

BLAGG ENGINEERING, INC.

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

3R-421

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2008 APR 30 PM 3 32

April 25, 2008

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

**Re: BP America Production Company
Groundwater Monitoring Report
GCU # 229E, Unit I, Sec. 21, T28N, R12W, NMPM
San Juan County, New Mexico**

NMOCD Administrative/Environmental Order #: NONE

Dear Mr. von Gonten:

BP America Production Company (**BP**) has retained Blagg Engineering, Inc. (**BEI**) to conduct environmental monitoring of groundwater at the GCU # 229E.

BP has followed its NMOCD approved groundwater management plan and continues groundwater monitoring at the site. No permanent closure is requested at this time.

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

Respectfully submitted:
Blagg Engineering, Inc.

Nelson J. Velez
Staff Geologist

Attachment: Groundwater Report (2 copies)

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

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

**GCU # 229E
(I) SECTION 21, T28N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

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

APRIL 2008

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

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

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2008 APR 30 PM 3 33

BP AMERICA PRODUCTION COMPANY
GCU # 229E - Blow Pit
NE/4 SE/4, Sec. 21, T28N, R12W

Pit Closure Date: August 2002 (blow pit)

Well Site Plugged & Abandoned: March 2003

Monitor Well Installation Date: 11/1/06 (MW #2), 1/18/07 (MW #1, MW #3), 8/30/07 (MW #4)

Monitor Well Sampling Dates: 11/14/06, 1/30/07, 4/25/07, 7/23/07, 9/17/07, 11/15/07

Site History:

A site blow pit closure was initiated in August 2002. A soil sample was collected at the pit center via extendahoe at approximately fourteen (14) feet below grade (see attached Field Report: Pit Closure Verification form). Laboratory results (see table below) indicated a need to establish vertical extent of hydrocarbon impacts in order to meet closure according to the New Mexico Oil Conservation Division's (NMOCD) guidelines referenced in Rule 50. In May 2003, Blagg Engineering, Inc. (BEI) attempted to investigate the vertical extent utilizing a truck mounted drill rig with solid 3 ¾ inch augers. One (1) additional soil sample was collected for laboratory analysis at a depth of 25-26 feet below grade. Upon reaching a total depth of approximately twenty nine (29) feet below grade (soils moisture content observed as saturated), a passive vent pipe was installed using two (2) inch PVC piping. The piping was hand driven into the annular after auger removal was finalized (see Bore/Test Hole Report - BH-1) and completed by infilling the annular with Colorado silica sand. In November 2006 monitor well MW #2 was installed adjacent to the passive vent pipe. Field readings and laboratory results from the pit and boring advancements are as follows:

Sample ID	Date	Time	Media Type	OVM (ppm)	TPH (ppm)	Benzene (ppm)	Total BTEX (ppm)
1 @ 14'	08/02/02	0849	soil	875	1,150	0.0777	4.970
BH-1 @ 18--19'	05/02/03	0833	soil	383	N/A	N/A	N/A
BH-1 @ 25--26'	05/02/03	0905	soil	805	2,030	0.295	6.810
BH-2 @ 25--26' (MW #2)	11/01/06	1110	soil	262	2,694	ND	0.0335
NMOCD regulatory standards				100	100	10	50

Note: OVM = Organic Vapor Meter or Photoionization Detector (PID), TPH = Total Petroleum Hydrocarbon per US EPA Method 8015B, BTEX = benzene, toluene, ethylbenzene, and total xylenes, ppm = parts per million or milligram per kilogram (mg/Kg), N/A = Not available, ND = Not detectable at reported limits (less than regulatory standards by at least a magnitude of 10), NMOCD = New Mexico Oil Conservation Division.

Groundwater impacts were identified from sampling and testing of MW #2 in November 2006. After receipt of the laboratory results, NMOCD was notified with a letter dated March 2, 2007 of the groundwater impacts (see attached letter).

Groundwater Investigation and Soil Lithology:

Additional groundwater monitor wells (MW #1 – background and MW #3 – suspected down gradient direction) were installed in January 2007 to delineate the previously identified source area, establish groundwater gradient information, and to test groundwater quality (Figure 1). After four (4) consecutive quarterly sampling events and observing a constant trend in groundwater gradient direction, an additional monitor well (MW #4) was installed in August 2007 for delineation purposes. All four (4) monitor wells were installed utilizing a conventional drill rig with eight inch hollow stem augers. Boring logs along with well completion information are contained within this report. There are no known receptors impacted by the previous discovery of impacted soil and/or groundwater.

Soil lithology at the site consists of primarily coarse grained sand, non cohesive, and firm with some gravel at varying depths and intervals.

Groundwater Monitor Well Sampling Procedures:

Monitor wells were developed by hand-bailing, using new disposable bailers after installation. Prior to sample collections, the monitor wells were purged approximately three (3) well bore volumes with new disposable bailers. The groundwater samples were collected following US EPA: SW-846 protocol, were placed into laboratory supplied containers with appropriate preservative, and stored in an ice chest for express delivery to an analytical laboratory for testing under strict chain-of-custody procedures. Analytical testing included BTEX by US EPA Method 8021B and general water quality parameters.

Fluids generated during monitor well development and purging were managed by discarding into the separator tank pit located on the same well pad (BP's GCU #316 well site). The tank pit contents are then disposed through approved NMOCD operational procedures for removal of produced fluids.

Groundwater Quality & Flow Direction Information:

Since November 2006, monitor wells have been sampled on a quarterly basis and according to BP's NMOCD approved groundwater management plan (**GMP**). The source area monitor well **MW #2** revealed total xylenes in excess of the New Mexico Water Quality Control Commission (**NMWQCC**) groundwater standards during the initial sampling event only. Afterwards, MW #2 has displayed four (4) consecutive sampling events below NMWQCC groundwater standards. Monitor wells MW #1 and MW #3 have not indicated the presence of BTEX during any direct sampling and testing of those wells. Monitor well MW #4 initial sampling and testing in September 2007, indicated total xylenes (320 ppb) below NMWQCC standards (620 ppb), but exceeding 25% of the regulatory standard, therefore placing it on a quarterly sampling schedule according to BP's GMP. The subsequent sampling and testing in November 2007 revealed total xylenes well above NMWQCC groundwater standards (6,500 ppb). General water quality does not appear to show any abnormalities. A historical summary of laboratory analytical BTEX and general water quality results are included within the tables on the following pages. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included.

Groundwater elevations have consistently been measured with a gradient towards the north-northeast direction (Figure 2 through Figure 6).

Summary and/or Recommendations:

The well site is located in a very remote area of San Juan County near the Navajo Agricultural Product Industry (NAPI) area. The presence of total xylenes well above NMWQCC standards within MW #4 during the November 2007 sampling event indicates possible long term monitoring is potentially required. It is recommended to continue monitoring of MW #4 on a quarterly basis. No additional remedial action is suggested until further review of future BTEX analyses.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: BP AMERICA PROD. CO. Telephone: (505)-326-9200 e-mail address: _____
Address: 200 ENERGY COURT, FARMINGTON, NM 87410
Facility or well name: GCU #229E API #: 30-045- 23900 U/L or Qtr/Qtr I Sec 21 T 28N R 12W
County: SAN JUAN Latitude 36.64548 Longitude 108.11172 NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☐ State ☐ Private ☐ Indian ☒

Pit Type: Drilling <input type="checkbox"/> Production <input checked="" type="checkbox"/> Disposal <input type="checkbox"/> <u>BLOW</u> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input checked="" type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/> Pit Volume _____ bbl	Below-grade tank Volume: _____ bbl Type of fluid: _____ Construction material: <u>NA</u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) 20 100 feet or more (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) No (0 points) 0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 0 1000 feet or more (0 points)
Ranking Score (Total Points) 20	

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☒ If yes, show depth below ground surface 29 ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: PIT LOCATED APPROXIMATELY 129 FT. N12E FROM WELL HEAD.
PIT EXCAVATION: WIDTH NA ft., LENGTH NA ft., DEPTH NA ft.
PIT REMEDIATION: CLOSE AS IS: ☐, LANDFARM: ☐, COMPOST: ☐, STOCKPILE: ☐, OTHER ☒ (explain) MONITORING
Cubic yards: NA
ESTABLISH VERTICAL EXTENT. GROUNDWATER IMPACTED.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an alternative OCD-approved plan ☒.

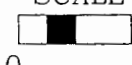
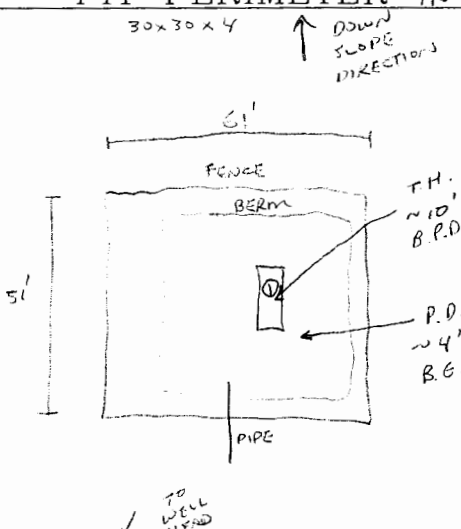
Date: 12/01/06

Printed Name/Title Jeff Blagg - P.E. # 11607 Signature Jeff Blagg

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title _____ Signature _____ Date: _____

CLIENT: <u>B?</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>81029</u> C.O.C. NO: <u>10079</u>																																
FIELD REPORT: PIT CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>																																
LOCATION: NAME: <u>GCN</u> WELL #: <u>229E</u> TYPE: <u>BLOW</u>		DATE STARTED: <u>8/2/02</u>																																
QUAD/UNIT: <u>I</u> SEC: <u>21</u> TWP: <u>28N</u> RNG: <u>12W</u> PM: <u>NM</u> CNTY: <u>ST</u> ST: <u>NM</u>		DATE FINISHED: _____																																
QTR/FOOTAGE: <u>1820'S/1080'E</u> NEISE CONTRACTOR: <u>L&L (SCOTT)</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>																																
EXCAVATION APPROX. _____ FT. x _____ FT. x _____ FT. DEEP. CUBIC YARDAGE: _____																																		
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: _____																																		
LAND USE: <u>RANGE -</u> NAPI LEASE: <u>NM 078391A</u> FORMATION: <u>OK</u>																																		
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>129</u> FT. <u>N12E</u> FROM WELLHEAD.																																		
DEPTH TO GROUNDWATER: <u>< 50'</u> NEAREST WATER SOURCE: <u>> 1000'</u> NEAREST SURFACE WATER: <u>> 1000'</u>																																		
NMDCD RANKING SCORE: <u>20</u> NMDCD TPH CLOSURE STD: <u>100</u> PPM																																		
SOIL AND EXCAVATION DESCRIPTION:																																		
SOIL TYPE: <u>SAND</u> / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER _____ SOIL COLOR: <u>PALE YELL. BROWN TO OLIVE-MED GRAY</u> COHESION (ALL OTHERS): <u>NON COHESIVE</u> / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE CONSISTENCY (NON COHESIVE SOILS): <u>LOOSE</u> / <u>FIRM</u> / DENSE / VERY DENSE PLASTICITY (CLAYS): <u>NON PLASTIC</u> / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC DENSITY (COHESIVE CLAYS & SILTS): <u>SOFT</u> / FIRM / STIFF / VERY STIFF / HARD MOISTURE: <u>DRY</u> / <u>SLIGHTLY MOIST</u> / MOIST / WET / SATURATED / SUPER SATURATED DISCOLORATION/STAINING OBSERVED: <u>YES</u> / NO EXPLANATION - <u>BETWEEN PIT SURFACE TO 12-14' BELOW GRADE</u> HC ODOR DETECTED: <u>YES</u> / NO EXPLANATION - <u>TEST HOLE & OVM SAMPLE</u> SAMPLE TYPE: <u>GRAB</u> / COMPOSITE - # OF PTS. <u>-</u> ADDITIONAL COMMENTS: <u>VERTICAL EXTENT NEEDS TO BE ESTABLISHED.</u>																																		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>SCALE</p>  <p>0 FT</p> </div> <div style="width: 65%;"> <p>FIELD 418.1 CALCULATIONS</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMP. TIME</th> <th>SAMPLE I.D.</th> <th>LAB No:</th> <th>WEIGHT (g)</th> <th>mL. FREON</th> <th>DILUTION</th> <th>READING</th> <th>CALC. ppm</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> </div> </div>			SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm																								
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<p>PIT PERIMETER</p>  <p>30x30x4 FENCE BERM T.H. ~10' B.P.D. P.D. ~4' B.G. PIPE TO WELL HEAD</p>	<p>OVM RESULTS</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>FIELD HEADSPACE PID (ppm)</th> <th>TIME</th> </tr> </thead> <tbody> <tr><td>1 @ 14</td><td>875</td><td> </td></tr> <tr><td>2 @</td><td> </td><td> </td></tr> <tr><td>3 @</td><td> </td><td> </td></tr> <tr><td>4 @</td><td> </td><td> </td></tr> <tr><td>5 @</td><td> </td><td> </td></tr> <tr><td>BH1 @ 18-19</td><td>383</td><td>0833</td></tr> <tr><td>BH1 @ 25-26</td><td>805</td><td>0905</td></tr> </tbody> </table>	SAMPLE ID	FIELD HEADSPACE PID (ppm)	TIME	1 @ 14	875		2 @			3 @			4 @			5 @			BH1 @ 18-19	383	0833	BH1 @ 25-26	805	0905	<p>PIT PROFILE</p> <p>5/2/03</p> <p>OVM CALIB. 53.1 0840</p>								
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<p>TRAVEL NOTES: CALLOUT: <u>8/1/02 - AFTER.</u> ONSITE: <u>8/2/02 - MORN.</u></p>																																		

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client: Blagg / BP
Sample ID: 1 @ 14'
Laboratory Number: 23454
Chain of Custody No: 10079
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

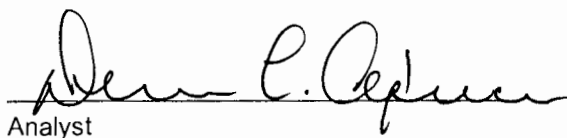
Project #: 94034-010
Date Reported: 08-05-02
Date Sampled: 08-02-02
Date Received: 08-02-02
Date Extracted: 08-05-02
Date Analyzed: 08-05-02
Analysis Requested: 8015 TPH

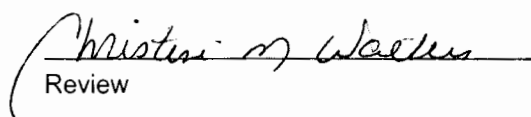
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	366	0.2
Diesel Range (C10 - C28)	779	0.1
Total Petroleum Hydrocarbons	1,150	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: GCU #229E Blow Pit Grab Sample.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Blagg / BP
Sample ID: 1 @ 14'
Laboratory Number: 23454
Chain of Custody: 10079
Sample Matrix: Soil
Preservative: Cool
Condition: Cool & Intact

Project #: 94034-010
Date Reported: 08-05-02
Date Sampled: 08-02-02
Date Received: 08-02-02
Date Analyzed: 08-05-02
Date Extracted: 08-05-02
Analysis Requested: BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	77.7	1.8
Toluene	867	1.7
Ethylbenzene	948	1.5
p,m-Xylene	1,490	2.2
o-Xylene	1,590	1.0
Total BTEX	4,970	

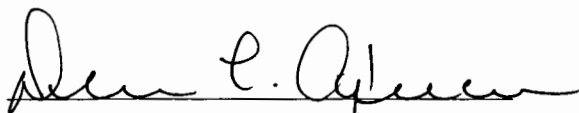
ND - Parameter not detected at the stated detection limit.

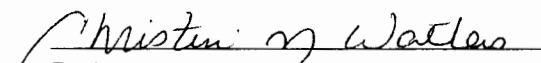
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99 %
	1,4-difluorobenzene	99 %
	Bromochlorobenzene	99 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: GCU #229E Blow Pit Grab Sample.


Analyst


Review

BLAGG ENGINEERING INC.

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

Phone: (505)632-1199 Fax: (505)632-3903

March 2, 2007

Mr. Glenn von Gonten, Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: BP America Production Company
Notice of Potential Groundwater Impact
GCU #229E
(T)Sec. 21 - T28N - R12W, San Juan County, NM

Dear Mr. von Gonten:

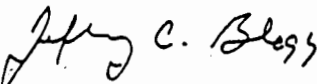
On behalf of BP America Production Company, Blagg Engineering, Inc. (BEI) has identified potential groundwater impacts at the subject location. During a pit closure investigation to determine the vertical extent of soil impacts, groundwater was encountered at a depth of approximately twenty nine (29) feet below grade. A monitor well was set and initial sampling test results indicate that groundwater exceeding New Mexico Water Quality Control Commission regulatory standards for total xylenes has been encountered. This site is located in a rural area of San Juan County with no known private or municipal water wells within 1 mile of the impact. Listed below are summary analytical test results for BTEX from a groundwater sample collected on November 14, 2006:

Parameter	Water Test Results (ug/L)
Benzene	ND
Toluene	25
Ethylbenzene	110
Total Xylenes	1,800

BP will implement its Groundwater Management Plan to complete investigation and remediation of impacts. A groundwater abatement plan will be prepared and submitted to NMOCD by April 13, 2007 for regulatory approval.

If you have questions or need additional information, please contact either myself at (505)632-1199 or Mr. Larry Schlotterback of BP at (505)326-9200.

Respectfully,
Blagg Engineering, Inc.



Jeffrey C. Blagg, P.E.
President

cc: Brandon Powell - NMOCD Aztec
Mr. Steven B. Etsitty - NNEPA Exec. Director
Larry Schlotterback - BP SJ Op. Ctr.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 229E - BLOW PIT

UNIT I, SEC. 21, T28N, R12W

REVISED DATE: November 30, 2007

FILENAME: (229E4Q07.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
30-Jan-07	MW #1	34.11	42.00	730	1,200	7.13		ND	ND	ND	ND
14-Nov-06	MW #2	31.60	42.00	866	1,300	7.05		ND	25	110	1,800
30-Jan-07		31.63			1,200	6.96		ND	ND	7.9	200
25-Apr-07		31.76			1,200	6.92		ND	ND	1.0	140
23-Jul-07		31.78			1,200	6.87		ND	ND	4.1	130
15-Nov-07		31.73			1,500	6.97		ND	ND	5.1	170
30-Jan-07	MW #3	33.20	42.00	762	1,200	7.18		ND	ND	ND	ND
25-Apr-07		33.34			1,200	7.07		ND	ND	ND	ND
23-Jul-07		33.38			1,100	6.98		ND	ND	ND	ND
15-Nov-07		33.30			1,300	7.16		ND	ND	ND	ND
17-Sep-07	MW #4	23.58	36.88		1,300	7.06		1.2	ND	13	340
15-Nov-07		23.55			1,400	7.15		2.2	1.9	150	6,500
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

- NOTES :**
- 1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .
 - 2) RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED .
 - 3) ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10).

GENERAL WATER QUALITY

BP AMERICA PRODUCTION COMPANY

GCU # 229E

Sample Dates : Nov. 14, 2006 & Jan. 30, 2007, Sept. 17, 2007

PARAMETERS	MW # 1 01/30/07	MW # 2 11/14/06	MW # 3 01/30/07	MW # 4 09/17/07	NMWQCC STANDARDS	Units
LAB pH	7.34	7.36	7.51	7.30	7 - 9	s. u.
LAB CONDUCTIVITY @ 25 C	1,320	1,230	1,250	N/A		umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	730	866	762	1,000	1,000	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	717	840	747	N/A		mg / L
SODIUM ABSORPTION RATIO	2.3	2.9	3.3	N/A		ratio
TOTAL ALKALINITY AS CaCO3	256	288	300	N/A		mg / L
TOTAL HARDNESS AS CaCO3	356	637	304	N/A		mg / L
BICARBONATE as HCO3	256	288	300	N/A		mg / L
CARBONATE AS CO3	< 0.1	< 0.1	< 0.1	N/A		mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	N/A		mg / L
NITRATE NITROGEN	7.6	15.5	9.5	23	10	mg / L
NITRITE NITROGEN	< 0.001	0.65	< 0.001	0.32		mg / L
CHLORIDE	39.9	64.0	43.7	33	250	mg / L
FLUORIDE	0.37	0.70	0.68	0.33	1.60	mg / L
PHOSPHATE	0.7	0.2	0.4	< 0.5		mg / L
SULFATE	283	312	264	320	600	mg / L
IRON	< 0.001	< 0.01	< 0.001	< 0.1	1.0	mg / L
CALCIUM	114	118	102	N/A		mg / L
MAGNESIUM	17.1	21.1	12.2	N/A		mg / L
POTASSIUM	0.10	0.60	< 0.01	N/A		mg / L
SODIUM	98.3	132	132	N/A		mg / L
CATION / ANION DIFFERENCE	0.03%	0.40%	0.07%	N/A		

NOTE: N/A = NOT AVAILABLE .

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT:

LOCATION NAME:

CONTRACTOR:

EQUIPMENT USED:

BORING LOCATION:

BP AMERICA PRODUCTION COMPANY

GCU # 229E BLOW PIT - UNIT I, SEC. 21, T28N, R12W

BLAGG ENGINEERING, INC.

EARTHPROBE 200

135 FEET, N14E FROM WELL HEAD.

BORING #..... BH - 1

MW#..... NA

PAGE #..... 1

DATE STARTED 5/02/03

DATE FINISHED 5/02/03

OPERATOR..... JCB

PREPARED BY NJV

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	VENT PIPE SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
2				TOP OF CASING APROX. 1.00 FT. ABOVE GRADE.
4			TOS 4.0 ft	BACKFILL MATERIAL - GRAYISH TO DARK YELLOWISH ORANGE SAND, NON COHESIVE, DRY TO SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 5.0 FT. BELOW GRADE).
6				
8				
10				
12				PALE YELLOWISH BROWN TO OLIVE/MEDIUM GRAY SAND, NON COHESIVE, MOIST, STRONG HC ODOR DETECTED WITHIN CUTTINGS (5.0 - 21.0 FT. BELOW GRADE).
14				SAMPLE 1 @ 14 FT. - CONDUCTED DURING TEST HOLE ADVANCEMENT ON 8/2/02; TIME COLLECTED 0849, OVM = 875 ppm; TPH = 1,150 ppm; Benzene = 77.7 ppb; Total BTEX = 4,970 ppb (see Pit Closure Field Report for additional information).
16				
18				BH1 @ 18-19 FT. - CONDUCTED DURING BORE HOLE ADVANCEMENT ON 5/2/03; TIME COLLECTED 0833, OVM = 383 ppm.
20				
22				
24				
26				BH1 @ 25-26 FT. - CONDUCTED DURING BORE HOLE ADVANCEMENT ON 5/2/03; TIME COLLECTED 0905, OVM = 805 ppm; TPH = 2,030 ppm; Benzene = 295 ppb; Total BTEX = 6,810 ppb (see Pit Closure Field Report for additional information).
28				
30			TD 29.0 ft	MEDIUM GRAY TO BLACK SAND, NON COHESIVE, MOIST TO SATURATED, STRONG HC ODOR DETECTED WITHIN CUTTINGS (21.0 - 31.0 FT. BELOW GRADE).
32				BLACK SAND & GRAVEL, NON COHESIVE, SATURATED, STRONG HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS, (31.0 - 33.0 FT. BELOW GRADE).
34				
36				
38				
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				
60				

NOTES:

□ - SAND.

▣ - SAND & GRAVEL.

OVM - organic vapor meter or PID (photoionization detector).

ppm - parts per million.

ppb - parts per billion.

TPH - total petroleum hydrocarbons (US Epa modified method 8015B).

BTEX - benzene, toluene, ethylbenzene, & total xylenes (US Epa method 8021B).

TOS - Top of screen.

TD - Total depth/bottom extent.

OVM CALIBRATION:

53.4 ppm; RF = 0.52
(RF = response factor).
100 ppm calibration gas
- isobutylene.
Date - 7/30/02.
Time - 1100.

OVM CALIBRATION:

53.1 ppm; RF = 0.52
(RF = response factor).
100 ppm calibration gas
- isobutylene.
Date - 5/2/03.
Time - 0840.

Passive vent pipe consist of 2 inch PVC - casing from approximately 1.0 ft. above grade to 4.0 ft. below grade, 0.010 slotted screen between 4.0 to 29.0 feet below grade, sand packed annular to grade. Temporarily installed slip cap at top of casing until further inspection indicates course of action to be taken.

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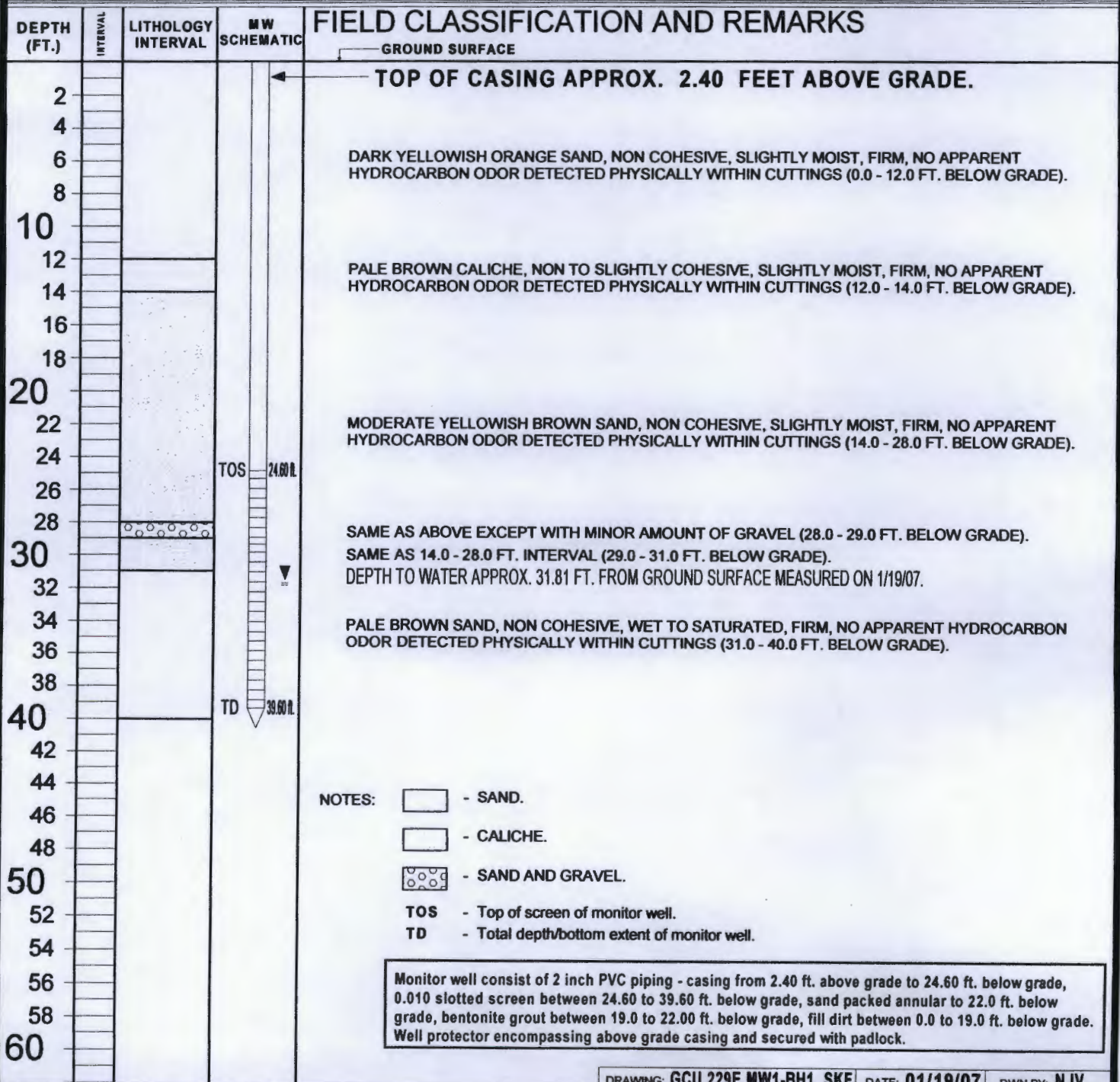
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(505) 632-1199

MW #1

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 88 FEET, N16W FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 1A
MW#..... 1
PAGE #..... 1
DATE STARTED 01/18/07
DATE FINISHED 01/18/07
OPERATOR..... DP
PREPARED BY NJV



BLAGG ENGINEERING, Inc.

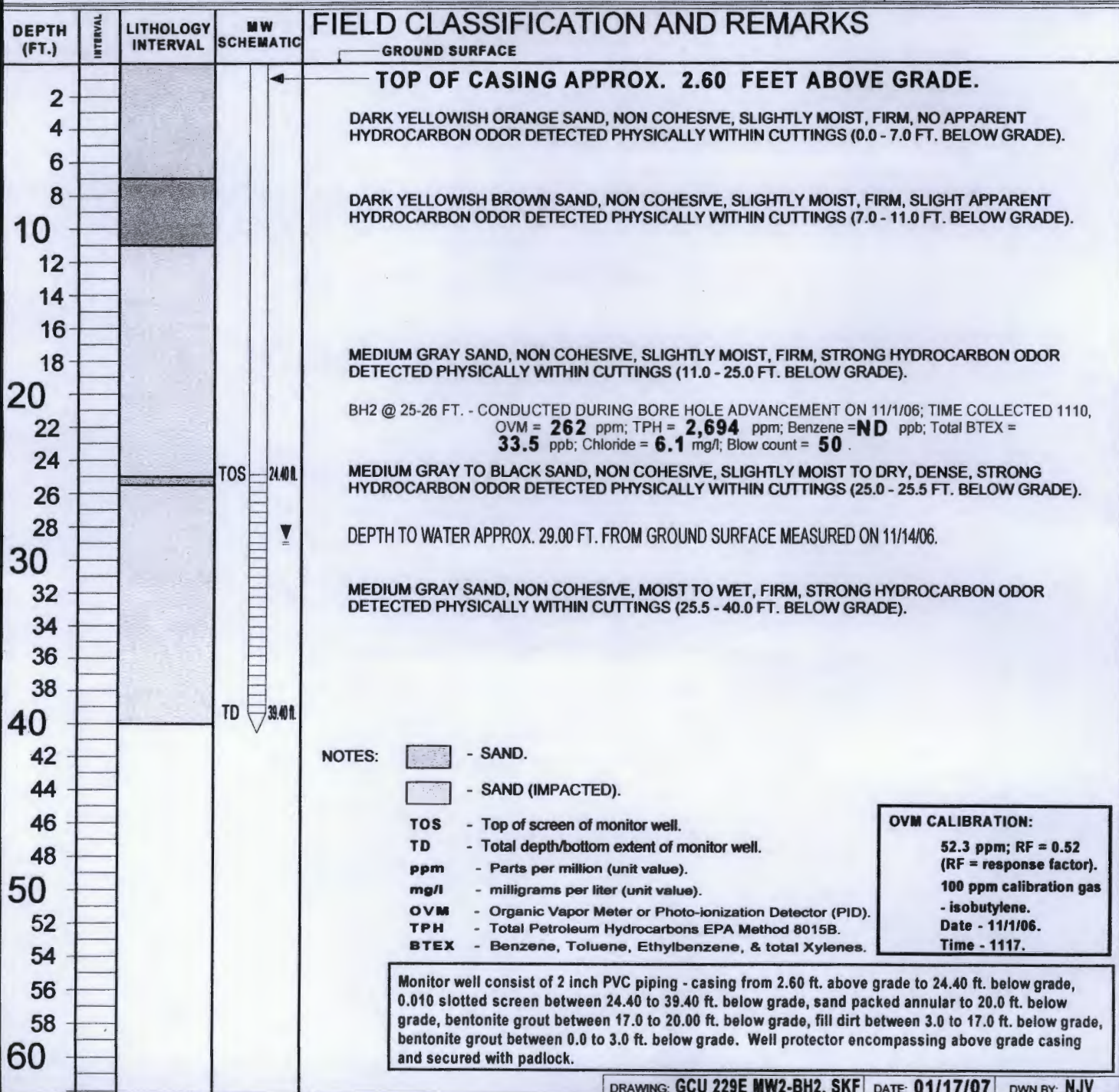
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 132 FEET, N13E FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 2
MW#..... 2
PAGE #..... 2
DATE STARTED 11/1/06
DATE FINISHED 11/1/06
OPERATOR..... DP
PREPARED BY NJV



BLAGG ENGINEERING, Inc.

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


MW #3

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 143.5 FEET, N1.5E FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 3
MW#..... 3
PAGE #..... 3
DATE STARTED 01/18/07
DATE FINISHED 01/18/07
OPERATOR..... DP
PREPARED BY NJV

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
2				TOP OF CASING APPROX. 2.50 FEET ABOVE GRADE.
4				
6				
8				DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 16.0 FT. BELOW GRADE).
10				
12				
14				
16				
18				
20				MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (16.0 - 29.0 FT. BELOW GRADE).
22				
24				
26				
28				
30				DEPTH TO WATER APPROX. 30.70 FT. FROM GROUND SURFACE MEASURED ON 1/19/07.
32				
34				PALE BROWN SAND, NON COHESIVE, WET, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (29.0 - 40.0 FT. BELOW GRADE).
36				
38				
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				
60				

NOTES:
 - SAND.
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 2.50 ft. above grade to 24.50 ft. below grade, 0.010 slotted screen between 24.50 to 39.50 ft. below grade, sand packed annular to 23.0 ft. below grade, bentonite grout between 20.0 to 23.00 ft. below grade, fill dirt between 0.0 to 20.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

TOS 24.50 ft.
 TD 39.50 ft.

BLAGG ENGINEERING, Inc.

P.O. BOX 87
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(505) 632-1199

MW #4

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 207 FEET, N11E FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 4
MW #..... 4
PAGE #..... 4
DATE STARTED 8/30/07
DATE FINISHED 8/30/07
OPERATOR..... DP
PREPARED BY NJV

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
2				TOP OF CASING APPROX. 2.25 FEET ABOVE GRADE.
4				
6				
8				
10				DARK YELLOWISH ORANGE TO DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 20.0 FT. BELOW GRADE).
12				
14				
16				
18				
20			TOS 19.63	SAME AS ABOVE EXCEPT WITH MINOR AMOUNT OF GRAVEL (20.0 - 21.0 FT. BELOW GRADE).
22				SAME AS ABOVE EXCEPT WITH NO GRAVEL (21.0 - 26.0 FT. BELOW GRADE).
24				DEPTH TO WATER APPROX. 21.35 FT. FROM GROUND SURFACE MEASURED ON 8/31/07.
26				
28				
30				OLIVE TO MEDIUM GRAY SAND, NON COHESIVE, MOIST TO WET, FIRM TO LOOSE, STRONG APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (26.0 - 35.0 FT. BELOW GRADE).
32				
34			TD 34.63	
36				
38				
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				
60				

NOTES:

- SAND.
- SAND (IMPACTED).
- TOS - Top of screen of monitor well.
- TD - Total depth/bottom extent of monitor well.

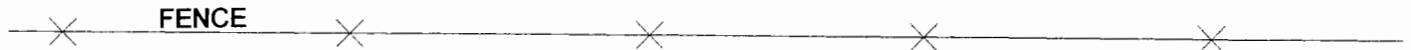
Monitor well consist of 2 inch PVC piping - casing from 2.40 ft. above grade to 19.63 ft. below grade, 0.010 slotted screen between 19.63 to 34.63 ft. below grade, sand packed annular to 17.0 ft. below grade, bentonite grout between 14.0 to 17.00 ft. below grade, fill dirt between 3.0 to 14.0 ft. below grade, bentonite grout between 0.0 to 3.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

FIGURE 1



OPEN RANGE

Direction to
Gallegos wash.



FENCE

MW #3

MW #2

MW #1

Pit area with
soil tested -
August, 2002

P & A
MARKER

1 INCH = 30 FT.

0 30 60 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.

GCU #229E

NE/4 SE/4 SEC. 21, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALL.

DRAWN BY: NJV

FILENAME: GCU 229E-SM.SKF

DRAFTED: 01-30-07 NJV

SITE MAP

01/07

FIGURE 2 (1st 1/4, 2007)



**OPEN
RANGE**

Direction to
Gallegos wash.

APPARENT
GROUNDWATER
FLOW DIRECTION
~N15.75E

FENCE

MW #3
(64.66)

64.80

65.00

65.20

MW #2
(64.80)

MW #1
(65.89)

Blow pit -
soil tested
Aug., 2002

1 INCH = 30 FT.

0 30 60 FT.

⊕
P & A
MARKER

	Top of Well Elevation
MW #1	(100.00)
MW #2	(96.43)
MW #3	(97.86)
MW #1	Groundwater Elevation as of 1/30/07.
(65.89)	

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

BP AMERICA PRODUCTION CO.
GCU #229E
NE/4 SE/4 SEC. 21, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 01-30-07-GW.SKF
DRAFTED: 01-31-07 NJV

**GROUNDWATER
CONTOUR
MAP**
01/07

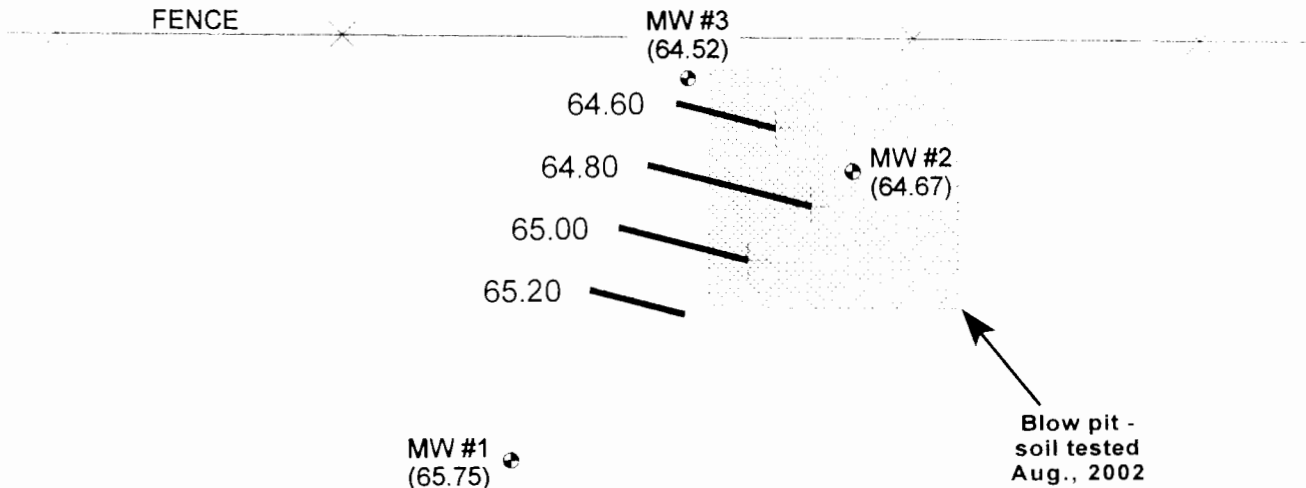
FIGURE 3 (2nd 1/4, 2007)



**OPEN
RANGE**

Direction to
Gallegos wash.

APPARENT
GROUNDWATER
FLOW DIRECTION
~N14.75E



1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(100.00)
MW #2	(96.43)
MW #3	(97.86)
MW #1 (65.75)	Groundwater Elevation as of 4/25/07.

P & A
MARKER

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

BP AMERICA PRODUCTION CO.

GCU #229E

NE/4 SE/4 SEC. 21, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

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P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 04-25-07-GW.SKF

DRAFTED: 04-30-07 NJV

GROUNDWATER

CONTOUR

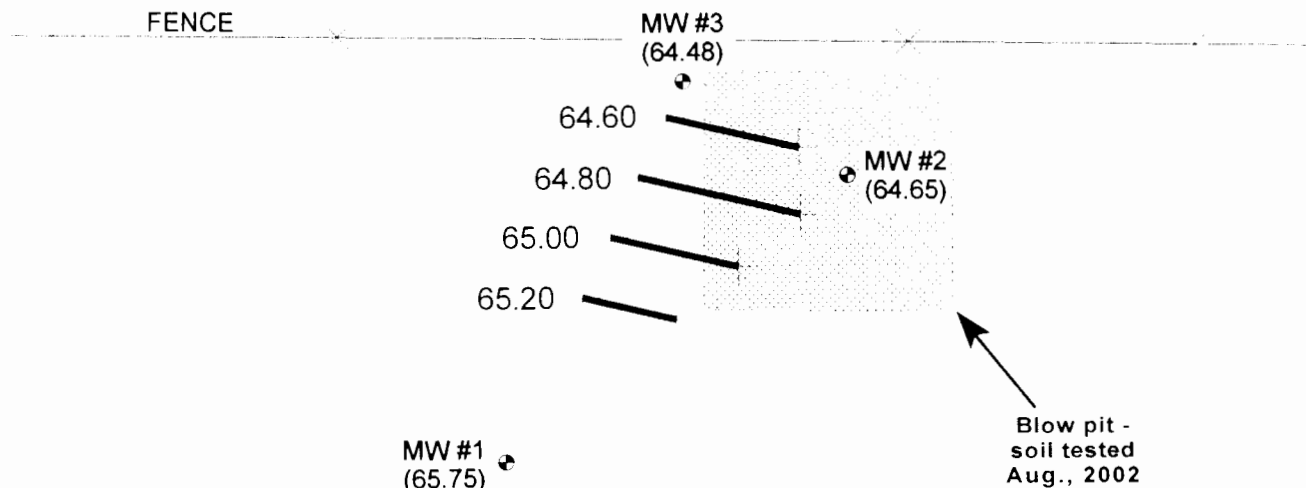
MAP

04/07

FIGURE 4 (3rd 1/4, 2007)



**OPEN
RANGE**



1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(100.00)
MW #2	(96.43)
MW #3	(97.86)
MW #1	Groundwater Elevation as of 7/23/07.
(65.75)	

P & A
MARKER

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

BP AMERICA PRODUCTION CO.
GCU #229E
NE1/4 SE1/4 SEC. 21, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM - RECLAMATION SERVICES
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PHONE (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 07-23-07-GW.SKF
DRAFTED: 07-25-07 NJV

GROUNDWATER
CONTOUR
MAP
07/07

FIGURE 5 (3rd 1/4, 2007)



**OPEN
RANGE**

MW #4
(63.15)

Direction to
Gallegos wash.

64.00

FENCE

64.40

MW #3
(64.56)

64.80

MW #2
(64.68)

65.20

MW #1
(65.84)

Blow pit -
soil tested
Aug., 2002

APPARENT
GROUNDWATER
FLOW DIRECTION
~N18.25E

1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(100.00)
MW #2	(96.43)
MW #3	(97.86)
MW #4	(86.73)
MW #1 (65.84)	Groundwater Elevation as of 9/17/07.

⊕
P & A
MARKER

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

BP AMERICA PRODUCTION CO.

GCU #229E

NE/4 SE/4 SEC. 21, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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PHONE (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 09-17-07-GW.SKF

REVISED: 09-17-07 NJV

**GROUNDWATER
CONTOUR**

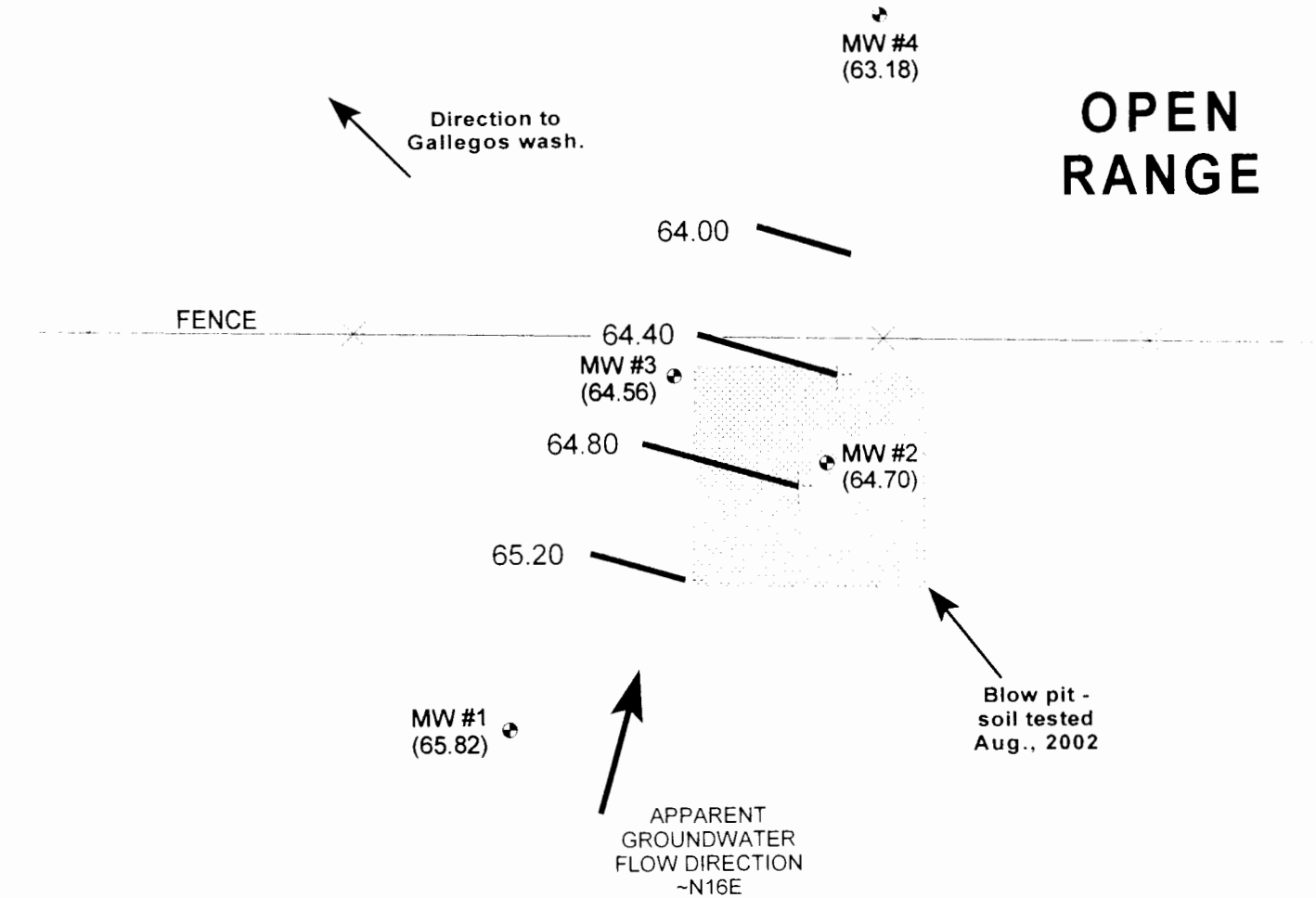
MAP

09/07

FIGURE 6 (4th 1/4, 2007)



**OPEN
RANGE**



1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(100.00)
MW #2	(96.43)
MW #3	(97.86)
MW #4	(86.73)
MW #1	Groundwater Elevation as of 11/15/07.
(65.82)	

P & A
MARKER

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

BP AMERICA PRODUCTION CO.
GCU #229E
NE/4 SE/4 SEC. 21, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 11-15-07-GW.SKF
REVISED: 11-15-07 NJV

**GROUNDWATER
CONTOUR
MAP**
11/07

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

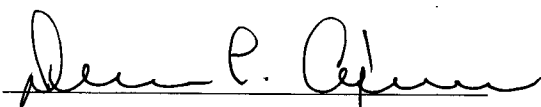
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	BH1 @ 25'-26'	Date Reported:	05-05-03
Laboratory Number:	25520	Date Sampled:	05-02-03
Chain of Custody No:	10808	Date Received:	05-02-03
Sample Matrix:	Soil	Date Extracted:	05-02-03
Preservative:	Cool	Date Analyzed:	05-05-03
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

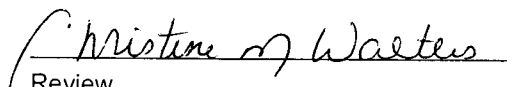
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1,340	0.2
Diesel Range (C10 - C28)	686	0.1
Total Petroleum Hydrocarbons	2,030	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: GCU #229E Blow Pit Grab Sample.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	BH1 @ 25'-26'	Date Reported:	05-05-03
Laboratory Number:	25520	Date Sampled:	05-02-03
Chain of Custody:	10808	Date Received:	05-02-03
Sample Matrix:	Soil	Date Analyzed:	05-05-03
Preservative:	Cool	Date Extracted:	05-02-03
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	295	1.8
Toluene	1,130	1.7
Ethylbenzene	1,180	1.5
p,m-Xylene	2,650	2.2
o-Xylene	1,550	1.0
Total BTEX	6,810	

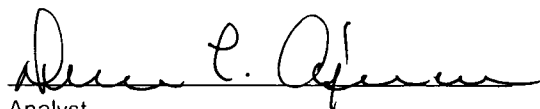
ND - Parameter not detected at the stated detection limit.

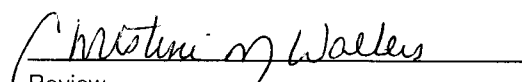
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99 %
	1,4-difluorobenzene	99 %
	Bromochlorobenzene	99 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: GCU #229E Blow Pit Grab Sample.


Analyst


Review

10808

ENVIROTECH INC.

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	05-05-TPH QA/QC	Date Reported:	05-05-03
Laboratory Number:	25520	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	05-05-03
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	04-29-03	2.6312E-002	2.6286E-002	0.10%	0 - 15%
Diesel Range C10 - C28	04-29-03	2.5849E-002	2.5823E-002	0.10%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

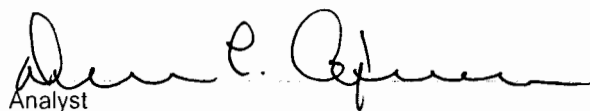
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	1,340	1,340	0.0%	0 - 30%
Diesel Range C10 - C28	686	684	0.3%	0 - 30%

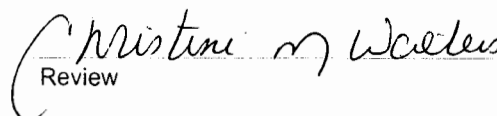
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	1,340	250	1,580	99.4%	75 - 125%
Diesel Range C10 - C28	686	250	935	99.8%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 25520 - 25524, 25528 - 25531.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	05-05-BTEX QA/QC	Date Reported:	05-05-03
Laboratory Number:	25520	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	05-05-03
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect. Limit
		Accept. Range 0 - 15%			
Benzene	3.7241E-002	3.7353E-002	0.3%	ND	0.2
Toluene	4.4375E-002	4.4464E-002	0.2%	ND	0.2
Ethylbenzene	7.5434E-002	7.5661E-002	0.3%	ND	0.2
p,m-Xylene	6.7602E-002	6.7806E-002	0.3%	ND	0.2
o-Xylene	5.7973E-002	5.8089E-002	0.2%	ND	0.1

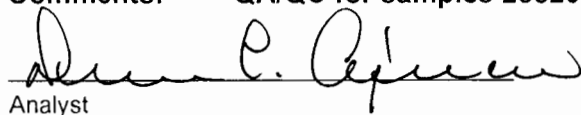
Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	295	303	2.7%	0 - 30%	1.8
Toluene	1,130	1,110	1.8%	0 - 30%	1.7
Ethylbenzene	1,180	1,160	1.7%	0 - 30%	1.5
p,m-Xylene	2,650	2,720	2.6%	0 - 30%	2.2
o-Xylene	1,550	1,590	2.6%	0 - 30%	1.0

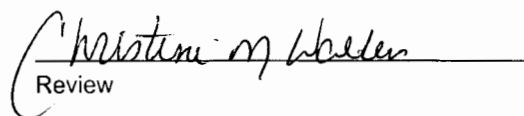
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	295	50.0	344	99.7%	39 - 150
Toluene	1,130	50.0	1,170	99.2%	46 - 148
Ethylbenzene	1,180	50.0	1,220	99.2%	32 - 160
p,m-Xylene	2,650	100	2,740	99.6%	46 - 148
o-Xylene	1,550	50.0	1,590	99.4%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples 25520 - 25524, 25528.


Analyst


Review

Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Blagg Engineering
Lab Order: 0611044
Project: GCU #316 (#229E)
Lab ID: 0611044-01

Client Sample ID: BH2 @ 25'-26'-Blow Pit
Collection Date: 11/1/2006 11:10:00 AM
Date Received: 11/3/2006
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	2600	100		mg/Kg	10	11/11/2006 11:22:42 AM
Surr: DNOP	171	61.7-135	S	%REC	10	11/11/2006 11:22:42 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	94	5.0		mg/Kg	1	11/6/2006 6:01:48 PM
Surr: BFB	413	84.5-129	S	%REC	1	11/6/2006 6:01:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	11/6/2006 6:01:48 PM
Toluene	ND	0.50		mg/Kg	10	11/6/2006 6:01:48 PM
Ethylbenzene	2.5	0.50		mg/Kg	10	11/6/2006 6:01:48 PM
Xylenes, Total	31	1.5		mg/Kg	10	11/6/2006 6:01:48 PM
Surr: 4-Bromofluorobenzene	101	76.8-115		%REC	10	11/6/2006 6:01:48 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	6.1	1.5		mg/Kg	5	11/9/2006 3:57:55 PM

Qualifiers:

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

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

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Std ☐ Level 4 ☐

Subject Name: GCU #316 (#229E)

P.O. Box 87

725

22

632-1199

Sample Temperature:

Sample I.D. No.

Number/Volume

[illegible]

HEAL No.

4/1/06	1110	5012	BH2C	25'-26'	1-4oz.
--------	------	------	------	---------	--------

bow PIT

1

Time:

Relinquished By (Signature)

0700

of them

Time:

Relinquished By: (Signature)

Received By: (Signature)

Received By: (Signature)

1-3-5-1

0945

Remarks:

-- GAS & DIESEL RANGE ONLY.
(GDR) (DOR)

ANALYSIS REQUEST

[illegible]

Air Bubbles or Headspace (Y or N)

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #316 (#229E)

Work Order: 0611044

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW9056A									
Sample ID: MB-11706		MBLK			Batch ID: 11706	Analysis Date: 11/9/2006 11:01:58 AM			
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-11706		LCS			Batch ID: 11706	Analysis Date: 11/9/2006 11:19:22 AM			
Chloride	14.63	mg/Kg	0.30	97.6	90	110			
Method: SW8015									
Sample ID: MB-11682		MBLK			Batch ID: 11682	Analysis Date: 11/11/2006 9:03:30 AM			
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Sample ID: LCS-11682		LCS			Batch ID: 11682	Analysis Date: 11/11/2006 9:38:18 AM			
Diesel Range Organics (DRO)	46.20	mg/Kg	10	92.4	64.6	116			
Sample ID: LCSD-11682		LCSD			Batch ID: 11682	Analysis Date: 11/11/2006 10:47:55 AM			
Diesel Range Organics (DRO)	45.57	mg/Kg	10	91.1	64.6	116	1.39	17.4	
Method: SW8015									
Sample ID: MB-11658		MBLK			Batch ID: 11658	Analysis Date: 11/6/2006 4:30:08 PM			
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: LCS-11658		LCS			Batch ID: 11658	Analysis Date: 11/6/2006 5:00:54 PM			
Gasoline Range Organics (GRO)	26.30	mg/Kg	5.0	103	73.4	115			
Sample ID: LCSD-11658		LCSD			Batch ID: 11658	Analysis Date: 11/6/2006 5:31:30 PM			
Gasoline Range Organics (GRO)	23.70	mg/Kg	5.0	92.4	73.4	115	10.4	11.6	
Method: SW8021									
Sample ID: MB-11658		MBLK			Batch ID: 11658	Analysis Date: 11/6/2006 4:30:08 PM			
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.15						
Sample ID: LCS-11658		LCS			Batch ID: 11658	Analysis Date: 11/6/2006 5:00:54 PM			
Benzene	0.2641	mg/Kg	0.050	82.5	77.5	123			
Toluene	1.688	mg/Kg	0.050	84.4	82.3	129			
Ethylbenzene	0.3317	mg/Kg	0.050	85.1	79.6	121			
Xylenes, Total	1.877	mg/Kg	0.15	89.4	80	130			
Sample ID: LCSD-11658		LCSD			Batch ID: 11658	Analysis Date: 11/6/2006 5:31:30 PM			
Benzene	0.2606	mg/Kg	0.050	81.4	77.5	123	1.33	27	
Toluene	1.666	mg/Kg	0.050	83.3	82.3	129	1.31	19	
Ethylbenzene	0.3267	mg/Kg	0.050	83.8	79.6	121	1.52	10	
Xylenes, Total	1.826	mg/Kg	0.15	87.0	80	130	2.73	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:

11/3/2006

Work Order Number **0611044**

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?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

CLIENT: Blagg Engineering
Project: GCU #316 (#229E)
Lab Order: 0611044

CASE NARRATIVE

Analytical Comments for METHOD 8015GRO_S, SAMPLE 0611044-01A: Elevated surrogate due to matrix interference.

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

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A & 14715

GCU # 229E - BLOW PIT
UNIT I, SEC. 21, T28N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL
ENVIROTECH

Date : November 14, 2006

SAMPLER: N J V

Filename : 11-14-06.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	-	-	31.60	42.00	1200	7.05	1,300	11.6	6.00

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	11/14/06	0945

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery . Blackish in appearance , hydrocarbon odor detected physically . Collected samples for BTEX and major anions / cations analyses .

Top of casing MW #2 ~ 2.60 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: 21-Nov-06

CLIENT: Blagg Engineering
Lab Order: 0611183
Project: GCU #229E (#316)
Lab ID: 0611183-01

Client Sample ID: MW-2
Collection Date: 11/14/2006 12:00:00 PM
Date Received: 11/15/2006
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	10		µg/L	10	11/20/2006 4:56:53 PM
Toluene	25	10		µg/L	10	11/20/2006 4:56:53 PM
Ethylbenzene	110	10		µg/L	10	11/20/2006 4:56:53 PM
Xylenes, Total	1800	30		µg/L	10	11/20/2006 4:56:53 PM
Surr: 4-Bromofluorobenzene	100	70.2-105		%REC	10	11/20/2006 4:56:53 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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

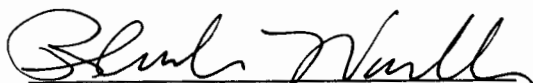
CATION / ANION ANALYSIS

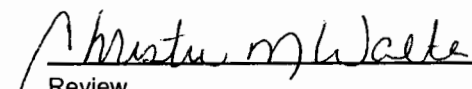
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #2	Date Reported:	11-17-06
Laboratory Number:	39151	Date Sampled:	11-14-06
Chain of Custody:	14715	Date Received:	11-14-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	11-15-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	7.36	s.u.		
Conductivity @ 25° C	1,230	umhos/cm		
Total Dissolved Solids @ 180C	866	mg/L		
Total Dissolved Solids (Calc)	840	mg/L		
SAR	2.9	ratio		
Total Alkalinity as CaCO3	288	mg/L		
Total Hardness as CaCO3	637	mg/L		
Bicarbonate as HCO3	288	mg/L	4.72	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	15.5	mg/L	0.25	meq/L
Nitrite Nitrogen	0.65	mg/L	0.01	meq/L
Chloride	64.0	mg/L	1.81	meq/L
Fluoride	0.70	mg/L	0.04	meq/L
Phosphate	0.2	mg/L	0.01	meq/L
Sulfate	312	mg/L	6.50	meq/L
Iron	<0.01	mg/L	0.00	meq/L
Calcium	118	mg/L	5.89	meq/L
Magnesium	21.1	mg/L	1.74	meq/L
Potassium	0.60	mg/L	0.02	meq/L
Sodium	132	mg/L	5.74	meq/L
Cations			13.38	meq/L
Anions			13.33	meq/L
Cation/Anion Difference			0.40%	

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: GCU #229E (#316) Grab Sample.


Analyst


Review

CHAIN-OF-CUSTODY RECORD

Client: BLAEG ENER. / BP AMERICA

Address: P.O. BOX 87

BLFO, NM 87413

Phone #: 632-1199

Fax #:

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

Date: 11/14/06 Time: 1200 Matrix: WATER Sample I.D. No.: MW # 2

QA/QC Package:
Std ☐ Level 4 ☐

Other:

Project Name:

GM # 229E (#316)

Project #:

72

Project Manager:

NV

Sampler:

NV

Sample Temperature:

10

Number/Volume

2-40ml

Preservative

HgCl₂

HNO₃

HEAL No.

0011183

Date: 11/14/06 Time: 1700

Relinquished By: (Signature) [Signature]

Received By: (Signature) [Signature] 11/15/06

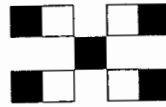
Date: 11/14/06 Time: 1700

Relinquished By: (Signature) [Signature]

Received By: (Signature) [Signature] 931

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

BTEX + MTBE + TPH (Gasoline Only)

(BTEX + MTBE + TPH) (80215)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EOD (Method 504.1)

EOD (Method 8021)

RCRA 8 Metals

Anions (F, Cl, NO₂, NO₃, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

Y

Remarks:

14715

san juan reproduction 578-129

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #229E (#316)

Work Order: 0611183

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

Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R21507 Analysis Date: 11/20/2006 9:02:19 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: R21507 Analysis Date: 11/20/2006 9:00:08 PM

Benzene	19.19	µg/L	1.0	96.0	85.9	113
Toluene	19.47	µg/L	1.0	97.4	86.4	113
Ethylbenzene	19.22	µg/L	1.0	96.1	83.5	118
Xylenes, Total	39.98	µg/L	3.0	100	83.4	122

Qualifiers:

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

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

11/15/2006

Work Order Number 0611183

Received by TLS

Checklist completed by


Signature

Nov 15, 2006
Date

Matrix

Carrier name Courier

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 & 14692

GCU # 229E - BLOW PIT
UNIT I, SEC. 21, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL
ENVIROTECH

Date : January 30, 2007

SAMPLER : N J V

Filename : 01-30-07.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.)
MW - 1	100.00	65.89	34.11	42.00	1225	7.13	1,200	14.3	4.00
MW - 2	96.43	64.80	31.63	42.00	1335	6.96	1,200	13.7	5.25
MW - 3	97.86	64.66	33.20	42.00	1300	7.18	1,200	14.8	4.25

INSTRUMENT CALIBRATIONS =
DATE & TIME =

7.00	2,800
01/30/07	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 all MW 's . All contained olive gray appearance . Strong hydrocarbon odor detected physically within purged water from MW # 2 . Collected BTEX from all MW 's & major anions / cations from MW # 1 & # 3 .

Top of casing MW # 1 ~ 2.40 ft. , MW # 2 ~ 2.60 ft. , MW # 3 ~ 2.50 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-07

CLIENT: Blagg Engineering
Project: GCU #229E (#316)**Lab Order:** 0702007**Lab ID:** 0702007-01**Collection Date:** 1/30/2007 12:25:00 PM**Client Sample ID:** MW #1**Matrix:** AQUEOUS

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

EPA METHOD 8021B: VOLATILES

Analyst: LMM

Benzene	ND	1.0		µg/L	1	2/2/2007 8:29:56 PM
Toluene	ND	1.0		µg/L	1	2/2/2007 8:29:56 PM
Ethylbenzene	ND	1.0		µg/L	1	2/2/2007 8:29:56 PM
Xylenes, Total	ND	3.0		µg/L	1	2/2/2007 8:29:56 PM
Surr: 4-Bromofluorobenzene	87.0	70.2-105		%REC	1	2/2/2007 8:29:56 PM

Lab ID: 0702007-02**Collection Date:** 1/30/2007 1:35:00 PM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

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

EPA METHOD 8021B: VOLATILES

Analyst: LMM

Benzene	ND	5.0		µg/L	5	2/2/2007 9:02:36 PM
Toluene	ND	5.0		µg/L	5	2/2/2007 9:02:36 PM
Ethylbenzene	7.9	5.0		µg/L	5	2/2/2007 9:02:36 PM
Xylenes, Total	200	15		µg/L	5	2/2/2007 9:02:36 PM
Surr: 4-Bromofluorobenzene	89.1	70.2-105		%REC	5	2/2/2007 9:02:36 PM

Lab ID: 0702007-03**Collection Date:** 1/30/2007 1:00:00 PM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

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

EPA METHOD 8021B: VOLATILES

Analyst: LMM

Benzene	ND	1.0		µg/L	1	2/2/2007 2:49:42 AM
Toluene	ND	1.0		µg/L	1	2/2/2007 2:49:42 AM
Ethylbenzene	ND	1.0		µg/L	1	2/2/2007 2:49:42 AM
Xylenes, Total	ND	3.0		µg/L	1	2/2/2007 2:49:42 AM
Surr: 4-Bromofluorobenzene	85.8	70.2-105		%REC	1	2/2/2007 2:49:42 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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

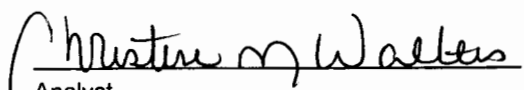
Client: Blagg / BP
Sample ID: MW #1
Laboratory Number: 39878
Chain of Custody: 14692
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 94034-010
Date Reported: 01-31-07
Date Sampled: 01-30-07
Date Received: 01-30-07
Date Extracted: N/A
Date Analyzed: 01-31-07

Parameter	Analytical Result	Units		
pH	7.34	s.u.		
Conductivity @ 25° C	1,320	umhos/cm		
Total Dissolved Solids @ 180C	730	mg/L		
Total Dissolved Solids (Calc)	717	mg/L		
SAR	2.3	ratio		
Total Alkalinity as CaCO ₃	256	mg/L		
Total Hardness as CaCO ₃	356	mg/L		
Bicarbonate as HCO ₃	256	mg/L	4.20	meq/L
Carbonate as CO ₃	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	7.6	mg/L	0.12	meq/L
Nitrite Nitrogen	<0.001	mg/L	0.00	meq/L
Chloride	39.9	mg/L	1.13	meq/L
Fluoride	0.37	mg/L	0.02	meq/L
Phosphate	0.7	mg/L	0.02	meq/L
Sulfate	283	mg/L	5.89	meq/L
Iron	<0.001	mg/L	0.00	meq/L
Calcium	114	mg/L	5.69	meq/L
Magnesium	17.1	mg/L	1.41	meq/L
Potassium	0.10	mg/L	0.00	meq/L
Sodium	98.3	mg/L	4.28	meq/L
Cations			11.37	meq/L
Anions			11.38	meq/L
Cation/Anion Difference			0.03%	

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: GCU #229E (#316)


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

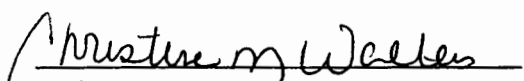
Client: Blagg / BP
Sample ID: MW #3
Laboratory Number: 39879
Chain of Custody: 14692
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

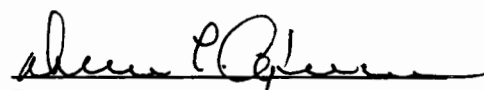
Project #: 94034-010
Date Reported: 01-31-07
Date Sampled: 01-30-07
Date Received: 01-30-07
Date Extracted: N/A
Date Analyzed: 01-31-07

Parameter	Analytical Result	Units		
pH	7.51	s.u.		
Conductivity @ 25° C	1,250	umhos/cm		
Total Dissolved Solids @ 180C	762	mg/L		
Total Dissolved Solids (Calc)	747	mg/L		
SAR	3.3	ratio		
Total Alkalinity as CaCO3	300	mg/L		
Total Hardness as CaCO3	304	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	9.5	mg/L	0.15	meq/L
Nitrite Nitrogen	<0.001	mg/L	0.00	meq/L
Chloride	43.7	mg/L	1.23	meq/L
Fluoride	0.68	mg/L	0.04	meq/L
Phosphate	0.4	mg/L	0.01	meq/L
Sulfate	264	mg/L	5.50	meq/L
Iron	<0.001	mg/L	0.00	meq/L
Calcium	102	mg/L	5.09	meq/L
Magnesium	12.2	mg/L	1.00	meq/L
Potassium	<0.01	mg/L	0.00	meq/L
Sodium	132	mg/L	5.75	meq/L
Cations			11.84	meq/L
Anions			11.85	meq/L
Cation/Anion Difference			0.07%	

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: GCU #229E (#316)


Analyst


Review

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

Other:

Project Name:

6CU # 229E (#316)

Project #:

Address: P.O. BOX 87

62FD., NM 87413

23

Project Manager:

22

Sampler:

22

3

Sample Temperature:

[illegible]

Date: /	Time:	Relinquished By: (Signature),
---------	-------	-------------------------------

Time:

Relinquished By: (Signature)

Received By: (Signature)

2/1/07

Date: _____

Time:

Relinquished By: (Signature)

Received By: (Signature)

935

ANALYSIS REQUEST

[illegible]

Remarks:

14692

san juan reproduction 578-129

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #229E (#316)

Work Order: 0702007

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

Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R22351

Analysis Date:

2/1/2007 9:17:32 AM

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

Sample ID: 5ML RB

MBLK

Batch ID: R22359

Analysis Date:

2/2/2007 9:44:47 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: R22351

Analysis Date:

2/1/2007 11:09:24 AM

Benzene	18.92	µg/L	1.0	94.6	85.9	113
Toluene	19.52	µg/L	1.0	97.6	86.4	113
Ethylbenzene	19.66	µg/L	1.0	98.3	83.5	118
Xylenes, Total	58.64	µg/L	3.0	97.7	83.4	122

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R22359

Analysis Date:

2/2/2007 11:15:15 AM

Benzene	18.38	µg/L	1.0	91.9	85.9	113
Toluene	19.10	µg/L	1.0	95.5	86.4	113
Ethylbenzene	19.18	µg/L	1.0	95.9	83.5	118
Xylenes, Total	57.41	µg/L	3.0	95.7	83.4	122

Qualifiers:

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

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S ²/₃ recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

2/1/2007

Work Order Number **0702007**

Received by **TLS**

Checklist completed by

Janice Shom
Signature

Feb 1, 07
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 - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

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

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 229E - BLOW PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT I, SEC. 21, T28N, R12W

Date : April 25, 2007

SAMPLER : N J V

Filename : 04-25-07.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW - 1	100.00	65.75	34.25	42.00	-	-	-	-	-
MW - 2	96.43	64.67	31.76	42.00	1150	6.92	1,200	17.7	5.00
MW - 3	97.86	64.52	33.34	42.00	1110	7.07	1,200	17.3	4.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

04/25/07 0855

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 # 2 & # 3 . Both contained orange tint appearance . Strong hydrocarbon odor detected physically within purged water from MW # 2 . Collected BTEX from MW # 2 & # 3 only .

Top of casing MW # 1 ~ 2.40 ft. , MW # 2 ~ 2.60 ft. , MW # 3 ~ 2.50 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: 01-May-07

CLIENT: Blagg Engineering
Project: GCU #229E (#316)

Lab Order: 0704418

Lab ID: 0704418-01

Collection Date: 4/25/2007 11:50:00 AM

Client Sample ID: MW #2

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/30/2007 10:03:04 AM
Benzene	ND	1.0		µg/L	1	4/30/2007 10:03:04 AM
Toluene	ND	1.0		µg/L	1	4/30/2007 10:03:04 AM
Ethylbenzene	1.0	1.0		µg/L	1	4/30/2007 10:03:04 AM
Xylenes, Total	140	2.0		µg/L	1	4/30/2007 10:03:04 AM
1,2,4-Trimethylbenzene	14	1.0		µg/L	1	4/30/2007 10:03:04 AM
1,3,5-Trimethylbenzene	8.9	1.0		µg/L	1	4/30/2007 10:03:04 AM
Surr: 4-Bromofluorobenzene	90.7	70.2-105		%REC	1	4/30/2007 10:03:04 AM

Lab ID: 0704418-02

Collection Date: 4/25/2007 11:10:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	4/28/2007 1:38:27 PM
Benzene	ND	1.0		µg/L	1	4/28/2007 1:38:27 PM
Toluene	ND	1.0		µg/L	1	4/28/2007 1:38:27 PM
Ethylbenzene	ND	1.0		µg/L	1	4/28/2007 1:38:27 PM
Xylenes, Total	ND	2.0		µg/L	1	4/28/2007 1:38:27 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2007 1:38:27 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2007 1:38:27 PM
Surr: 4-Bromofluorobenzene	87.4	70.2-105		%REC	1	4/28/2007 1:38:27 PM

Qualifiers: * Value exceeds Maximum Contaminant Level

E Value above quantitation range

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

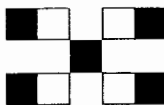
**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com



ANALYSIS REQUEST

[illegible]

Remarks:

CHAIN-OF-CUSTODY RECORD				QA/QC Package: Std <input type="checkbox"/> Level 4 <input checked="" type="checkbox"/>			
Client: <u>BLAGG ENGR./BP AMERICA</u>				Other:			
				Project Name: <u>SCU # 229E (#316)</u>			
Address: <u>P.O. BOX 87 BLFO, NM 87413</u>				Project #: <u>NV</u>			
				Project Manager: <u>NV</u>			
Phone #: <u>632-1199</u>				Sampler: <u>NV</u>			
Fax #:				Sample Temperature: <u>7°</u>			
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No. <u>0704418</u> <u>-1</u> <u>-2</u>
<u>4/25/07</u>	<u>1150</u>	<u>WATER</u>	<u>MW # 2</u>	<u>2-40 ml</u>	<input checked="" type="checkbox"/>		
<u>4/25/07</u>	<u>1110</u>	<u>WATER</u>	<u>MW # 3</u>	<u>2-40 ml</u>	<input checked="" type="checkbox"/>		
Date: <u>4/25/07</u>	Time: <u>1535</u>	Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>		Date: <u>4/25/07</u>	
Date: <u>4/25/07</u>	Time: <u>1535</u>	Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>		Date: <u>4/25/07</u>	

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #229E (#316)

Work Order: 0704418

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

Method: SW8021

Sample ID: 5ML REAGENT BLA

MBLK

Batch ID: R23390

Analysis Date:

4/27/2007 8:31:58 AM

Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5
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
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0

Sample ID: 5ML REAGENT BLA

MBLK

Batch ID: R23409

Analysis Date:

4/30/2007 8:32:29 AM

Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5
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
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R23390

Analysis Date:

4/28/2007 10:05:11 AM

Methyl tert-butyl ether (MTBE)	19.34	µg/L	2.5	96.7	51.2	138
Benzene	19.11	µg/L	1.0	95.6	85.9	113
Toluene	19.66	µg/L	1.0	98.3	86.4	113
Ethylbenzene	19.70	µg/L	1.0	98.5	83.5	118
Xylenes, Total	58.72	µg/L	2.0	97.9	83.4	122
1,2,4-Trimethylbenzene	18.03	µg/L	1.0	90.1	83.5	115
1,3,5-Trimethylbenzene	18.05	µg/L	1.0	90.3	85.2	113

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R23409

Analysis Date:

4/30/2007 11:03:20 AM

Methyl tert-butyl ether (MTBE)	18.92	µg/L	2.5	94.6	51.2	138
Benzene	18.67	µg/L	1.0	93.3	85.9	113
Toluene	19.56	µg/L	1.0	97.8	86.4	113
Ethylbenzene	19.80	µg/L	1.0	99.0	83.5	118
Xylenes, Total	59.19	µg/L	2.0	98.6	83.4	122
1,2,4-Trimethylbenzene	18.79	µg/L	1.0	94.0	83.5	115
1,3,5-Trimethylbenzene	18.67	µg/L	1.0	93.3	85.2	113

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R23390

Analysis Date:

4/28/2007 10:35:06 AM

Methyl tert-butyl ether (MTBE)	18.85	µg/L	2.5	94.2	51.2	138	2.58	28
Benzene	18.42	µg/L	1.0	92.1	85.9	113	3.67	27
Toluene	18.85	µg/L	1.0	94.3	86.4	113	4.18	19
Ethylbenzene	19.01	µg/L	1.0	95.0	83.5	118	3.55	10
Xylenes, Total	56.20	µg/L	2.0	93.7	83.4	122	4.38	13
1,2,4-Trimethylbenzene	17.47	µg/L	1.0	87.4	83.5	115	3.13	21
1,3,5-Trimethylbenzene	17.46	µg/L	1.0	87.3	85.2	113	3.35	10

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:

4/26/2007

Work Order Number 0704418

Received by TLS

Checklist completed by

[Signature]
Signature

4-26-07
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?

7°

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

GCU # 229E - BLOW PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT I, SEC. 21, T28N, R12W

Date : July 23, 2007

SAMPLER : N J V

Filename : 07-23-07.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.)
MW - 1	100.00	65.75	34.25	42.00	-	-	-	-	-
MW - 2	96.43	64.65	31.78	42.00	0935	6.87	1,200	21.6	5.00
MW - 3	97.86	64.48	33.38	42.00	0910	6.98	1,100	20.6	4.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
07/23/07	0620

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 # 2 & # 3 . Both contained orange tint appearance . Hydrocarbon odor detected physically within purged water from MW # 2 . Collected BTEX from MW # 2 & # 3 only .

Top of casing MW # 1 ~ 2.40 ft. , MW # 2 ~ 2.60 ft. , MW # 3 ~ 2.50 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: 31-Jul-07

CLIENT: Blagg Engineering
Project: GCU #229E (#316)**Lab Order:** 0707303**Lab ID:** 0707303-01**Collection Date:** 7/23/2007 10:30:00 AM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	7/28/2007 1:45:17 AM
Toluene	ND	1.0		µg/L	1	7/28/2007 1:45:17 AM
Ethylbenzene	4.1	1.0		µg/L	1	7/28/2007 1:45:17 AM
Xylenes, Total	130	2.0		µg/L	1	7/28/2007 1:45:17 AM
Surr: 4-Bromofluorobenzene	119	70.2-105	S	%REC	1	7/28/2007 1:45:17 AM

Lab ID: 0707303-02**Collection Date:** 7/23/2007 10:00:00 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	7/28/2007 2:15:13 AM
Toluene	ND	1.0		µg/L	1	7/28/2007 2:15:13 AM
Ethylbenzene	ND	1.0		µg/L	1	7/28/2007 2:15:13 AM
Xylenes, Total	ND	2.0		µg/L	1	7/28/2007 2:15:13 AM
Surr: 4-Bromofluorobenzene	101	70.2-105		%REC	1	7/28/2007 2:15:13 AM

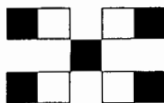
Qualifiers:

- * 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**

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CHAIN-OF-CUSTODY RECORD									
QA / QC Package: _____ Std <input type="checkbox"/> Level 4 <input type="checkbox"/>									
Other: _____									
Project Name: <u>GCN #229E (#316)</u>									
Project #: <u>NV</u>									
Project Manager: <u>NV</u>									
Sampler: <u>NV</u>									
Sample Temperature: <u>40</u>									
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.		
					HgCl ₂	HNO ₃			
7/23/07	1030	WATER	MW #2	2-40ml	✓			0107303	1
7/23/07	1000	WATER	MW #3	2-40ml	✓				2
Date: 7/23/07	Time: 1515	Relinquished By: (Signature) <u>William Taylor</u>		Received By: (Signature) <u>David</u>		Date: 7/24/07		Time: 14:20	
Date: 7/23/07	Time: 1515	Relinquished By: (Signature)		Received By: (Signature)		Date: 7/24/07		Time: 14:20	

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #229E (#316)

Work Order: 0707303

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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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	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 **0707303**

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

GCU # 229E - BLOW PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT I, SEC. 21, T28N, R12W

Date : September 17, 2007

DEVELOPER : N J V

Filename : 09-17-07.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.)
MW - 1	100.00	65.84	34.16	42.00	-	-	-	-	-
MW - 2	96.43	64.68	31.75	42.00	-	-	-	-	-
MW - 3	97.86	64.56	33.30	42.00	-	-	-	-	-
MW - 4	86.73	63.15	23.58	36.88	1130	7.06	1,300	21.0	6.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
09/17/07	0945

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery in MW #4, murky brown in appearance. Collected samples from MW #4 only
(BTEX, anions, & iron only).

Top of casing MW #1 ~ 2.40 ft., MW #2 ~ 2.60 ft., MW #3 ~ 2.50 ft., MW #4 ~ 2.25 ft. above grade

Hall Environmental Analysis Laboratory, Inc.

Date: 02-Oct-07

CLIENT: Blagg Engineering
Lab Order: 0709216
Project: GCU #229E (#316)
Lab ID: 0709216-01

Client Sample ID: MW #4
Collection Date: 9/17/2007 11:30:00 AM
Date Received: 9/18/2007
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1.2	1.0		µg/L	1	9/27/2007 4:01:53 PM
Toluene	ND	1.0		µg/L	1	9/27/2007 4:01:53 PM
Ethylbenzene	13	1.0		µg/L	1	9/27/2007 4:01:53 PM
Xylenes, Total	340	20		µg/L	10	9/26/2007 10:18:00 PM
Surr: 4-Bromofluorobenzene	105	70.2-105		%REC	1	9/27/2007 4:01:53 PM
EPA METHOD 300.0: ANIONS						Analyst: KS
Fluoride	0.33	0.10		mg/L	1	9/18/2007 7:25:54 PM
Chloride	33	0.10		mg/L	1	9/18/2007 7:25:54 PM
Nitrogen, Nitrite (As N)	0.32	0.10		mg/L	1	9/18/2007 7:25:54 PM
Bromide	0.37	0.10		mg/L	1	9/18/2007 7:25:54 PM
Nitrogen, Nitrate (As N)	23	1.0		mg/L	10	9/18/2007 7:43:19 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/18/2007 7:25:54 PM
Sulfate	320	5.0		mg/L	10	9/18/2007 7:43:19 PM
FERROUS IRON						Analyst: KS
Ferrous Iron	ND	0.10		mg/L	1	10/1/2007
SM4500-H+B: PH						Analyst: SMP
pH	7.30	0.1		pH units	1	9/19/2007
SM 2540C: TDS						Analyst: TAF
Total Dissolved Solids	1000	200		mg/L	1	9/19/2007

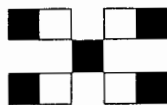
Qualifiers:

- * 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

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www.hallenvironmental.com



CHAIN-OF-CUSTODY RECORD									
QA / QC Package: Std <input type="checkbox"/> Level 4 <input type="checkbox"/> Other: _____									
Project Name: <u>GCU # 229E (#316)</u>									
Project #: _____									
Project Manager: <u>NV</u>									
Sampler: <u>NV</u>									
Sample Temperature: <u>30</u>									
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.	
					HgCl ₂	HNO ₃	HCl		
9/17/07	1130	WATER	MW #4	2-40 ml	✓			0769216	
"	"	"	"	1-125 ml			✓	-1	
"	"	"	"	1- 25 ⁵⁰⁰ ml					
				915					
Date: <u>9/17/07</u> Time: <u>1600</u> Relinquished By: (Signature) <u>[Signature]</u>				Received By: (Signature) <u>[Signature]</u> Date: <u>9/18/07</u> Time: <u>14:25</u>					
Date: _____ Time: _____ Relinquished By: (Signature) _____				Received By: (Signature) _____					

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #229E (#316)

Work Order: 0709216

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: E300

Sample ID: MBLK MBLK Batch ID: R25240 Analysis Date: 9/18/2007 10:52:04 AM

Fluoride	ND	mg/L	0.10
Chloride	ND	mg/L	0.10
Nitrogen, Nitrite (As N)	ND	mg/L	0.10
Bromide	ND	mg/L	0.10
Nitrogen, Nitrate (As N)	ND	mg/L	0.10
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50
Sulfate	ND	mg/L	0.50

Sample ID: MBLK MBLK Batch ID: R25240 Analysis Date: 9/18/2007 10:20:00 PM

Fluoride	ND	mg/L	0.10
Chloride	ND	mg/L	0.10
Nitrogen, Nitrite (As N)	ND	mg/L	0.10
Bromide	ND	mg/L	0.10
Nitrogen, Nitrate (As N)	ND	mg/L	0.10
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50
Sulfate	ND	mg/L	0.50

Sample ID: LCS 300-07038 LCS Batch ID: R25240 Analysis Date: 9/18/2007 11:09:29 AM

Fluoride	0.5374	mg/L	0.10	107	90	110
Chloride	5.208	mg/L	0.10	104	90	110
Nitrogen, Nitrite (As N)	0.9743	mg/L	0.10	97.4	90	110
Bromide	2.714	mg/L	0.10	109	90	110
Nitrogen, Nitrate (As N)	2.685	mg/L	0.10	107	90	110
Phosphorus, Orthophosphate (As P)	5.456	mg/L	0.50	109	90	110
Sulfate	10.78	mg/L	0.50	108	90	110

Sample ID: LCS 300-07038 LCS Batch ID: R25240 Analysis Date: 9/18/2007 10:37:24 PM

Fluoride	0.5243	mg/L	0.10	105	90	110
Chloride	5.092	mg/L	0.10	102	90	110
Nitrogen, Nitrite (As N)	0.9683	mg/L	0.10	96.8	90	110
Bromide	2.687	mg/L	0.10	107	90	110
Nitrogen, Nitrate (As N)	2.635	mg/L	0.10	105	90	110
Phosphorus, Orthophosphate (As P)	5.610	mg/L	0.50	112	90	110
Sulfate	10.57	mg/L	0.50	106	90	110

S

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	Spikes recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #229E (#316)

Work Order: 0709216

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML RB		<i>MBLK</i>							
					Batch ID: R25334		Analysis Date:	9/26/2007 10:12:19 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: 5ML RB		<i>MBLK</i>							
					Batch ID: R25352		Analysis Date:	9/27/2007 10:01:15 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		<i>LCS</i>							
					Batch ID: R25334		Analysis Date:	9/26/2007 9:15:28 PM	
Benzene	20.66	µg/L	1.0	103	85.9	113			
Toluene	20.61	µg/L	1.0	103	86.4	113			
Ethylbenzene	20.22	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.06	µg/L	2.0	100	83.4	122			
Sample ID: 100NG BTEX LCS		<i>LCS</i>							
					Batch ID: R25352		Analysis Date:	9/27/2007 11:06:54 PM	
Benzene	21.10	µg/L	1.0	106	85.9	113			
Toluene	21.43	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.60	µg/L	1.0	108	83.5	118			
Xylenes, Total	65.13	µg/L	2.0	108	83.4	122			
Sample ID: 100NG BTEX LCSD		<i>LCSD</i>							
					Batch ID: R25352		Analysis Date:	9/27/2007 11:36:58 PM	
Benzene	20.59	µg/L	1.0	103	85.9	113	2.45	27	
Toluene	20.84	µg/L	1.0	104	86.4	113	2.76	19	
Ethylbenzene	20.97	µg/L	1.0	104	83.5	118	2.98	10	
Xylenes, Total	63.14	µg/L	2.0	105	83.4	122	3.10	13	
Method: E160.1									
Sample ID: MB-13875		<i>MBLK</i>							
					Batch ID: 13875		Analysis Date:	9/19/2007	
Total Dissolved Solids	ND	mg/L	20						
Sample ID: LCS-13875		<i>LCS</i>							
					Batch ID: 13875		Analysis Date:	9/19/2007	
Total Dissolved Solids	1020	mg/L	20	102	80	120			

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:

9/18/2007

Work Order Number 0709216

Received by ARS

Checklist completed by

Signature

Date

9/18/07

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?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

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

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 229E - BLOW PIT
UNIT I, SEC. 21, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : November 15, 2007

DEVELOPER : N J V

Filename : 11-15-07.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.)
MW - 1	100.00	65.82	34.18	42.00	-	-	-	-	-
MW - 2	96.43	64.70	31.73	42.00	1230	6.97	1,500	16.5	5.00
MW - 3	97.86	64.56	33.30	42.00	1145	7.16	1,300	16.2	4.25
MW - 4	86.73	63.18	23.55	36.88	1320	7.15	1,400	20.1	6.50

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
11/14/07	1000

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery in all MW's sampled . MW # 4 contained possible free phase product during development / purging process with strong hydrocarbon odor . Collected samples from MW # 2 , # 3 , & # 4 for BTEX analysis only .

Top of casing MW # 1 ~ 2.40 ft. , MW # 2 ~ 2.60 ft. , MW # 3 ~ 2.50 ft. , MW # 4 ~ 2.25 ft. above grade

Hall Environmental Analysis Laboratory, Inc.

Date: 28-Nov-07

CLIENT: Blagg Engineering
Project: GCU #229E (#316)**Lab Order:** 0711289**Lab ID:** 0711289-01**Collection Date:** 11/15/2007 12:30:00 PM**Client Sample ID:** MW#2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/21/2007 2:18:52 PM
Toluene	ND	1.0		µg/L	1	11/21/2007 2:18:52 PM
Ethylbenzene	5.1	1.0		µg/L	1	11/21/2007 2:18:52 PM
Xylenes, Total	170	2.0		µg/L	1	11/21/2007 2:18:52 PM
Surr: 4-Bromofluorobenzene	106	70.2-105	S	%REC	1	11/21/2007 2:18:52 PM

Lab ID: 0711289-02**Collection Date:** 11/15/2007 11:45:00 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	11/21/2007 3:19:14 PM
Toluene	ND	1.0		µg/L	1	11/21/2007 3:19:14 PM
Ethylbenzene	ND	1.0		µg/L	1	11/21/2007 3:19:14 PM
Xylenes, Total	ND	2.0		µg/L	1	11/21/2007 3:19:14 PM
Surr: 4-Bromofluorobenzene	89.3	70.2-105		%REC	1	11/21/2007 3:19:14 PM

Lab ID: 0711289-03**Collection Date:** 11/15/2007 1:20:00 PM**Client Sample ID:** MW#4**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2.2	1.0		µg/L	1	11/21/2007 4:22:05 PM
Toluene	1.9	1.0		µg/L	1	11/21/2007 4:22:05 PM
Ethylbenzene	150	10		µg/L	10	11/21/2007 3:51:55 PM
Xylenes, Total	6500	100		µg/L	50	11/26/2007 4:39:42 PM
Surr: 4-Bromofluorobenzene	107	70.2-105	S	%REC	10	11/21/2007 3:51:55 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

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CHAIN-OF-CUSTODY RECORD									
QA/QC Package: Std <input type="checkbox"/> Level 4 <input type="checkbox"/> Other: _____									
Project Name: <u>GCW #229E (#316)</u>									
Project #: <u>20</u>									
Project Manager: <u>NV</u>									
Sampler: <u>NV</u>									
Sample Temperature: <u>15</u>									
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.	
					HgCl ₂	HNO ₃			
<u>11/15/07</u>	<u>1230</u>	<u>WATER</u>	<u>MW #2</u>	<u>2-40ml</u>	<u>✓</u>			<u>0711289</u>	
<u>11/15/07</u>	<u>1145</u>	<u>WATER</u>	<u>MW #3</u>	<u>2-40ml</u>	<u>✓</u>			<u>1</u>	
<u>11/15/07</u>	<u>1320</u>	<u>WATER</u>	<u>MW #4</u>	<u>2-40ml</u>	<u>✓</u>			<u>3</u>	
Relinquished By: (Signature) <u>[Signature]</u>				Received By: (Signature) <u>[Signature]</u>					
Time: <u>1415</u>				Date: <u>11/15/07</u>					
Relinquished By: (Signature) <u>[Signature]</u>				Received By: (Signature) <u>[Signature]</u>					
Time: <u>1415</u>				Date: <u>11/15/07</u>					

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #229E (#316)

Work Order: 0711289

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		MBLK			Batch ID: R26192	Analysis Date: 11/21/2007 9:29:58 AM			
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 5ML RB-B		MBLK			Batch ID: R26220	Analysis Date: 11/26/2007 9:16:40 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: R26192	Analysis Date: 11/21/2007 5:22:13 PM			
Benzene	20.11	µg/L	1.0	101	85.9	113			
Toluene	20.53	µg/L	1.0	103	86.4	113			
Ethylbenzene	20.99	µg/L	1.0	105	83.5	118			
Xylenes, Total	67.69	µg/L	2.0	113	83.4	122			
Sample ID: 100NG BTEX LCS		LCS			Batch ID: R26220	Analysis Date: 11/26/2007 4:09:36 PM			
Benzene	20.64	µg/L	1.0	103	85.9	113			
Toluene	22.02	µg/L	1.0	110	86.4	113			
Ethylbenzene	22.65	µg/L	1.0	113	83.5	118			
Xylenes, Total	69.20	µg/L	2.0	115	83.4	122			
Sample ID: 100NG BTEX LCSD		LCSD			Batch ID: R26192	Analysis Date: 11/21/2007 5:52:17 PM			
Benzene	20.18	µg/L	1.0	101	85.9	113	0.387	27	
Toluene	20.09	µg/L	1.0	100	86.4	113	2.21	19	
Ethylbenzene	20.67	µg/L	1.0	103	83.5	118	1.55	10	
Xylenes, Total	64.06	µg/L	2.0	107	83.4	122	5.52	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 Received:

11/19/2007

Work Order Number **0711289**

Received by: **ARS**

Checklist completed by:

Signature

Date

Sample ID labels checked by

Initials

Matrix

Carrier name **UPS**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

1°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action