

3R – 396

**CLOSURE
REQUEST**

02 / 01 / 2011

BLAGG ENGINEERING, INC.

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

3R 396

February 1, 2011

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

**RE: REQUEST FOR PERMANENT CLOSURE
BP America Production Company
Groundwater Monitoring Report
GCU # 188, Unit J, Sec. 30, T29N, R12W, NMPM
San Juan County, New Mexico**

NMOCD Administrative/Environmental Order #: 3RP-396-0

Dear Mr. von Gonten:

BP America Production Company (**BP**) has retained Blagg Engineering, Inc. (**BEI**) to conduct environmental monitoring of groundwater at the GCU # 188.

The last formal correspondence to NMOCD was conducted with letter dated, May 1, 2009. BP has followed its NMOCD approved groundwater management plan and is requesting permanent closure for this site.

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. Jeff Peace, Environmental Advisor, BP, Farmington, NM

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

**GCU #188
(J) SECTION 30, T29N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

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

DECEMBER 2010

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

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

BP AMERICA PRODUCTION COMPANY

GCU # 188 - Production Tank Pit

NW¹/₄ SE¹/₄, Sec. 30, T29N, R12W

Monitor Well Installation Dates: 3/11/03 (MW #2), 7/13/06 (MW #1 & #3), 5/23/07 (MW #4), 5/24/07 (MW #5 & #6)

Monitor Well Sampling Dates: 3/31/09, 5/19/09, 8/28/09, 12/17/09, 2/26/10, 5/13/10, 7/27/10, 10/29/10

Pit Closure & Background:

Initial groundwater impacts at this site were discovered in May 2003 following work on an earthen production tank pit closure in June 2002. Impacted soils were removed from the site and a single groundwater monitoring well (MW #2) was placed in the source area to test water depth and quality. Initial water test results indicated impacts were present, but at levels near or below New Mexico Water Quality Control Commission (NMWQCC) standards. Quarterly monitoring was maintained and in August 2006, MW #2 had achieved four (4) consecutive sampling events below NMWQCC's standards for BTEX. The groundwater report submitted in 2006 to the New Mexico Oil Conservation Division (NMOCD) recommended further delineation to quantify gradient and impact extent with a minimum of two (2) additional monitoring wells. The recommendation was accomplished in 2006 with the installation of MW #1 (up gradient/background) and MW #3 (presumed down gradient direction). Upon review of the BTEX levels in MW #3, BP added three (3) additional monitor wells in 2007 to further determine the lateral areal extent of the groundwater impacts (MW #4, MW #5, and MW #6).

Groundwater Monitor Well Sampling Procedures:

Each monitor well was developed by hand-bailing, using new disposable bailers after installation. Prior to sample collections, each monitor well was purged approximately three (3) well bore volumes with new disposable bailers. 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 for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by US EPA Method 8021B or 8260 was conducted.

Fluids generated during monitor well development and purging were managed by discarding into the separator below-grade tank (BGT) located on the well site. The BGT contents are eventually disposed through approved NMOCD operational procedures for removal of produced fluids.

Water Quality and Gradient Information:

Sampling of the groundwater monitor wells has been ongoing since March 2003. A summary of laboratory analytical results is included within the tables on the following pages and field/laboratory reports are included. On-site monitor well MW #3 was sampled on a quarterly basis for BTEX only during 2009-2010 calendar years and appears to have followed the same decreasing trend in BTEX as previously recorded from MW #2. MW #5 was also sampled during the October 2010 sampling event to address Section 2.7 of BP's NMOCD approved Groundwater Management Plan (GMP).

Groundwater contour maps (Figure 2 through Figure 9) reveal the relative elevations from the site wells have shown an apparent north-northeast or north-northwest flow direction.

Summary and/or Recommendations:

Hydrocarbon impact from the apparent source area appears to have been remediated via excavation/natural attenuation. All site monitor wells have tested at non-detectable or below NMWQCC's standards for BTEX for at least four (4) consecutive sampling events; therefore, meeting sections 2.1, 2.3, and 2.7 of BP's GMP. Permanent site closure is recommended. Following approval by NMOCD, site monitor wells will be abandoned pursuant to the approved GMP.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 188 - SEPARATOR PIT
UNIT J, SEC. 30, T29N, R12W

REVISED DATE: November 12, 2010

FILENAME: (188-4Q10.WK4) NJV

								BTEX EPA METHOD 8021B (ppb)			
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	Benzene	Toluene	Ethyl Benzene	Total Xylene
03-Aug-06	MW #1	18.02	22.05	2,910	2,700	6.77		ND	ND	ND	ND
14-Mar-03	MW #2	13.93	17.50	2,310	2,300	7.47		23	8.0	220	830
29-May-03		13.78			2,300	6.93		10	18	23	180
18-Aug-03		13.88			3,000	6.86		15	ND	37	220
18-Nov-03		13.45			2,700	6.86		31	ND	74	470
29-Mar-04		13.59			2,600	6.86		11	ND	24	180
23-Jun-04		13.68			2,800	6.78		12	ND	27	170
22-Dec-04		12.87			N/A	N/A		18	ND	71	520
28-Mar-05		12.86			2,300	6.79		9.3	15	42	220
23-Jun-05		12.60			2,300	6.72		6.3	12	29	120
21-Sep-05		13.31			2,300	6.65		9.0	7.7	18	190
03-Aug-06		13.45			2,300	6.68		2.4	2.9	3.6	72
03-Aug-06	MW #3	15.81	21.90	2,300	2,400	6.84		16	22	220	1,400
30-Oct-06		15.60			2,500	6.87		13	ND	190	1,000
22-Feb-07		15.12			2,400	7.01		13	12	250	1,300
08-May-07		15.23			2,400	6.83		8.1	6.6	190	860
15-Aug-07		15.45			2,700	6.77		9.9	7.1	110	460
15-Nov-07		15.14			2,500	6.91		8.0	7.0	95	700
14-Apr-08		14.79			2,400	7.04		11.5	11.5	179	873
09-Jun-08		14.89			1,800	7.02		9.8	8.4	141	704
26-Aug-08		15.43			2,600	7.04		6.7	ND	110	410
22-Dec-08		14.93			2,000	7.26		11	21.0	200	860
31-Mar-09		15.25			2,100	7.31		5.0	8.6	120	420
19-May-09		15.49			1,900	7.08		6.0	6.9	91	310
28-Aug-09		15.61			2,400	7.12		ND	ND	83	220
17-Dec-09		14.89			2,300	7.24		5.5	9.7	190	710
26-Feb-10		14.95			2,000	7.93		5.2	9.4	200	600
13-May-10		15.34			2,300	7.15		ND	ND	120	390
27-Jul-10		15.69			2,800	7.07		2.0	1.7	34	80
29-Oct-10		15.43			2,400	7.07		2.5	3.7	100	410
31-May-07	MW #4	13.65	21.85	2,230	2,200	6.91		ND	27	ND	1,300
15-Aug-07		14.08			2,200	6.78		ND	ND	260	1,100
15-Nov-07		13.82			2,500	6.80		ND	ND	30	160
14-Apr-08		13.38			2,400	6.97		ND	ND	4.3	16.0
09-Jun-08		13.45			1,700	6.96		ND	ND	3.2	10.1
26-Aug-08		14.10			2,000	7.00		9.7	ND	77.0	360
22-Dec-08		13.65			1,500	7.15		ND	ND	16.0	63.0
31-May-07	MW #5	14.25	21.28	2,260	2,200	7.00		11	32	790	4,400
15-Aug-07		14.70			2,400	6.84		11	ND	510	930
15-Nov-07		14.43			2,300	7.20		5.7	ND	510	680
14-Apr-08		13.98			2,400	7.25		ND	ND	66.9	ND
09-Jun-08		14.06			1,700	7.25		3.7	ND	156	3.8
26-Aug-08		14.72			2,000	7.32		2.6	ND	33	ND
22-Dec-08		14.25			1,400	7.55		ND	ND	3.8	7.0
29-Oct-10		14.72			2,600	7.30		ND	ND	ND	ND
31-May-07	MW #6	14.37	21.90	1,930	1,400	6.93		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 CO.

GCU #188

NW/4 SE/4 SEC. 30, 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: GCU188-SM3.SKF

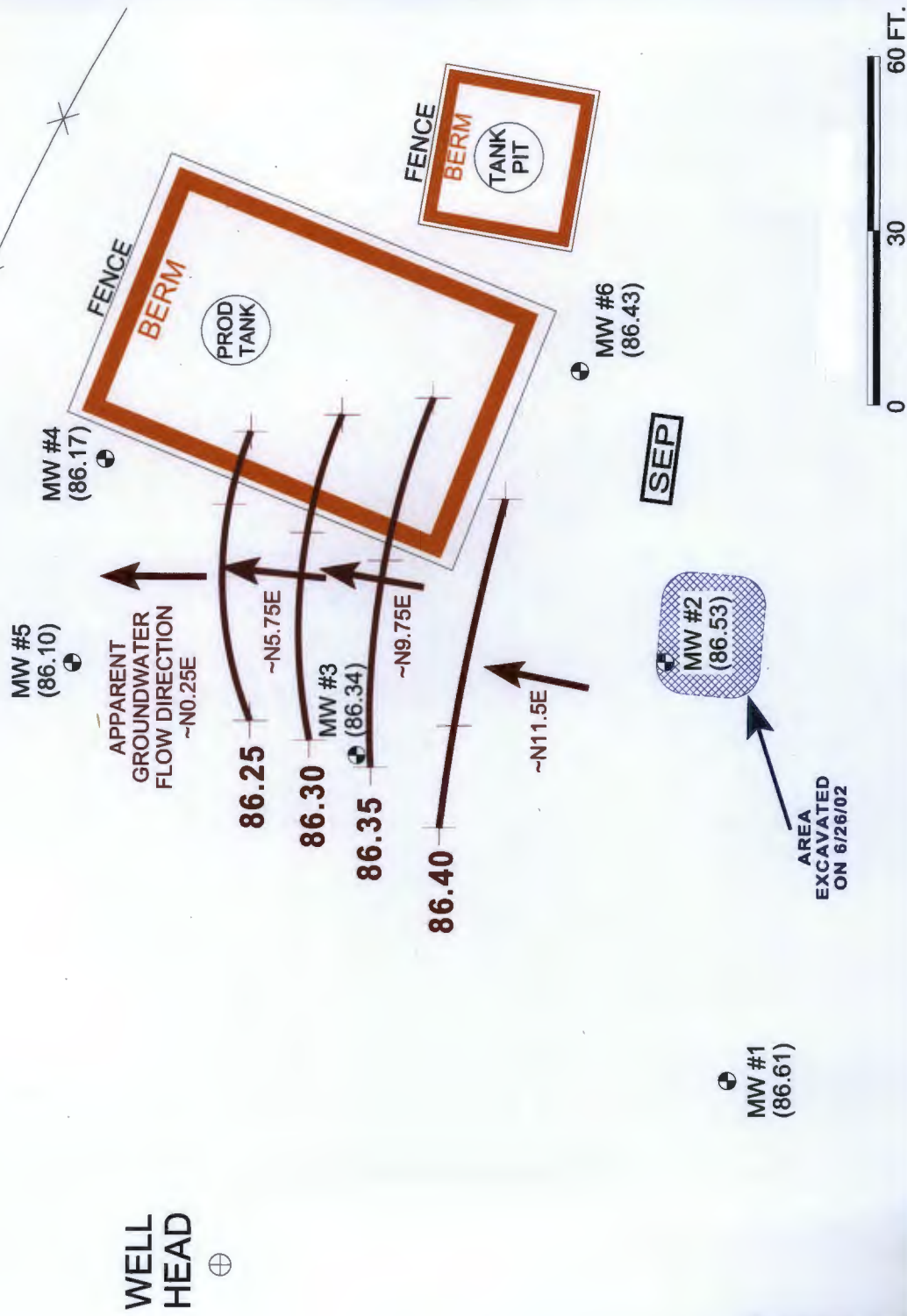
REVISED: 05-24-07 NJV

SITE
MAP

05/07



FIGURE 2
(1st 1/4, 2009)



Top of Well Elevation	
MW #1	(104.08)
MW #2	(99.36)
MW #3	(101.59)
MW #4	(100.08)
MW #5	(100.62)
MW #6	(101.01)
MW #1 (86.61)	Groundwater Elevation as of 3/31/09.

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

BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

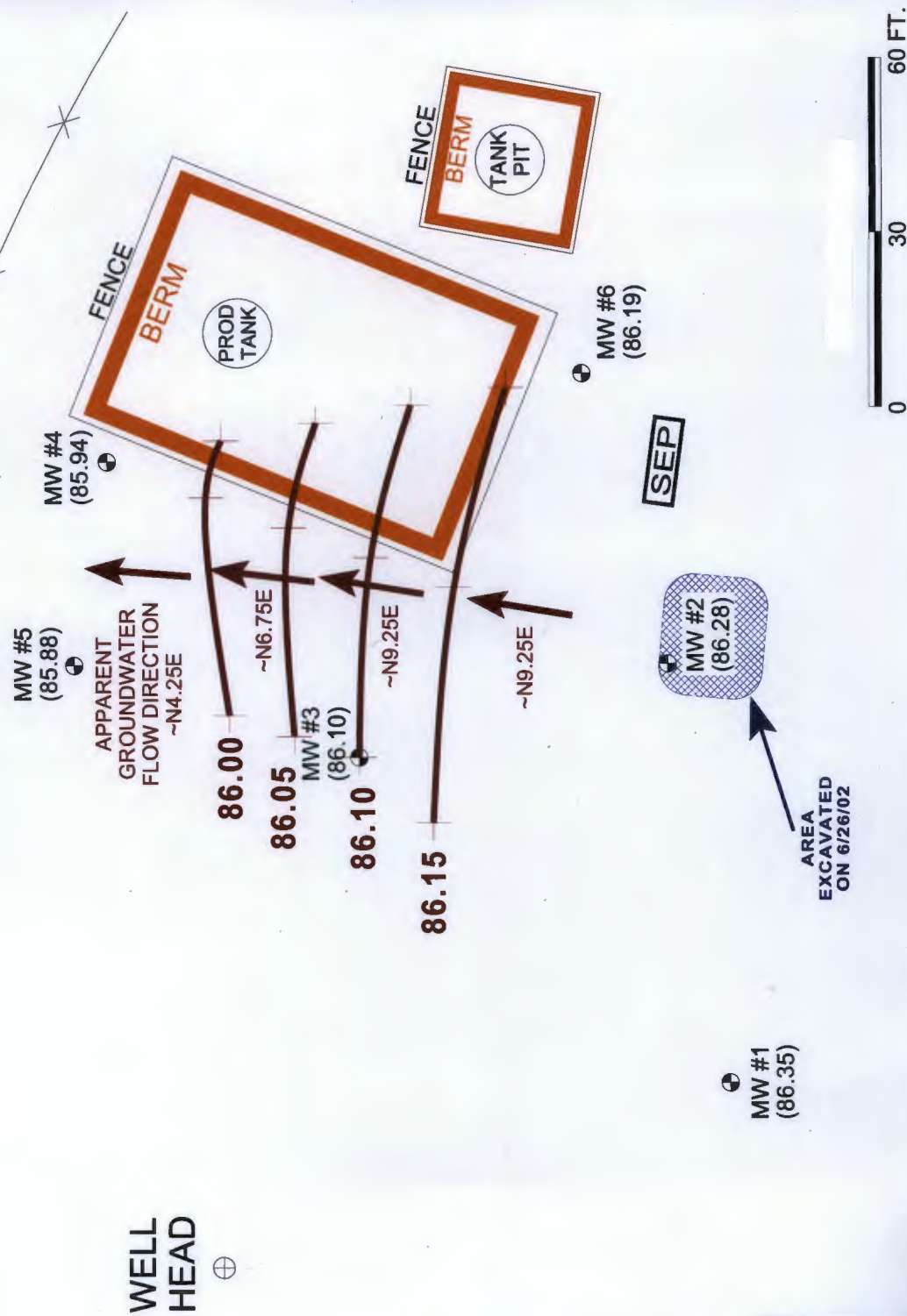
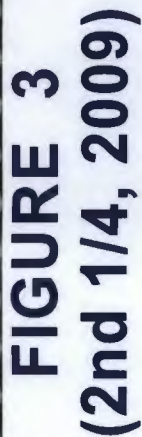
P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 03-31-09-GW.SKF
REVISED: 04-01-09 NJV

GROUNDWATER CONTOUR MAP
03/09



	Top of Well Elevation
MW #1	_____ (104.08)
MW #2	_____ (99.36)
MW #3	_____ (101.59)
MW #4	_____ (100.08)
MW #5	_____ (100.62)
MW #6	_____ (101.01)
MW #1	_____

Groundwater Elevation
as of 5/19/09.

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

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GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV

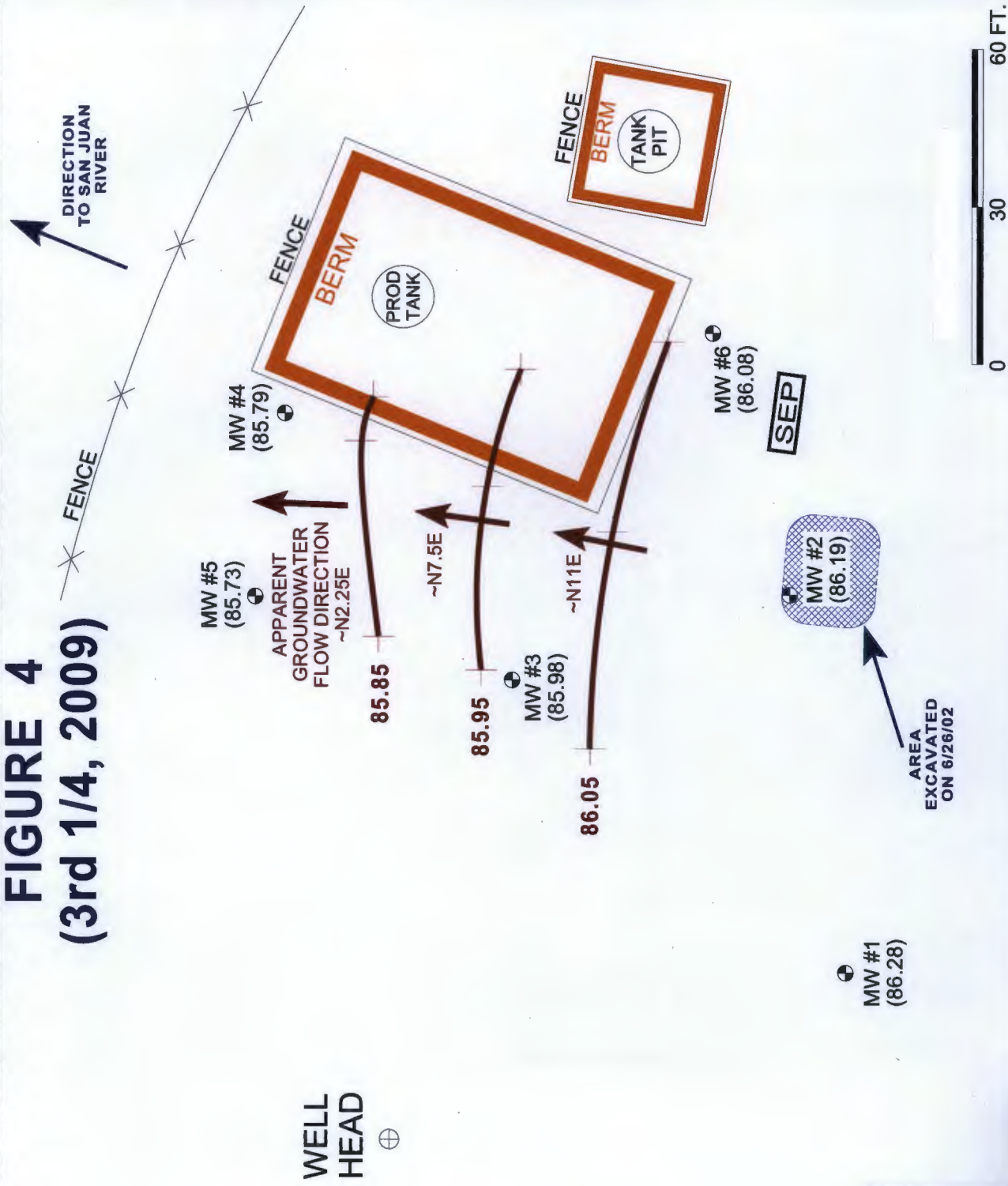
EII ENAME· 05-19-09-GW.SKF

REVISÉ: 05-22-09 NJV

05/09



FIGURE 4
(3rd 1/4, 2009)



MW #1	Top of Well Elevation
—	(104.08)
MW #2	—
—	(99.36)
MW #3	—
—	(101.59)
MW #4	—
—	(100.08)
MW #5	—
—	(100.62)
MW #6	—
—	(101.01)
⊕ MW #1 (86.28)	Groundwater Elevation as of 8/28/09.

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

BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, 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: 08-28-09-GW.SKF

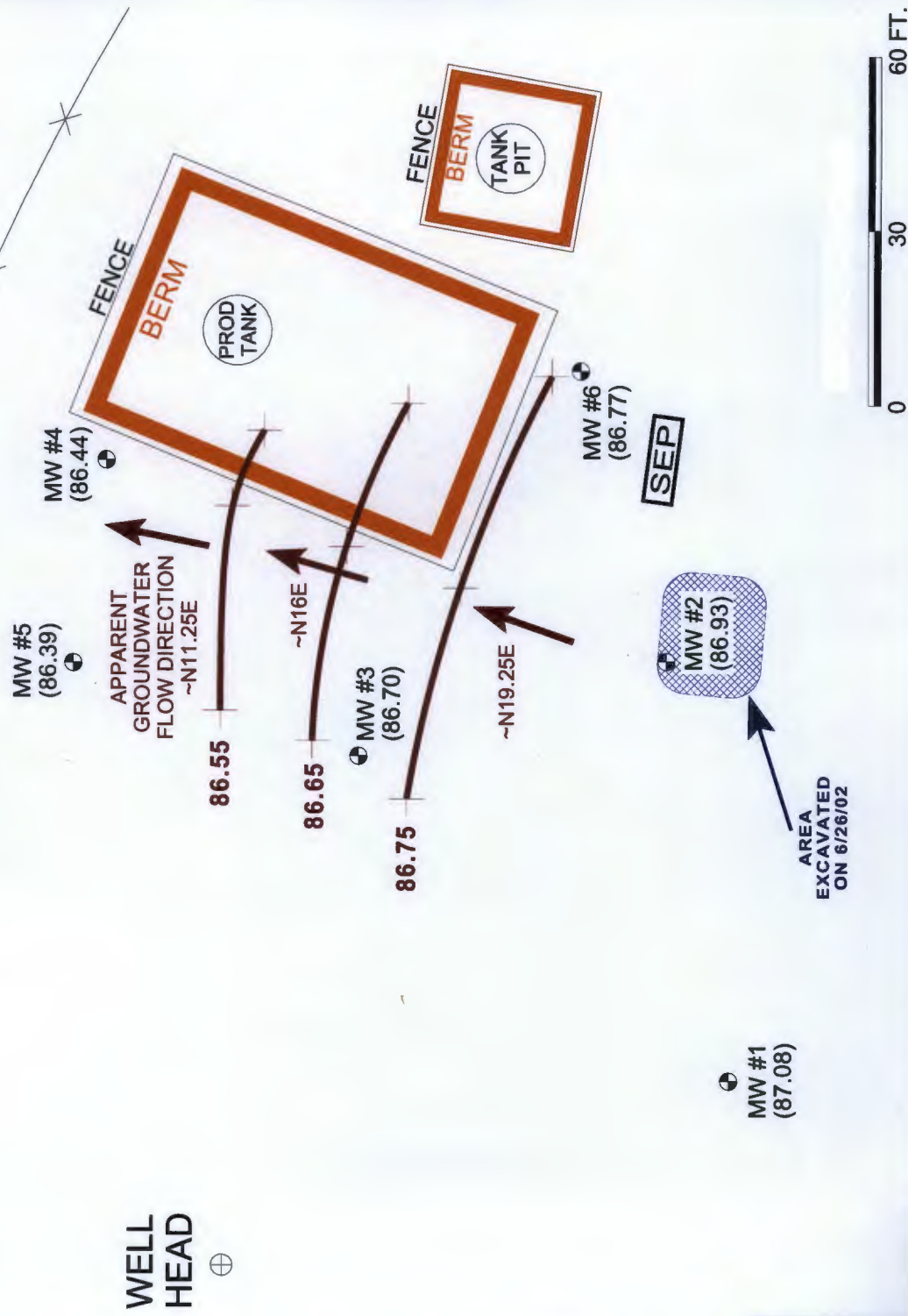
REVISED: 08-28-09 NJV

**GROUNDWATER
CONTOUR
MAP**

08/09



FIGURE 5
(4th 1/4, 2009)



Top of Well Elevation	
MW #1	(104.08)
MW #2	(99.36)
MW #3	(101.59)
MW #4	(100.08)
MW #5	(100.62)
MW #6	(101.01)
Groundwater Elevation as of 12/17/09.	

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

BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, I INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV

FILENAME: 12-17-09-GW.SKF

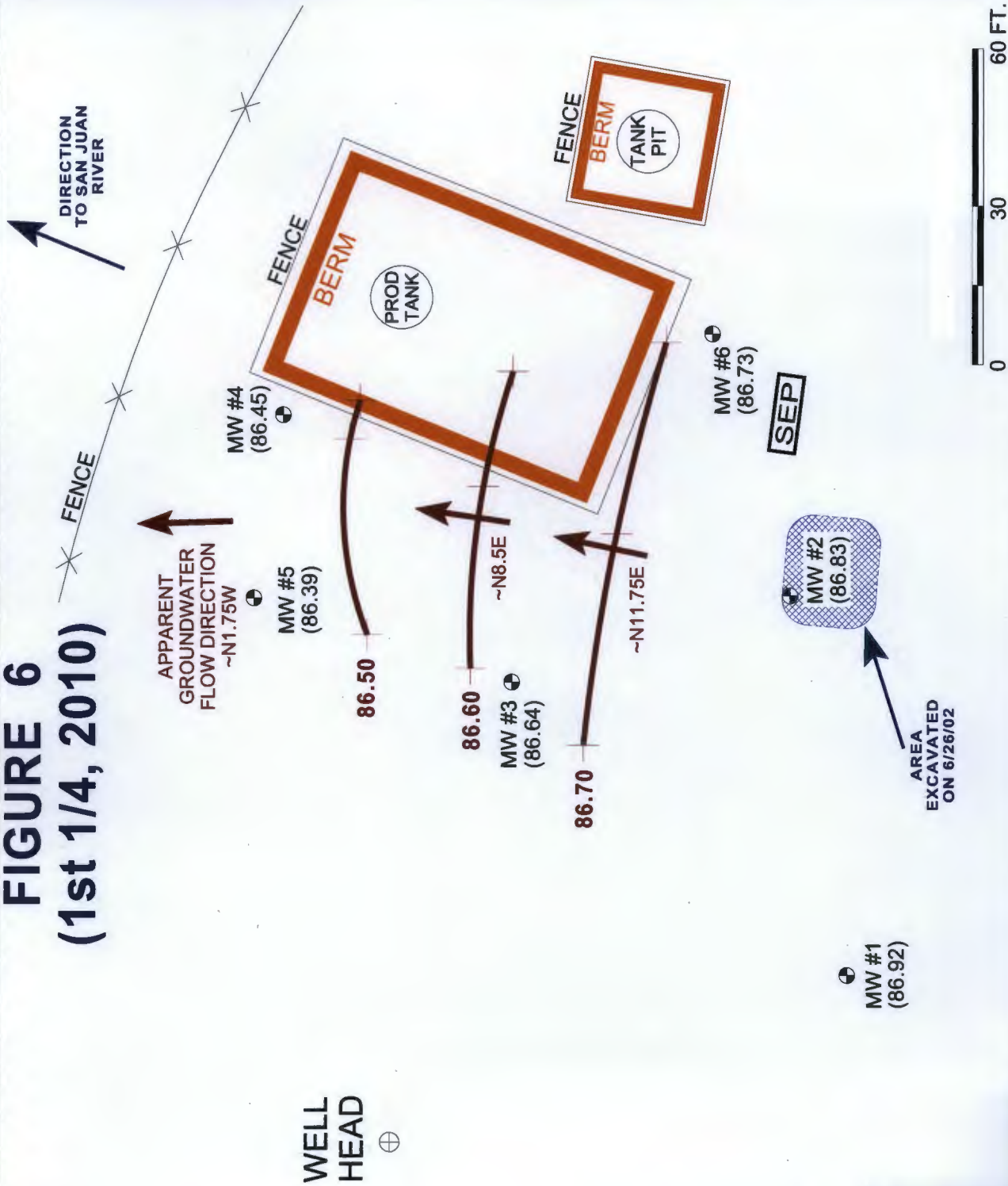
REVISED: 12-19-09 NJV

GROUNDWATER
CONTOUR
MAP

12/09



FIGURE 6
(1st 1/4, 2010)



BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 02-26-10-GW.SKF

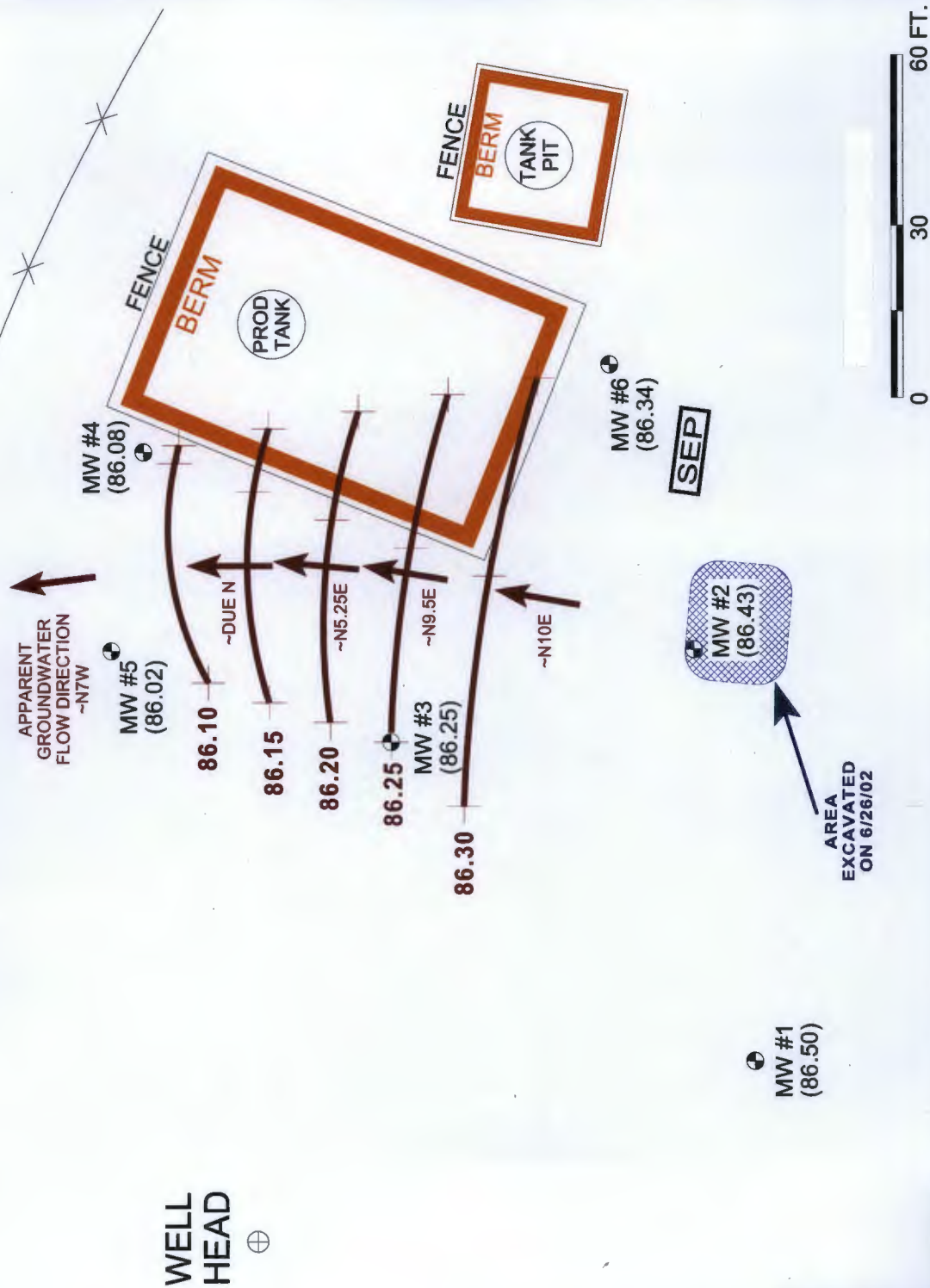
REVISED: 02-26-10 NJV

**GROUNDWATER
CONTOUR
MAP**

02/10



FIGURE 7
(2nd 1/4, 2010)



BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, 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

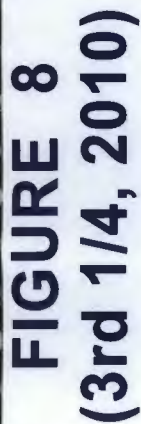
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FILENAME: 05-13-10-GW.SKF

REVISED: 05-13-10 NJV

**GROUNDWATER
CONTOUR
MAP**

05/10



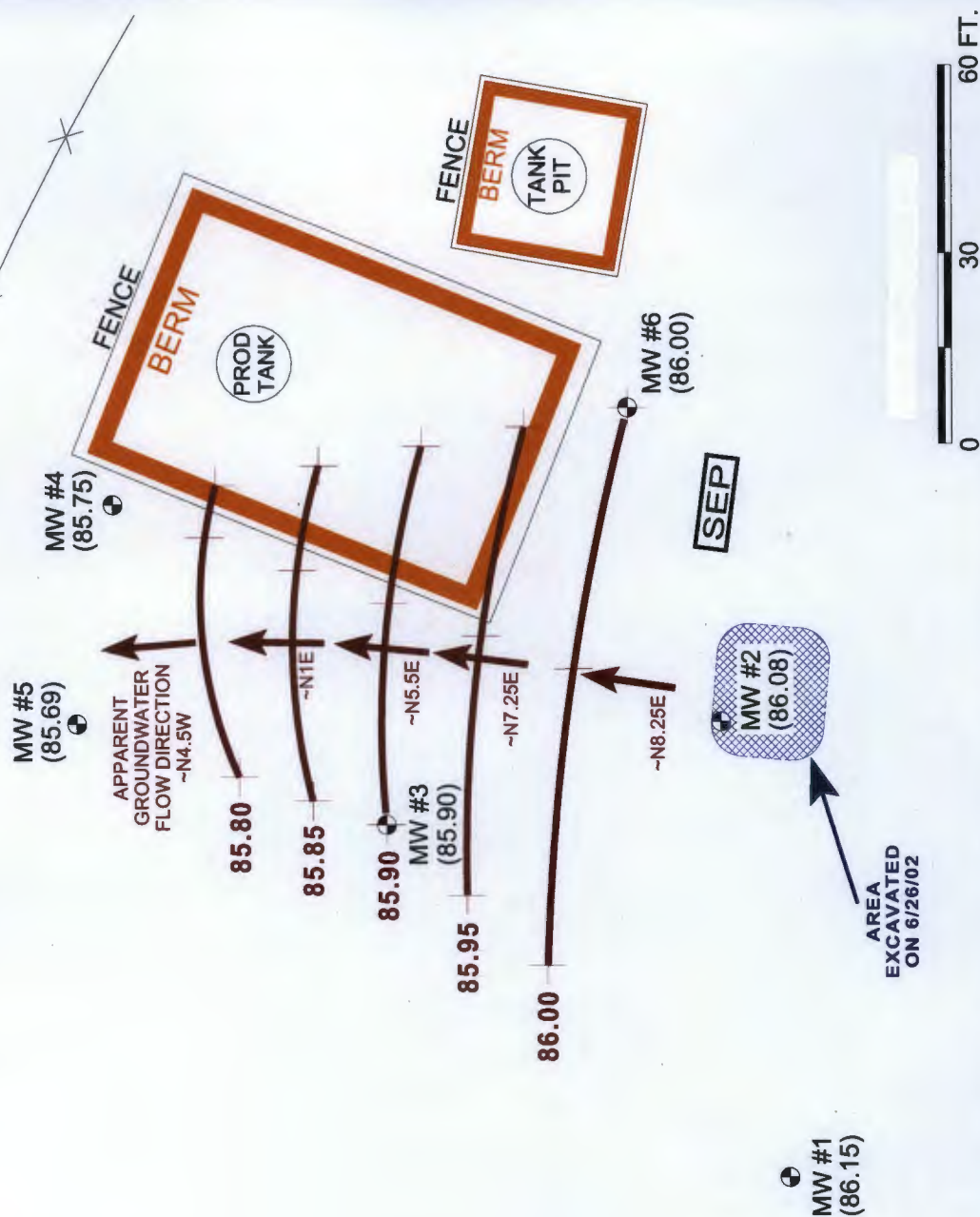
**DIRECTION
TO SAN JUAN
RIVER**

FENCE

WELL
HEAD

	Top of Well Elevation
MW #1	(104.08)
MW #2	(99.36)
MW #3	(101.59)
MW #4	(100.08)
MW #5	(100.62)
MW #6	(101.01)
MW #1	Groundwater Elevation as of 7/27/10.

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



BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV

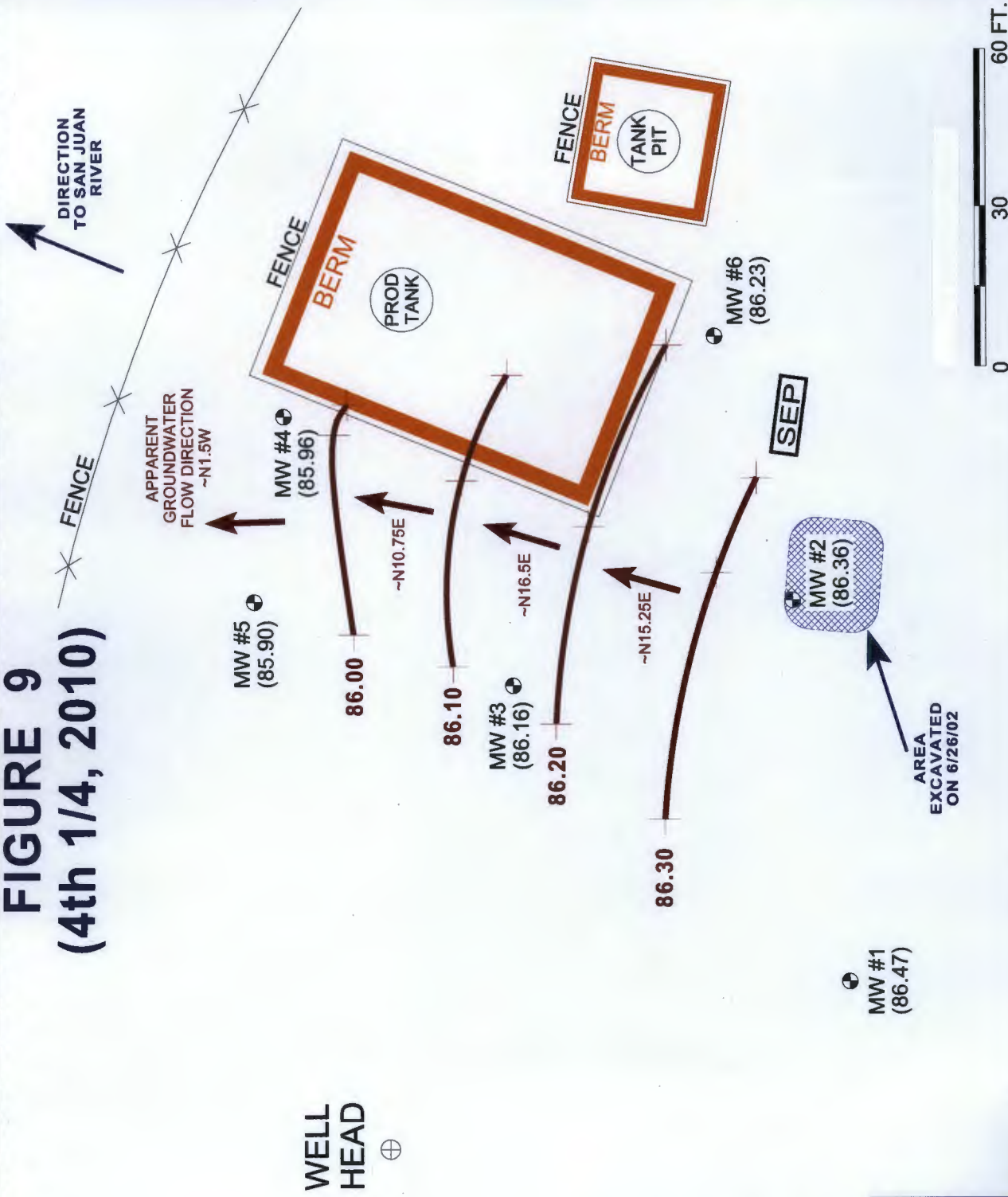
FILENAME: 07-27-10-GW.SKF

REVISÉ: 07-27-10 NJV

07/10



FIGURE 9
(4th 1/4, 2010)



BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 10-29-10-GW.SKF

REVISED: 10-29-10 NJV

**GROUNDWATER
CONTOUR
MAP**

10/10

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date: March 31, 2009

SAMPLER: NJV

Filename: 03-31-09.WK4

PROJECT MANAGER: NJV

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	104.08	86.61	17.47	22.05	-	-	-	-	-
2	99.36	86.53	12.83	17.50	-	-	-	-	-
3	101.59	86.34	15.25	21.90	1600	7.31	2,100	17.8	3.25
4	100.08	86.17	13.91	21.85	-	-	-	-	-
5	100.62	86.10	14.52	21.28	-	-	-	-	-
6	101.01	86.43	14.58	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	03/31/09	0945

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".

Excellent recovery in MW # 3, murky brown / black in appearance. Collected sample from MW # 3 only for BTEX analysis.

Top of casing MW # 1 ~ 1.90 ft., MW # 2 ~ @ grade, MW # 3 ~ 2.40 ft., MW # 4 ~ 2.25 ft., MW # 5 ~ 2.40 ft., MW # 6 ~ 2.30 ft. above grade.

on-site	3:25	temp	53 F
off-site	4:10	temp	53 F
sky cond.	Cloudy		
wind speed	0-10	direct.	W

Hall Environmental Analysis Laboratory, Inc.

Date: 07-Apr-09

CLIENT: Blagg Engineering
Lab Order: 0904019
Project: GCU #188
Lab ID: 0904019-01

Client Sample ID: MW #3
Collection Date: 3/31/2009 4:00:00 PM
Date Received: 4/1/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	5.0	2.0		µg/L	2	4/7/2009 12:19:39 AM
Toluene	8.6	2.0		µg/L	2	4/7/2009 12:19:39 AM
Ethylbenzene	120	2.0		µg/L	2	4/7/2009 12:19:39 AM
Xylenes, Total	420	4.0		µg/L	2	4/7/2009 12:19:39 AM
Surr: 4-Bromofluorobenzene	112	65.9-130		%REC	2	4/7/2009 12:19:39 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
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
www.hallenvironmental.com

QA/QC Package:

Std ☒ Level 4 ☐

Other:

Project Name:

GCU #188

Address:

P.O. Box 87

BLFO. NM 87413

Project Manager:

Manager: Nelson Velez

Phone #:

632-1199

Fax #:

Sample Temperature:

Date _____

Time

Matrix

Sample I.D. No.

Number/Volume

Preservative

HgCl ₂	HNO ₃	HCl
-------------------	------------------	-----

HEAL No.

0904019

3/3/00

WATER

New #3

2-40ml

T

Date: 7

Time:

Relinquished By: (Signature)

Received By: (Signature)

Date:

Time:

Relinquished By: (Signature)

Received By: (Signature)

ANALYSIS REQUEST

[illegible]

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0904019

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

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R33112 Analysis Date: 4/6/2009 10:05:03 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	2.0

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R33112 Analysis Date: 4/6/2009 8:13:23 PM

Benzene	21.79	µg/L	1.0	109	85.9	113
Toluene	22.74	µg/L	1.0	114	86.4	113
Ethylbenzene	21.76	µg/L	1.0	109	83.5	118
Xylenes, Total	64.38	µg/L	2.0	107	83.4	122

S

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

4/1/2009

Work Order Number **0904019**

Received by: **AT**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Client drop-off

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?

2°

<6° C 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: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU #188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: May 19, 2009

SAMPLER: N J V

Filename: 05-19-09.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	104.08	86.35	17.73	22.05	-	-	-	-	-
2	99.36	86.28	13.08	17.50	-	-	-	-	-
3	101.59	86.10	15.49	21.90	1005	7.08	1,900	18.6	3.25
4	100.08	85.94	14.14	21.85	-	-	-	-	-
5	100.62	85.88	14.74	21.28	-	-	-	-	-
6	101.01	86.19	14.82	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800

DATE & TIME = 05/16/09 0810

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".

Excellent recovery in MW #3. Collected sample for BTEX per US EPA Method 8021B from MW #3 only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft., MW #4 ~ 2.25 ft., MW #5 ~ 2.40 ft., MW #6 ~ 2.30 ft. above grade.

on-site	9:31	temp	77 F
off-site	10:15	temp	81 F
sky cond.	Partly cloudy		
wind speed	0 - 5	direct.	West

Hall Environmental Analysis Laboratory, Inc.

Date: 02-Jun-09

CLIENT: Blagg Engineering
Lab Order: 0905365
Project: GCU #188
Lab ID: 0905365-01

Client Sample ID: MW #3
Collection Date: 5/19/2009 10:05:00 AM
Date Received: 5/20/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	6.0	5.0		µg/L	5	5/30/2009 2:32:06 PM
Toluene	6.9	5.0		µg/L	5	5/30/2009 2:32:06 PM
Ethylbenzene	91	5.0		µg/L	5	5/30/2009 2:32:06 PM
Xylenes, Total	310	10		µg/L	5	5/30/2009 2:32:06 PM
Surr: 4-Bromofluorobenzene	99.2	65.9-130		%REC	5	5/30/2009 2:32:06 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- 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

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Project Manager:

Nelson Velez

Sampler: Nelson Velaz

On Ice	Des	5 No
Sample Temperature		33

Date	Time	Matrix	Sample Request ID
------	------	--------	-------------------

Container Type and #	Preservative Type
-------------------------	----------------------

Type and #	Type
40m/-2	HCl

1/9/09	1005	WATER	MW #3
--------	------	-------	-------

40m/-2	HCl
--------	-----

1

✓

[illegible][illegible]

Remarks:

Received by: 	Date	Time
	5/20/09	9:30

Date: 5/19/09	Time: 1425	Relinquished by: <i>Theresa Vey</i>
Date:	Time:	Relinquished by:

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0905365

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		<i>MBLK</i>							
					Batch ID: R33878		Analysis Date: 5/29/2009 9:06:58 AM		
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		<i>LCS</i>							
					Batch ID: R33878		Analysis Date: 5/30/2009 5:24:25 AM		
Benzene	19.92	µg/L	1.0	99.6	85.9	113			
Toluene	19.82	µg/L	1.0	99.1	86.4	113			
Ethylbenzene	20.29	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.55	µg/L	2.0	101	83.4	122			
Sample ID: 100NG BTEX LCSD		<i>LCSD</i>							
					Batch ID: R33878		Analysis Date: 5/30/2009 5:54:51 AM		
Benzene	20.56	µg/L	1.0	103	85.9	113	3.18	27	
Toluene	20.46	µg/L	1.0	102	86.4	113	3.14	19	
Ethylbenzene	20.86	µg/L	1.0	104	83.5	118	2.79	10	
Xylenes, Total	62.33	µg/L	2.0	104	83.4	122	2.90	13	

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

5/20/2009

Work Order Number 0905365

Received by: **TLS**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: **Greyhound**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☒	
Chain of custody present?	Yes ☒	No ☐		
Chain of custody signed when relinquished and received?	Yes ☒	No ☐		
Chain of custody agrees with sample labels?	Yes ☒	No ☐		
Samples in proper container/bottle?	Yes ☒	No ☐		
Sample containers intact?	Yes ☒	No ☐		
Sufficient sample volume for indicated test?	Yes ☒	No ☐		
All samples received within holding time?	Yes ☒	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐	Number of preserved bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☒	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒	<2 >12 unless noted below.
Container/Temp Blank temperature?	3.8°	<6° C 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: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: August 28, 2009

SAMPLER: N J V

Filename: 08-28-09.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	104.08	86.28	17.80	22.05	-	-	-	-	-
2	99.36	86.19	13.17	17.50	-	-	-	-	-
3	101.59	85.98	15.61	21.90	1200	7.12	2,400	22.4	3.00
4	100.08	85.79	14.29	21.85	-	-	-	-	-
5	100.62	85.73	14.89	21.28	-	-	-	-	-
6	101.01	86.08	14.93	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800

DATE & TIME = 08/28/09 1140

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".

Excellent recovery in MW # 3. Collected sample for BTEX per US EPA Method 8021B from MW # 3 only.

Top of casing MW # 1 ~ 1.90 ft., MW # 2 ~ @ grade, MW # 3 ~ 2.40 ft., MW # 4 ~ 2.25 ft., MW # 5 ~ 2.40 ft., MW # 6 ~ 2.30 ft. above grade.

on-site	11:00	temp	85 F
off-site	12:29	temp	88 F
sky cond.	Sunny		
wind speed	0 - 5	direct.	W

Hall Environmental Analysis Laboratory, Inc.

Date: 09-Sep-09

CLIENT: Blagg Engineering
Lab Order: 0909074
Project: GCU #188
Lab ID: 0909074-01

Client Sample ID: MW #3
Collection Date: 8/28/2009 12:00:00 PM
Date Received: 9/3/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	5.0		µg/L	5	9/8/2009 4:49:06 PM
Toluene	ND	5.0		µg/L	5	9/8/2009 4:49:06 PM
Ethylbenzene	83	5.0		µg/L	5	9/8/2009 4:49:06 PM
Xylenes, Total	220	10		µg/L	5	9/8/2009 4:49:06 PM
Surr: 4-Bromofluorobenzene	107	65.9-130		%REC	5	9/8/2009 4:49:06 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #188

Work Order: 0909074

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

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R35219 Analysis Date: 9/8/2009 9:20:48 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	2.0

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R35219 Analysis Date: 9/9/2009 2:55:15 AM

Benzene	21.17	µg/L	1.0	20	0	106	85.9	113
Toluene	21.76	µg/L	1.0	20	0	109	86.4	113
Ethylbenzene	21.04	µg/L	1.0	20	0.134	105	83.5	118
Xylenes, Total	62.33	µg/L	2.0	60	0	104	83.4	122

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

9/3/2009

Work Order Number **0909074**

Received by: **ARS**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

4.1°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:

<2 >12 unless noted
below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: December 17, 2009

SAMPLER: N J V

Filename: 12-17-09.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	104.08	87.08	17.00	22.05	-	-	-	-	-
2	99.36	86.93	12.43	17.50	-	-	-	-	-
3	101.59	86.70	14.89	21.90	1315	7.24	2,300	13.1	3.50
4	100.08	86.44	13.64	21.85	-	-	-	-	-
5	100.62	86.39	14.23	21.28	-	-	-	-	-
6	101.01	86.77	14.24	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800

DATE & TIME = 12/16/09 0835

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 ".

Excellent recovery in MW #3. Collected sample for BTEX per US EPA Method 8021B from MW #3 only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft., MW #4 ~ 2.25 ft., MW #5 ~ 2.40 ft., MW #6 ~ 2.30 ft. above grade.

on-site	12:32	temp.	36 F
off-site	1:20	temp.	37 F
sky cond.	Mostly sunny		
wind speed	0 - 5	direct.	W

Hall Environmental Analysis Laboratory, Inc.

Date: 30-Dec-09

CLIENT: Blagg Engineering
Lab Order: 0912427
Project: GCU #188
Lab ID: 0912427-01

Client Sample ID: MW #3
Collection Date: 12/17/2009 1:15:00 PM
Date Received: 12/18/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	5.5	5.0		µg/L	5	12/25/2009 4:17:01 AM
Toluene	9.7	5.0		µg/L	5	12/25/2009 4:17:01 AM
Ethylbenzene	190	5.0		µg/L	5	12/25/2009 4:17:01 AM
Xylenes, Total	710	10		µg/L	5	12/25/2009 4:17:01 AM
Surr: 4-Bromofluorobenzene	112	65.9-130		%REC	5	12/25/2009 4:17:01 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- 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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #188

Work Order: 0912427

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		MBLK		Batch ID: R36711		Analysis Date: 12/24/2009 10:04:25 AM					
benzene	ND	µg/L	1.0								
toluene	ND	µg/L	1.0								
ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX LCS		LCS		Batch ID: R36711		Analysis Date: 12/24/2009 6:11:13 PM					
benzene	20.55	µg/L	1.0	20	0	103	85.9	113			
Toluene	20.53	µg/L	1.0	20	0	103	86.4	113			
ethylbenzene	20.09	µg/L	1.0	20	0.066	100	83.5	118			
Xylenes, Total	61.73	µg/L	2.0	60	0	103	83.4	122			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

12/18/2009

Work Order Number **0912427**

Received by: **TLS**

Checklist completed by:

Signature

Sample ID labels checked by:

Initials

Matrix:

Carrier name: **UPS**

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?	0.8°	<6° C Acceptable		
				Number of preserved bottles checked for pH: _____
				<2 >12 unless noted below.
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: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date: February 26, 2010

SAMPLER: N J V

Filename: 02-26-10.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	104.08	86.92	17.16	22.05	-	-	-	-	-
2	99.36	86.83	12.53	17.50	-	-	-	-	-
3	101.59	86.64	14.95	21.90	1340	7.93	2,000	15.6	3.50
4	100.08	86.45	13.63	21.85	-	-	-	-	-
5	100.62	86.39	14.23	21.28	-	-	-	-	-
6	101.01	86.73	14.28	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800

DATE & TIME = 02/26/10 1000

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".

Excellent recovery in MW # 3. Collected sample for BTEX per US EPA Method 8021B from MW # 3 only.

Top of casing MW # 1 ~ 1.90 ft., MW # 2 ~ @ grade, MW # 3 ~ 2.40 ft., MW # 4 ~ 2.25 ft., MW # 5 ~ 2.40 ft., MW # 6 ~ 2.30 ft. above grade.

on-site	12:53	temp.	41 F
off-site	1:45	temp.	44 F
sky cond.	Mostly sunny		
wind speed	0 - 10	direct.	NW

Hall Environmental Analysis Laboratory, Inc.

Date: 08-Mar-10

CLIENT: Blagg Engineering
Lab Order: 1003068
Project: GCU #188
Lab ID: 1003068-01

Client Sample ID: MW #3
Collection Date: 2/26/2010 1:40:00 PM
Date Received: 3/3/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	5.2	5.0		µg/L	5	3/5/2010 5:11:03 PM
Toluene	9.4	5.0		µg/L	5	3/5/2010 5:11:03 PM
Ethylbenzene	200	5.0		µg/L	5	3/5/2010 5:11:03 PM
Xylenes, Total	600	10		µg/L	5	3/5/2010 5:11:03 PM
Surr: 4-Bromofluorobenzene	106	65.9-130		%REC	5	3/5/2010 5:11:03 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Tel. 505-345-3975 Fax 505-345-4107

مدرسہ اسلامیہ دارالعلوم دیوبند

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Date _____ Time _____

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 1003068

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		MBLK									
						Batch ID: R37664	Analysis Date: 3/5/2010 9:16:26 AM				
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX LCS		LCS									
						Batch ID: R37664	Analysis Date: 3/5/2010 8:43:42 PM				
Benzene	19.65	µg/L	1.0	20	0	98.3	85.9	113			
Toluene	19.01	µg/L	1.0	20	0	95.0	86.4	113			
Ethylbenzene	18.98	µg/L	1.0	20	0	94.9	83.5	118			
Xylenes, Total	57.39	µg/L	2.0	60	0	95.7	83.4	122			
Sample ID: 100NG BTEX LCSD		LCSD									
						Batch ID: R37664	Analysis Date: 3/5/2010 9:13:58 PM				
Benzene	19.07	µg/L	1.0	20	0	95.4	85.9	113	3.02	27	
Toluene	18.37	µg/L	1.0	20	0	91.8	86.4	113	3.43	19	
Ethylbenzene	18.16	µg/L	1.0	20	0	90.8	83.5	118	4.39	10	
Xylenes, Total	55.07	µg/L	2.0	60	0	91.8	83.4	122	4.14	13	

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

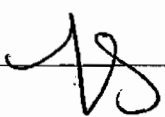
3/3/2010

Work Order Number **1003068**

Received by: **TLS**

Checklist completed by:

Signature



Date

3/3/10

Sample ID labels checked by:

Initials



Matrix:

Carrier name: **UPS**

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?

1.9°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:

**<2 >12 unless noted
below.**

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU #188 - PROD. TANK PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date : May 13, 2010

SAMPLER : NJV

Filename : 05-13-10.WK4

PROJECT MANAGER : NJV

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1	104.08	86.50	17.58	22.05	-	-	-	-	-
2	99.36	86.43	12.93	17.50	-	-	-	-	-
3	101.59	86.25	15.34	21.90	1145	7.15	2,300	17.1	3.25
4	100.08	86.08	14.00	21.85	-	-	-	-	-
5	100.62	86.02	14.60	21.28	-	-	-	-	-
6	101.01	86.34	14.67	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800

DATE & TIME = 05/10/10 0915

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".

Excellent recovery in MW #3. Collected sample for BTEX per US EPA Method 8021B from MW #3 only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft., MW #4 ~ 2.25 ft., MW #5 ~ 2.40 ft., MW #6 ~ 2.30 ft. above grade.

on-site	11:09	temp.	55 F
off-site	12:02	temp.	56 F
sky cond.	Partly cloudy		
wind speed	0 - 5	direct.	SW

Hall Environmental Analysis Laboratory, Inc.

Date: 25-May-10

CLIENT: Blagg Engineering
Lab Order: 1005386
Project: GCU #188
Lab ID: 1005386-01

Client Sample ID: MW #3
Collection Date: 5/13/2010 11:45:00 AM
Date Received: 5/14/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: BDH
Benzene	ND	5.0		µg/L	5	5/24/2010 11:43:31 PM
Toluene	ND	5.0		µg/L	5	5/24/2010 11:43:31 PM
Ethylbenzene	120	5.0		µg/L	5	5/24/2010 11:43:31 PM
Xylenes, Total	390	10		µg/L	5	5/24/2010 11:43:31 PM
Surr: 4-Bromofluorobenzene	96.2	60.1-133		%REC	5	5/24/2010 11:43:31 PM

Qualifiers:

* Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
NC Non-Chlorinated
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #188

Work Order: 1005386

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 5mL rb		MBLK		Batch ID: R38881		Analysis Date: 5/24/2010 11:59:38 AM					
Benzene	ND	µg/L	1.0								
oluene	ND	µg/L	1.0								
ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100ng lcs		LCS		Batch ID: R38881		Analysis Date: 5/24/2010 12:56:02 PM					
Benzene	21.58	µg/L	1.0	20	0	108	82.4	116			
Toluene	23.39	µg/L	1.0	20	0	117	89.5	123			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

5/14/2010

Work Order Number **1005386**

Received by: **ARS**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☒	
Chain of custody present?	Yes ☒	No ☐		
Chain of custody signed when relinquished and received?	Yes ☒	No ☐		
Chain of custody agrees with sample labels?	Yes ☒	No ☐		
Samples in proper container/bottle?	Yes ☒	No ☐		
Sample containers intact?	Yes ☒	No ☐		
Sufficient sample volume for indicated test?	Yes ☒	No ☐		
All samples received within holding time?	Yes ☒	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐	Number of preserved bottles checked for pH: _____
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☒	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒	<2 >12 unless noted below.
Container/Temp Blank temperature?	2.6°	<6° C 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: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: July 27, 2010

SAMPLER: N J V

Filename: 07-27-10.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	104.08	86.15	17.93	22.05	-	-	-	-	-
2	99.36	86.08	13.28	17.50	-	-	-	-	-
3	101.59	85.90	15.69	21.90	1150	7.07	2,800	21.8	3.00
4	100.08	85.75	14.33	21.85	-	-	-	-	-
5	100.62	85.69	14.93	21.28	-	-	-	-	-
6	101.01	86.00	15.01	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	07/26/10	1630

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 ".

Excellent recovery in MW # 3 . Collected sample for BTEX per US EPA Method 8021B from MW # 3 only .

Top of casing MW # 1 ~ 1.90 ft. , MW # 2 ~ @ grade , MW # 3 ~ 2.40 ft. , MW # 4 ~ 2.25 ft. , MW # 5 ~ 2.40 ft. , MW # 6 ~ 2.30 ft. above grade.

on-site	11:00	temp.	81 F
off-site	12:05	temp.	88 F
sky cond.	Mostly sunny		
wind speed	0 - 5	direct.	SE-SW

Hall Environmental Analysis Laboratory, Inc.

Date: 04-Aug-10

CLIENT: Blagg Engineering
Lab Order: 1007A38
Project: GCU #188
Lab ID: 1007A38-01

Client Sample ID: MW#3
Collection Date: 7/27/2010 11:50:00 AM
Date Received: 7/29/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2.0	1.0		µg/L	1	8/2/2010 3:14:42 PM
Toluene	1.7	1.0		µg/L	1	8/2/2010 3:14:42 PM
Ethylbenzene	34	1.0		µg/L	1	8/2/2010 3:14:42 PM
Xylenes, Total	80	2.0		µg/L	1	8/2/2010 3:14:42 PM
Surr: 4-Bromofluorobenzene	114	65.9-130		%REC	1	8/2/2010 3:14:42 PM

Qualifiers:

* Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
NC Non-Chlorinated
PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #188

Work Order: 1007A38

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

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R40133 Analysis Date: 7/30/2010 9:20:23 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	2.0

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R40133 Analysis Date: 7/30/2010 7:50:21 PM

Benzene	18.83	µg/L	1.0	20	0	94.2	87.9	121
Toluene	18.38	µg/L	1.0	20	0	91.9	83	124
Ethylbenzene	18.23	µg/L	1.0	20	0	91.2	81.7	122
Xylenes, Total	55.63	µg/L	2.0	60	0	92.7	85.6	121

Qualifiers:

E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded
 NC Non-Chlorinated
 R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

7/29/2010

Work Order Number **1007A38**

Received by: **AMG**

Checklist completed by:

Signature

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Number of preserved
bottles checked for
pH:

<2 >12 unless noted
below.

Container/Temp Blank temperature?

-1.2°

<6° C 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: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: October 29, 2010

SAMPLER: N J V

Filename: 10-29-10.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	104.08	86.47	17.61	22.05	-	-	-	-	-
2	99.36	86.36	13.00	17.50	-	-	-	-	-
3	101.59	86.16	15.43	21.90	1005	7.07	2,400	16.0	3.25
4	100.08	85.96	14.12	21.85	-	-	-	-	-
5	100.62	85.90	14.72	21.28	1050	7.30	2,600	16.2	3.25
6	101.01	86.23	14.78	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	10/28/10	0800

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".

Excellent recovery in MW # 3, fair in MW # 5. Collected samples for BTEX per US EPA Method 8021B from MW # 3 & # 5 only.

Top of casing MW # 1 ~ 1.90 ft., MW # 2 ~ @ grade, MW # 3 ~ 2.40 ft., MW # 4 ~ 2.25 ft., MW # 5 ~ 2.40 ft., MW # 6 ~ 2.30 ft. above grade.

on-site	9:30	temp.	44 F
off-site	11:00	temp.	54 F
sky cond.	Mostly sunny		
wind speed	0 - 10	direct.	E - ESE

Hall Environmental Analysis Laboratory, Inc.

Date: 10-Nov-10

CLIENT: Blagg Engineering
Project: GCU #188**Lab Order:** 1011101**Lab ID:** 1011101-01**Collection Date:** 10/29/2010 10:05:00 AM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	2.5	1.0		µg/L	1	11/8/2010 4:25:01 PM
Toluene	3.7	1.0		µg/L	1	11/8/2010 4:25:01 PM
Ethylbenzene	100	5.0		µg/L	5	11/9/2010 1:32:23 PM
Xylenes, Total	410	10		µg/L	5	11/9/2010 1:32:23 PM
Surr: 4-Bromofluorobenzene	91.1	76.4-106		%REC	1	11/8/2010 4:25:01 PM

Lab ID: 1011101-02**Collection Date:** 10/29/2010 10:50:00 AM**Client Sample ID:** MW #5**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/8/2010 4:51:30 PM
Toluene	ND	1.0		µg/L	1	11/8/2010 4:51:30 PM
Ethylbenzene	ND	1.0		µg/L	1	11/8/2010 4:51:30 PM
Xylenes, Total	ND	2.0		µg/L	1	11/8/2010 4:51:30 PM
Surr: 4-Bromofluorobenzene	103	76.4-106		%REC	1	11/8/2010 4:51:30 PM

Qualifiers: * Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

NC Non-Chlorinated

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

ND Not Detected at the Reporting Limit

Turn-Around Time: ☒ Standard ☐ Rush

Mailing Address: P. O. Box 87

phone #: BYD. NM 87413
(505) 632-1199

Email or Fax#:

DA/QC Package:

☐ Level 4 (Full Validation)

Accreditation

☐ Other

□ EDD (Type)

Date	Time	Matrix	Sample Request ID
------	------	--------	-------------------

1	10
---	----

WATER

water	MW #3
-------	-------

0501	61/62/c
------	---------

water

WATER	MW #	S

Time:	
Date:	

Relinquished by:

linquished by: *John V. J.*

ate:	Time:
------	-------

Relinquished by:

Date _____ Time _____

1

Received by: Michael Cowie Date: 11/2/16 Time: 10:30

Date	Time
------	------

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 1011101

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8280: Volatiles Short List											
Sample ID: 5ml-rb		MBLK									
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: b5		MBLK									
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-rb		MBLK									
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 lcs		LCS									
Benzene	20.74	µg/L	1.0	20	0	104	84.6	109			
Toluene	19.27	µg/L	1.0	20	0	96.3	81	114			
Sample ID: 100ng lcs2		LCS									
Benzene	19.45	µg/L	1.0	20	0	97.2	84.6	109			
Toluene	19.15	µg/L	1.0	20	0	95.8	81	114			
Sample ID: 100ng lcs		LCS									
Benzene	19.64	µg/L	1.0	20	0	98.2	84.6	109			
Toluene	18.36	µg/L	1.0	20	0	91.8	81	114			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

11/2/2010

Work Order Number **1011101**

Received by: **MMG**

Checklist completed by:

Michelle Garcia 11/2/10
Signature Date

Sample ID labels checked by:

Initials

[Handwritten Signature]

Matrix:

Carrier name: Priority US Mail

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 ☐	Number of preserved bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☒	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒	<2 >12 unless noted below.
Container/Temp Blank temperature?	0.8°	<6° C Acceptable		
		If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____