

3R - 042

**MONITORING
REPORTS**

01/30/2008

BLAGG ENGINEERING, INC.

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

320042

RECEIVED ^{January 30, 2008}

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

FEB 9 2008
31
Oil Conservation Division
Environmental Bureau

Re: **REQUEST FOR PERMANENT CLOSURE**
BP America Production Company (formerly Amoco Production Co.)
Groundwater Monitoring Report
Price # 3, Unit A, Sec. 15, T28N, R8W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: 3RP-42-0

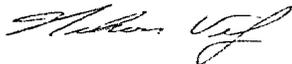
Dear Mr. Von Gonten:

BP America Production Company (BP) has retained Blagg Engineering, Inc. (BEI) to conduct environmental monitoring of groundwater at the Price # 3.

The last BEI correspondence concerning the above reference well site was with letter dated, September 19, 1994. Since then, BP has plugged and abandoned the well in February, 1996 and followed its NMOCD approved groundwater management plan. Permanent closure is requested for the site.

If you have any questions concerning the enclosed documentation, please contact either myself or Jeffrey C. Blagg at the address or phone number listed above. 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, NMOCD District III Office, Aztec, NM
Mr. Larry Schlotterback, BP, Farmington, NM

3R0042

**BP AMERICA PRODUCTION CO.
RECEIVED**

FEB 02 2008

⁷¹
Oil Conservation Division
Environmental Bureau
GROUNDWATER REMEDIATION REPORT

**PRICE #3
(A) SECTION 15, T28N, R8W, 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

Price #3

Ne/4 Ne/4, Sec. 15, T28N, R8W

Historical Information:

Discovery of Potential Impacts:	August, 1994 - Separator Pit
Reclamation Procedures:	Excavation – September, 1994 (Landfarm On-Site)
Monitor Well Installation Dates:	May, 2006
Monitor Well Sampling Dates:	June, 2006; August, 2006

A potential groundwater impact due to a historical release at a separator pit was discovered during site work in August, 1994. Groundwater was encountered at a depth of approximately nine (9) feet below ground surface. All soils in the area of the pit with potential hydrocarbon content were excavated to below the water table and landfarmed on site. Water was sampled from the pit excavation on August 30, 1994 and laboratory analysis found total xylenes at 768 ug/L. All other BTEX (benzene, toluene and ethyl-benzene, and total xylenes) constituents tested within New Mexico Water Quality Control Commission (NMWQCC) standards. There was no sheen or any apparent gross hydrocarbon impact observed after the soil remediation process had been completed. A re-sampling on September 7, 1994 found all BTEX constituents within 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 at the adjacent Jones A LS #3 well site.

Groundwater Quality & Flow Direction Information:

Two (2) monitor wells were installed to quantify water quality (Figure 1). Monitor well MW #2 was placed at the original pit center and monitor well MW #3 was placed in the likely down-gradient direction based on surface topography, data collected from the adjacent Jones A LS #3 well site. Monitor well sampling and testing has not detected the presence of any BTEX constituents or any general water chemistry parameters above NMWQCC standards. Summary laboratory analytical results are included in the tables on the following pages.

Summary and Recommendations:

Potential hydrocarbon impacted soil at the separator pit has been remediated via excavation. With the exception of one (1) groundwater sample collected during the soil remediation process, there is no indication of any remaining groundwater impact at the pit location. Analytical testing indicate that all site wells meet NMWQCC standards for groundwater. Permanent site closure is recommended. Following approval by the New Mexico Oil Conservation Division, 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.

PRICE # 3 - SEPARATOR PIT

UNIT A, SEC. 15, T28N, R8W

REVISED DATE: December 13, 2006

FILENAME: (PR3-3Q06.WK4) NJV

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
07-Jun-06	MW #2	9.48	20.00	1,240	1,500	7.24		ND	ND	ND	ND
23-Aug-06		9.65			1,200	7.16		ND	ND	ND	ND
07-Jun-06	MW #3	9.88	20.00	1,120	1,500	7.26		ND	ND	ND	ND
23-Aug-06		10.09			1,200	7.23		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

GENERAL WATER QUALITY
BP AMERICA PRODUCTION COMPANY

PRICE # 3

Sample Date : June 7 , 2006

PARAMETERS	MW # 2	MW # 3	Units
LAB pH	7.59	7.61	s. u.
LAB CONDUCTIVITY @ 25 C	1,720	1,660	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	1,240	1,120	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	1,250	1,100	mg / L
SODIUM ABSORPTION RATIO	1.5	0.8	ratio
TOTAL ALKALINITY AS CaCO3	194	154	mg / L
TOTAL HARDNESS AS CaCO3	752	734	mg / L
BICARBONATE as HCO3	194	154	mg / L
CARBONATE AS CO3	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	0.70	0.60	mg / L
NITRITE NITROGEN	0.051	0.095	mg / L
CHLORIDE	30.0	36.0	mg / L
FLUORIDE	0.67	0.79	mg / L
PHOSPHATE	< 0.01	< 0.01	mg / L
SULFATE	772	642	mg / L
IRON	0.001	0.001	mg / L
CALCIUM	250	246	mg / L
MAGNESIUM	31.3	29.3	mg / L
POTASSIUM	0.37	0.48	mg / L
SODIUM	93.1	52.2	mg / L
CATION / ANION DIFFERENCE	0.08	0.06	



ON SITE TECHNOLOGIES, LTD.

AROMATIC VOLATILE ORGANICS

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

Date: *8/31/94*
 Lab ID: *1843*
 Sample ID: *2795*
 Job No. *2-1000*

Project Name: *Price #3*
 Project Location: *PW 1 @ GW (9') - Separator Pit*
 Sampled by: *NV* Date: *8/30/94* Time: *8:53*
 Analyzed by: *DLA* Date: *8/31/94*
 Sample Matrix: *Liquid*

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
<i>Benzene</i>	<i>3.9</i>	<i>0.2</i>
<i>Toluene</i>	<i>14.5</i>	<i>0.2</i>
<i>Ethylbenzene</i>	<i>38.6</i>	<i>0.2</i>
<i>m,p-Xylene</i>	<i>667</i>	<i>0.2</i>
<i>o-Xylene</i>	<i>101</i> > <i>768</i> = > <i>STANDARD</i>	<i>0.2</i>
<i>TOTAL</i>	<i>825 ug/L</i>	

ND - Not Detectable

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

Approved by: *[Signature]*
 Date: *8/31/94*



AROMATIC VOLATILE ORGANICS

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

Date: *9/8/94*
Lab ID: *1849*
Sample ID: *2909*
Job No. *2-1000*

Project Name: *Price #3*
Project Location: *PW 2 @ GW (9') - Separator Pit*
Sampled by: *NV* Date: *9/7/94* Time: *9:40*
Analyzed by: *DLA* Date: *9/8/94*
Sample Matrix: *Liquid*

Aromatic Volatile Organics

<i>Component</i>	<i>Measured Concentration ug/L</i>	<i>Detection Limit Concentration ug/L</i>
<i>Benzene</i>	<i>1.3</i>	<i>0.2</i>
<i>Toluene</i>	<i>0.9</i>	<i>0.2</i>
<i>Ethylbenzene</i>	<i>0.1</i>	<i>0.2</i>
<i>m,p-Xylene</i>	<i>7.2</i>	<i>0.2</i>
<i>o-Xylene</i>	<i>10.8</i>	<i>0.2</i>
	<i>TOTAL 20.2 ug/L</i>	

ND - Not Detectable

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

Approved by: *DLA*

Date: *9/8/94*

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80069</u> C.D.C. NO: <u>ANAITAS</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: <u>PRICE 3</u>	LEASE: <u>82-078390</u>	DATE STARTED: <u>5-15-96</u>
QUAD/UNIT: <u>A SEC: 15 TWP: 28N RNG: 8W</u>	BM: <u>N.M.</u> CNTY: <u>S.J.</u> ST: <u>N.M.</u>	DATE FINISHED: _____
QTR/FOOTAGE: <u>NE/SW NE</u>	CONTRACTOR: <u>MOSS</u>	ENVIRONMENTAL SPECIALIST: <u>R.E.D.</u>

SOIL REMEDIATION:

REMEDIATION SYSTEM: LANDFARM APPROX. CUBIC YARDAGE: 250

LAND USE: RANGE

FIELD NOTES & REMARKS:

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

NMOCB RANKING SCORE: 20 NMOCB TPH CLOSURE STD: 100 PPM

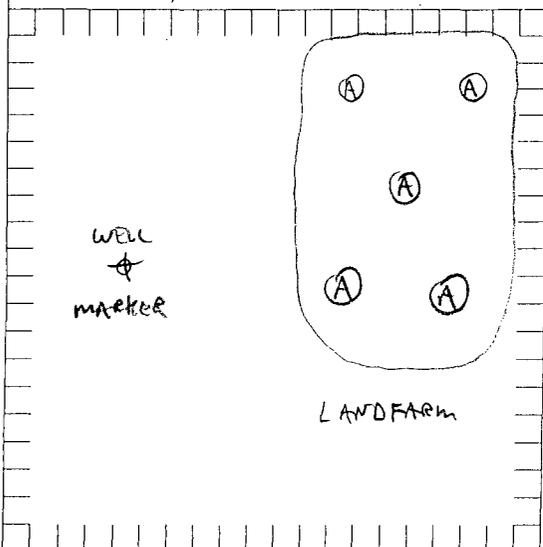
SOIL CONSISTS OF DRY SILTY-SAND, NO OIL, NO STAIN.

FIELD 418.1 CALCULATIONS

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

CLOSE L.F.

SKETCH/SAMPLE LOCATIONS



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
<u>COMP. A</u>	<u>0</u>

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME	RESULTS
<u>COMP. A</u>	<u>8015</u>	<u>0905</u>	<u>ND</u>

SCALE



TRAVEL NOTES: CALLOUT: _____ ONSITE: 5-15-96 0900

TOTAL VOLATILE PETROLEUM HYDROCARBONS

Gasoline Range Organics

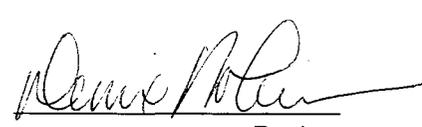
Blagg Engineering, Inc.Project ID: Price 3
Sample Matrix: Soil
Preservative: Cool
Condition: IntactReport Date: 05/31/96
Date Sampled: 05/15/96
Date Received: 05/15/96
Date Extracted: 05/29/96
Date Analyzed: 05/29/96

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Comp. A	3571	ND	17.4

ND- Analyte not detected at the stated detection limit.

Quality Control: Surrogate % Recovery Acceptance Limits
Trifluorotoluene 68% 50 - 150%Reference: Method for the Determination of Gasoline Range Organics,
State of Tennessee, Department of Environment and Conservation, Division
of Underground Storage Tanks.

Comments:


Analyst
Review

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
Diesel Range Organics

Blagg Engineering, Inc.

Project ID:	Price 3	Report Date:	05/31/96
Sample Matrix:	Soil	Date Sampled:	05/15/96
Preservative:	Cool	Date Received:	05/15/96
Condition:	Intact	Date Extracted:	05/29/96
		Date Analyzed:	05/30/96

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Comp. A	3571	ND	19.4

ND- Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	o - Terphenyl	101%	50 - 150%

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments:


Analyst


Review



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

December 10, 1996

CERTIFIED MAIL
RETURN RECEIPT NO. P-269-269-225

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) September 19, 1994 "AMOCO PRODUCTION COMPANY PIT CLOSURE VERIFICATIONS" which were submitted on behalf of Amoco by their consultant Blagg Engineering, Inc. This document contains "PIT REMEDIATION AND CLOSURE REPORTS" for 37 unlined pits in the San Juan Basin of Northwestern New Mexico.

The OCD's review of the above referenced document is addressed below:

A. The pit closure/soil remediation activities conducted at the sites listed below are **approved**.

- ✓ 1. Bolack B LS #5 (Separator pit) Unit J, Sec. 33, T28N, R08W.
- ✓ 2. Elliott GC A#1 (Blow pit I) Unit D, Sec. 14, T29N, R09W.
- ✓ 3. Federal F#1 (Separator pit) Unit H, Sec. 16, T27N, R10W.
- ✓ 4. Hancock GC #1 (Compressor pit) Unit L, Sec. 15, T30N, R12W.
- ✓ 5. Hancock GC #1 (Separator pit) Unit L, Sec. 15, T30N, R12W.
- ✓ 6. Hargrave A#3 (Blow pit) Unit B, Sec. 16, T27N, R10W.
- ✓ 7. Hargrave A#3 (Drip pit) Unit B, Sec. 16, T27N, R10W.
- ✓ 8. R.P. Hargrave K#1 (Blow pit) Unit M, Sec. 16, T27N, R10W.
- ✓ 9. R.P. Hargrave K#1 (Separator pit) Unit M, Sec. 16, T27N, R10W.
- ✓ 10. R.P. Hargrave K#1E (Blow pit) Unit C, Sec. 16, T27N, R10W.
- ✓ 11. R.P. Hargrave K#1E (Separator pit) Unit C, Sec. 16, T27N, R10W.
- 12. Jones #5E (Blow pit) Unit I, Sec. 35, T29N, R08W.
- ✓ 13. Jones A LS #1A (Separator pit) Unit J, Sec. 10, T28N, R08W.
- ✓ 14. P.O. Pipkin #3E (Blow pit) Unit I, Sec. 17, T27N, R10W.
- 15. P.O. Pipkin #4E (Blow pit) Unit C, Sec. 17, T27N, R10W.
- 16. P.O. Pipkin #4E (Separator pit) Unit C, Sec. 17, T27N, R10W.

Please be advised that OCD approval does not relieve Amoco of liability if remaining contaminants are found to pose a future 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.

B. The pit remedial 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. Subsequently, the OCD cannot issue final closure approval at this time and approval of closure actions at these sites is **denied**. Please resubmit final closure reports for these sites upon completion of the landfarming and/or composting activities. The final reports will include the results of the soil remediation levels achieved, the laboratory analyses and associated quality assurance/quality control data and the disposition of the remediated soils.

1. A.L. Elliott C#1 (Blow pit) Unit B, Sec. 15, T29N, R09W.
2. A.L. Elliott C#1 (Separator pit) Unit B, Sec. 15, T29N, R09W.
3. A.L. Elliott D#9 (Blow pit) Unit N, Sec. 11, T29N, R09W.
4. A.L. Elliott E#1 (Blow pit) Unit D, Sec. 14, T29N, R09W.
5. Elliott GC A#1 (Blow pit) Unit D, Sec. 14, T29N, R09W.
- ✓ 6. R.P. Hargrave F#3 (Blow pit) Unit E, Sec. 16, T27N, R10W.
- ✓ 7. Schwerdtfeger A#3E (Blow pit) Unit L, Sec. 06, T27N, R08W.
- ✓ 8. Schwerdtfeger A#3E (Production pit) Unit L, Sec. 06, T27N, R08W.
- ✓ 9. Schwerdtfeger A#3E (Separator pit) Unit L, Sec. 06, T27N, R08W.
- ✓ 10. Schwerdtfeger A#3E (Dehy pit) Unit L, Sec. 06, T27N, R08W.
- ✓ 11. Schwerdtfeger A LS #22 (Separator) Unit D, Sec. 06, T27N, R08W.
- ✓ 12. Schwerdtfeger A LS #10 (Separator) Unit M, Sec. 31, T28N, R08W.

C. The final pit remedial contaminant levels at the sites listed below are in excess of the OCD's recommended remediation levels. Consequently, the OCD cannot issue final closure approval and approval of closure actions at these sites is **denied**. The OCD requests that Amoco address the extent of the remaining contamination at these sites. The OCD will reconsider issuing closure approval upon resubmission of pit closure forms which address the remaining extent of contamination at the sites. The resubmitted forms should include the completed form and all pertinent information related to the extent of contamination, the results of the soil remediation levels achieved, the results of the soil remediation levels achieved, the laboratory analyses and associated quality assurance/quality control data and the disposition of the remediated soils.

1. A.L. Elliott C#4 (Separator pit) Unit A, Sec. 15, T29N, R09W.
2. Jones #5E (Tank pit) Unit I, Sec. 35, T29N, R08W.
- ✓ 3. P.O. Pipkin #3 (Blow pit) Unit A, Sec. 17, T27N, R10W.
- ✓ 4. P.O. Pipkin #3 (Separator pit) Unit A, Sec. 17, T27N, R10W.
- ✓ 5. P.O. Pipkin #3E (Dehy pit) Unit I, Sec. 17, T27N, R10W.
- ✓ 6. P.O. Pipkin #3E (Separator pit) Unit I, Sec. 17, T27N, R10W.

Mr. B.D. Shaw
December 10, 1996
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 and the extent of ground water contamination at the sites has not been determined. Therefore, approval of these pit closure forms is **denied**. The OCD requests that Amoco investigate the extent of contamination and, if necessary, remediate contaminated ground water pursuant to Amoco's November 21, 1995 ground water investigation/remediation work plan which was approved by the OCD on November 29, 1995.

- | | |
|------------------------------------|------------------------------|
| 1. Jennapah GC A#1 (Separator pit) | Unit H, Sec. 36, T28N, R09W. |
| 2. Jennapah GC A#1 (Tank pit) | Unit H, Sec. 36, T28N, R09W. |
| 3. Price #3 (Separator pit) | Unit A, Sec. 15, T28N, R08W. |

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 reports should include the completed form and all pertinent information related to the extent of contamination, the results of the soil remediation levels in the pits and landfarms, all laboratory analyses and associated quality assurance/quality control data and the disposition of all remediated soils.

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

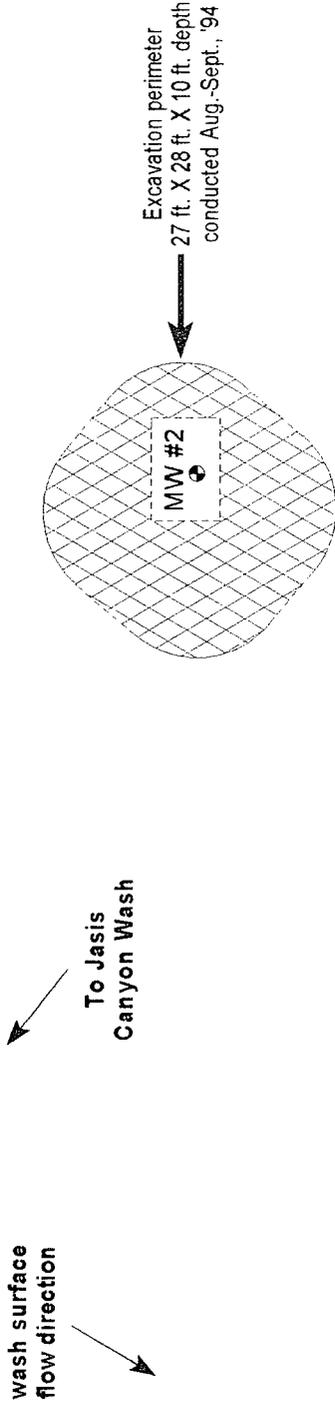
Sincerely,



William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office
Bill Liess, BLM Farmington District Office
~~Nelson Velez, Blagg Engineering, Inc.~~
Charmaine Tso, Navajo Nation EPA

FIGURE 1



MW #3

P & A
MARKER

1 INCH = 20 FT.



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.
PRICE #3
NE/4 NE/4 SEC. 15, T28N, R8W
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 INSTALLATIONS
DRAWN BY: NJV
FILENAME: PRICE 3-SM.SKF
DRAFTED: 08-19-06 NJV

SITE MAP

06/06

BLAGG ENGINEERING, INC.

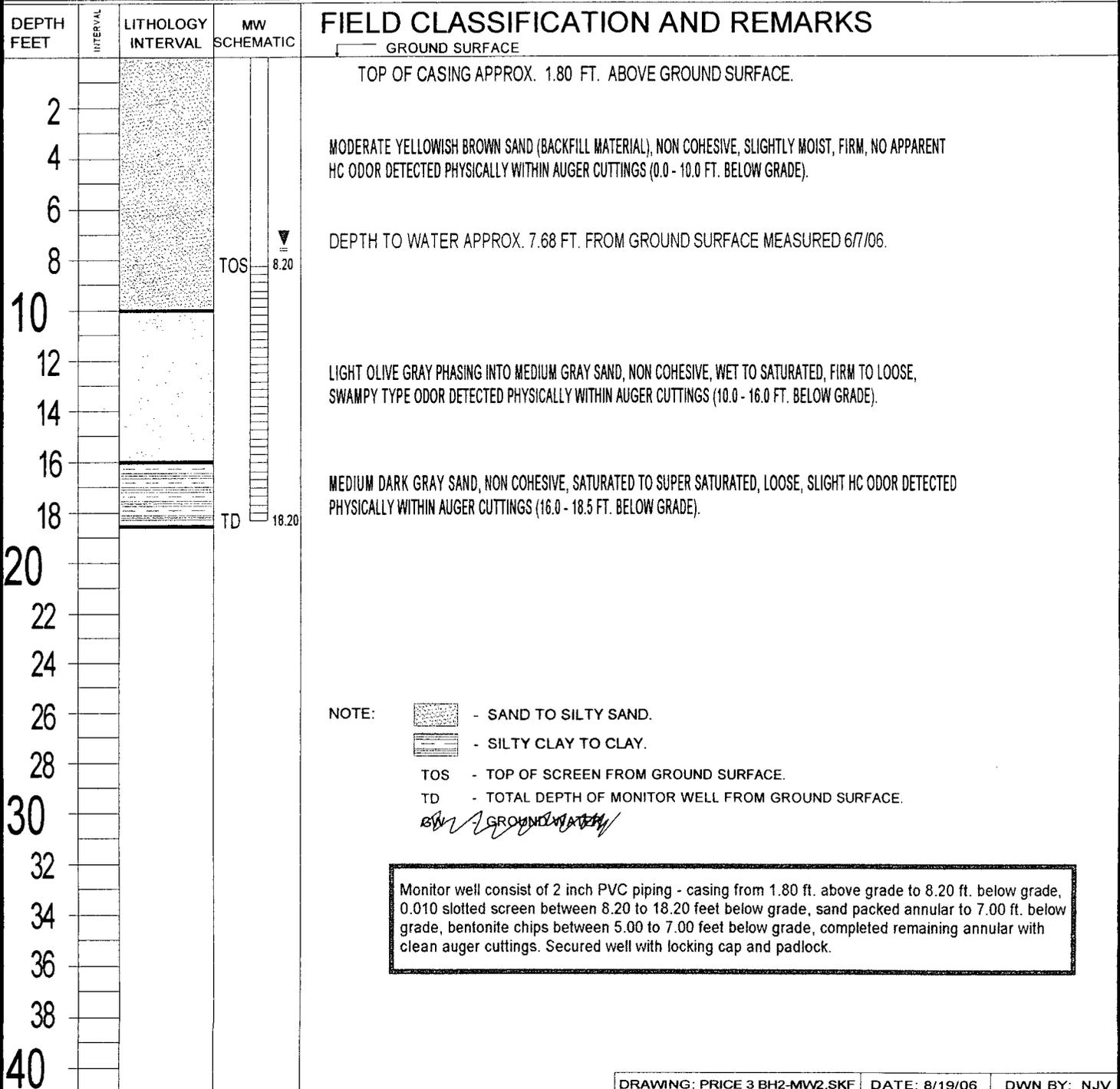
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2

BORE / TEST HOLE REPORT

BORING #.....	BH - 2
MW #.....	2
PAGE #.....	2
DATE STARTED	5/23/06
DATE FINISHED	5/23/06
OPERATOR.....	DP
PREPARED BY	NJV

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	PRICE # 3 UNIT A, SEC. 15, T28N, R8W
CONTRACTOR:	BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	97 FT., N42E FROM PLUGGED & ABANDONED MARKER.



BLAGG ENGINEERING, INC.

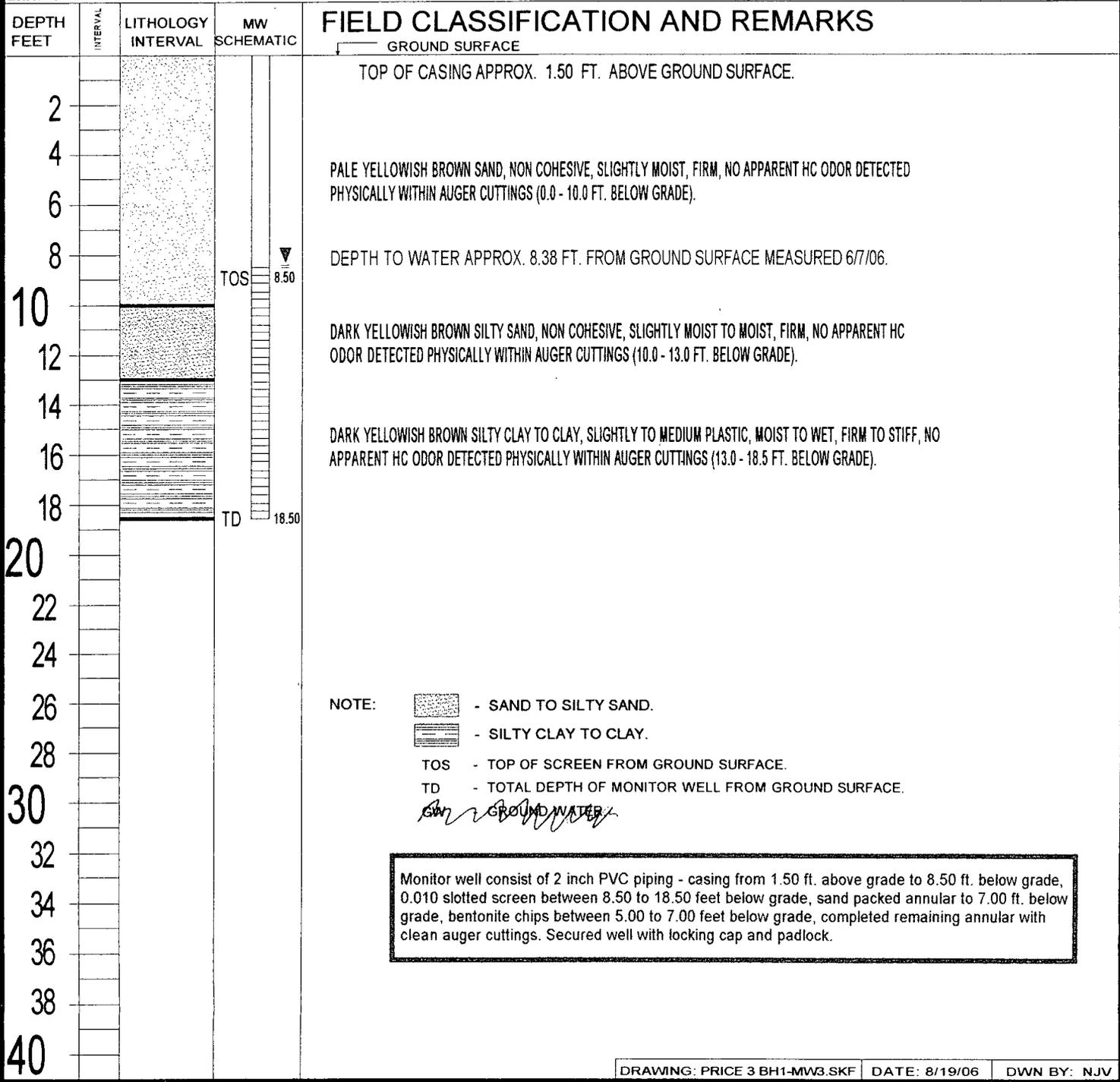
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #3

BORE / TEST HOLE REPORT

BORING #.....	BH - 1
MW #.....	3
PAGE #.....	1
DATE STARTED	5/23/06
DATE FINISHED	5/23/06
OPERATOR.....	DP
PREPARED BY	NJV

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	PRICE # 3 UNIT A, SEC. 15, T28N, R8W
CONTRACTOR:	BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	50.25 FT., N37E FROM PLUGGED & ABANDONED MARKER.



BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A & 14635

PRICE # 3 - SEPARATOR PIT UNIT A, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL
ENVIROTECH

Date : June 7, 2006

SAMPLER : N J V

Filename : 06-07-06.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.)
MW - 2	-	-	9.48	20.00	1000	7.24	1,500	21.4	5.25
MW - 3	-	-	9.88	20.00	0945	7.26	1,500	21.8	5.00

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	06/07/06	0655

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery both MW 's . Sampled both MW 's for BTEX & major anions / cations .

Murky brown appearance & no apparent hc odor detected physically in both MW 's .

Top of casing MW # 2 ~ 1.80 ft. , MW # 3 ~ 1.50 ft. above grade .

Hall Environmental Analysis Laboratory

Date: 12-Jun-06

CLIENT: Blagg Engineering
Project: Price #3

Lab Order: 0606081

Lab ID: 0606081-01

Collection Date: 6/7/2006 10:00:00 AM

Client Sample ID: MW #2

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	6/8/2006 10:19:25 PM
Toluene	ND	1.0		µg/L	1	6/8/2006 10:19:25 PM
Ethylbenzene	ND	1.0		µg/L	1	6/8/2006 10:19:25 PM
Xylenes, Total	ND	3.0		µg/L	1	6/8/2006 10:19:25 PM
Surr: 4-Bromofluorobenzene	98.0	85-115		%REC	1	6/8/2006 10:19:25 PM

Lab ID: 0606081-02

Collection Date: 6/7/2006 9:45:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	6/8/2006 10:48:29 PM
Toluene	ND	1.0		µg/L	1	6/8/2006 10:48:29 PM
Ethylbenzene	ND	1.0		µg/L	1	6/8/2006 10:48:29 PM
Xylenes, Total	ND	3.0		µg/L	1	6/8/2006 10:48:29 PM
Surr: 4-Bromofluorobenzene	86.8	85-115		%REC	1	6/8/2006 10:48:29 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
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
S	Spike Recovery outside accepted recovery limits		

ENVIROTECH LABS

PRactical SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

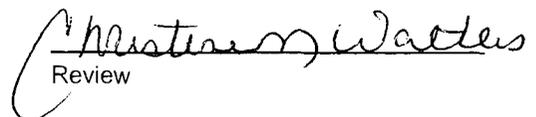
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #2	Date Reported:	06-08-06
Laboratory Number:	37352	Date Sampled:	06-07-06
Chain of Custody:	14635	Date Received:	06-07-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	06-08-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	7.59	s.u.		
Conductivity @ 25° C	1,720	umhos/cm		
Total Dissolved Solids @ 180C	1,240	mg/L		
Total Dissolved Solids (Calc)	1,250	mg/L		
SAR	1.5	ratio		
Total Alkalinity as CaCO3	194	mg/L		
Total Hardness as CaCO3	752	mg/L		
Bicarbonate as HCO3	194	mg/L	3.18	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	0.70	mg/L	0.01	meq/L
Nitrite Nitrogen	0.051	mg/L	0.00	meq/L
Chloride	30.0	mg/L	0.85	meq/L
Fluoride	0.67	mg/L	0.04	meq/L
Phosphate	<0.01	mg/L	0.00	meq/L
Sulfate	722	mg/L	15.03	meq/L
Iron	0.001	mg/L	0.00	meq/L
Calcium	250	mg/L	12.46	meq/L
Magnesium	31.3	mg/L	2.58	meq/L
Potassium	0.37	mg/L	0.01	meq/L
Sodium	93.1	mg/L	4.05	meq/L
Cations			19.09	meq/L
Anions			19.11	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: Price #3.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #3	Date Reported:	06-08-06
Laboratory Number:	37353	Date Sampled:	06-07-06
Chain of Custody:	14635	Date Received:	06-07-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	06-08-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	7.61	s.u.		
Conductivity @ 25° C	1,660	umhos/cm		
Total Dissolved Solids @ 180C	1,120	mg/L		
Total Dissolved Solids (Calc)	1,100	mg/L		
SAR	0.8	ratio		
Total Alkalinity as CaCO3	154	mg/L		
Total Hardness as CaCO3	734	mg/L		
Bicarbonate as HCO3	154	mg/L	2.52	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	0.60	mg/L	0.01	meq/L
Nitrite Nitrogen	0.095	mg/L	0.00	meq/L
Chloride	36.0	mg/L	1.02	meq/L
Fluoride	0.79	mg/L	0.04	meq/L
Phosphate	<0.01	mg/L	0.00	meq/L
Sulfate	642	mg/L	13.37	meq/L
Iron	0.001	mg/L	0.00	meq/L
Calcium	246	mg/L	12.26	meq/L
Magnesium	29.3	mg/L	2.41	meq/L
Potassium	0.48	mg/L	0.01	meq/L
Sodium	52.2	mg/L	2.27	meq/L
Cations			16.95	meq/L
Anions			16.96	meq/L
Cation/Anion Difference			0.06%	

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: Price #3.


 Analyst


 Review

CHAIN OF CUSTODY RECORD

14635

Client / Project Name		Project Location		ANALYSIS / PARAMETERS							
BURKE / BY		PRICE #3		Client No.	Lab Number	Sample Matrix	No. of Containers	MAJOR ANIONS/CATIONS	Remarks	Date	Time
Sampler: NV		94034-010									
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	MAJOR ANIONS/CATIONS	Remarks	Date	Time		
MW #2	6/7/06	1000	37352	WATER	1	✓					
MW #3	6/7/06	945	37353	WATER	1	✓					
Relinquished by: (Signature) <i>[Signature]</i>											
Relinquished by: (Signature) <i>[Signature]</i>											
Relinquished by: (Signature)											
Received by: (Signature) <i>[Signature]</i>											
Received by: (Signature) <i>[Signature]</i>											
Received by: (Signature)											

ENVIROTECH INC.

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

Sample Receipt		
Received Intact	Y	N
Cool - Ice/Blue Ice	✓	N/A

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: Price #3

Work Order: 0606081

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

Method: SW8021

Batch ID: R19554

Sample ID: 5ML RB

MBLK

Analysis Date: 6/8/2006

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

Analysis Date: 6/8/2006

Benzene	20.86	µg/L	1.0	104	85	115			
Toluene	18.34	µg/L	1.0	91.7	85	118			
Ethylbenzene	18.92	µg/L	1.0	94.6	85	116			
Xylenes, Total	57.89	µg/L	3.0	96.5	85	119			

Sample ID: 100NG BTEX LCSD

LCSD

Analysis Date: 6/8/2006

Benzene	20.53	µg/L	1.0	103	85	115	1.61	27	
Toluene	18.62	µg/L	1.0	93.1	85	118	1.47	19	
Ethylbenzene	19.23	µg/L	1.0	96.2	85	116	1.64	10	
Xylenes, Total	58.60	µg/L	3.0	97.7	85	119	1.23	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

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

6/7/2006

Work Order Number 0606081

Received by GLS

Checklist completed by

Signature

[Handwritten Signature]

Date

6-7-06

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes

No

Not Present

Custody seals intact on shipping container/cooler?

Yes

No

Not Present

Not Shipped

Custody seals intact on sample bottles?

Yes

No

N/A

Chain of custody present?

Yes

No

Chain of custody signed when relinquished and received?

Yes

No

Chain of custody agrees with sample labels?

Yes

No

Samples in proper container/bottle?

Yes

No

Sample containers intact?

Yes

No

Sufficient sample volume for indicated test?

Yes

No

All samples received within holding time?

Yes

No

Water - VOA vials have zero headspace?

No VOA vials submitted

Yes

No

Water - pH acceptable upon receipt?

Yes

No

N/A

Container/Temp Blank temperature?

2°

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

PRICE # 3 - SEPARATOR PIT UNIT A, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : August 23, 2006

SAMPLER : N J V

Filename : 08-23-06.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.)
MW - 2	-	-	9.65	20.00	1005	7.16	1,200	21.4	5.00
MW - 3	-	-	10.09	20.00	1045	7.23	1,200	21.0	5.00

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	08/22/06	0930

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3$ (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 both MW 's . Sampled both MW 's for BTEX analyzes only .

Murky brown appearance & no apparent hc odor detected physically in both MW 's .

Top of casing MW # 2 ~ 1.80 ft . , MW # 3 ~ 1.50 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: 31-Aug-06

CLIENT: Blagg Engineering
 Lab Order: 0608305
 Project: Price #3
 Lab ID: 0608305-01

Client Sample ID: MW #2
 Collection Date: 8/23/2006 10:05:00 AM
 Date Received: 8/24/2006
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	8/29/2006 12:23:12 AM
Toluene	ND	1.0		µg/L	1	8/29/2006 12:23:12 AM
Ethylbenzene	ND	1.0		µg/L	1	8/29/2006 12:23:12 AM
Xylenes, Total	ND	3.0		µg/L	1	8/29/2006 12:23:12 AM
Surr: 4-Bromofluorobenzene	109	72.2-125		%REC	1	8/29/2006 12:23:12 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

Hall Environmental Analysis Laboratory, Inc.

Date: 31-Aug-06

CLIENT: Blagg Engineering
Lab Order: 0608305
Project: Price #3
Lab ID: 0608305-02

Client Sample ID: MW #3
Collection Date: 8/23/2006 10:45:00 AM
Date Received: 8/24/2006
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	8/29/2006 12:52:02 AM
Toluene	ND	1.0		µg/L	1	8/29/2006 12:52:02 AM
Ethylbenzene	ND	1.0		µg/L	1	8/29/2006 12:52:02 AM
Xylenes, Total	ND	3.0		µg/L	1	8/29/2006 12:52:02 AM
Surr: 4-Bromofluorobenzene	110	72.2-125		%REC	1	8/29/2006 12:52:02 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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: Price #3

Work Order: 0608305

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

Sample ID: 5ML REAGENT BLA MBLK Batch ID: R20460 Analysis Date: 8/28/2006 9:03:02 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: R20460 Analysis Date: 8/28/2006 6:35:20 PM

Benzene	21.94	µg/L	1.0	110	85	115			
Toluene	22.83	µg/L	1.0	114	85	118			
Ethylbenzene	22.42	µg/L	1.0	112	85	116			
Xylenes, Total	66.05	µg/L	3.0	110	85	119			

Sample ID: 100NG BTEX LCSD LCSD Batch ID: R20460 Analysis Date: 8/28/2006 7:04:26 PM

Benzene	20.70	µg/L	1.0	104	85	115	5.78	27	
Toluene	20.60	µg/L	1.0	103	85	118	10.3	19	
Ethylbenzene	20.75	µg/L	1.0	104	85	116	7.74	10	
Xylenes, Total	61.70	µg/L	3.0	103	85	119	6.82	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 | Recovery outside accepted recovery limits |

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

8/24/2006

Work Order Number 0608305

Received by GLS

Checklist completed by

Signature

[Handwritten Signature]

8-24-06

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

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____