

3R-017

Ground Water Remediation Report

**DATE:
Apr 2008**

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

3 R 017

COPY

April 25, 2008

Mr. Glenn von Gonten, Senior Hydrologist
New Mexico Oil Conservation Division-NMOCD
Environmental Bureau
1220 St. Francis Drive
Santa Fe, New Mexico 87505

**Re: BP America Production Company
Groundwater Monitoring Report
GCU # 153E, Unit C, Sec. 28, T29N, R12W, NMPM
San Juan County, New Mexico**

NMOCD Administrative/Environmental Order #: 3RP-17-0

Dear Mr. von Gonten:

BP America Production Company (BP) has retained Blagg Engineering, Inc. (BEI) to conduct environmental monitoring of groundwater at the GCU # 153E.

The last formal correspondence to NMOCD was conducted with a letter dated February 15, 2006. Since then, BP has followed its NMOCD approved groundwater management plan and continues to monitor the site. No permanent closure is requested at this time.

If you have any questions concerning the enclosed documentation, please contact either myself or Jeffrey C. Blagg at (505) 632-1199. Thank you for your cooperation and assistance.

Respectfully submitted:
Blagg Engineering, Inc.

Nelson J. Velez
Staff Geologist

Attachment: Groundwater Report (2 copies)

cc: Mr. Brandon Powell, Environmental Specialist, NMOCD District III Office, Aztec, NM
Mr. Larry Schlotterback, Environmental Coordinator, BP, Farmington, NM (without lab report)
Ms. Shannon Hoover, Senior Geologist, URS Corp., Austin, Texas

32017

BP AMERICA PRODUCTION CO.

COPY

GROUNDWATER REMEDIATION REPORT

**GCU #153E
(C) SECTION 28, T29N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

**PREPARED FOR:
NEW MEXICO OIL CONSERVATION DIVISION
1220 ST. FRANCIS DRIVE
SANTA FE, NEW MEXICO 87504**

APRIL 2008

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

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

**BP AMERICA PRODUCTION COMPANY
GCU # 153E - Separator & Dehydrator Pits
NE/4 NW/4, Sec. 28, T29N, R12W**

Monitor Well Sampling Dates: 6/29/06, 6/25/07

Site Historic Summary:

A site dehydrator pit closure was initiated in December 1994 by removing impacted soil via excavation. Documentation for this work and subsequent groundwater monitoring data for the site have previously been submitted for New Mexico Oil Conservation Division (NMOCD) review. The reporting herein is for site monitoring for 2006 and 2007. Site features are depicted on Figure 1.

Groundwater Monitor Well Sampling Procedures:

MW #3R was purged of its well bore using a new disposable bailer, then given a sufficient amount of time to allow recovery prior to sample collections. The groundwater samples were collected following US EPA: SW-846 protocol, were placed into laboratory supplied containers with appropriate preservative, and stored in an ice chest for express delivery to an analytical laboratory for testing under strict chain-of-custody procedures. Analytical testing included benzene, toluene, ethylbenzene, and total xylenes (BTEX) by US EPA Method 8021B.

Fluids generated during monitor well development and purging were managed by discarding into the separator tank pit located on the well site. The tank pit contents are then disposed through approved NMOCD operational procedures for removal of produced fluids.

Groundwater Quality & Flow Direction Information:

Annual sampling of the groundwater monitor well MW #3R has been conducted in June 2006 and June 2007. A summary of laboratory analytical results is included within the tables on the following pages and field/laboratory reports are included.

Groundwater has consistently been measured with a gradient towards the southwest direction (Figures 2 and 3).

Summary and/or Recommendations:

Continued site monitoring per BP's NMOCD approved Ground Water Management Plan is recommended. Hydrocarbon impacts appear to be in a steady state condition, with benzene as the only analyte with concentrations above the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards. No additional remedial actions are indicated or suggested at this time.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 153E

UNIT C, SEC. 28, T29N, R12W

REVISED DATE: August 3, 2007

FILENAME: (15-2Q-07.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS (ft)	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
08-Mar-96	MW #1A	14.95	20.00	4,460	3,200	7.2		ND	0.73	ND	ND
12-Jan-93	MW #2A	11.50	15.83	4,460	5,700	6.6		11.5	12.1	ND	54.0
05-May-93		10.34			3,400	6.6		14.0	6.9	10.9	20.1
01-Sep-93		11.54			2,800	7.1		700	10.4	244	82.9
01-Dec-93		11.42			4,800	7.0		118	1.6	76.0	44.7
08-Mar-94		11.01			4,600	7.2		24.1	8.5	24.5	29.3
27-Jun-94		11.14			4,000	6.9		350	13.2	126	ND
21-Sep-94		11.80			3,500	6.9		328.7	13.3	140.8	1.5
16-Dec-94		11.55			3,800	7.1		6.7	9.6	1.1	8.7
15-Mar-95		11.15			4,400	6.8		1.7	5.0	ND	3.8
16-Jun-95		10.82			4,000	6.9		36.5	5.4	17.6	7.2
11-Sep-95		11.39			3,100	7.2		239	17.0	168	35.6
08-Dec-95		11.44			3,800	6.8		50.2	9.99	10.3	5.84
08-Mar-96		11.08			2,700	6.7		1.08	ND	2.71	0.87
17-Jun-96		11.30			2,700	6.9		230	10.2	77.7	32.54
25-Jun-97		10.52			2,600	6.8		522	6.6	82.6	44.6
12-Jun-98		10.59			2,400	7.3		125	7.3	22.7	44.7
28-May-99		10.05			2,700	6.8		185	47.8	44.1	73.4
26-May-00		10.10			3,500	7.0		220	ND	96	15
28-Jul-01		10.87			3,700	7.26		66	ND	24	31
11-Mar-02		10.80			4,600	6.86		ND	ND	2.1	ND
21-Jun-02		11.18			4,700	7.63		63	ND	28	29.8
30-Jun-03		10.74			2,900	6.81		41	5.3	30	36
25-Jun-04		10.78			2,900	6.81		7.6	ND	3.5	5.5
22-Dec-04		11.03			N/A	N/A		ND	ND	ND	ND
29-Mar-05		9.85			3,100	6.73		ND	ND	ND	ND
12-Jan-93	MW #3A	11.40			6,800	7.0		706,000	6,438,000	3,684,000	13,999,000
05-May-93		10.38			4,900	7.0		8,200	2,210	1,070	4,340
01-Sep-93		11.44	16.00		5,400	7.1		8,300	800	660	2,750
01-Dec-93		11.33					0.02				
08-Mar-94		11.03					0.03				
27-Jun-94							0.02				
21-Sep-94							0.01				
16-Dec-94		11.97					0.48				
28-Jun-95	WP #3B	11.73	15.00		6,500	7.4		1946.7	1734.5	434.3	3,150
11-Sep-95		12.14			8,400	7.8		752	102	427	1,386
08-Dec-95		12.15			4,800	6.2		772	70.1	208	2,070
08-Mar-96		11.78			4,000	6.1		775	156	259	2,480
17-Jun-96		11.77			4,800	6.4		764	196	184	1,515
25-Jun-97		11.25			3,400	6.3		1,940	167	143	727
12-Jun-98		11.22			3,700	6.6		276	68.4	85.3	457.8
28-May-99		11.56			3,900	6.5		178	98.0	50.5	250.3
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

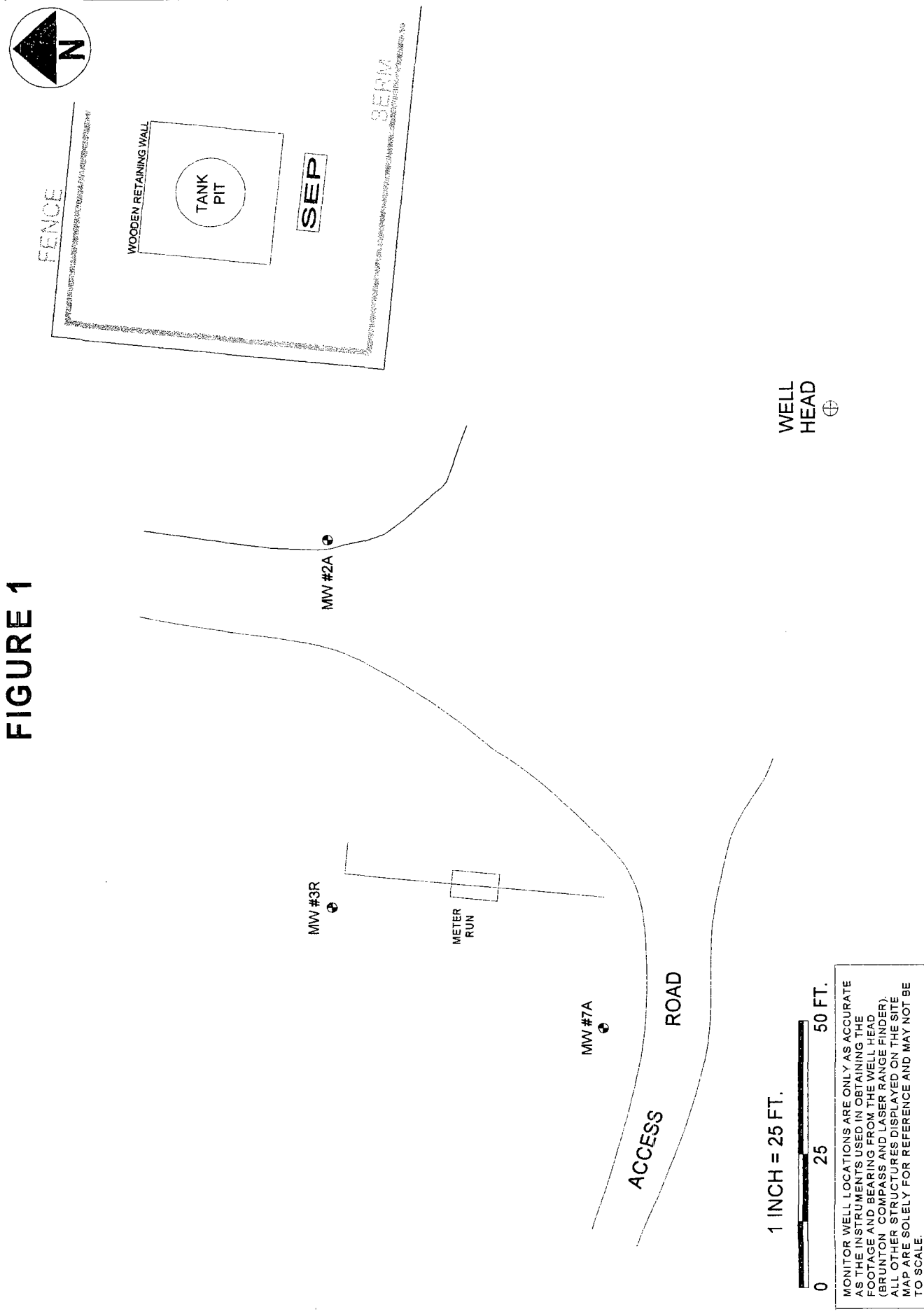
GCU # 153E
UNIT C, SEC. 28, T29N, R12W

REVISED DATE: August 3, 2007
FILENAME: (15-2Q-07.WK4) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS (ft)	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
13-Jun-00	MW #3R	10.88			7,600	7.0		360	16	720	1,234
28-Jul-01		11.72			8,600	7.25		520	35	350	757
11-Mar-02		11.70			9,700	7.14		120	6.9	110	225
21-Jun-02		11.90			8,800	7.69		310	ND	300	551
30-Jun-03		11.39			5,200	7.11		300	ND	76	170
25-Jun-04		10.51			5,200	7.11		120	ND	44	63
27-Jun-05		10.78			6,200	7.00		160	12	54	84
29-Jun-06		11.51			7,800	6.93		470	39	170	180
25-Jun-07		10.70			6,000	6.94		180	ND	24	24
08-Mar-96	MW #4A	10.59	13.05		3,600	7.4		ND	ND	ND	ND
08-Mar-96	MW #5A	11.75	14.04		12,300	7.8		ND	1.14	ND	ND
12-Jan-93	MW #7A	12.42			12,400	7.3		ND	0.5	ND	1.1
05-May-93		10.56			10,600	7.5		ND	ND	ND	0.5
01-Sep-93		11.90	16.60		10,700	7.5		0.2	ND	ND	0.8
08-Mar-94		11.10			16,800	7.3		ND	ND	ND	ND
27-Jun-94		11.23			13,700	7.3		ND	ND	ND	ND
21-Sep-94		12.30			13,100	7.3		0.8	1	ND	2.2
16-Dec-94		11.69			9,600	7.5		ND	ND	ND	ND
15-Mar-95		11.21			18,400	7.5		ND	ND	ND	ND
16-Jun-95		10.88			12,200	7.4		ND	ND	ND	ND
11-Sep-95		11.64			11,200	7.7		1.1	0.6	0.5	1.0
08-Dec-95		11.50			10,800	7.4		ND	ND	ND	ND
08-Mar-96		11.18			8,300	7.3		ND	ND	ND	ND
17-Jun-96		11.28			9,000	7.4		ND	ND	ND	ND
28-Jul-01		10.87			8,300	7.59		ND	ND	ND	ND
08-Mar-96	MW #11A	12.10	20.17		3,100	6.9		ND	ND	ND	ND
08-Mar-96	MW #12A	10.76	19.79		2,800	7.0		ND	ND	ND	ND
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 PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED .
 - 3) ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10) .

FIGURE 1



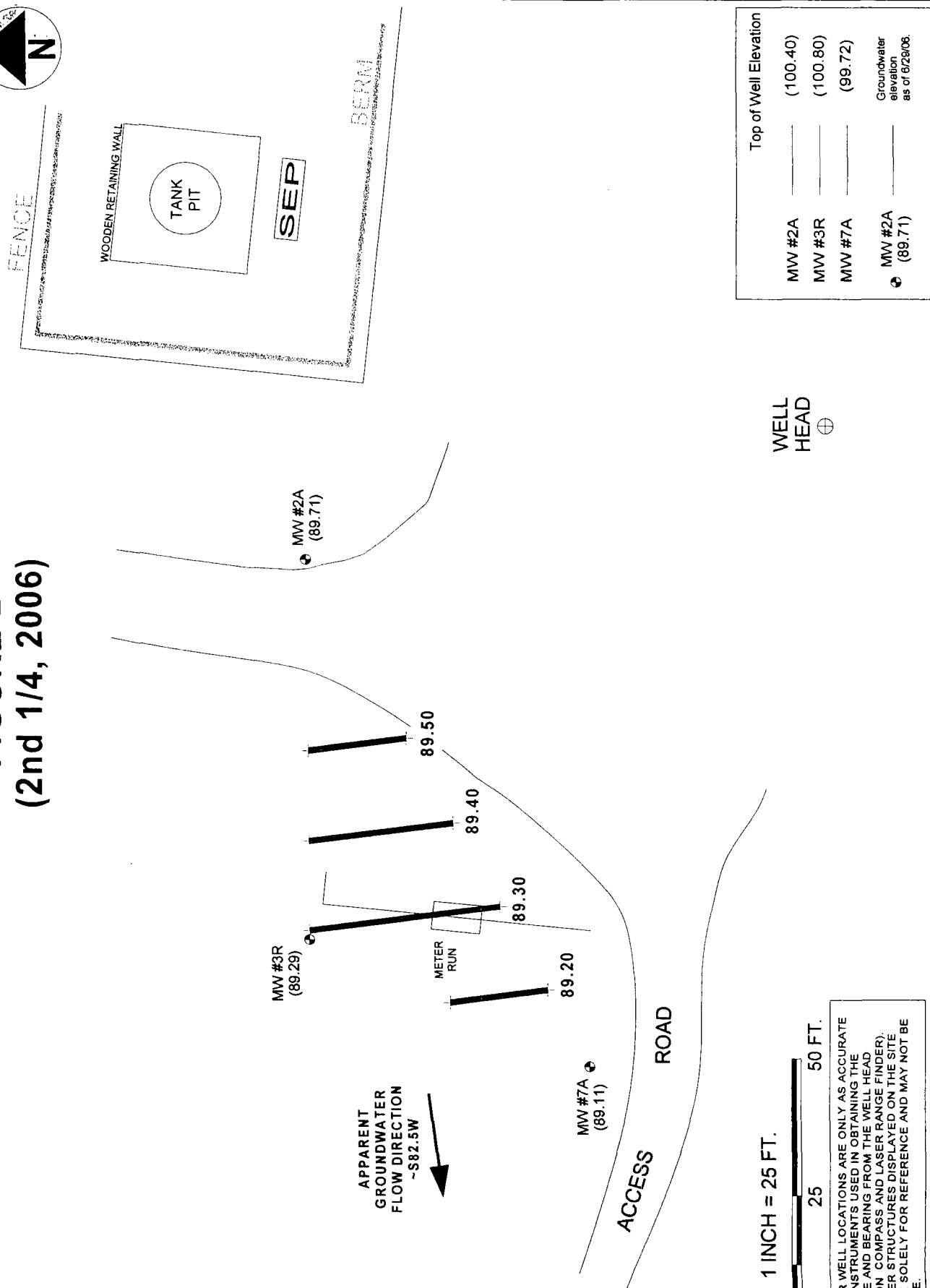
BP/AMERICA PRODUCTION COMPANY
 GCUJ #153E
 NE/4 NW/4 SEC. 28 T29N R12W
 SAN JUAN COUNTY NEW MEXICO

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: GCU153E-SM-06-06.SKF
 REVISED: 6/29/06 NJV

SITE MAP
 06/06

FIGURE 2
(2nd 1/4, 2006)



BP AMERICA PRODUCTION COMPANY
GCU #153E
NE/4 NW/4 SEC. 28, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

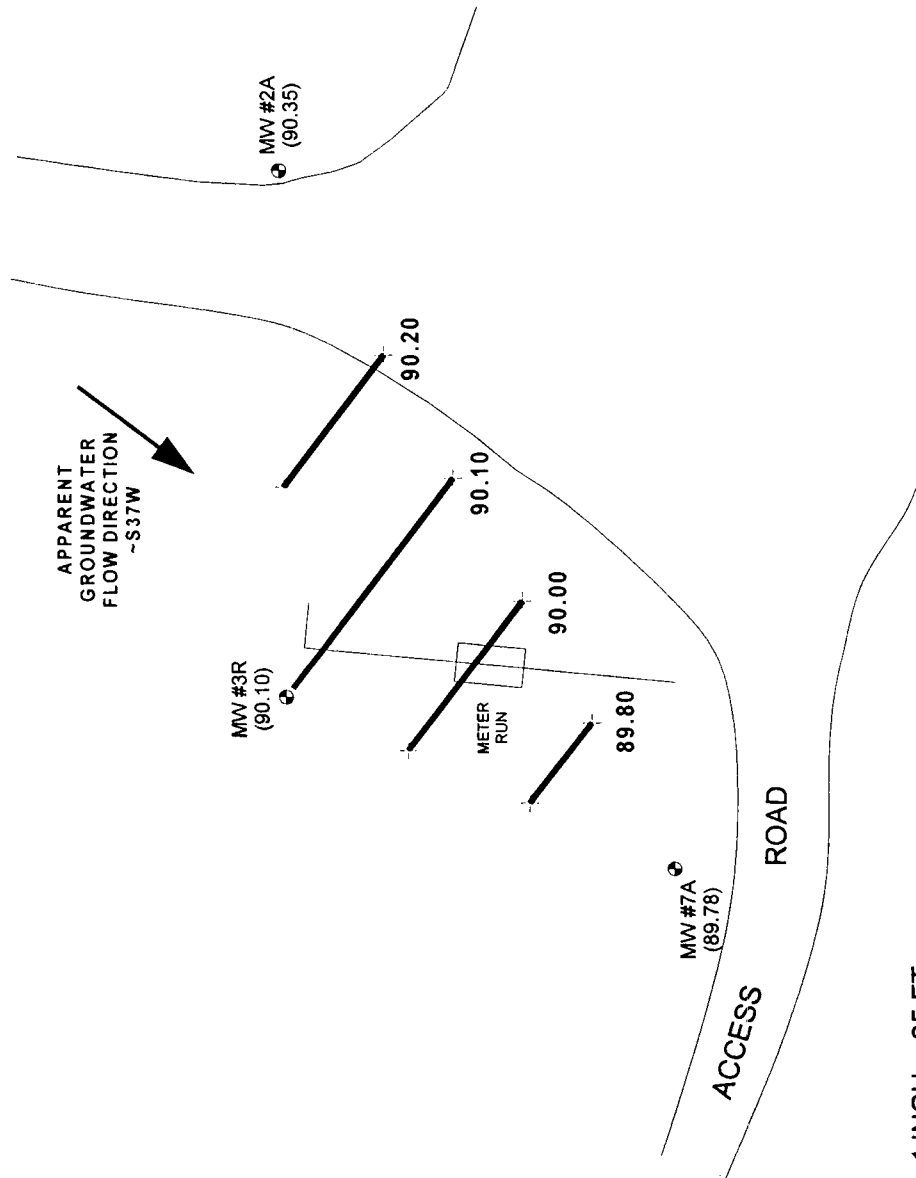
BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 832-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 06-29-06-GW.SKF
REVISED: 6/29/06 NJV

GROUNDWATER GRADIENT MAP
06/06

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

FIGURE 3
(2nd 1/4, 2007)



1 INCH = 25 FT.



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

Top of Well Elevation	
MW #2A	(100.40)
MW #3R	(100.80)
MW #7A	(99.72)
Groundwater elevation as of 6/25/07.	

BP AMERICA PRODUCTION COMPANY
GCU #153E
NE/4 NW/4 SEC. 28, T29N, R12W
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: 06-25-07-GW.SKF
REVISED: 6/25/07 NJV

GROUNDWATER GRADIENT MAP
06/07

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 153E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 28, T29N, R12W

Date : June 29, 2006

SAMPLER : N J V

Filename : 06-29-06.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.)
2A	100.40	89.71	10.69	15.83	-	-	-	-	-
3R	100.80	89.29	11.51	20.00	1155	6.93	7,800	22.6	1.50
7A	99.72	89.11	10.61	16.31	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/26/06 0630

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2"

Poor / fair recovery in MW # 3R . Collected BTEX sample from MW # 3R only .

Hall Environmental Analysis Laboratory, Inc.

Date: 12-Jul-06

CLIENT: Blagg Engineering
Lab Order: 0606376
Project: GCU #153E
Lab ID: 0606376-01

Client Sample ID: MW #3R
Collection Date: 6/29/2006 11:55:00 AM
Date Received: 6/30/2006
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	470	10		µg/L	10	7/11/2006 2:23:53 PM
Toluene	39	10		µg/L	10	7/11/2006 2:23:53 PM
Ethylbenzene	170	10		µg/L	10	7/11/2006 2:23:53 PM
Xylenes, Total	180	30		µg/L	10	7/11/2006 2:23:53 PM
Surr: 4-Bromofluorobenzene	115	72.2-125		%REC	10	7/11/2006 2:23:53 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit

www.hallenvironmental.com

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #153E

Work Order: 0606376

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R19846 Analysis Date: 7/10/2006 8:44:37 AM

Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						

Sample ID: 5ML RB

MBLK

Batch ID: R19868 Analysis Date: 7/11/2006 8:11:30 AM

Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R19846 Analysis Date: 7/10/2006 1:14:32 PM

Benzene	19.16	µg/L	1.0	95.8	85	115			
Toluene	18.37	µg/L	1.0	90.3	85	118			
Ethylbenzene	19.10	µg/L	1.0	95.5	85	116			
Xylenes, Total	59.24	µg/L	3.0	96.2	85	119			

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R19868 Analysis Date: 7/11/2006 7:20:12 PM

Benzene	18.97	µg/L	1.0	94.8	85	115			
Toluene	17.83	µg/L	1.0	89.1	85	118			
Ethylbenzene	18.23	µg/L	1.0	91.1	85	116			
Xylenes, Total	56.77	µg/L	3.0	93.1	85	119			

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R19846 Analysis Date: 7/10/2006 6:40:10 PM

Benzene	19.17	µg/L	1.0	95.9	85	115	0.0730	27	
Toluene	17.96	µg/L	1.0	88.2	85	118	2.27	19	
Ethylbenzene	18.63	µg/L	1.0	93.2	85	116	2.46	10	
Xylenes, Total	59.62	µg/L	3.0	96.8	85	119	0.643	13	

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R19868 Analysis Date: 7/11/2006 7:49:12 PM

Benzene	19.72	µg/L	1.0	98.6	85	115	3.88	27	
Toluene	19.09	µg/L	1.0	95.4	85	118	6.84	19	
Ethylbenzene	19.91	µg/L	1.0	99.6	85	116	8.83	10	
Xylenes, Total	61.88	µg/L	3.0	102	85	119	8.61	13	

Qualifiers:

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

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

6/30/2006

Work Order Number **0606376**

Received by **AT**

Checklist completed by

Signature

Date

6/30/06

Matrix

Carrier name **Greyhound**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

6°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 153E

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT C, SEC. 28, T29N, R12W

Date : June 25, 2007

SAMPLER : N J V

Filename : 06-25-07.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.)
2A	100.40	90.35	10.05	15.83	-	-	-	-	-
3R	100.80	90.10	10.70	20.00	0715	6.94	6,000	15.5	1.75
7A	99.72	89.78	9.94	16.31	-	-	-	-	-

INSTRUMENT CALIBRATIONS =
DATE & TIME =

7.00	2,800
06/25/07	0550

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2 ".

Poor / fair recovery in MW # 3R . Bailed MW # 3R to total depth , then allowed recovery to approx.
15.30 ft. prior to collecting sample . Collected sample from MW # 3R for BTEX analysis only .

Hall Environmental Analysis Laboratory, Inc.

Date: 02-Jul-07

CLIENT: Blagg Engineering
Lab Order: 0706380
Project: GCU #153E
Lab ID: 0706380-01

Client Sample ID: MW #3R
Collection Date: 6/25/2007 7:15:00 AM
Date Received: 6/26/2007
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	180	2.0		µg/L	2	7/1/2007 5:40:39 PM
Toluene	ND	2.0		µg/L	2	7/1/2007 5:40:39 PM
Ethylbenzene	24	2.0		µg/L	2	7/1/2007 5:40:39 PM
Xylenes, Total	24	4.0		µg/L	2	7/1/2007 5:40:39 PM
Surr: 4-Bromofluorobenzene	93.7	70.2-105		%REC	2	7/1/2007 5:40:39 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
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[illegible]

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #153E

Work Order: 0706380

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: SW8021

Sample ID: 5ML REAGENT BLA MBLK Batch ID: R24198 Analysis Date: 6/30/2007 6:59:05 PM

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Xylenes, Total ND µg/L 2.0

Sample ID: 5ML REAGENT BLA MBLK Batch ID: R24212 Analysis Date: 7/1/2007 1:37:26 PM

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Xylenes, Total ND µg/L 2.0

Sample ID: 100NG BTEX LCS LCS Batch ID: R24198 Analysis Date: 6/30/2007 11:44:25 PM

Benzene 19.42 µg/L 1.0 97.1 85.9 113

Toluene 19.80 µg/L 1.0 99.0 86.4 113

Ethylbenzene 20.03 µg/L 1.0 100 83.5 118

Xylenes, Total 59.67 µg/L 2.0 99.4 83.4 122

Sample ID: 100NG BTEX LCS LCS Batch ID: R24212 Analysis Date: 7/1/2007 3:37:57 PM

Benzene 19.32 µg/L 1.0 96.6 85.9 113

Toluene 18.95 µg/L 1.0 94.8 86.4 113

Ethylbenzene 18.99 µg/L 1.0 95.0 83.5 118

Xylenes, Total 55.81 µg/L 2.0 93.0 83.4 122

Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Sample recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

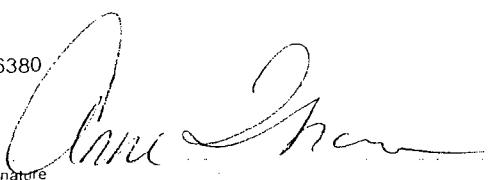
Date and Time Received:

6/26/2007

Work Order Number 0706380

Received by AT

Checklist completed by


Signature Date

6/26/07

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☒	N/A ☐	
Chain of custody present?	Yes ☒	No ☐		
Chain of custody signed when relinquished and received?	Yes ☒	No ☐		
Chain of custody agrees with sample labels?	Yes ☒	No ☐		
Samples in proper container/bottle?	Yes ☒	No ☐		
Sample containers intact?	Yes ☒	No ☐		
Sufficient sample volume for indicated test?	Yes ☒	No ☐		
All samples received within holding time?	Yes ☒	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☒	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒	
Container/Temp Blank temperature?	8°	4° C ± 2 Acceptable		

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____