CLIENT: Blagg Engineering
Lab Order: 0308214
Project: E. J. Johnson C #1E
Lab ID: 0308214-01

Client Sample ID: MW #1
Collection Date: 8/26/2003 11:30:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.52	0.50		µg/L	1	8/29/2003 8:41:52 PM
Toluene	ND	0.50		µg/L	1	8/29/2003 8:41:52 PM
Ethylbenzene	ND	0.50		µg/L	1	8/29/2003 8:41:52 PM
Xylenes, Total	ND	0.50		µg/L	1	8/29/2003 8:41:52 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	1	8/29/2003 8:41:52 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: 0308214
Project: E. J. Johnson C #1E
Lab ID: 0308214-02

Client Sample ID: MW #2
Collection Date: 8/26/2003 11:40:00 AM

Matrix: AQUEOUS

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

Analyst: NSB

Benzene	ND	0.50		µg/L	1	8/29/2003 9:43:52 PM
Toluene	ND	0.50		µg/L	1	8/29/2003 9:43:52 PM
Ethylbenzene	35	0.50		µg/L	1	8/29/2003 9:43:52 PM
Xylenes, Total	2.0	0.50		µg/L	1	8/29/2003 9:43:52 PM
Surr: 4-Bromofluorobenzene	106	74-118		%REC	1	8/29/2003 9:43:52 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: 0308214
Project: E. J. Johnson C #1E
Lab ID: 0308214-03

Client Sample ID: MW #3
Collection Date: 8/26/2003 11:20:00 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 10:14:46 PM
Toluene	ND	0.50		µg/L	1	8/29/2003 10:14:46 PM
Ethylbenzene	ND	0.50		µg/L	1	8/29/2003 10:14:46 PM
Xylenes, Total	ND	0.50		µg/L	1	8/29/2003 10:14:46 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	8/29/2003 10:14:46 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: 0308214
Project: E. J. Johnson C #1E
Lab ID: 0308214-04

Client Sample ID: MW #4
Collection Date: 8/26/2003 11:50:00 AM

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2.2	0.50		µg/L	1	9/3/2003 3:37:30 PM
Toluene	ND	0.50		µg/L	1	9/3/2003 3:37:30 PM
Ethylbenzene	31	0.50		µg/L	1	9/3/2003 3:37:30 PM
Xylenes, Total	15	0.50		µg/L	1	9/3/2003 3:37:30 PM
Surr: 4-Bromofluorobenzene	115	74-118		%REC	1	9/3/2003 3:37:30 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: 0308214
Project: E. J. Johnson C #1E
Lab ID: 0308214-05

Client Sample ID: MW #5
Collection Date: 8/26/2003 12:00:00 PM

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	64	20		µg/L	40	8/30/2003 12:18:14 AM
Toluene	1100	20		µg/L	40	8/30/2003 12:18:14 AM
Ethylbenzene	520	20		µg/L	40	8/30/2003 12:18:14 AM
Xylenes, Total	4200	20		µg/L	40	8/30/2003 12:18:14 AM
Surr: 4-Bromofluorobenzene	107	74-118		%REC	40	8/30/2003 12:18:14 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

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.3976
www.hallenvironmental.com

Address: P.O. Box 87

Bloomfield, Nov 87413

Project Manager: Nelson Velez

Sampler: Nelson Velez

Sample Temperature: 27.7

Phone #: (505) 632-1199

Fax #: (505) 632-3903

[illegible]

Remarks:

Relinquished By: (Signature)

Date:	Time:
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Relinquished By: (Signature)

Date:	Time:
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Hall Environmental Analysis Laboratory

Date: 05-Sep-03

CLIENT: Blagg Engineering
Work Order: 0308214
Project: E. J. Johnson C #1E

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: 0308214
Project: E. J. Johnson C #1E

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
 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: 0308214
Project: E. J. Johnson C #1E

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
			2

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Receive

Work Order Number **0308214**

Received by **AMG**

Checklist completed by

Asongals 8/27/03
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?	4°	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

JOHNSON, E. J. C # 1E

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date: November 11, 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.)
1	104.05		-	20.00	-	-	-	-	-
2	103.64		-	20.00	-	-	-	-	-
3	98.06		-	17.00	-	-	-	-	-
4	101.16		12.15	19.80	1410	7.73	2,300	12.3	1.25
5	100.86		12.35	19.80	1420	8.09	2,400	13.1	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
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".

Bailed MW's # 4 & # 5 to total depth, then allowed recovery prior to sampling. Fair recovery in MW # 5; poor recovery in MW # 4. Collected BTEX samples from MW # 4 & # 5 only.

MW #	DTW
1	-
2	-
3	-
4	12.15
5	12.35

(prior to purging -
in ft.)

MW #	DTW
1	-
2	-
3	-
4	17.67
5	12.56

(@ time of sampling -
in ft.)

Hall Environmental Analysis Laboratory

Date: 01-Dec-03

CLIENT: Blagg Engineering
Project: E. J. Johnson C #1E**Lab Order:** 0311196**Lab ID:** 0311196-01**Collection Date:** 11/24/2003 2:10:00 PM**Client Sample ID:** MW #4**Matrix:** AQUEOUS

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

Analyst: NSB

Benzene	1.3	1.0		µg/L	2	12/1/2003 3:11:48 AM
Toluene	ND	1.0		µg/L	2	12/1/2003 3:11:48 AM
Ethylbenzene	38	1.0		µg/L	2	12/1/2003 3:11:48 AM
Xylenes, Total	18	1.0		µg/L	2	12/1/2003 3:11:48 AM
Surr: 4-Bromofluorobenzene	111	74-118		%REC	2	12/1/2003 3:11:48 AM

Lab ID: 0311196-02**Collection Date:** 11/24/2003 2:20:00 PM**Client Sample ID:** MW #5**Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
----------	--------	-------	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	100	10		µg/L	20	12/1/2003 4:12:45 AM
Toluene	43	10		µg/L	20	12/1/2003 4:12:45 AM
Ethylbenzene	190	10		µg/L	20	12/1/2003 4:12:45 AM
Xylenes, Total	940	10		µg/L	20	12/1/2003 4:12:45 AM
Surr: 4-Bromofluorobenzene	125	74-118	S	%REC	20	12/1/2003 4:12:45 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

CHAIN-OF-CUSTODY RECORD

Client: BLAGE ENER. / 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

HgCl₂ HNO₃

HEAL No.

11/24/03

1410

WATER

MW # 4

2-40ml

✓

D311916-1

11/24/03

1420

WATER

MW # 5

2-40ml

✓

-2-

Date:

Time:

Relinquished By: (Signature)

Received By: (Signature)

11/25/03

Remarks:

Date:

Time:

Relinquished By: (Signature)

Received By: (Signature)

11/25/03

Accreditation:

NELAC ☐ USACE ☐

Other:

Project Name:

E.J. JOHNSON C # RE

Project #:

Project Manager:

NTV

Sampler:

NTV

Sample Temperature:

32

ANALYSIS REQUEST

BTEX + MTBE + TPH (Gasoline Only)

BTEX + MTBE + TPH (80218)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

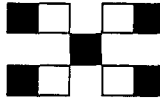
Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

8260B (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: 01-Dec-03

CLIENT: Blagg Engineering
Project: E. J. Johnson C #1E
Lab Order: 0311196

CASE NARRATIVE

Analytical Comments for METHOD 8021BTEX_W, SAMPLE 0311196-02a: High surrogate due to matrix interference. Analytical Comments for METHOD 8021BTEX_W, SAMPLE 0311196-01a: Sample analyzed at dilution because of high hydrocarbons.

Hall Environmental Analysis Laboratory

Date: 01-Dec-03

CLIENT: Blagg Engineering
Work Order: 0311196
Project: E. J. Johnson C #1E

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									
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: 0311196
Project: E. J. Johnson C #1E

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				
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	
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:

11/25/2003

Work Order Number 0311196

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?

3°

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

JOHNSON, E. J. C # 1E

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date: March 26, 2004

SAMPLER: N J V

Filename: 03-26-04.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.)
1	104.05	87.94	16.11	20.00	-	-	-	-	-
2	103.64	89.98	13.66	20.00	-	-	-	-	-
3	98.06	89.01	9.05	17.00	-	-	-	-	-
4	101.16	88.99	12.17	19.80	0740	7.51	2,600	12.9	1.25
5	100.86	88.47	12.39	19.80	0730	8.13	2,300	12.5	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
03/25/04	1600

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 ".

Bailed MW #4 & #5 to total depth, then allowed recovery prior to sampling. Poor recovery in #5; very poor recovery in MW #4. Collected BTEX from MW #4 & #5 only.

MW #	DTW
1	-
2	-
3	-
4	12.17
5	12.39

(prior to purging -
in ft.)

MW #	DTW
1	-
2	-
3	-
4	17.10
5	13.80

(@ time of sampling -
in ft.)

Hall Environmental Analysis Laboratory

Date: 05-Apr-04

CLIENT: Blagg Engineering
Project: E. J. Johnson C #1E**Lab Order:** 0403233**Lab ID:** 0403233-01**Collection Date:** 3/26/2004 7:40:00 AM**Client Sample ID:** MW #4**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	ND	1.0		µg/L	2	3/30/2004 4:30:26 PM
Toluene	ND	1.0		µg/L	2	3/30/2004 4:30:26 PM
Ethylbenzene	ND	1.0		µg/L	2	3/30/2004 4:30:26 PM
Xylenes, Total	7.0	1.0		µg/L	2	3/30/2004 4:30:26 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	2	3/30/2004 4:30:26 PM

Lab ID: 0403233-02**Collection Date:** 3/26/2004 7:30:00 AM**Client Sample ID:** MW #5**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	51	2.5		µg/L	5	3/31/2004 2:18:00 PM
Toluene	ND	2.5		µg/L	5	3/31/2004 2:18:00 PM
Ethylbenzene	61	2.5		µg/L	5	3/31/2004 2:18:00 PM
Xylenes, Total	300	2.5		µg/L	5	3/31/2004 2:18:00 PM
Surr: 4-Bromofluorobenzene	109	74-118		%REC	5	3/31/2004 2:18:00 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-Apr-04

CLIENT: Blagg Engineering
Work Order: 0403233
Project: E. J. Johnson C #1E

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R11457	Test Code: SW8021	Units: µg/L	Analysis Date	3/30/2004 10:10:48 AM	Prep Date				
Client ID:			Run ID: PIDFID_040330A		SeqNo: 262658						
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	19.7	0	20	0	98.5	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R11468	Test Code: SW8021	Units: µg/L	Analysis Date	3/31/2004 9:11:45 AM	Prep Date				
Client ID:			Run ID: PIDFID_040331A		SeqNo: 262858						
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	19.99	0	20	0	100	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-Apr-04

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: Blagg Engineering
 Work Order: 0403233
 Project: E. J. Johnson C #1E

Sample ID	BTEX STD 100ng	Batch ID: R11457	Test Code: SW8021	Units: µg/L	Analysis Date	3/31/2004 12:32:41 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040330A		SeqNo:	262679					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.32	0.50	20	0	107	81.3	121	0			
Toluene	20.72	0.50	20	0	104	84.9	118	0			
Ethylbenzene	20.76	0.50	20	0	104	53.8	149	0			
Xylenes, Total	64.43	0.50	60	0	107	83.1	122	0			

Sample ID	BTEX STD 100ng	Batch ID: R11468	Test Code: SW8021	Units: µg/L	Analysis Date	3/31/2004 5:50:52 PM	Prep Date				
Client ID:		Run ID: PIDFID_040331A			SeqNo:	262902					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.26	0.50	20	0	106	81.3	121	0			
Toluene	21.15	0.50	20	0	106	84.9	118	0			
Ethylbenzene	20.82	0.50	20	0	104	53.8	149	0			
Xylenes, Total	64.37	0.50	60	0	107	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

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

3/29/2004

Work Order Number 0403233

Received by AT

Checklist completed by

Signature

Date

3/29/04

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☐

Not Shipped ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : XTO ENERGY INC.

CHAIN-OF-CUSTODY # : N / A

JOHNSON, E. J. C # 1E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date : June 16, 2004

SAMPLER : N J V

Filename : 06-16-04.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.)
1	104.05	88.13	15.92	20.00	-	-	-	-	-
2	103.64	90.14	13.50	20.00	-	-	-	-	-
3	98.06	89.10	8.96	17.00	-	-	-	-	-
4	101.16	89.16	12.00	19.80	0820	7.40	2,100	18.9	1.25
5	100.86	88.64	12.22	19.80	0800	8.08	2,200	19.5	1.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/16/04	0750

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".

Bailed MW #4 & #5 to total depth, then allowed recovery prior to sampling. Poor recovery in #5; very poor recovery in MW #4. Collected BTEX from MW #4 & #5 only.

MW #	DTW
1	-
2	-
3	-
4	12.00
5	12.22

(prior to purging - in ft.)

MW #	DTW
1	-
2	-
3	-
4	16.90
5	12.50

(@ time of sampling - in ft.)

Hall Environmental Analysis Laboratory

Date: 29-Jun-04

CLIENT: Blagg Engineering
Project: E. J. Johnson C #1E**Lab Order:** 0406178**Lab ID:** 0406178-01**Collection Date:** 6/16/2004 8:00:00 AM**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	61	2.5		µg/L	5	6/25/2004 3:33:38 PM
Toluene	3.2	2.5		µg/L	5	6/25/2004 3:33:38 PM
Ethylbenzene	76	2.5		µg/L	5	6/25/2004 3:33:38 PM
Xylenes, Total	380	2.5		µg/L	5	6/25/2004 3:33:38 PM
Surr: 4-Bromofluorobenzene	106	74-118		%REC	5	6/25/2004 3:33:38 PM

Lab ID: 0406178-02**Collection Date:** 6/16/2004 8:20:00 AM**Client Sample ID:** MW #4**Matrix:** AQUEOUS

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

Analyst: NSB

Benzene	0.92	0.50		µg/L	1	6/25/2004 4:05:44 PM
Toluene	ND	0.50		µg/L	1	6/25/2004 4:05:44 PM
Ethylbenzene	9.3	0.50		µg/L	1	6/25/2004 4:05:44 PM
Xylenes, Total	4.2	0.50		µg/L	1	6/25/2004 4:05:44 PM
Surr: 4-Bromofluorobenzene	108	74-118		%REC	1	6/25/2004 4:05:44 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 D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BASS-ENR. / KTO ENERGY

Address: P.O. Box 87

— ١٦ —

NTV

Phone #: 505-632-1199

Fax #: 505-632-3903

Sample I.D. No.

0800 WATER

216
#5 MW

2-40ml

✓

[illegible]

240658-

0820	WATER
------	-------

MW # 4

2-40 ml

✓

2

Relinquished By: (Signature) _____

Received By: (Signature)	6/17/04
--------------------------	---------

Relinquished By: (Signature)

Received By: (Signature)

ANALYSIS REQUEST

[illegible]

Remarks:

Hall Environmental Analysis Laboratory

Date: 29-Jun-04

CLIENT: Blagg Engineering
Work Order: 0406178
Project: E. J. Johnson C #1E

QC SUMMARY REPORT
Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R12276	Test Code: SW8021	Units: µg/L	Analysis Date	6/25/2004 8:13:54 AM	Prep Date				
Client ID:		Run ID: PIDFID_040625A			SeqNo:	282684					
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	20.13	0	20	0	101	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: 29-Jun-04

CLIENT: Blagg Engineering
Work Order: 0406178
Project: E. J. Johnson C #1E

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX std 100ng	Batch ID: R12276	Test Code: SW8021	Units: µg/L	Analysis Date 6/25/2004 9:15:51 AM	Prep Date					
Client ID:			Run ID: PIDFID_040625A		SeqNo: 282714						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.97	0.5	20	0	105	81.3	121	0			
Toluene	20.98	0.5	20	0	105	84.9	118	0			
Ethylbenzene	21.03	0.5	20	0	105	53.8	149	0			
Xylenes, Total	64.11	0.5	60	0	107	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

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

6/17/2004

Work Order Number 0406178

Received by AT

Checklist completed by



Signature

Date

6/17/04

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?

4°

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

JOHNSON, E. J. C # 1E

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT C, SEC. 21, T27N, R10W

Date: June 28, 2005

SAMPLER: N J V

Filename: 06-28-05.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.)
1	104.05	87.93	16.12	20.00	-	-	-	-	-
2	103.64	89.89	13.75	20.00	-	-	-	-	-
3	98.06	88.85	9.21	17.00	-	-	-	-	-
4	destroyed			19.80	-	-	-	-	-
5	100.86	88.42	12.44	19.80	0845	8.00	2,100	19.9	1.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/28/04 0830

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".

Bailed MW #5 to total depth, then allowed recovery prior to sampling. Poor recovery in #5. Collected BTEX from MW #5 only.

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

CLIENT: Blagg Engineering
Lab Order: 0506286
Project: E. J. Johnson C #1E
Lab ID: 0506286-01

Client Sample ID: MW #5
Collection Date: 6/28/2005 8:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	23	0.50		µg/L	1	7/1/2005 10:58:44 AM
Toluene	ND	0.50		µg/L	1	7/1/2005 10:58:44 AM
Ethylbenzene	15	0.50		µg/L	1	7/1/2005 10:58:44 AM
Xylenes, Total	71	0.50		µg/L	1	7/1/2005 10:58:44 AM
Surr: 4-Bromofluorobenzene	102	83.3-121		%REC	1	7/1/2005 10:58:44 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

CHAIN-OF-CUSTODY RECORD

Client: BLAGG ENER. / XTO ENERGY

Address: P.O. Box 87

BLFO. NM 87413

Phone #: (505) 632-1199

Fax #: (505) 632-3903

Accreditation Applied

NELAC ☐ USACE ☐

Other:

Project Name:

E.J. JOHNSON C #1E

Project #:

Project Manager:

NV

Sampler:

NV

Sample Temperature:

4°

Number/Volume

Preservative

HgCl₂ HNO₃

HEAL No.

Date: 6/23/05

Time: 0845

Matrix: WATER

Sample I.D. No.: MW # 5

2-45ml

✓

0506286-1

Date:

Time:

Relinquished By: (Signature)

Relinquished By: (Signature)

Received By: (Signature)

Remarks:

Date:

Time:

Relinquished By: (Signature)

Relinquished By: (Signature)

Received By: (Signature)

ANALYSIS REQUEST

BTEX + MTBE + TMS (8021R) ✓

BTEX + MTBE + TPH (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₂, NO₃, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

8260B (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-Jul-05

CLIENT: Blagg Engineering

Work Order: 0506286

Project: E. J. Johnson C #1E

QC SUMMARY REPORT

Method Blank

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

Sample ID	Reagent Blank 5m	Batch ID: R15868	Test Code: SW8021	Units: µg/L	Analysis Date	7/1/2005 8:47:19 AM	Prep Date					
Client ID:			Run ID: PIDFID_050701A		SeqNo:	376332						
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 18.33 0 20 0 91.7 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: 0506286
 Project: E. J. Johnson C #1E

QC SUMMARY REPORT
 Laboratory Control Spike - generic

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			

Sample ID		BTEX LCS 100ng		Batch ID: R15868		Test Code: SW8021		Units: µg/L		Analysis Date		7/1/2005 11:29:43 AM		Prep Date	
Client ID:						Run ID:		PIDFID_050701A		SeqNo:		376335			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Benzene	19.5	0.5	20	0	97.5	88.7	114	0							
Toluene	19.23	0.5	20	0	96.2	89.3	112	0							
Ethylbenzene	19.32	0.5	20	0	96.6	88.6	113	0							
Xylenes, Total	58.12	0.5	60	0	96.9	89.4	112	0							

Sample ID	BTEX LCSD 100n	Batch ID: R15868	Test Code: SW8021	Units: µg/L	Analysis Date	7/1/2005 12:00:45 PM	Prep Date				
Client ID:			Run ID: PIDFID_050701A		SeqNo:	376336					
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	88.7	114	19.5	1.21	27	
Toluene	19.96	0.5	20	0	99.8	89.3	112	19.23	3.73	19	
Ethylbenzene	19.91	0.5	20	0	99.5	88.6	113	19.32	3.01	10	
Xylenes, Total	58.99	0.5	60	0	98.3	89.4	112	58.12	1.48	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:

6/29/2005

Work Order Number **0506286**

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?	4°	4° C ± 2 Acceptable If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____