3R - 35

REPORTS

DATE:

12/2005

3RC0035

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

2003-2005

JONES A LS #3
(G) SECTION 15, T28N, R8W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
MR. GLENN VON GONTEN
NEW MEXICO OIL CONSERVATION DIVISION

DECEMBER 2005

PREPARED BY:
BLAGG ENGINEERING, INC.

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

BP America Production Co.
JONES A LS # 3 - Dehydrator Pit
Sw/4 Ne/4 Sec. 15, T28N, R8W

Pit Closure Date: 3/20/03 (Documentation Included)

Monitor Well Installation Date: 5/28/04 (MW #2)

Monitor Well Sampling Dates: 6/14/04, 12/29/04, 3/28/05, 6/23/05

Site History:

Potential groundwater impacts were identified following closure of a dehydrator pit and installation of a monitor well in May, 2004. A groundwater monitor well installed in the source area to determine water depth and quality found impacts in excess of New Mexico Water Quality Control Commission (NMWQCC) standards. The water table aquifer is found at an approximate depth of 9 feet below ground surface. The Jones A LS #3 is located in a remote area and no domestic or municipal receptors are at risk. Agency notification of this remote impact was not made due to an administrative oversight. However, quarterly/annual sampling have been collected to quantify water quality parameters.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor well following US EPA: SW-846 protocol. Samples were collected using new disposable bailers and placed in laboratory supplied 40 ml glass vials with teflon septa caps. Analysis included benzene, toluene, ethylbenzene, and total xylenes (**BTEX**) per US EPA Method 8020 or 8021. Samples were preserved cool and with either mercuric chloride or hydrochloric acid and express delivered to a qualified laboratory for testing. Waste generated during monitor well sampling and development was disposed of utilizing the production tank steel tank pit located on the well site.

Summary and/or Recommendations:

Further site delineation is indicated. However, only limited remedial efforts have been conducted and additional actions are indicated. Due to shallow groundwater, excavation is the recommended best available technology for site remediation and delineation of soil impacts. Following this remedial action, additional wells to determine residual water quality, groundwater flow direction, and extent of impacts will be necessary.

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

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

Form C-144
March 12, 2004

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

Address: 200 Energy Court, Farmington, NM 87410

Facility or well name: **JONES A LS #3** API #: **30-045-07469** U/L or Qtr/Qtr **G** Sec **15** T **28N** R **8W**

County: San Juan Latitude 36.66470 Longitude 107.66436 NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit	**Below-grade tank**
Type: Drilling ☐ Production ☒ Disposal ☐ DEHYDRATOR Workover ☐ Emergency ☐ Lined ☐ Unlined ☒ Liner type: Synthetic ☐ Thickness ____mil Clay ☐ Volume ____bbl	Volume: ____bbl Type of fluid: ____ Construction material: N/A Double-walled, with leak detection? Yes ☐ 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 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points)	20
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (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 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)	10
	Ranking Score (Total Points)		30

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: 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 9.5 ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

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 (attached) alternative OCD-approved plan ☒.**

Date: 12/14/05

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

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:

Date: ____

Printed Name/Title____ Signature____

VHL 30045 1467

CLIENT: BP

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

LOCATION NO: B0068
COCR NO: 10746

S

FIELD REPORT: PIT CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: JONES A LS WELL #: 3 TYPE: DEHY
QUAD/UNIT: G SEC: 15 TWP: 28N RNG: 8W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: 1460'N/1460'E SWNE CONTRACTOR: SIENA (CALVIN)

DATE STARTED: 3-20-03
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: JCB

EXCAVATION APPROX. 12 FT. x 12 FT. x 9 FT. DEEP. CUBIC YARDAGE: 0

DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD:
LAND USE: RANGE LEASE: ~~NMSF~~ 078390 FORMATION: MV

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 81 FT. S25°E FROM WELLHEAD.

DEPTH TO GROUNDWATER: <50 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000 / <1000 NV
NMOCD RANKING SCORE: 30 20 NV NMOCD TPH CLOSURE STD: 100 PPM

OVM CALIB. READ. = 131.2 ppm
OVM CALIB. GAS = 250 ppm RF = 0.52
TIME: 0845 am/pm DATE: 3-20-03

SOIL AND EXCAVATION DESCRIPTION:

SOIL TYPE: (SAND) / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: Yellow Tan 0'-6' Black 6'-9' Gray @ 9'
COHESION (ALL OTHERS): (NON COHESIVE) SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
CONSISTENCY (NON COHESIVE SOILS): (LOOSE) / FIRM / DENSE / VERY DENSE
PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: DRY / SLIGHTLY MOIST / (MOIST) / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: (YES) / NO EXPLANATION - Black @ 6' BGS
HC ODOR DETECTED: (YES) / NO EXPLANATION - STRONG
SAMPLE TYPE: (GRAB) / COMPOSITE - # OF PTS.
ADDITIONAL COMMENTS: Wood lined Pit w/ steel ~~tank~~ tank. Use Backhoe to Remove tank & sample. [Note: loose sidewalls & collapsing Prevented deeper sample]

GROUNDWATER IMPACTED

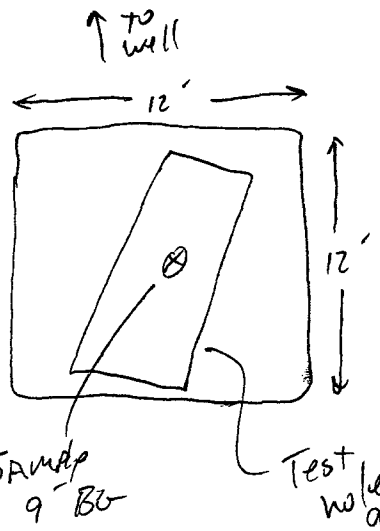
FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMP. ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (ppm)

SCALE
0 FT

N

PIT PERIMETER



P.D. = PIT DEPRESSION; B.G. = BELOW GRADE; B = BELOW
T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM

OVM READING

SAMPLE ID	FIELD HEADSPACE (ppm)
1 @ 9'	213
2 @	
3 @	
4 @	
5 @	

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
1 @ 9'	TPH/BTEX	1540
	TPH - FAILED	
	BTEX - PASSED	

PIT PROFILE

TRAVEL NOTES: CALLOUT: 3/20/03 1155 ONSITE: 3/20/03 1455

revised: 09/04/02

bei1005C.skf

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:	DEHY #1 @ 9'	Date Reported:	03-22-03
Laboratory Number:	25147	Date Sampled:	03-20-03
Chain of Custody No:	10746	Date Received:	03-21-03
Sample Matrix:	Soil	Date Extracted:	03-21-03
Preservative:	Cool	Date Analyzed:	03-22-03
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	914	0.2
Diesel Range (C10 - C28)	89.6	0.1
Total Petroleum Hydrocarbons	1,000	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: **Jones A LS #3.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	DEHY #1 @ 9'	Date Reported:	03-22-03
Laboratory Number:	25147	Date Sampled:	03-20-03
Chain of Custody:	10746	Date Received:	03-21-03
Sample Matrix:	Soil	Date Analyzed:	03-22-03
Preservative:	Cool	Date Extracted:	03-21-03
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**492**	**1.8**
Toluene	**1,630**	**1.7**
Ethylbenzene	**1,180**	**1.5**
p,m-Xylene	**1,720**	**2.2**
o-Xylene	**1,920**	**1.0**
Total BTEX	**6,940**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97 %**
	1,4-difluorobenzene	**97 %**
	Bromochlorobenzene	**97 %**

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: **Jones A LS #3.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

10746

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG/BP	JONES A LS #3	

Sampler:	Client No.
J. C. Blagg	94034-010

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH 8015	BTEX 8021					Remarks
BLOW #1 @ 8'	3/20/03	1507	25146	SOIL	1	X						
DEHY #1 @ 9'	"	1540	25147	"	1	X	X					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
J. C. Blagg	3/21/03	0700	C. Aylin	3.21.03	0700
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

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

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

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:	03-22-TPH QA/QC	Date Reported:	03-22-03
Laboratory Number:	25139	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	03-22-03
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	04-25-02	2.7355E-002	2.7328E-002	0.10%	0 - 15%
Diesel Range C10 - C28	04-25-02	2.4557E-002	2.4508E-002	0.20%	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	740	737	0.4%	0 - 30%
Diesel Range C10 - C28	39.3	39.2	0.3%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	740	250	988	99.8%	75 - 125%
Diesel Range C10 - C28	39	250	289	100%	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 25139 - 25147, 25155.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	03-22-BTEX QA/QC	Date Reported:	03-22-03
Laboratory Number:	25139	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	03-22-03
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	4.1274E-002	4.1398E-002	0.3%	ND	0.2
Toluene	4.8348E-002	4.8445E-002	0.2%	ND	0.2
Ethylbenzene	7.9848E-002	8.0088E-002	0.3%	ND	0.2
p,m-Xylene	7.6417E-002	7.6647E-002	0.3%	ND	0.2
o-Xylene	7.1539E-002	7.1683E-002	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	170	169	0.2%	0 - 30%	1.8
Toluene	1,020	1,000	2.0%	0 - 30%	1.7
Ethylbenzene	324	318	2.0%	0 - 30%	1.5
p,m-Xylene	1,430	1,420	0.7%	0 - 30%	2.2
o-Xylene	594	596	0.4%	0 - 30%	1.0

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	170	50.0	219	99.5%	39 - 150
Toluene	1,020	50.0	1,060	99.1%	46 - 148
Ethylbenzene	324	50.0	372	99.4%	32 - 160
p,m-Xylene	1,430	100	1,520	99.3%	46 - 148
o-Xylene	594	50.0	642	99.7%	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 25139 - 25144, 25147, 25155.

Analyst

Review

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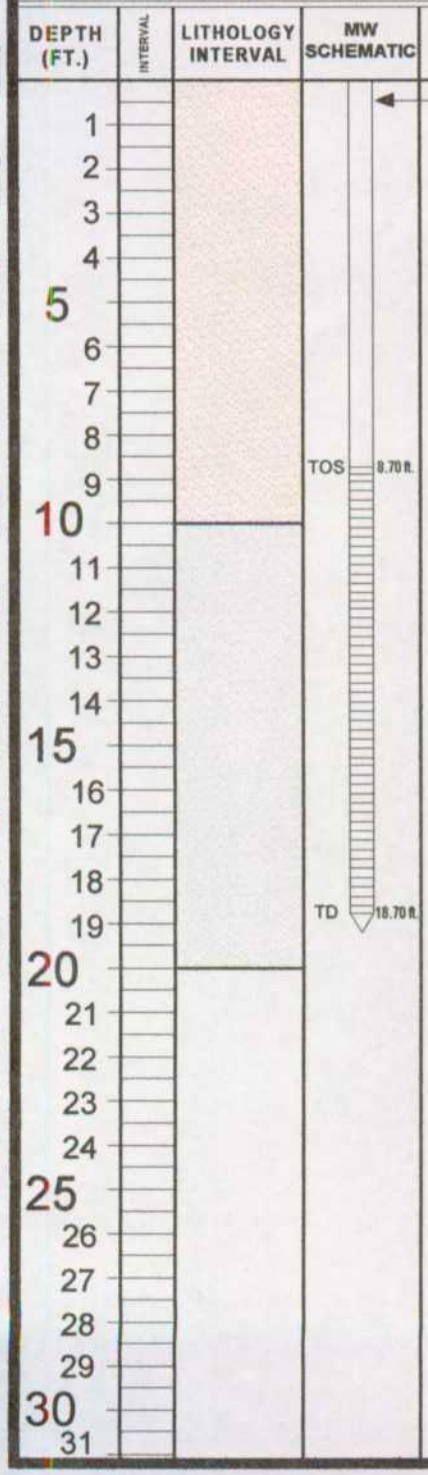
BLAGG ENGINEERING, INC.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	JONES A LS # 3 UNIT G, SEC. 15, T28N, R8W
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (EARTHPROBE 200)
BORING LOCATION:	81 FEET, S25E FROM WELL HEAD.

BORING #.....	BH - 1
MW #.....	2
PAGE #.....	1
DATE STARTED	5/28/04
DATE FINISHED	5/28/04
OPERATOR.....	JCB
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.30 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 10.0 FT. BELOW GRADE).

▼ GW DEPTH ON 6/12/04 = 9.42 FT. (APPROX.) FROM GROUND SURFACE.

LIGHT TO DARK GRAY SAND, NON COHESIVE, SATURATED, STRONG HC ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (10.0 - 20.0 FT. BELOW GRADE).

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 1.30 ft. above grade to 8.70 ft. below grade, 0.010 slotted screen between 8.70 to 18.70 feet below grade, sand packed annular to approx. 3 ft. below grade, then backfilled with native clean soil. Locking cap with lock at top of casing.

DRAWING: Jones A LS 3-BH1-MW2. SKF | DATE: 12/14/05 | DWN BY: NJV

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

REVISED DATE: December 14, 2005

FILENAME: (J3-2Q05.WK4) NJV

								BTEX EPA METHOD 8021B (ppb)			
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	Benzene	Toluene	Ethyl Benzene	Total Xylene
14-Jun-04	MW #2	10.78	20.00		2,400	7.14		**290**	**780**	52	470
29-Dec-04		10.53			N/A	N/A		**7.8**	**11**	2.5	13
28-Mar-05		9.97			2,100	7.02		**720**	**4,800**	640	**6,800**
23-Jun-05		10.85			2,100	6.93		**140**	**220**	30	**570**
					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 PROCEEDING RESULTS EXCEEDED .

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 14, 2004

SAMPLER : N J V

Filename : 06-14-04.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	-	-	10.78	20.00	0735	7.14	2,400	14.6	4.50
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	06/14/04	0730		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 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 . Collected sample for BTEX analysis only .

Top of casing MW # 2 ~ 1.30 ft. above grade .

Hall Environmental Analysis Laboratory

Date: *24-Jun-04*

CLIENT: Blagg Engineering
Client Sample ID: MW #2
Lab Order: 0406135
Collection Date: 6/14/2004 7:35:00 AM
Project: Jones A LS #3
Lab ID: 0406135-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	290	10		µg/L	20	6/23/2004 6:17:11 PM
Toluene	780	10		µg/L	20	6/23/2004 6:17:11 PM
Ethylbenzene	52	10		µg/L	20	6/23/2004 6:17:11 PM
Xylenes, Total	470	10		µg/L	20	6/23/2004 6:17:11 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	20	6/23/2004 6:17:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Accreditation Applied:
NELAC ☐ USACE ☐
Other: _____

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

Client: BLAGG ENER./BP AMERICA
Address: P.O. BOX 87
BLOO., NM 87413
Phone #: 505-632-1199
Fax #: 505-632-3903

Project Name: JONES A LS #3
Project #: NV
Project Manager: NJV
Sampler: NJV
Sample Temperature: 4°C

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
6/14/04	0735	WATER	MW #2	2-40ml	✓			04060135-1

ANALYSIS REQUEST

(BTEX + ~~MTBE~~ + TMB's (8021B))	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
6/14/04	0900		6/14/04 1715
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Hall Environmental Analysis Laboratory

Date: *24-Jun-04*

CLIENT: Blagg Engineering
Work Order: 0406135
Project: Jones A LS #3

QC SUMMARY REPORT
Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R12252** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/23/2004 9:55:37 AM** Prep Date

Client ID: Run ID: **PIDFID_040623A** SeqNo: **282031**

Analyte	Result	MQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND										
Toluene	ND										
Ethylbenzene	ND										
Xylenes, Total	ND										
Surr: 4-Bromofluorobenzene	20.24		20	0	101	74	118	0			

2 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *24-Jun-04*

CLIENT: Blagg Engineering
Work Order: 0406135
Project: Jones A LS #3

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **BTEX std 100ng** Batch ID: **R12252** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/23/2004 7:51:10 PM** Prep Date

Client ID: Run ID: **PIDFID_040623A** SeqNo: **282037**

Analyte	Result	MQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.1		20	0	95.5	81.3	121	0			
Toluene	19.01		20	0	95.1	84.9	118	0			
Ethylbenzene	18.95		20	0	94.7	53.8	149	0			
Xylenes, Total	58.09		60	0	96.8	83.1	122	0			

3 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 6/14/2004

Work Order Number 0406135 | Received by AT

Checklist completed by _____ 6/14/04
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? **4°** *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **December 29, 2004**

SAMPLER : N J V

Filename : **12-29-04.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	-	-	10.53	20.00	1055	N/A	N/A	N/A	4.75
					INSTRUMENT CALIBRATIONS =				
					DATE & TIME =				

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 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. Collected sample for BTEX analysis only.

Top of casing MW # 2 ~ 1.30 ft. above grade.

Hall Environmental Analysis Laboratory

Date: *06-Jan-05*

CLIENT: Blagg Engineering
Client Sample ID: MW #2
Lab Order: 0501005
Collection Date: 12/29/2004 10:55:00 AM
Project: Jones A LS #3
Lab ID: 0501005-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	7.8	0.50		µg/L	1	1/5/2005 1:56:11 PM
Toluene	11	0.50		µg/L	1	1/5/2005 1:56:11 PM
Ethylbenzene	2.5	0.50		µg/L	1	1/5/2005 1:56:11 PM
Xylenes, Total	13	0.50		µg/L	1	1/5/2005 1:56:11 PM
Surr: 4-Bromofluorobenzene	103	83.3-121		%REC	1	1/5/2005 1:56:11 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Accreditation Applied:
NELAC ☐ USACE ☐
Other:

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

Client: BLAGG ENERGY / BP AMERICA
Project Name: JONES A LS #3
Address: P.O. BOX 87
BLFD., NM 87413
Project #:
Project Manager: NJV
Phone #: 505-632-1199
Sampler: NJV
Fax #: 505-632-3903
Sample Temperature: 2 °

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	(BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
12/29/04	1055	WATER	MW #2	2-40ml	✓		0501005-1	✓																

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	Remarks:
12/30/04	1555		1/3/05 0900	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

CLIENT: Blagg Engineering
Work Order: 0501005
Project: Jones A LS #3

QC SUMMARY REPORT

Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R14206** Test Code: **SW8021** Units: **µg/L** Analysis Date **1/4/2005 8:43:42 AM** Prep Date

Client ID: Run ID: **PIDFID_050104A** SeqNo: **330470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.97	0	20	0	99.9	83.3	121	0			

Sample ID **Reagent Blank 5m** Batch ID: **R14214** Test Code: **SW8021** Units: **µg/L** Analysis Date **1/5/2005 8:53:08 AM** Prep Date

Client ID: Run ID: **PIDFID_050105A** SeqNo: **330765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.27	0	20	0	96.3	83.3	121	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Jan-05*

CLIENT: Blagg Engineering
Work Order: 0501005
Project: Jones A LS #3

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **BTEX std 100ng** Batch ID: **R14206** Test Code: **SW8021** Units: **µg/L** Analysis Date **1/4/2005 7:42:37 PM** Prep Date

Client ID: Run ID: **PIDFID_050104A** SeqNo: **330511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.16	0.5	20	0	101	88.7	114	0			
Toluene	19.44	0.5	20	0	97.2	89.3	112	0			
Ethylbenzene	20.19	0.5	20	0	101	88.6	113	0			
Xylenes, Total	59.17	0.5	60	0	98.6	89.4	112	0			

Sample ID **BTEX std 75ng** Batch ID: **R14214** Test Code: **SW8021** Units: **µg/L** Analysis Date **1/5/2005 9:52:33 AM** Prep Date

Client ID: Run ID: **PIDFID_050105A** SeqNo: **330774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	15.03	0.5	15	0	100	88.7	114	0			
Toluene	14.57	0.5	15	0	97.2	89.3	112	0			
Ethylbenzene	14.78	0.5	15	0	98.5	88.6	113	0			
Xylenes, Total	44.49	0.5	45	0	98.9	89.4	112	0			

3 / 4

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 1/3/2005

Work Order Number 0501005 | Received by AT

Checklist completed by _____ 1/3/05
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?	2°	*4° C ± 2 Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **March 28, 2005**

SAMPLER : N J V

Filename : **03-28-05.WK4**

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW - 2	-	-	9.97	20.00	1300	7.02	2,100	15.6	5.00
				INSTRUMENT CALIBRATIONS =		7.00	2,800		
				DATE & TIME =		03/28/05	1245		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 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. Collected sample for BTEX analysis only.

Top of casing MW # 2 ~ 1.30 ft. above grade.

Hall Environmental Analysis Laboratory

Date: *01-Apr-05*

CLIENT: Blagg Engineering
Client Sample ID: MW #2
Lab Order: 0503263
Collection Date: 3/28/2005 1:00:00 PM
Project: Jones A LS #3
Lab ID: 0503263-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	720	50		µg/L	100	3/31/2005 11:27:23 PM
Toluene	4800	50		µg/L	100	3/31/2005 11:27:23 PM
Ethylbenzene	640	50		µg/L	100	3/31/2005 11:27:23 PM
Xylenes, Total	6800	50		µg/L	100	3/31/2005 11:27:23 PM
Surr: 4-Bromofluorobenzene	106	83.3-121		%REC	100	3/31/2005 11:27:23 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Accreditation Applied:
NELAC ☐ USACE ☐
Other:

Client: BLAGG ENGR. / BP AMERICA

Project Name: JONES A LS #3

Address: P.O. BOX 87
BLFD, NM 87413

Project #:

Project Manager: NJV

Phone #: 505-632-1199

Sampler: NJV

Fax #: 505-632-3903

Sample Temperature: 5°C

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
3/28/05	1300	WATER	MW #2	2-40ml	✓			0503263-1

(BTEX) + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																

Date: 3/29/05 Time: 0915 Relinquished By: (Signature)

Received By: (Signature) 3/29/05

Date: Time: Relinquished By: (Signature)

Received By: (Signature)

Remarks:

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

Hall Environmental Analysis Laboratory

Date: *01-Apr-05*

CLIENT: Blagg Engineering
Work Order: 0503263
Project: Jones A LS #3

QC SUMMARY REPORT
Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R14975** Test Code: **SW8021** Units: **µg/L** Analysis Date **3/31/2005 8:26:57 AM** Prep Date

Client ID: Run ID: **PIDFID_050331A** SeqNo: **348320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.23	0	20	0	101	83.3	121	0			

2 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *01-Apr-05*

CLIENT: Blagg Engineering
Work Order: 0503263
Project: Jones A LS #3

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **BTEX lcs 100ng** Batch ID: **R14975** Test Code: **SW8021** Units: **µg/L** Analysis Date **4/1/2005 12:26:55 AM** Prep Date

Client ID: Run ID: **PIDFID_050331A** SeqNo: **348406**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.15	0.5	20	0	101	88.7	114	0			
Toluene	20.5	0.5	20	0	102	89.3	112	0			
Ethylbenzene	21.27	0.5	20	0	106	88.6	113	0			
Xylenes, Total	59.94	0.5	60	0	99.9	89.4	112	0			

3 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 3/29/2005

Work Order Number 0503263 | Received by AT

Checklist completed by _____ 3/29/05
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 _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

JONES A LS # 3 - DEHY. PIT
UNIT G, SEC. 15, T28N, R8W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **June 23, 2005**

SAMPLER : N J V

Filename : **06-23-05.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	-	-	10.85	20.00	0640	6.93	2,100	15.8	4.50
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	06/23/05	0630		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 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. Collected sample for BTEX analysis only.

Top of casing MW # 2 ~ 1.30 ft. above grade.

Hall Environmental Analysis Laboratory

Date: *29-Jun-05*

CLIENT: Blagg Engineering
Client Sample ID: MW #2
Lab Order: 0506238
Collection Date: 6/23/2005 6:40:00 AM
Project: Jones A LS #3
Lab ID: 0506238-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **KTM**
Benzene	140	10		µg/L	20	6/29/2005 3:29:17 AM
Toluene	220	10		µg/L	20	6/29/2005 3:29:17 AM
Ethylbenzene	30	10		µg/L	20	6/29/2005 3:29:17 AM
Xylenes, Total	570	10		µg/L	20	6/29/2005 3:29:17 AM
Surr: 4-Bromofluorobenzene	99.8	83.3-121		%REC	20	6/29/2005 3:29:17 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Accreditation Applied:
NELAC ☐ USACE ☐
Other:

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

Client: BLAGG ENER. / BP AMERICA

Project Name: JONES A LS #3

Address: P.O. BOX 87
BLFD., NM 87413

Project #:

Project Manager: NV

Phone #: 632-1199

Sampler: NV

Fax #: 632-3903

Sample Temperature: 2.0

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles or Headspace (Y or N)
6/23/05	0640	WATER	MW #2	2-40ml	✓		0506238 -1	✓															

Date: 6/24/05 Time: 0835 Relinquished By: (Signature)

Received By: (Signature)

Date: Time: Relinquished By: (Signature)

Received By: (Signature) 6/24/05 1644

Remarks:

CLIENT: Blagg Engineering
Work Order: 0506238
Project: Jones A LS #3

QC SUMMARY REPORT

Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R15814** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/27/2005 10:15:08 AM** Prep Date

Client ID: Run ID: **PIDFID_050627A** SeqNo: **374760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.22	0	20	0	101	83.3	121	0			

Sample ID **Reagent Blank 5m** Batch ID: **R15826** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/28/2005 10:11:52 AM** Prep Date

Client ID: Run ID: **PIDFID_050628A** SeqNo: **375119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.15	0	20	0	90.7	83.3	121	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Date: *29-Jun-05*

CLIENT: Blagg Engineering
Work Order: 0506238
Project: Jones A LS #3

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **BTEX LCS 2.5ug** Batch ID: **R15814** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/27/2005 1:55:44 PM** Prep Date

Client ID: Run ID: **PIDFID_050627A** SeqNo: **374788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.24	0.5	20	0	101	88.7	114	0			
Toluene	20.39	0.5	20	0	102	89.3	112	0			
Ethylbenzene	20.51	0.5	20	0	103	88.6	113	0			
Xylenes, Total	61.44	0.5	60	0	102	89.4	112	0			

Sample ID **BTEX LCS 100ng** Batch ID: **R15826** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/29/2005 5:01:22 AM** Prep Date

Client ID: Run ID: **PIDFID_050628A** SeqNo: **375362**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.38	0.5	20	0	96.9	88.7	114	0			
Toluene	19.71	0.5	20	0	98.5	89.3	112	0			
Ethylbenzene	19.73	0.5	20	0	98.7	88.6	113	0			
Xylenes, Total	59.38	0.5	60	0	99.0	89.4	112	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG** Date and Time Received:

Work Order Number **0506238** Received by AMG

Checklist completed by Gonzales 6/24/05
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? **2°** *4° C ± 2 Acceptable*
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____