

**3R - 049**

**MONITORING  
REPORTS**

**01/30/2008**

FEB 02 2008

RECEIVED  
January 30, 2008

320049

**BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413  
Phone: (505)632-1199 Fax: (505)632-3903

Mr. Glenn Von Gonten, 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 (formerly Amoco Production Co.)**  
**Groundwater Monitoring Report**  
**State GC J # 1A, Unit F, Sec. 36, T30N, R9W, NMPM**  
**San Juan County, New Mexico**

**NMOCD Administrative/Environmental Order #: 3RP-49-0**

Dear Mr. Von Gonten:

BP America Production Company (**BP**) has retained Blagg Engineering, Inc. (**BEI**) to conduct environmental monitoring of groundwater at the State GC J # 1A.

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 Geologist, NMOCD District III Office, Aztec, NM  
Mr. Larry Schlotterback, Environmental Coordinator, BP, Farmington, NM (without lab report)

**RECEIVED**

**320049**

**FEB 02 2008**

01

**Oil Conservation Division  
Environmental Bureau**

**BP AMERICA PRODUCTION CO.**

**GROUNDWATER REMEDIATION REPORT**

**STATE GC J #1A  
(F) SECTION 36, T30N, R9W, NMPM  
SAN JUAN COUNTY, NEW MEXICO**

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

**JANUARY 2008**

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

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

# **BP AMERICA PRODUCTION COMPANY**

## **State GC J #1A**

### **Se/4 Nw/4, Sec. 36, T30N, R9W**

#### **Historical Information:**

Discovery of Potential Impacts:	May 1995 - Dehydrator Pit
Reclamation Procedures:	Excavation - May/June 1995 (Soils composted on location, then transferred to local landowner for crop enhancement) Passive Vent System - June 1995
Monitor Well Installation Dates:	July/August 2006, June 2007
Monitor Well Sampling Dates:	August & October 2006; July & October 2007

A potential groundwater impact due to a historical release at a dehydrator pit was discovered during pit closure work in May, 1995. Impacted soils (7,650 ± cubic yards) were excavated to a depth of approximately 35 feet below ground surface. Groundwater was encountered at the total depth of the excavation. All impacted soils that could be accessed were excavated and composted on site. During backfilling operations with clean soil, a passive vent system was installed to accelerate in-situ soil and groundwater remediation. Water sampled from within the pit excavation found elevated levels of benzene, toluene, ethyl-benzene, and total xylenes (BTEX) constituents in excess of New Mexico Water Quality Control Commission (NMWQCC) standards.

#### **Groundwater Monitor Well Sampling Procedures:**

Groundwater samples were collected from site monitor wells following US EPA: SW-846 protocol. After well development, samples were collected with new disposable bailers, placed into laboratory supplied containers with appropriate preservative and stored in an ice chest for express delivery to a qualified laboratory for testing. Analytical testing included BTEX by US EPA Method 8021B and general water chemistry.

Waste generated during monitor well sampling and development was disposed of utilizing the separator tank pit located on the well site.

#### **Groundwater Quality & Flow Direction Information:**

Monitor well sampling and testing has found BTEX constituents to be at non-detectable levels at stated laboratory limits or very low values. The general water chemistry parameters are below NMWQCC standards or statistically equivalent to background levels (utilizing MW #1 as background). Summary laboratory analytical results are included in the tables on the following pages.

Groundwater contour maps of relative water table elevations for all sample events are included (Figures 2 and 5). The general groundwater flow direction has been in a west to southwest direction. The present monitor well placement of MW #4 is positioned in the down-gradient direction from the source area.

#### **Summary and Recommendations:**

Potential hydrocarbon impacted soil at the dehydrator pit has been remediated via excavation and passive vent system. With the exception of groundwater samples collected during the soil remediation process, there is no indication of any remaining groundwater impact at the pit location. Analytical testing indicates that all site wells meet NMWQCC standards or are statistically equivalent to background for groundwater. Permanent site closure is recommended. Following approval by the NMOCD, site monitor wells will be abandoned pursuant to the approved BP Ground Water Management Plan.

# BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

STATE GC J # 1A

UNIT F, SEC. 36, T30N, R9W

REVISED DATE: October 24, 2007

FILENAME: ( J1A-4Q07.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
11-Aug-06	MW #1	35.49	40.65	4,864	4,300	7.07		ND	ND	ND	ND
07-Aug-06	MW #2	35.00	41.50	4,380	3,900	7.06		ND	ND	ND	4.1
28-Oct-06		35.09			4,300	7.17		ND	ND	ND	ND
21-Jul-07		34.30			3,400	6.95		ND	ND	ND	ND
10-Oct-07		35.07			3,700	6.87		ND	ND	ND	ND
11-Aug-06	MW #3	34.36	40.93	4,020	4,600	7.01		ND	ND	ND	ND
28-Oct-06		34.39			4,000	6.97		ND	ND	ND	ND
10-Oct-07		34.40			3,900	6.91		ND	ND	ND	ND
21-Jul-07	MW #4	34.38			3,500	6.96		ND	ND	ND	ND
10-Oct-07		35.02			4,000	6.91		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

# GENERAL WATER QUALITY

## BP AMERICA PRODUCTION COMPANY

### STATE GC J # 1A

Sample Date : August 7 , 2006

PARAMETERS	MW # 1	MW # 2	MW # 3	Units
LAB pH	7.25	7.31	7.10	s. u.
LAB CONDUCTIVITY @ 25 C	5,640	5,070	5,640	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	4,864	4,380	4,020	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	4,720	4,400	4,080	mg / L
SODIUM ABSORPTION RATIO	3.2	2.9	1.6	ratio
TOTAL ALKALINITY AS CaCO3	250	300	340	mg / L
TOTAL HARDNESS AS CaCO3	2,970	2,970	2,970	mg / L
BICARBONATE as HCO3	250	300	340	mg / L
CARBONATE AS CO3	< 0.1	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	< 0.01	< 0.01	< 0.01	mg / L
NITRITE NITROGEN	0.009	< 0.01	< 0.01	mg / L
CHLORIDE	17.3	24.9	13.8	mg / L
FLUORIDE	2.20	2.05	0.90	mg / L
PHOSPHATE	< 0.1	< 0.1	2.7	mg / L
SULFATE	3,110	2,850	2,620	mg / L
IRON	< 0.01	< 0.01	0.223	mg / L
CALCIUM	1,044	1,000	1,040	mg / L
MAGNESIUM	6.59	6.59	6.96	mg / L
POTASSIUM	4.70	3.95	< 0.1	mg / L
SODIUM	383	333	189	mg / L
CATION / ANION DIFFERENCE	0.05	0.05	0.08	

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80289</u> C.O.C. NO: <u>2937</u>
----------------------	--	---

FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>
LOCATION: NAME: <u>STATE GC</u> WELL #: <u>J1A</u> PIT: <u>DEHY</u>		DATE STARTED: <u>5/23/95</u> DATE FINISHED: _____
QUAD/UNIT: <u>F SEC:36 TWP:30N</u> RNG: <u>9W</u> PM: <u>NM</u> CNTY: <u>SJ</u> ST: <u>NM</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE: <u>SE 1/4 NW 1/4</u> CONTRACTOR: <u>P. VELASQUEZ</u>		

EXCAVATION APPROX. 60 FT. x 63 FT. x 37 FT. DEEP. CUBIC YARDAGE: 7650

DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: COMPOSTED

LAND USE: RANGE LEASE: \_\_\_\_\_ FORMATION: MV

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 95 FT. N80E FROM WELLHEAD.

DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOC RANKING SCORE: 0 NMOC TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

CHECK ONE:

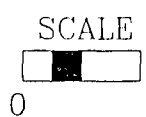
☐ PIT ABANDONED

☒ STEEL TANK INSTALLED

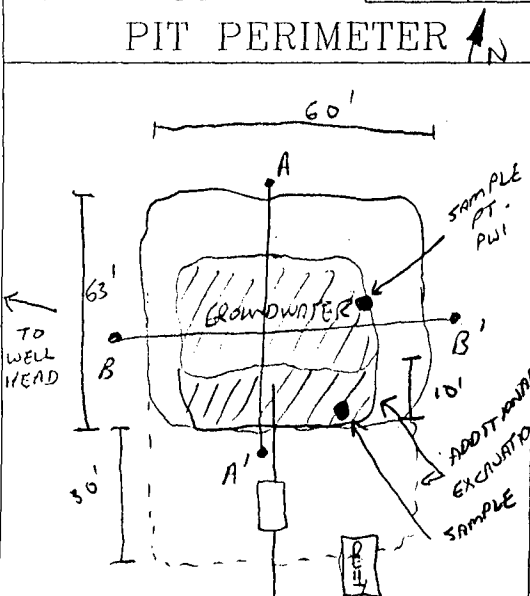
GROUNDWATER PUMPED & DISPOSED OF BY TRIPLE S. 10" PIPE TO BE INSTALLED FOR VENTING & GROUNDWATER MONITORING PURPOSES. SOE WALLS AFTER ADDITIONAL EXCAVATION INDICATED A UNIFORM THICKNESS THROUGHOUT THE PERIMETER OF APPROXIMATELY 3-4' THICKNESS ABOVE GROUNDWATER OF MED. LT. GRAY DISCOLORATION (PRESUMED ILC CONTAMINATION). DUE TO THE AMOUNT OF OVERBURDEN, EXCAVATION WAS TERMINATED.

CONDITIONAL

FIELD 418.1 CALCULATIONS



TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	ml. FREON	DILUTION	READING	CALC. ppm

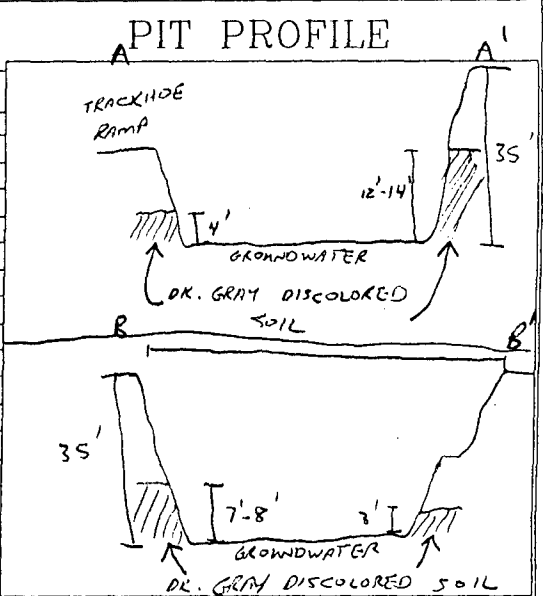


OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	
2	
3	
4	
5	

SAMPLE ID	ANALYSIS	TIME
PW166(35')	BTEX	1145
	<u>FAILED</u>	
PW166(35')	BTEX	1558
	<u>FAILED</u>	



TRAVEL NOTES: CALLOUT: 5/23/95 ONSITE: 5/23/95

OFF: (505) 325-8786



LAB: (505) 325-5667

**AROMATIC VOLATILE ORGANICS**

Attn: *Nelson Velez*  
Company: *Blagg Engineering, Inc.*  
Address: *P.O. Box 87*  
City, State: *Bloomfield, NM 87413*

Date: *5/23/95*  
Lab ID: *2937*  
Sample ID: *6479*  
Job No. *2-1000*

Project Name: *State GC J1A*  
Project Location: *PW1 @ GW ( 35' ) - Dehy. Pit*  
Sampled by: *NV* Date: *5/23/95*  
Analyzed by: *DC* Date: *5/23/95*  
Sample Matrix: *Water*

Time: *11:45*

**Aromatic Volatile Organics**

<b>Component</b>	<b>Measured Concentration ug/L</b>	<b>Detection Limit Concentration ug/L</b>
<i>Benzene</i>	<i>4,920</i>	<i>0.2</i>
<i>Toluene</i>	<i>11,149</i>	<i>0.2</i>
<i>Ethylbenzene</i>	<i>872</i>	<i>0.2</i>
<i>m,p-Xylene</i>	<i>8,485</i>	<i>0.2</i>
<i>o-Xylene</i>	<i>2,288</i>	<i>0.2</i>
	<i>TOTAL 27,714 ug/L</i>	

*ND - Not Detectable*

**Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography**

Approved by: *Daly*  
Date: *5/23/95*

**P. O. BOX 2606 • FARMINGTON, NM 87499**

**- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -**



OFF: (505) 325-8786



LAB: (505) 325-5667

**AROMATIC VOLATILE ORGANICS**

Attn: *Nelson Velez*  
Company: *Blagg Engineering*  
Address: *P.O. Box 87*  
City, State: *Bloomfield, NM 87413*

Date: *6/20/95*  
COC No.: *3101*  
Sample No. *6842*  
Job No. *2-1000*

Project Name: *State GC J1A*  
Project Location: *PW2 @ GW ( 35' )*  
Sampled by: *NV*  
Analyzed by: *DC*  
Type of Sample: *Water*

Date: *6/16/95* Time: *15:58*  
Date: *6/19/95*

**Aromatic Volatile Organics**

<i>Component</i>	<i>Measured Concentration ug/L</i>	<i>Detection Limit Concentration ug/L</i>
<i>Benzene</i>	<i>65.5</i>	<i>0.2</i>
<i>Toluene</i>	<i>4.0</i>	<i>0.2</i>
<i>Ethylbenzene</i>	<i>2.1</i>	<i>0.2</i>
<i>m,p-Xylene</i>	<i>340.0</i>	<i>0.2</i>
<i>o-Xylene</i>	<i>207.6</i>	<i>0.2</i>
	<i>TOTAL 619.3 ug/L</i>	

*ND - Not Detectable*


**Method -** *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: *Ja Gx*  
Date: *6/20/95*

P. O. BOX 2606 • FARMINGTON, NM 87499

— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

# CHAIN OF CUSTODY RECORD

**TECHNOLOGIES, LTD.** 

[illegible]

1. *Introduction*  
 2. *Background*  
 3. *Methodology*  
 4. *Results*  
 5. *Discussion*  
 6. *Conclusion*  
 7. *References*  
 8. *Appendix*  
 9. *Index*  
 10. *Table of Contents*  
 11. *Abstract*  
 12. *Summary*  
 13. *Key Words*  
 14. *Keywords*  
 15. *Subject Headings*  
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# CHAIN OF CUSTODY RECORD

1015

Date:

Page 7 of 7

657 W. Maple • P. O. Box 2606 • Farmington NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

80289

[illegible]

## OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 87505

September 19, 1995

HAND DELIVERED

Mr. B.D. Shaw  
Amoco Production Company  
200 Amoco Court  
Farmington, New Mexico 87401

RE: FINAL SAN JUAN BASIN PIT CLOSURE REPORTS

Dear Mr. Shaw:

The New Mexico Oil Conservation Division (OCD) has completed a review of Amoco Production Company's (Amoco) August 9, 1995 "AMOCO PRODUCTION COMPANY PIT CLOSURE VERIFICATIONS" which was submitted on behalf of Amoco by their consultant Blagg Engineering, Inc. This document contains "PIT REMEDIATION AND CLOSURE REPORTS" for 18 unlined pits in the San Juan Basin of Northwestern New Mexico.

The OCD's review of the above referenced document is addressed in the following sections:

A. The pit closure/soil remediation activities conducted at the sites listed below are approved as meeting the standards in effect at the time of closure.

1. L.C. Kelly #6 (Blow pit) located in Unit B, Sec. 11, T30N, R12W.
2. Bell Federal GC A#1E (Blow pit) located in Unit E, Sec. 12, T30N, R13W.
3. L.C. Kelly #6A (Separator pit) located in Unit D, Sec. 11, T30N, R12W.
4. Pan American Federal C#1E (Blow pit) located in Unit I, Sec. 19, T30N, R12W.
5. Taft GC #1 (Blow pit) located in Unit A, Sec. 14, T30N, R13W.
6. Pan American Federal C#2E (Blow pit) located in Unit D, Sec. 19, T30N, R12W.

- B. The soil excavation activities conducted at the sites listed below are satisfactory. However, according to the reports, onsite landfarming and/or composting actions are still continuing at the sites. Therefore, the OCD cannot issue final closure approval for these sites at this time. Please resubmit closure reports for these sites upon completion of the landfarming and/or composting activities. The final reports will include the results of the final soil remediation levels achieved and the disposition of the remediated soils.
1. L.C. Kelly #4 (Blow pit) located in Unit M, Sec. 03, T30N, R12W.
  2. L.C. Kelly #4 (Separator pit) located in Unit M, Sec. 03, T30N, R12W.
  3. L.C. Kelly #4 (Tank drain pit) located in Unit M, Sec. 03, T30N, R12W.
  4. L.C. Kelly #5 (Blow pit) located in Unit I, Sec. 03, T30N, R12W.
  5. L.C. Kelly #5 (Separator pit) located in Unit I, Sec. 03, T30N, R12W.
- C. The final soil remedial contaminant levels at the sites listed below are in excess of the recommended remediation levels as contained in the OCD's February 1993 "SURFACE IMPOUNDMENT CLOSURE GUIDELINES". Therefore, the OCD requests that Amoco submit a plan to address the remaining contamination at these sites. The plan will be submitted to the OCD Santa Fe Office by November 10, 1995 with a copy supplied to the OCD Aztec Office.
1. Federal GC E#1E (Separator pit) located in Unit I, Sec. 30, T30N, R12W.
  2. Federal GC D#1E (Blow pit) located in Unit I, Sec. 30, T30N, R12W.
  3. L.C. Kelly #6 (Drip Pit) located in Unit B, Sec. 11, T30N, R12W.
  4. L.C. Kelly #6A (Blow Pit) located in Unit D, Sec. 11, T30N, R12W.
  5. Pan American Federal C#2E (Separator pit) located in Unit D, Sec. 19, T30N, R12W.

Mr. B.D. Shaw  
September 19, 1995  
Page 3

D. Ground water at the sites listed below is contaminated with petroleum related constituents in excess of New Mexico Water Quality Control Commission ground water standards. Please submit a work plan to the OCD by November 10, 1995 for determining the extent of ground water contamination at the sites.

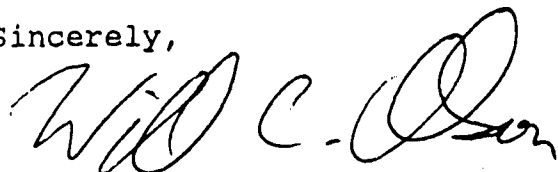
1. State GC J#1A (Dehydrator pit) located in Unit F, Sec. 36, T30N, R09W.
2. GCU #93E (Separator pit) located in Unit L, Sec. 36, T29N, R12W.

To simplify the approval process for both Amoco and OCD, the OCD requests that Amoco submit all future pit closure reports only upon completion of all closure activities including onsite landfarming or composting of contaminated soils. The results of final remediation levels achieved during landfarming or composting and the disposition of the remediated soils should be included in the report.

Please be advised that OCD approval does not relieve Amoco of liability if, in the future, remaining contaminants are found to pose a threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve Amoco of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,



William C. Olson  
Hydrogeologist  
Environmental Bureau

cc: ~~Environmental Bureau Office~~

Ray Powell, NM State Land Commissioner  
Michael J. Pool, BLM Farmington District Manager

# FIGURE 1



RIVER FLOW  
DIRECTION

TO SAN  
JUAN R.

SECURITY FENCE

SECURITY FENCE

FENCE

PROD.  
TANK

TANK  
PIT

SEP

COMPR.

BERM

MW #1

AREA EXCAVATED  
IN MAY-JUNE, 1995  
(60 ft. X 93 ft. X 37 ft.)

MW #3

WELL  
HEAD

MW #2

1 INCH = 30 FT.

0 30 60 FT.

EXPOSED  
GROUNDWATER  
IN MAY-JUNE, 1995

METER  
RUN

SECURITY FENCE

GATE ENTRANCE

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.  
STATE GC J # 1A  
SE 1/4 NW 1/4 SEC. 36, T30N, R9W  
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.  
CONSULTING PETROLEUM / RECLAMATION SERVICES  
P.O. BOX 87  
BLOOMFIELD, NEW MEXICO 87413  
PHONE: (505) 632-1195

PROJECT: MW INSTALLATION  
DRAWN BY: NJV  
FILENAME: STATE GC J 1A-SM.SKF  
DRAFTED: 08-10-06 NJV

**SITE  
MAP**  
08/06

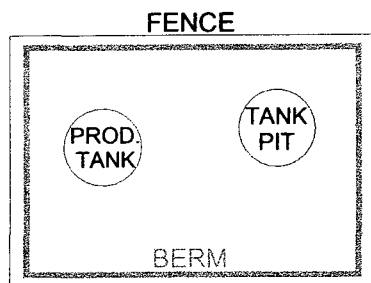
**FIGURE 2**  
**(3rd 1/4, 2006)**



← RIVER FLOW  
DIRECTION

↑ TO SAN  
JUAN R.

SECURITY FENCE



SEP

COMPR.

SECURITY FENCE

MW #1  
(67.70)

67.65

AREA EXCAVATED  
IN MAY-JUNE, 1995  
(60 ft. X 93 ft. X 37 ft.)

67.60

67.55

MW #3  
(67.51)

APPARENT  
GROUNDWATER  
FLOW DIRECTION  
~S68W

~S73.75W

MW #2  
(67.63)

⊕ WELL  
HEAD

METER  
RUN

EXPOSED  
GROUNDWATER  
IN MAY-JUNE, 1995

GATE ENTRANCE

SECURITY FENCE

1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(103.19)
MW #2	(102.63)
MW #3	(101.87)
⊕ MW #1	Groundwater Elevation as of 8/7/06.
(90.65)	

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.  
STATE GC J # 1A  
SE/4 NW/4 SEC. 36, T30N, R9W  
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: 08-07-06-GW.SKF  
DRAFTED: 08-10-06 NJV

GROUNDWATER  
GRADIENT  
MAP  
08/06



**FIGURE 3**  
**(4th 1/4, 2006)**

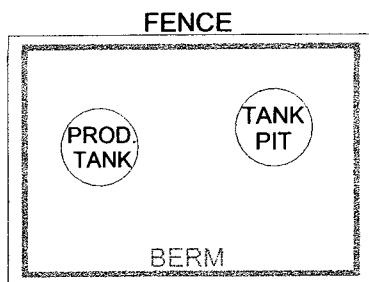


RIVER FLOW  
DIRECTION

TO SAN  
JUAN R.

SECURITY FENCE

SECURITY FENCE



SEP

COMPR.

MW #1  
(67.66)

67.60

AREA EXCAVATED  
IN MAY-JUNE, 1995  
(60 ft. X 93 ft. X 37 ft.)

~S49.5W

67.55

67.50

MW #3  
(67.48)

APPARENT  
GROUNDWATER  
FLOW DIRECTION  
~S39.5W

WELL  
HEAD

MW #2  
(67.54)

METER  
RUN

EXPOSED  
GROUNDWATER  
IN MAY-JUNE, 1995

SECURITY FENCE

GATE ENTRANCE

1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(103.19)
MW #2	(102.63)
MW #3	(101.87)
MW #1 (67.66)	Groundwater Elevation as of 10/28/06.

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.  
STATE GC J # 1A  
SE 1/4 NW 1/4 SEC. 36, T30N, R9W  
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: 10-28-06-GW.SKF  
REVISED: 10-28-06 NJV

GROUNDWATER  
GRADIENT  
MAP  
10/06

**FIGURE 4**  
(3rd 1/4, 2007)



RIVER FLOW  
DIRECTION

TO SAN  
JUAN R.

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.

SECURITY FENCE

FENCE

PROD.  
TANK

TANK  
PIT

SEP

COMPR.

BERM

SECURITY FENCE

MW #1  
(68.34)

AREA EXCAVATED  
IN MAY-JUNE, 1995  
(60 ft. X 93 ft. X 37 ft.)

MW #2  
(68.27)

METER  
RUN

GATE ENTRANCE

1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(103.19)
MW #2	(102.57)
MW #3	(101.87)
MW #4	(102.45)
MW #1 (68.34)	Groundwater Elevation as of 7/21/07.

MW #3  
(68.08)

APPARENT  
GROUNDWATER  
FLOW DIRECTION  
~N88.75W

WELL  
HEAD

EXPOSED  
GROUNDWATER  
IN MAY-JUNE, 1995

MW #4  
(68.07)

SECURITY FENCE

BP AMERICA PRODUCTION CO  
STATE GC J # 1A  
SE 1/4 NW 1/4 SEC. 36, T30N, R9W  
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: 07-21-07-GW.SKF  
REVISED: 07-21-07 NJV

GROUNDWATER  
CONTOUR  
MAP  
07/07

**FIGURE 5**  
**(4TH 1/4, 2007)**



RIVER FLOW  
DIRECTION

TO SAN  
JUAN R.

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.

SECURITY FENCE

FENCE

PROD.  
TANK

TANK  
PIT

SEP

BERM

COMPR.

SECURITY FENCE

MW #1  
(67.58)

67.55

~S34W

67.50

MW #3  
(67.47)

~S34W

WELL  
HEAD

67.45

APPARENT  
GROUNDWATER  
FLOW DIRECTION  
~S50.25W

AREA EXCAVATED  
IN MAY-JUNE, 1995  
(60 ft. X 93 ft. X 37 ft.)

EXPOSED  
GROUNDWATER  
IN MAY-JUNE, 1995

MW #2  
(67.50)

METER  
RUN

GATE ENTRANCE

MW #4  
(67.43)

1 INCH = 30 FT.

0 30 60 FT.

BP AMERICA PRODUCTION CO.  
STATE GC J # 1A  
SE/4 NW/4 SEC. 36, T30N, R9W  
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING  
DRAWN BY: NJV  
FILENAME: 10-10-07-GW.SKF  
REVISED: 10-10-07 NJV

GROUNDWATER  
CONTOUR  
MAP  
10/07

# BLAGG ENGINEERING, Inc.

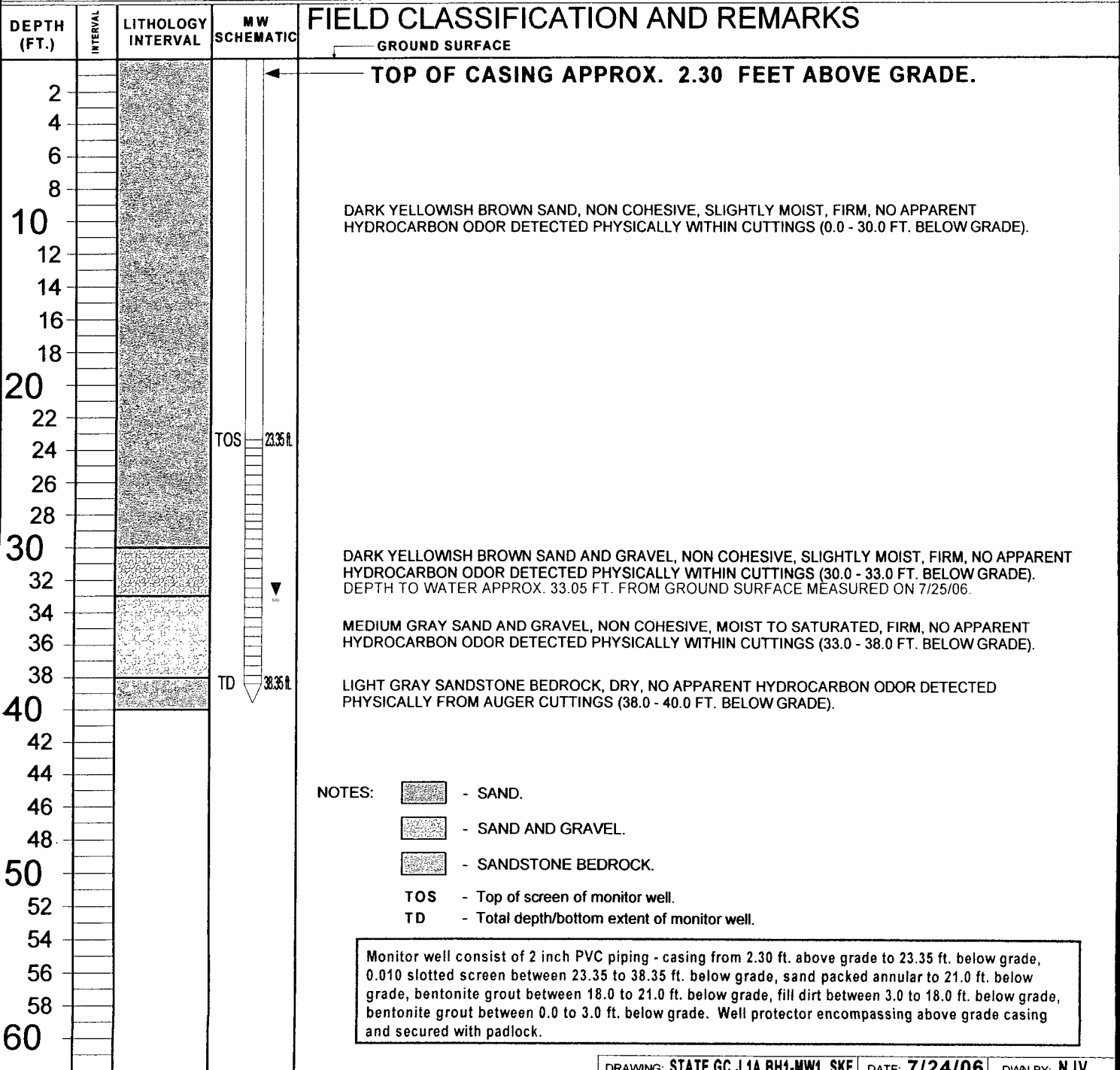
P.O. BOX 87  
BLOOMFIELD, NM 87413  
(505) 632-1199

## MW #1

### BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**  
LOCATION NAME: **STATE GC J #1A DEHY. PIT UNIT F, SEC. 36, T30N, R9W**  
CONTRACTOR: **BLAGG ENGINEERING, INC. / ENVIROTECH, INC.**  
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75) W/ TUBEX SYSTEM**  
BORING LOCATION: **147 FEET, N48E FROM WELL HEAD.**

BORING #..... **BH - 1**  
MW #..... **1**  
PAGE #..... **1**  
DATE STARTED **7/24/06**  
DATE FINISHED **7/25/06**  
OPERATOR..... **KP**  
PREPARED BY **NJV**



# BLAGG ENGINEERING, Inc.

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

## MW #2

### BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**  
LOCATION NAME: **STATE GC J #1A DEHY. PIT UNIT F, SEC. 36. T30N, R9W**  
CONTRACTOR: **BLAGG ENGINEERING, INC. / ENVIROTECH, INC.**  
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75) W/ TUBEX SYSTEM**  
BORING LOCATION: **95 FEET, N80E FROM WELL HEAD.**

BORING #..... **BH - 3**  
MW #..... **2**  
PAGE #..... **2**  
DATE STARTED **8/1/06**  
DATE FINISHED **8/1/06**  
OPERATOR..... **KP**  
PREPARED BY **NJV**

DEPTH (FT.)  
INTERVAL  
LITHOLOGY  
INTERVAL  
MW  
SCHEMATIC

### FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE




TOP OF CASING APPROX. 3.00 FEET ABOVE GRADE.

MODERATE TO DARK YELLOWISH BROWN SAND (FILL MATERIAL), NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 30.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 33.93 FT. FROM GROUND SURFACE MEASURED ON 8/1/06.

DARK TO GRAYISH BLACK SAND AND GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM, APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (30.0 - 37.0 FT. BELOW GRADE).

GRAYISH ORANGE SANDSTONE BEDROCK, DRY, SLIGHTLY FRIABLE TO COMPETENT, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY FROM AUGER CUTTINGS (37.0 - 40.0 FT. BELOW GRADE).

NOTES:  - SAND.  
 - SAND AND GRAVEL.  
 - SANDSTONE BEDROCK.

TOS - Top of screen of monitor well.  
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 3.00 ft. above grade to 28.50 ft. below grade, 0.010 slotted screen between 28.50 to 38.50 ft. below grade, sand packed annular to 26.0 ft. below grade, bentonite grout between 23.0 to 26.0 ft. below grade, fill dirt between 3.0 to 23.0 ft. below grade, bentonite grout between 0.0 to 3.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

# BLAGG ENGINEERING, Inc.

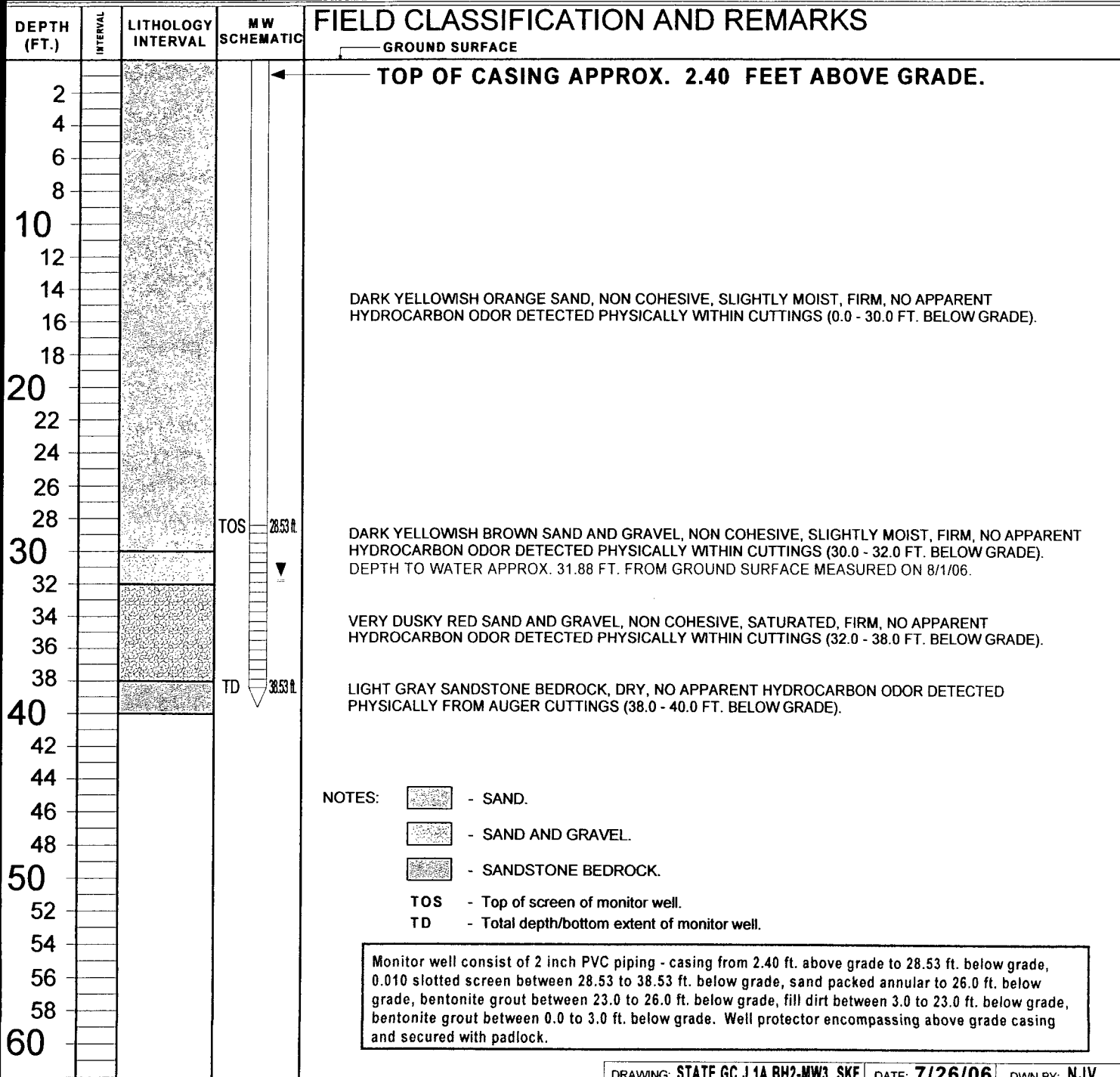
P.O. BOX 87  
BLOOMFIELD, NM 87413  
(505) 632-1199

## MW #3

## BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**  
LOCATION NAME: **STATE GC J#1A DEHY. PIT UNIT F, SEC. 36, T30N, R9W**  
CONTRACTOR: **BLAGG ENGINEERING, INC. / ENVIROTECH, INC.**  
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75) W/ TUBEX SYSTEM**  
BORING LOCATION: **53 FEET, N11.5W FROM WELL HEAD.**

BORING #..... **BH - 2**  
MW #..... **3**  
PAGE #..... **3**  
DATE STARTED **7/25/06**  
DATE FINISHED **7/26/06**  
OPERATOR..... **KP**  
PREPARED BY **NJV**



# BLAGG ENGINEERING, Inc.

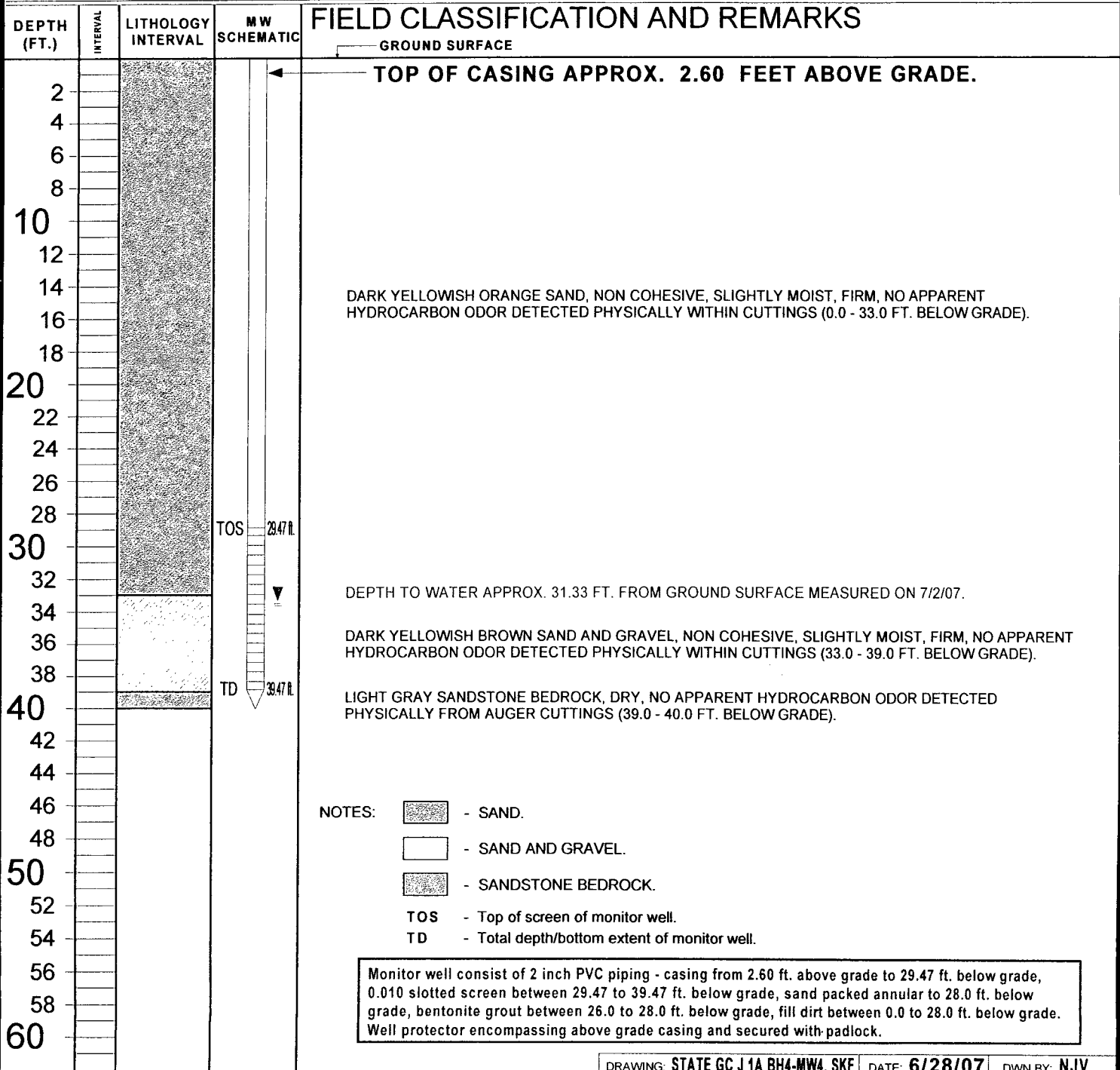
P.O. BOX 87  
BLOOMFIELD, NM 87413  
(505) 632-1199

## MW #4

### BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**  
LOCATION NAME: **STATE GC J #1A DEHY. PIT UNIT F, SEC. 36, T30N, R9W**  
CONTRACTOR: **BLAGG ENGINEERING, INC. / ENVIROTECH, INC.**  
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75) W/ TUBEX SYSTEM**  
BORING LOCATION: **FEET, FROM WELL HEAD.**

BORING #..... **BH - 4**  
MW #..... **4**  
PAGE #..... **4**  
DATE STARTED **6/28/07**  
DATE FINISHED **6/28/07**  
OPERATOR..... **DP**  
PREPARED BY **NJV**



# BLAGG ENGINEERING, INC.

## MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A & 14667

STATE GC J # 1A

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT F, SEC. 36, T30N, R9W

ENVIROTECH, INC.

Date : August 7, 2006

SAMPLER : N J V

Filename : 08-07-06.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.)
1	103.19	67.70	35.49	40.65	0905	7.07	4,300	21.7	2.50
2	102.63	67.63	35.00	41.50	1030	7.06	3,900	20.5	3.25
3	101.87	67.51	34.36	40.93	0950	7.01	4,600	20.5	3.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
08/07/06	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 ".

Excellent recovery in all MW 's . Collected BTEX & major anions / cations from all MW 's .

Top of casing MW # 1 ~ 2.30 ft. , MW # 2 ~ 3.00 ft. , MW # 3 ~ 2.40 ft. above grade.



**Hall Environmental Analysis Laboratory, Inc.**

Date: 22-Aug-06

**CLIENT:** Blagg Engineering  
**Project:** STATE GC J #1A**Lab Order:** 0608165**Lab ID:** 0608165-01**Collection Date:** 8/11/2006 7:15:00 AM**Client Sample ID:** MW #1**Matrix:** AQUEOUS

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

**EPA METHOD 8021B: VOLATILES**

Analyst: NSB

Benzene	ND	1.0		µg/L	1	8/16/2006 1:45:03 PM
Toluene	ND	1.0		µg/L	1	8/16/2006 1:45:03 PM
Ethylbenzene	ND	1.0		µg/L	1	8/16/2006 1:45:03 PM
Xylenes, Total	ND	3.0		µg/L	1	8/16/2006 1:45:03 PM
Surr: 4-Bromofluorobenzene	106	72.2-125		%REC	1	8/16/2006 1:45:03 PM

**Lab ID:** 0608165-02**Collection Date:** 8/11/2006 7:35:00 AM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

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

**EPA METHOD 8021B: VOLATILES**

Analyst: NSB

Benzene	ND	1.0		µg/L	1	8/16/2006 2:14:04 PM
Toluene	ND	1.0		µg/L	1	8/16/2006 2:14:04 PM
Ethylbenzene	ND	1.0		µg/L	1	8/16/2006 2:14:04 PM
Xylenes, Total	ND	3.0		µg/L	1	8/16/2006 2:14:04 PM
Surr: 4-Bromofluorobenzene	109	72.2-125		%REC	1	8/16/2006 2:14:04 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

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Aug-06

CLIENT: Blagg Engineering  
Lab Order: 0608110  
Project: STATE GC J #1A  
Lab ID: 0608110-01

Client Sample ID: MW #2  
Collection Date: 8/7/2006 10:30:00 AM  
Date Received: 8/9/2006  
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	1.0		µg/L	1	8/12/2006 6:29:51 AM
Toluene	ND	1.0		µg/L	1	8/12/2006 6:29:51 AM
Ethylbenzene	ND	1.0		µg/L	1	8/12/2006 6:29:51 AM
Xylenes, Total	4.1	3.0		µg/L	1	8/12/2006 6:29:51 AM
Surr: 4-Bromofluorobenzene	96.4	72.2-125		%REC	1	8/12/2006 6:29:51 AM

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

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

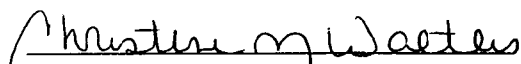
## CATION / ANION ANALYSIS

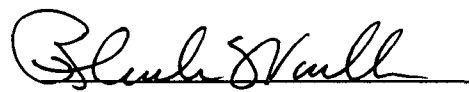
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #1	Date Reported:	08-08-06
Laboratory Number:	38074	Date Sampled:	08-07-06
Chain of Custody:	14667	Date Received:	08-07-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-08-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	7.25	s.u.		
Conductivity @ 25° C	5,640	umhos/cm		
Total Dissolved Solids @ 180C	4,864	mg/L		
Total Dissolved Solids (Calc)	4,720	mg/L		
SAR	3.2	ratio		
Total Alkalinity as CaCO3	250	mg/L		
Total Hardness as CaCO3	2,970	mg/L		
Bicarbonate as HCO3	250	mg/L	4.10	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	<0.01	mg/L	0.00	meq/L
Nitrite Nitrogen	0.009	mg/L	0.00	meq/L
Chloride	17.3	mg/L	0.49	meq/L
Fluoride	2.20	mg/L	0.12	meq/L
Phosphate	<0.1	mg/L	0.00	meq/L
Sulfate	3,110	mg/L	64.75	meq/L
Iron	<0.01	mg/L	0.00	meq/L
Calcium	1,044	mg/L	52.10	meq/L
Magnesium	6.59	mg/L	0.54	meq/L
Potassium	4.70	mg/L	0.12	meq/L
Sodium	383	mg/L	16.66	meq/L
Cations			69.42	meq/L
Anions			69.45	meq/L
Cation/Anion Difference			0.05%	

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

Comments: **State GC J #1A Grab Sample.**

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

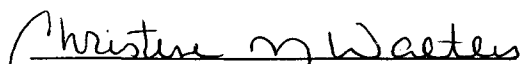
Client: Blagg / BP  
Sample ID: MW #2  
Laboratory Number: 38075  
Chain of Custody: 14667  
Sample Matrix: Water  
Preservative: Cool  
Condition: Cool & Intact


Project #: 94034-010  
Date Reported: 08-08-06  
Date Sampled: 08-07-06  
Date Received: 08-07-06  
Date Extracted: N/A  
Date Analyzed: 08-08-06

Parameter	Analytical Result	Units		
pH	7.31	s.u.		
Conductivity @ 25° C	5,070	umhos/cm		
Total Dissolved Solids @ 180C	4,380	mg/L		
Total Dissolved Solids (Calc)	4,400	mg/L		
SAR	2.9	ratio		
Total Alkalinity as CaCO3	300	mg/L		
Total Hardness as CaCO3	2,970	mg/L		
Bicarbonate as HCO3	300	mg/L	4.92	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	<0.01	mg/L	0.00	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	24.9	mg/L	0.70	meq/L
Fluoride	2.05	mg/L	0.11	meq/L
Phosphate	<0.1	mg/L	0.00	meq/L
Sulfate	2,850	mg/L	59.34	meq/L
Iron	<0.01	mg/L	0.00	meq/L
Calcium	1,000	mg/L	49.90	meq/L
Magnesium	6.59	mg/L	0.54	meq/L
Potassium	3.95	mg/L	0.10	meq/L
Sodium	333	mg/L	14.49	meq/L
Cations			65.03	meq/L
Anions			65.06	meq/L
Cation/Anion Difference			0.05%	

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

Comments: **State GC J #1A Grab Sample.**

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

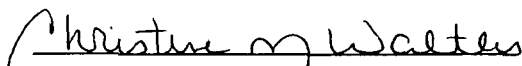
Client: Blagg / BP  
Sample ID: MW #3  
Laboratory Number: 38076  
Chain of Custody: 14667  
Sample Matrix: Water  
Preservative: Cool  
Condition: Cool & Intact

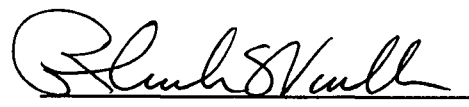
Project #: 94034-010  
Date Reported: 08-08-06  
Date Sampled: 08-07-06  
Date Received: 08-07-06  
Date Extracted: N/A  
Date Analyzed: 08-08-06

Parameter	Analytical Result	Units		
pH	7.10	s.u.		
Conductivity @ 25° C	5,640	umhos/cm		
Total Dissolved Solids @ 180C	4,020	mg/L		
Total Dissolved Solids (Calc)	4,080	mg/L		
SAR	1.6	ratio		
Total Alkalinity as CaCO3	340	mg/L		
Total Hardness as CaCO3	2,970	mg/L		
Bicarbonate as HCO3	340	mg/L	5.57	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	<0.01	mg/L	0.00	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	13.8	mg/L	0.39	meq/L
Fluoride	0.90	mg/L	0.05	meq/L
Phosphate	2.7	mg/L	0.09	meq/L
Sulfate	2,620	mg/L	54.55	meq/L
Iron	0.223	mg/L	0.01	meq/L
Calcium	1,040	mg/L	51.90	meq/L
Magnesium	6.96	mg/L	0.57	meq/L
Potassium	<0.1	mg/L	0.00	meq/L
Sodium	189	mg/L	8.22	meq/L
Cations			60.69	meq/L
Anions			60.64	meq/L
Cation/Anion Difference			0.08%	

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

Comments: **State GC J #1A Grab Sample.**

  
Analyst

  
Review



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## 2. ORDERS

2.1 The customer may order services by submitting a written purchase order to HEAL, by placing a telephone order, which will be subsequently confirmed in writing, or by negotiated contract. Any such order constitutes a) an acceptance by the Customer of HEAL'S offer to do business with the Customer under these Terms and Conditions, and b) an agreement to be bound by these Terms and Conditions. The Customer's delivery of samples to HEAL constitutes the Customer's express assent to be governed by these Terms and Conditions. HEAL reserves the right to refuse to proceed with work at any time based upon an unfavorable customer credit report.

2.2 Any order placed by the Customer under Section 2.1 is subject to a minimum cancellation charge of \$250.

## 3. PAYMENT TERMS

3.1 Services performed by HEAL will be in accordance with prices quoted and later confirmed in writing or as stated on the Price Schedule, which prices are subject to change periodically without notice. The Customer must confirm with HEAL the current price prior to placing an order for work.

3.2 Payment terms are net 30 days from the date of invoice by HEAL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) per month or portion thereof from the due date until the date of payment. All payments shall be made in United States currency.

3.3 The prices stated on the Price Schedule do not include any sales, use or other taxes unless specifically stated. Such taxes will be added to invoice prices when required.

## 4. RECEIPT OF SAMPLES AND DELIVERY OF SERVICES

4.1 Prior to HEAL'S Acceptance of any sample (or after any revocation of Acceptance), the entire risk of loss or damage to such sample will remain with the Customer. In no event will HEAL have any responsibility or liability for the action or inaction of HEAL'S carrier shipping or delivering any sample to or from HEAL'S premises.

4.2 HEAL reserves the absolute right, exercisable at any time to refuse delivery of, refuse to accept, or revoke Acceptance of, any sample which in the sole judgement of HEAL, a) is of unsuitable volume, b) unsuitable containers as required for the requested analysis, or c) may be or become unsuitable for, or may pose a risk in, handling, transport or processing for any health, safety, environmental or other reason, whether or not due to the presence in the sample of any hazardous substance and whether or not such presence has been disclosed to HEAL by the Customer.

4.3 Where applicable, HEAL will use analytical methodologies which are in substantial conformity with U.S. Environmental Protection Agency (EPA), state agency, American Society for Testing and Materials (ASTM), Association of Official Analytical Chemists (AOAC), Standard Methods for the examination of Water and Wastewater, or other recognized methodologies. HEAL reserves the right to deviate from these

methodologies, if necessary or appropriate due to the nature of composition of the sample or otherwise based on the reasonable judgement of HEAL, which deviation, if any will be made on a basis consistent with recognized standards of industry and/or HEAL'S Standard Operating Procedures.

4.4 Upon timely delivery of samples, HEAL will use its best efforts to comply with storage, processing and analytical holding time limits as set forth in applicable EPA or state guidelines or otherwise requested by the Customer or set forth on the Price Schedule. However, unless specifically made part of a written agreement between HEAL and the Customer, such time limits cannot be guaranteed. Unless specifically indicated on the Price Schedule or expressly made part of a written agreement between HEAL and the Customer, analytical turnaround times are not guaranteed.

4.5 At HEAL'S sole discretion, verbal Results may be given in advance of the written report of Results. Such verbal Results are TENTATIVE RESULTS ONLY, subject to confirmation or change based on HEAL'S standard quality assurance review procedures.

## 5. WARRANTIES, LIABILITY AND INDEMNIFICATION

5.1 HEAL warrants only that its services will fulfill obligations set forth in Section 4.3 and 4.4 hereof. This warranty is the sole and exclusive warranty given by HEAL in connection with any such services, and HEAL gives and makes no other representation or warranty of any kind, express or implied. No representative of HEAL is authorized to give or make any other representation or warranty or modify the warranty in any way.

The liability and obligations of HEAL, and the remedies of the Customer in connection with any services performed by HEAL will be limited to repeating the services performed or, at the sole option of HEAL, refunding in full or in part fees paid by the Customer for such services. HEAL'S obligation to repeat any services with respect to any sample will be contingent on the Customer's providing, at the request of HEAL, and at the Customer's expense, an additional sample if necessary. Any analysis generating Results consistent with the Original Results will be at the Customer's expense. Except as otherwise specifically provided herein, HEAL shall have no liability, obligation or responsibility of any kind for any losses, costs, expenses, or other damages (including but not limited to any special, indirect, incidental or consequential damages) for any representation or warranty of a kind with respect to HEAL'S Services or Results.

In no event shall HEAL have any responsibility or liability to the Customer for any failure or delay in performance by HEAL, which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of HEAL. Such cause and circumstance shall include, but not be limited to, acts of God, acts of Customer, acts of orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disputes, difficulties or delays in transportation, mail or delivery services, inability to obtain from HEAL usual sources sufficient services or supplies, or any other cause beyond HEAL'S reasonable control.

5.4 All results provided by HEAL are strictly for the use of its Customers, and HEAL is in no way responsible for the use of such results by Customers or third parties. All results should be considered in their entirety, and HEAL is in no way responsible for the separation, detachment, or other use of any portion of the results.

5.5 The customer represents and warrants that any sample delivered to HEAL will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by the customer. The Customer further warrants that any sample containing any hazardous substance, which is to be delivered to HEAL'S premises will be packaged, labeled, transported and delivered properly and in accordance with applicable laws.

5.6 It is understood and agreed that all samples and cuttings of materials containing hazardous contaminants are the property and the responsibility of the Customer. All contaminated samples and laboratory byproducts will be returned to the Customer for disposal. It is understood and agreed that HEAL is not, and has no responsibility as, a generator, treater, store, or disposer of hazardous or toxic substances found or identified at a site, and the Customer agrees to assume the responsibility for the foregoing.

5.7 The Customer shall indemnify and hold harmless HEAL from and against any and all claims, suits, judgments, damages, losses, liabilities, expenses, payments, taxes, duties, fines and/or other costs (including but not limited to liability to a third party) arising out of a) the presence of hazardous substances in any sample of the Customer regardless of the Customer's compliance with paragraph 5.5 hereof b) accidents occurring during the transport of any sample of the Customer, c) events control, or d) negligence by the Customer in the use, evaluation, or application of Results provided by HEAL.

5.8 Should any Customer sample, due to its matrix or constituents of its matrix, cause the operations of any HEAL instrumentation to be reduced, stopped, or altered, HEAL is entitled to compensation by the Customer for any loss of revenue due to the instrument's downtime, and/or the parts and labor necessary to bring the instrument's back to its former operating condition. The amount of compensation is negotiable upon acceptance of these Terms and Conditions and the individual circumstances warranting the reimbursement.

## 6. ENTIRE AGREEMENT; SEVERABILITY

6.1 These Terms and Conditions, together with any additions or revisions which may be agreed to in writing by HEAL, as provided in Section 7.1, embodied the whole agreement of the parties. There are no promises, terms, conditions, understandings, obligations or agreements other than those contained herein, unless made in accordance with Section 7.1, and these Terms and Conditions shall supersede all previous communications, representations, or agreements, either verbal or written, between the Customer and HEAL. HEAL specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Customer to HEAL.

6.2 The invalidity or unenforceability, in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions, the intent of the parties being that the provisions be severable.

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7.2 No waiver by HEAL of any provision, term or condition hereof or of any breach by or obligation of the Customer hereunder shall constitute a waiver of such provision, term or condition on any other occasion or a waiver of any other breach by or obligation of the Customer.

## 8. SAMPLE STORAGE

8.1 Bulk samples will be retained for thirty (30) days after the analytical report has been issued unless alternate arrangements have been made in advance. Storage of samples or extracts for longer periods is by request only. Sample storage charges depend upon storage requirements and duration. Normally, a sample storage fee of \$5.00 per sample per month will be billed monthly unless other arrangements are made. If requested, unused sample material may be returned at the client's expense. Materials which are identified as hazardous, will be returned to the client or disposed of as hazardous waste and billed at the rate of \$25.00 per sample. HEAL reserves the right to return all dioxin/dibenzodioxins/dibenzofurans to the client.

## 9. SECTION HEADING

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## 10. GOVERNING LAW

10.1 These Terms and Conditions, and transaction or agreement, to which they apply, shall be governed both as to interpretation and performance by the laws of the State of New Mexico.





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14667

# ENVIROTECH INC.

5796 U.S. Highway 64  
Farmington, New Mexico 87401  
(505) 632-0615

## QA/QC SUMMARY REPORT

Client: Blagg Engineering  
 Project: STATE GC J #1A

Work Order: 0608110

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

Method: SW8021

Sample ID: 5ML RB-III

MBLK

Batch ID: R20262 Analysis Date: 8/12/2006 2:03:56 AM

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

Sample ID: 100NG BTEX LCS-III

LCS

Batch ID: R20262 Analysis Date: 8/12/2006 7:56:33 AM

Benzene	17.99	µg/L	1.0	90.0	85	115
Toluene	18.42	µg/L	1.0	92.1	85	118
Ethylbenzene	19.03	µg/L	1.0	95.1	85	116
Xylenes, Total	59.71	µg/L	3.0	97.3	85	119

Sample ID: 100NG BTEX LCSD-I

LCSD

Batch ID: R20262 Analysis Date: 8/12/2006 8:47:53 AM

Benzene	18.22	µg/L	1.0	91.1	85	115	1.25	27
Toluene	17.82	µg/L	1.0	89.1	85	118	3.31	19
Ethylbenzene	18.94	µg/L	1.0	94.7	85	116	0.453	10
Xylenes, Total	58.76	µg/L	3.0	95.7	85	119	1.62	13

## Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

8/9/2006

Work Order Number 0608110

Received by

NJM

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?

14°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

## QA/QC SUMMARY REPORT

Client: Blagg Engineering  
Project: STATE GC J #1A

Work Order: 0608165

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

Method: SW8021

Sample ID: B MBLK Batch ID: R20310 Analysis Date: 8/16/2006 10:48:28 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: R20310 Analysis Date: 8/16/2006 7:12:02 PM

Benzene	18.87	µg/L	1.0	94.3	85	115
Toluene	19.11	µg/L	1.0	91.8	85	118
Ethylbenzene	20.35	µg/L	1.0	102	85	116
Xylenes, Total	63.16	µg/L	3.0	103	85	119

## Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

8/11/2006

Work Order Number 0608165

Received by GLS

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

# BLAGG ENGINEERING, INC.

## MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

STATE GC J # 1A

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT F, SEC. 36, T30N, R9W

Date : October 28, 2006

SAMPLER : N J V

Filename : 10-28-06.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.)
1	103.19	67.66	35.53	40.65	-	-	-	-	-
2	102.63	67.54	35.09	41.50	0930	7.17	4,300	13.4	3.25
3	101.87	67.48	34.39	40.93	1000	6.97	4,000	14.1	3.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

10/27/06 0845

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 both MW's . Collected BTEX from MW's # 2 & # 3 only .

Top of casing MW # 1 ~ 2.30 ft. , MW # 2 ~ 3.00 ft. , MW # 3 ~ 2.40 ft. above grade.

**Hall Environmental Analysis Laboratory, Inc.**

Date: 03-Nov-06

**CLIENT:** Blagg Engineering  
**Project:** State GC J #1A**Lab Order:** 0610364**Lab ID:** 0610364-01**Collection Date:** 10/28/2006 9:30:00 AM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

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

Analyst: NSB

Benzene	ND	1.0		µg/L	1	11/2/2006 1:39:54 PM
Toluene	ND	1.0		µg/L	1	11/2/2006 1:39:54 PM
Ethylbenzene	ND	1.0		µg/L	1	11/2/2006 1:39:54 PM
Xylenes, Total	ND	3.0		µg/L	1	11/2/2006 1:39:54 PM
Surr: 4-Bromofluorobenzene	84.9	72.2-125		%REC	1	11/2/2006 1:39:54 PM

**Lab ID:** 0610364-02**Collection Date:** 10/28/2006 10:00:00 AM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

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

Analyst: NSB

Benzene	ND	1.0		µg/L	1	11/2/2006 2:10:07 PM
Toluene	ND	1.0		µg/L	1	11/2/2006 2:10:07 PM
Ethylbenzene	ND	1.0		µg/L	1	11/2/2006 2:10:07 PM
Xylenes, Total	ND	3.0		µg/L	1	11/2/2006 2:10:07 PM
Surr: 4-Bromofluorobenzene	81.8	72.2-125		%REC	1	11/2/2006 2:10:07 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



# CHAIN-OF-CUSTODY RECORD

Client: BAGG ENTER. / BP AMERICA

Project Name: STATE GC J # 1A

Address: P.O. BOX 87

Project #:

B.F.D. NWA 87413

Project Manager:

NV

Phone #:

632-1199

Sampler:

NV

Fax #:

Sample Temperature:

Date

Time

Matrix

Sample I.D. No.

Number/Volume

Preservative

HEAL No.

(BTEX) + MTBE + TMB's (80218)

BTEX + MTBE + TPH (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

10/28/06 0930

WATER

MW # 2

2-40 ml

✓

-1

✓

10/28/06 1000

WATER

MW # 3

2-40 ml

✓

-2

✓

Date: 10/30/06

Relinquished By: (Signature) [Signature]

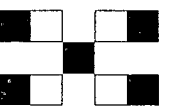
Received By: (Signature) [Signature]

Remarks:

Date: 10/30/06

Relinquished By: (Signature) [Signature]

Received By: (Signature) [Signature]



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

**ANALYSIS REQUEST**

## 1. DEFINITIONS

- 1.1 "Acceptance of a sample" means the determination of HEAL to proceed with work following receipt and inspection of such sample.
- 1.2 "Customer" means the individual or entity who may request laboratory services and his or its heirs, successors, assigns, and representatives.
- 1.3 HEAL means Hall Environmental Analysis Laboratory is employees, servants, agents, and representative.
- 1.4 "Price schedule" means HEAL'S standard price schedule, as such, document may be amended from time to time by HEAL.
- 1.5 "Results" mean data generated by HEAL from the analysis of one or more samples.
- 1.6 "Terms and Conditions" mean these Terms and Conditions of sale, including the Price Schedule, and any additions or amendments hereto which are agreed to in writing by HEAL as provided in Section 7.1

## 2. ORDERS

- 2.1 The customer may order services by submitting a written purchase order to HEAL, by placing a telephone order, which will be subsequently confirmed in writing, or by negotiated contract. Any such order constitutes a) an acceptance by the Customer of HEAL'S offer to do business with the Customer under these Terms and Conditions, and b) an agreement to be bound by these Terms and Conditions. The Customer's delivery of samples to HEAL constitutes the Customer's express consent to be governed by these Terms and Conditions. HEAL reserves the right to refuse to proceed with work at any time based upon an unfavorable customer credit report.
- 2.2 Any order placed by the Customer under Section 2.1 is subject to a minimum cancellation charge of \$250.

## 3. PAYMENT TERMS

- 3.1 Services performed by HEAL will be in accordance with prices quoted and later confirmed in writing or as stated on the Price Schedule, which prices are subject to change periodically without notice. The Customer should confirm with HEAL the current price prior to placing an order for work.
- 3.2 Payment terms are net 30 days from the date of invoice by HEAL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) per month or portion thereof from the due date until the date of payment. All payments shall be made in United States currency.
- 3.3 The prices stated on the Price Schedule do not include any sales, use or other taxes unless specifically stated. Such taxes will be added to invoice prices when required.

## 4. RECEIPT OF SAMPLES AND DELIVERY OF SERVICES

- 4.1 Prior to HEAL'S Acceptance of any sample (or after any revocation of Acceptance), the entire risk of loss or damage to such sample will remain with the Customer. In no event will HEAL have any responsibility or liability for the action or inaction of HEAL'S carrier shipping or delivering any sample to or from HEAL'S premises.
- 4.2 HEAL reserves the absolute right, exercisable at any time to refuse delivery of, refuse to accept, or revoke Acceptance of, any sample which in the sole judgment of HEAL a) is of unsuitable volume, b) unsuitable containers as required for the requested analysis, or c) may be or become unsuitable for, or may pose a risk in, handling, transport or processing for any health, safety, environmental or other reason, whether or not due to the presence in the sample of any hazardous substance and whether or not such presence has been disclosed to HEAL by the Customer.
- 4.3 Where applicable, HEAL will use analytical methodologies which are in substantial conformity with U.S. Environmental Protection Agency (EPA), state agency, American Society for Testing and Materials (ASTM), Association of Official Chemists (AOAC), Standard Methods for the examination of Water and Wastewater, or other recognized methodologies. HEAL reserves the right to deviate from these

5.7

The Customer shall indemnify and hold harmless HEAL from and against any and all claims, suits, judgments, damages, losses, liabilities, expenses, payments, taxes, duties, fines and/or other costs (including but not limited to liability to a third party) arising out of a) the presence of hazardous substances in any sample of the Customer regardless of the Customer's compliance with paragraph 5.5 hereof b) accidents occurring during the transport of any sample of the Customer, c) events control, or d) negligence by the Customer in the use, evaluation, or application of Results provided by HEAL.

5.8

Should any Customer sample, due to its matrix or constituents of its matrix, cause the operations of any HEAL instrumentation to be reduced, stopped, or altered, HEAL is entitled to compensation by the Customer for any loss of revenue due to the instrument's downtime, and/or the parts and labor necessary to bring the instruments back to its former operating condition. The amount of compensation is negotiable upon acceptance of these Terms and Conditions and the individual circumstances warranting the reimbursement.

## 6. ENTIRE AGREEMENT; SEVERABILITY

- 6.1 These Terms and Conditions, together with any additions or revisions which may be agreed to in writing by HEAL as provided in Section 7.1, embodied the whole agreement of the parties. There are no promises, terms, conditions, understandings, obligations or agreements other than those contained herein, unless made in accordance with Section 7.1, and these Terms and Conditions shall supersede all previous communications, representations, or agreements, either verbal or written, between the Customer and HEAL. HEAL specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Customer to HEAL.
- 6.2 The invalidity or unenforceability, in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions, the intent of the parties being that the provisions be severable.

## 7. AMENDMENTS AND WAIVERS

- 7.1 HEAL shall not be subject to or bound by any provision, term or condition which is in addition to or inconsistent or conflicting with these Terms and Conditions. HEAL shall not be deemed to have amended or waived or provision, term or condition, or have given any required consent or approval, or to have waived any breach by the Customer of any of these Terms and Conditions unless specifically set forth in writing and executed on behalf of HEAL by a duly authorized officer. No other employee, servant, agent or representatives of HEAL has any authority whatsoever to add to, delete, alter or vary any of these Terms and Conditions in any manner, or to give any consent, approval or waiver, and HEAL shall not be bound by any such purported addition, deletion, alteration, variation, consent, approval or waiver.
- 7.2 No waiver by HEAL of any provision, term or condition hereof or of any breach by or obligation of the Customer hereunder shall constitute a waiver of such provision, term or condition on any other occasion or a waiver of any other breach by or obligation of the Customer.

## 8. SAMPLE STORAGE

- 8.1 Bulk samples will be retained for thirty (30) days after the analytical report has been issued unless alternate arrangements have been made in advance. Storage of samples or extracts for longer periods is by request only. Sample storage charges depend upon storage requirements and duration. Normally, a sample storage fee of \$5.00 per sample, per month will be billed monthly unless other arrangements are made. If requested, unused sample material may be returned at the client's expense. Materials, which are identified as hazardous, will be returned to the client or disposed of as hazardous waste and billed at the rate of \$25.00 per sample. HEAL reserves the right to return all dibenzodioxins/dibenzofurans to the client.

## 9. SECTION HEADING

- 9.1 The section headings of these Terms and Conditions are intended solely for convenient reference and shall not define, limit or affect in any way these Terms and Conditions or their interpretations.

## 10. GOVERNING LAW

- 10.1 These Terms and Conditions, and transaction or agreement to which they apply, shall be governed both as to interpretation and performance by the laws of the State of New Mexico.

# QA/QC SUMMARY REPORT

Client: Blagg Engineering  
Project: State GC J #1A

Work Order: 0610364

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

Sample ID: 5ML RB

MBLK

Batch ID: R21272 Analysis Date: 11/2/2006 8:24:59 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: R21272 Analysis Date: 11/2/2006 5:13:35 PM

Benzene	18.71	µg/L	1.0	93.6	85	115
Toluene	18.92	µg/L	1.0	94.6	85	118
Ethylbenzene	18.78	µg/L	1.0	91.3	85	116
Xylenes, Total	37.98	µg/L	3.0	91.3	85	119

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R21272 Analysis Date: 11/2/2006 5:43:34 PM

Benzene	18.94	µg/L	1.0	94.7	85	115	1.18	27
Toluene	19.35	µg/L	1.0	96.7	85	118	2.23	19
Ethylbenzene	19.05	µg/L	1.0	92.6	85	116	1.45	10
Xylenes, Total	39.18	µg/L	3.0	94.3	85	119	3.11	13

## Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

10/31/2006

Work Order Number 0610364

Received by AT

Checklist completed by

Signature

Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

# BLAGG ENGINEERING, INC.

## MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

STATE GC J # 1A

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT F, SEC. 36, T30N, R9W

Date : July 21, 2007

SAMPLER : N J V

Filename : 07-21-07.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.)
1	103.19	68.34	34.85	40.65	-	-	-	-	-
2	102.57	68.27	34.30	41.50	1100	6.95	3,400	19.9	3.50
3	101.87	68.08	33.79	40.93	-	-	-	-	-
4	102.45	68.07	34.38	42.07	1145	6.96	3,500	20.0	1.75

INSTRUMENT CALIBRATIONS =

7.00

2,800

DATE & TIME =

07/19/07

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".

Excellent recovery in MW # 2 , fair in MW # 4 . Purged MW # 4 to total depth , then allowed recovery to approx. 35.00 ft. prior to sampling . Collected BTEX samples from MW # 2 & # 4 only .

Top of casing MW # 1 ~ 2.30 ft. , MW # 2 ~ 3.00 ft. , MW # 3 ~ 2.40 ft. , MW # 4 ~ 2.60 ft. above grade.

**Hall Environmental Analysis Laboratory, Inc.**

Date: 31-Jul-07

**CLIENT:** Blagg Engineering  
**Project:** State GC J #1A**Lab Order:** 0707305**Lab ID:** 0707305-01**Collection Date:** 7/21/2007 11:00:00 AM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: NSB
EPA METHOD 8021B: VOLATILES						
Benzene	ND	1.0		µg/L	1	7/28/2007 2:45:13 AM
Toluene	ND	1.0		µg/L	1	7/28/2007 2:45:13 AM
Ethylbenzene	ND	1.0		µg/L	1	7/28/2007 2:45:13 AM
Xylenes, Total	ND	2.0		µg/L	1	7/28/2007 2:45:13 AM
Surr: 4-Bromofluorobenzene	105	70.2-105		%REC	1	7/28/2007 2:45:13 AM

**Lab ID:** 0707305-02**Collection Date:** 7/21/2007 11:45:00 AM**Client Sample ID:** MW #4**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: NSB
EPA METHOD 8021B: VOLATILES						
Benzene	ND	1.0		µg/L	1	7/28/2007 3:15:03 AM
Toluene	ND	1.0		µg/L	1	7/28/2007 3:15:03 AM
Ethylbenzene	ND	1.0		µg/L	1	7/28/2007 3:15:03 AM
Xylenes, Total	ND	2.0		µg/L	1	7/28/2007 3:15:03 AM
Surr: 4-Bromofluorobenzene	105	70.2-105	S	%REC	1	7/28/2007 3:15:03 AM

**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

## 1. DEFINITIONS

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- 2.2 Any order placed by the Customer under Section 2.1 is subject to a minimum cancellation charge of \$250.

## 3. PAYMENT TERMS

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- 3.3 The prices stated on the Price Schedule do not include any sales, use or other taxes unless specifically stated. Such taxes will be added to invoice prices when required.

## 4. RECEIPT OF SAMPLES AND DELIVERY OF SERVICES

- 4.1 Prior to HEAL'S Acceptance of any sample (or after any revocation of Acceptance), the entire risk of loss or damage to such sample will remain with the Customer. In no event will HEAL have any responsibility or liability for the action or inaction of HEAL'S carrier shipping or delivering any sample to or from HEAL'S premises.
- 4.2 HEAL reserves the absolute right, exercisable at any time to refuse delivery of, refuse to accept, or revoke Acceptance of, any sample which in the sole judgment of HEAL a) is of unsuitable volume, b) unsuitable containers as required for the requested analysis, or c) may be or become unsuitable for, or may pose a risk in handling, transport or processing for any health, safety, environmental or other reason, whether or not due to the presence in the sample of any hazardous substance and whether or not such presence has been disclosed to HEAL by the Customer.

- 4.3 Where applicable, HEAL will use analytical methodologies which are in substantial conformity with U.S. Environmental Protection Agency (EPA), state agency, American Society for Testing and Materials (ASTM), Association of Official Analytical Chemists (AOAC), Standard Methods for the examination of Water and Wastewater, or other recognized methodologies. HEAL reserves the right to deviate from these

methodologies, if necessary or appropriate due to the nature of composition of the sample or otherwise based on the reasonable judgement of HEAL, which deviation, if any will be made on a basis consistent with recognized standards of industry and/or HEAL'S Standard Operating Procedures.

Upon timely delivery of samples, HEAL will use its best efforts to comply with storage, processing and analytical holding time limits as set forth in applicable EPA or state guidelines or otherwise requested by the Customer or set forth on the Price Schedule. However, unless specifically made part of a written agreement between HEAL and the Customer, such time limits cannot be guaranteed. Unless specifically indicated on the Price Schedule or expressly made part of a written agreement between HEAL and the Customer, analytical turnaround times are not guaranteed.

At HEAL'S sole discretion, verbal Results may be given in advance of the written report of Results. Such verbal Results are TENTATIVE RESULTS ONLY, subject to confirmation or change based on HEAL'S standard quality assurance review procedures.

## 5. WARRANTIES, LIABILITY AND INDEMNIFICATION

- 5.1 HEAL warrants only that its services will fulfill obligations set forth in Section 4.3 and 4.4 hereof. This warranty is the sole and exclusive warranty given by HEAL in connection with any such services, and HEAL gives and makes no other representation or warranty of any kind, express or implied. No representative of HEAL is authorized to give or make any other representation or warranty or modify the warranty in any way.

- 5.2 The liability and obligations of HEAL, and the remedies of the Customer in connection with any services performed by HEAL will be limited to repaying the services performed or, at the sole option of HEAL, refunding in full or in part fees paid by the Customer for such services. HEAL'S obligation to repeat any services with respect to any sample will be contingent on the Customer's providing, at the request of HEAL, and at the Customer's expense, an additional sample if necessary. Any reanalysis generating Results consistent with the Original Results will be at the Customer's expense. Except as otherwise specifically provided herein, HEAL shall have no liability, obligation or responsibility of any kind for any losses, costs, expenses, or other damages (including but not limited to any special, indirect, incidental or consequential damages) for any representation or warranty of a kind with respect to HEAL'S Services or Results.

- 5.3 In no event shall HEAL have any responsibility or liability to the Customer for any failure or delay in performance by HEAL, which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of HEAL. Such cause and circumstance shall include, but not be limited to, acts of God, acts of Customer, acts of orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disputes, difficulties or delays in transportation, mail or delivery services, inability to obtain from HEAL usual sources sufficient services or supplies, or any other cause beyond HEAL'S reasonable control.

- 5.4 All results provided by HEAL are strictly for the use of its Customers, and HEAL is in no way responsible for the use of such results by Customers or third parties. All results should be considered in their entirety, and HEAL is in no way responsible for the separation, detachment, or other use of any portion of the results.

- 5.5 The customer represents and warrants that any sample delivered to HEAL will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by the customer. The Customer further warrants that any sample containing any hazardous substance, which is to be delivered to HEAL'S premises will be packaged, labeled, transported and delivered properly and in accordance with applicable laws.

- 5.6 It is understood and agreed that all samples and cuttings of materials containing hazardous contaminants are the property and the responsibility of the Customer. All contaminated samples and laboratory byproducts will be returned to the Customer for disposal. It is understood and agreed that HEAL is not, and has no responsibility as, a generator, treater, store, or disposer of hazardous or toxic substances found or identified at a site, and the Customer agrees to assume the responsibility for the foregoing.

5.7

The Customer shall indemnify and hold harmless HEAL from and against any and all claims, suits, judgments, damages, losses, liabilities, expenses, payments, taxes, duties, fines and/or other costs (including but not limited to liability to a third party) arising out of a) the presence of hazardous substances in any sample of the Customer regardless of the Customer's compliance with paragraph 5.5 hereof b) accidents occurring during the transport of any sample of the Customer, c) events control, or d) negligence by the Customer in the use, evaluation, or application of Results provided by HEAL.

5.8

Should any Customer sample, due to its matrix or constituents of its matrix, cause the operations of any HEAL instrumentation to be reduced, stopped, or altered, HEAL is entitled to compensation by the Customer for any loss of revenue due to the instrument's downtime, and/or the parts and labor necessary to bring the instrument back to its former operating condition. The amount of compensation is negotiable upon acceptance of these Terms and Conditions and the individual circumstances warranting the reimbursement.

## 6. ENTIRE AGREEMENT: SEVERABILITY

- 6.1 These Terms and Conditions, together with any additions or revisions which may be agreed to in writing by HEAL as provided in Section 7.1, embodied the whole agreement of the parties. There are no promises, terms, conditions, understandings, obligations or agreements other than those contained herein, unless made in accordance with Section 7.1; and these Terms and Conditions shall supersede all previous communications, representations, or agreements, either verbal or written, between the Customer and HEAL. HEAL specifically rejects all additional, inconsistent or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Customer to HEAL.

6.2

The invalidity or unenforceability, in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions, the intent of the parties being that the provisions be severable.

## 7. AMENDMENTS AND WAIVERS

- 7.1 HEAL shall not be subject to or bound by any provision, term or condition which is in addition to or inconsistent or conflicting with these Terms and Conditions. HEAL shall not be deemed to have amended or waived or provision, term or condition, or have given any required consent or approval, or to have waived any breach by the Customer of any of these Terms and Conditions unless specifically set forth in writing and executed on behalf of HEAL by a duly authorized officer. No other employee, servant, agent or representatives of HEAL has any authority whatsoever to add to, delete, alter or vary any of these Terms and Conditions in any manner, or to give any consent, approval or waiver, and HEAL shall not be bound by any such purported addition, deletion, alteration, variation, consent, approval or waiver.

7.2

No waiver by HEAL of any provision, term or condition hereof or of any breach by or obligation of the Customer hereunder shall constitute a waiver of such provision, term or condition on any other occasion or a waiver of any other breach by or obligation of the Customer.

## 8. SAMPLE STORAGE

- 8.1 Bulk samples will be retained for thirty (30) days after the analytical report has been issued unless alternate arrangements have been made in advance. Storage of samples or extracts for longer periods is by request only. Sample storage charges depend upon storage requirements and duration. Nominally, a sample storage fee of \$5.00 per sample, per month will be billed monthly unless other arrangements are made. If requested, unused sample material may be returned at the client's expense. Materials, which are identified as hazardous, will be returned to the client or disposed of as hazardous waste and billed at the rate of \$25.00 per sample. HEAL reserves the right to return all dibenzodioxins/dibenzofurans to the client.

## 9. SECTION HEADING

- 9.1 The section headings of these Terms and Conditions are intended solely for convenient reference and shall not define, limit or affect in any way. These Terms and Conditions or their interpretations.

## 10. GOVERNING LAW

- 10.1 These Terms and Conditions, and transaction or agreement, to which they apply, shall be governed both as to interpretation and performance by the laws of the State of New Mexico.

## QA/QC SUMMARY REPORT

Client: Blagg Engineering  
Project: State GC J #1A

Work Order: 0707305

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

Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R24556 Analysis Date: 7/27/2007 9:15:11 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: R24556 Analysis Date: 7/27/2007 1:04:28 PM

Benzene	21.25	µg/L	1.0	106	85.9	113
Toluene	21.71	µg/L	1.0	109	86.4	113
Ethylbenzene	22.05	µg/L	1.0	110	83.5	118
Xylenes, Total	67.14	µg/L	2.0	112	83.4	122

## Qualifiers:

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



# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

7/24/2007

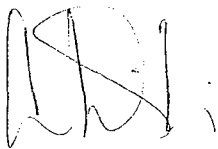
Work Order Number 0707305

Received by

ARS

Checklist completed by

Signature



7/24/07  
Date

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?

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 : BP AMERICA PROD. CO.****CHAIN-OF-CUSTODY # :** N / A**STATE GC J # 1A****LABORATORY (S) USED :** HALL ENVIRONMENTAL**UNIT F, SEC. 36, T30N, R9W****Date :** October 10, 2007**SAMPLER :** N J V**Filename :** 10-10-07.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.)
1	103.19	67.58	35.61	40.65	-	-	-	-	-
2	102.57	67.50	35.07	41.50	1520	6.87	3,700	20.5	3.25
3	101.87	67.47	34.40	40.93	1450	6.91	3,900	20.5	3.25
4	102.45	67.43	35.02	42.07	1420	6.91	4,000	21.2	1.50

**INSTRUMENT CALIBRATIONS =**

7.00 2,800

**DATE & TIME =**

10/09/07 1145

**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 # 2 , MW # 3 , fair in MW # 4 . Purged MW # 4 to total depth , then allowed recovery near original static water level prior to sampling . Collected BTEX samples from MW # 2 , # 3 , & # 4 .

Top of casing MW # 1 ~ 2.30 ft. , MW # 2 ~ 3.00 ft. , MW # 3 ~ 2.40 ft. , MW # 4 ~ 2.60 ft. above grade.

**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Oct-07

**CLIENT:** Blagg Engineering  
**Project:** STATE GC J #1A**Lab Order:** 0710249**Lab ID:** 0710249-01**Collection Date:** 10/10/2007 3:20:00 PM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/13/2007 6:27:38 AM
Toluene	ND	1.0		µg/L	1	10/13/2007 6:27:38 AM
Ethylbenzene	ND	1.0		µg/L	1	10/13/2007 6:27:38 AM
Xylenes, Total	ND	2.0		µg/L	1	10/13/2007 6:27:38 AM
Surr: 4-Bromofluorobenzene	87.8	70.2-105		%REC	1	10/13/2007 6:27:38 AM

**Lab ID:** 0710249-02**Collection Date:** 10/10/2007 2:50:00 PM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/13/2007 7:27:29 AM
Toluene	ND	1.0		µg/L	1	10/13/2007 7:27:29 AM
Ethylbenzene	ND	1.0		µg/L	1	10/13/2007 7:27:29 AM
Xylenes, Total	ND	2.0		µg/L	1	10/13/2007 7:27:29 AM
Surr: 4-Bromofluorobenzene	90.3	70.2-105		%REC	1	10/13/2007 7:27:29 AM

**Lab ID:** 0710249-03**Collection Date:** 10/10/2007 2:20:00 PM**Client Sample ID:** MW #4**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	1.0		µg/L	1	10/13/2007 8:27:07 AM
Toluene	ND	1.0		µg/L	1	10/13/2007 8:27:07 AM
Ethylbenzene	ND	1.0		µg/L	1	10/13/2007 8:27:07 AM
Xylenes, Total	ND	2.0		µg/L	1	10/13/2007 8:27:07 AM
Surr: 4-Bromofluorobenzene	86.8	70.2-105		%REC	1	10/13/2007 8:27:07 AM

**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**

Other: \_\_\_\_\_

Project Name: STATE GC J #1A

Tel. 505.345.3975 Fax 505.345.4107  
www.hallenvironmental.com

Project #:

25

Project Manager:

Sampler: W

Sample Temperature: 20

[illegible]

Date:	10/11/07	Time:	1610	Relinquished By: (Signature)	Received By: (Signature)	10/11/07
Date:		Time:		Relinquished By: (Signature)	Received By: (Signature)	

# ANALYSIS REQUEST

[illegible]

Remarks:

## QA/QC SUMMARY REPORT

Client: Blagg Engineering

Project: STATE GC J #1A

Work Order: 0710249

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

Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R25551 Analysis Date: 10/12/2007 10:24:23 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: R25551 Analysis Date: 10/12/2007 12:54:50 PM

Benzene	19.63	µg/L	1.0	98.2	85.9	113
Toluene	18.95	µg/L	1.0	94.8	86.4	113
Ethylbenzene	18.80	µg/L	1.0	94.0	83.5	118
Xylenes, Total	55.71	µg/L	2.0	92.9	83.4	122

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R25551 Analysis Date: 10/13/2007 12:12:27 PM

Benzene	20.51	µg/L	1.0	103	85.9	113	4.39	27
Toluene	19.23	µg/L	1.0	96.2	86.4	113	1.46	19
Ethylbenzene	19.41	µg/L	1.0	97.1	83.5	118	3.18	10
Xylenes, Total	57.77	µg/L	2.0	96.3	83.4	122	3.62	13

## Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

10/11/2007

Work Order Number **0710249**

Received by **TLS**

Checklist completed by

Signature

Date

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?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_