3R - 410

ANNUAL MONITORING REPORT

05/01/2009

3R410

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

RECEIVED
2009 MAY 4 AM 9 45

May 1, 2009

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
Sammons GC F # 1, Unit A, Sec. 18, T29N, R9W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: 3RP-410-0

Dear Mr. von Gonten:

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

The last formal correspondence to NMOCD was conducted with letter dated, January 25, 2008. Since then, BP has followed its NMOCD approved groundwater management plan and continues to monitor 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

NJV/njv

Sammons GC F 1 05-01-09 CVL.DOC

RECEIVED
2009 MAY 4 AM 9 45

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

SAMMONS GC F #1
(A) SECTION 18, T29N, R9W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

APRIL 2009

PREPARED BY:
BLAGG ENGINEERING, INC.

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

BP AMERICA PRODUCTION COMPANY
SAMMONS GC F # 1 – Production Tank Pit
NE/4 NE/4, Sec. 18, T29N, R9W

Monitor Well Installation Dates: **11/01/06 (MW #2A), 8/29/07 (MW #1A & #3A)**

Monitor Well Sampling Dates: **4/4/08, 6/27/08, 8/25/08, 12/19/08**

Site History:

A groundwater impact was identified following closure of a production tank pit in August 2004. Documentation for this work and subsequent groundwater monitoring data for the site have previously been submitted for New Mexico Oil Conservation Division (**NMOCD**) review. Further limited excavation of the source area was suggested within the report. The reporting herein is for site monitoring from June 2008 only.

Groundwater Monitor Well Sampling Procedures:

Each monitor well was developed by hand-bailing, using new disposable bailers after installation. Prior to sample collections, each monitor well was purged approximately three (3) well bore volumes with new disposable bailers. The groundwater samples were collected following US EPA: SW-846 protocol, were placed into laboratory supplied containers with appropriate preservative, and stored in an ice chest for express delivery to an analytical laboratory for testing under strict chain-of-custody procedures. Analytical testing for benzene, toluene, ethylbenzene, and total xylenes (**BTEX**) by US EPA Method 8021B or 8260 was conducted.

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

Water Quality and Gradient Information:

MW #2A has tested with total xylenes fluctuations below and above the New Mexico Water Quality Control Commission (**NMWQCC**) standards since its installation. Down gradient delineation appears to have been achieved, based on test results of MW #3A. A summary of BTEX laboratory analytical results is included within the table on the following page. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included.

Groundwater contour maps of relative water table elevations have consistently been measure to flow in the southwest direction toward MW #3A (Figure 2 through Figure 4).

Summary and/or Recommendations:

Limited excavation of the impacted soil at the source area is still recommended. Thereafter, installation of a replacement monitor well and continue quarterly sampling until a minimum of four (4) consecutive sampling events below NMWQCC standards has been attained. Bi-annual sampling of MW #2A is currently suggested unless circumstances dictate otherwise.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

SAMMONS GC F # 1 - PROD. TANK PIT
UNIT A, SEC. 18, T29N, R9W

REVISED DATE: January 8, 2009

FILENAME: (SF1-4Q08.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
19-Sep-07	MW #1A	5.25	15.00		700	6.86		ND	ND	ND	ND
14-Nov-06	MW #2A	6.05	13.00		1,300	6.96		**10**	ND	14	**1,000**
26-Feb-07		5.92			1,500	6.91		**ND**	ND	ND	**670**
22-May-07		3.86			900	6.78		**14**	ND	ND	**270**
16-Aug-07		5.12			1,200	6.73		**4.9**	ND	7.8	**2,300**
03-Dec-07		3.83	11.22		1,200	7.12		**3.7**	3.4	2.1	**1,200**
04-Apr-08		2.59			1,000	6.90		**2.3**	ND	1.2	**1,100**
27-Jun-08		1.31			1,200	6.97		**3.8**	ND	ND	**534**
25-Aug-08		2.65			1,100	7.03		**3.0**	ND	ND	**1,700**
"	duplicate	"			"	"		**3.3**	ND	ND	**1,700**
19-Dec-08		4.09			900	7.30		**2.2**	ND	ND	**740**
19-Sep-07	MW #3A	3.11	13.50		900	6.74		ND	ND	ND	ND
03-Dec-07		3.49			900	7.11		ND	ND	ND	ND
04-Apr-08		2.15			900	6.88		ND	ND	ND	ND
27-Jun-08		0.94			800	7.02		ND	ND	ND	ND
					NMWQCC GROUNDWATER STANDARDS			**10**	**750**	**750**	**620**

NOTES : 1) **RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .**

2) **RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS EXCEEDED .**

3) **ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10) .**

FIGURE 1A

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.

SAMMONS GC F # 1

NE/4 NE/4 SEC. 18, T29N, R9W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALLATION

DRAWN BY: NJV

FILENAME: SAMMONS GC F 1-SM2.SKF

REVISED: 08-23-07

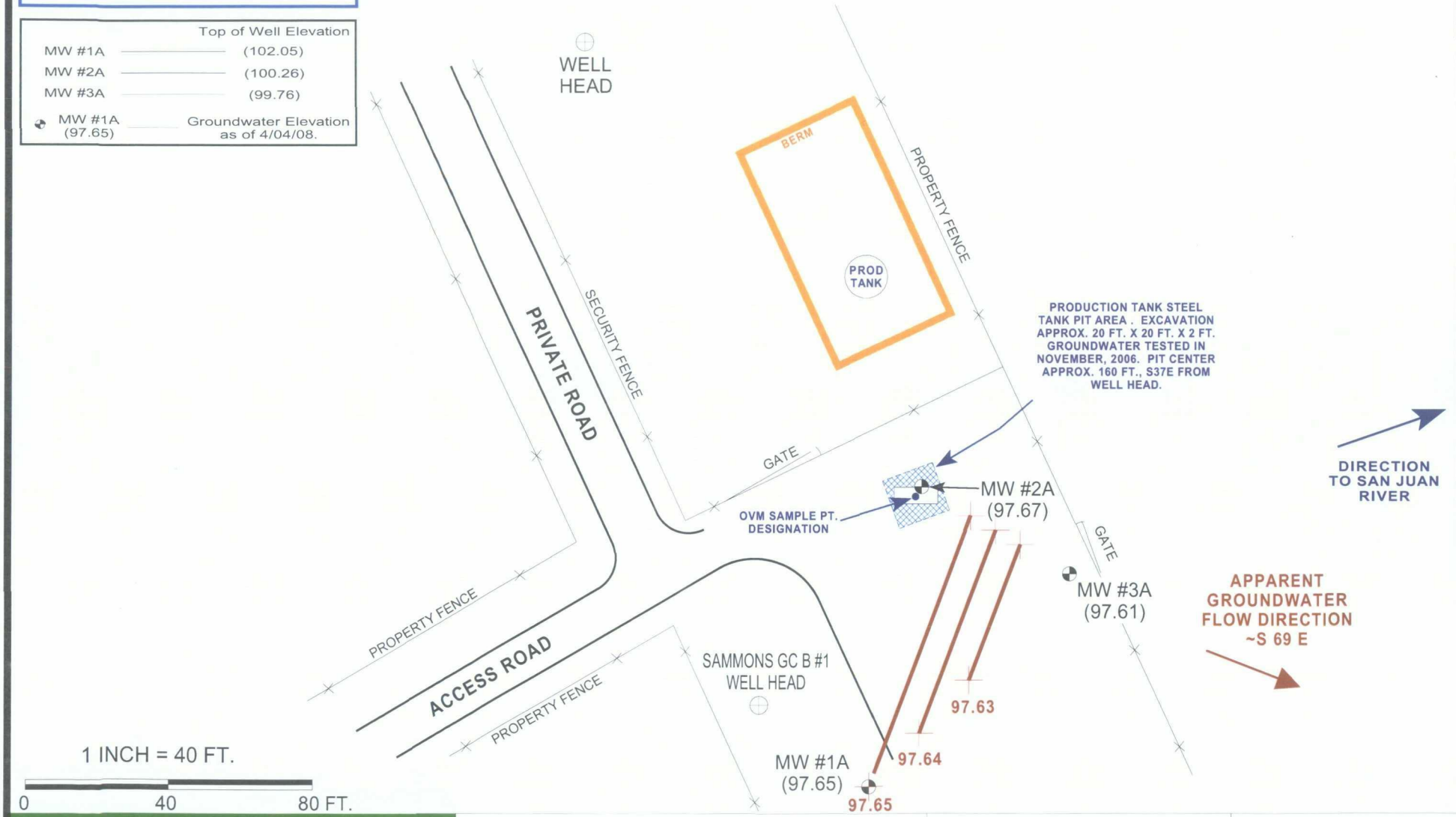
SITE MAP

08/07

FIGURE 2
(2nd 1/4, 2008)

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.

	Top of Well Elevation
MW #1A	(102.05)
MW #2A	(100.26)
MW #3A	(99.76)
MW #1A (97.65)	Groundwater Elevation as of 4/04/08.



BP AMERICA PRODUCTION CO.

SAMMONS GC F # 1

NE/4 NE/4 SEC. 18, T29N, R9W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 04-04-08-GW.SKF

REVISED: 04-04-08

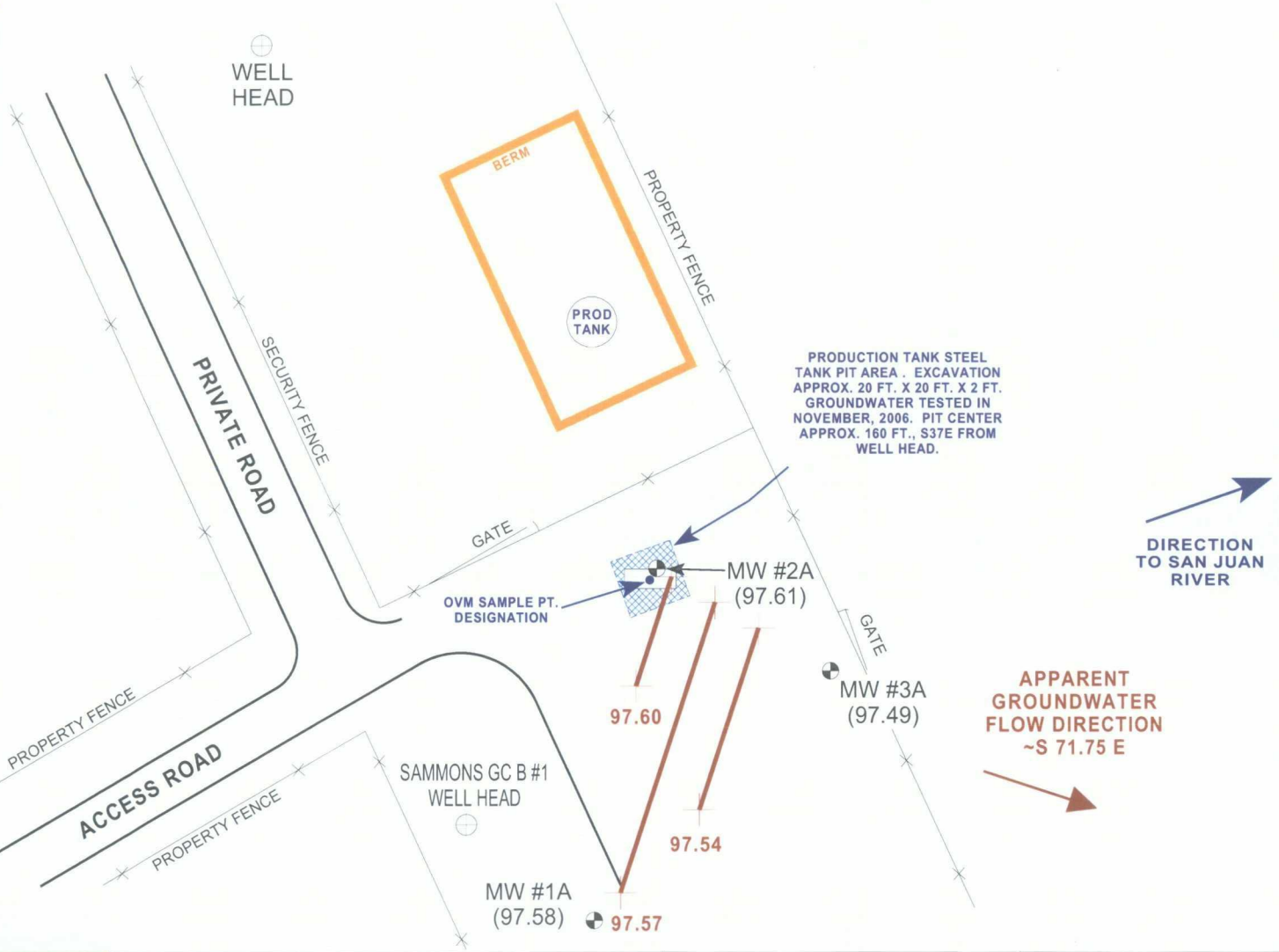
GROUNDWATER CONTOUR MAP

04/08

FIGURE 3
(3rd 1/4, 2008)

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.

	Top of Well Elevation
MW #1A	(102.05)
MW #2A	(100.26)
MW #3A	(99.76)
MW #1A (97.58)	Groundwater Elevation as of 8/25/08.



BP AMERICA PRODUCTION CO.

SAMMONS GC F # 1

NE/4 NE/4 SEC. 18, T29N, R9W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 08-25-08-GW.SKF

REVISED: 08-25-08

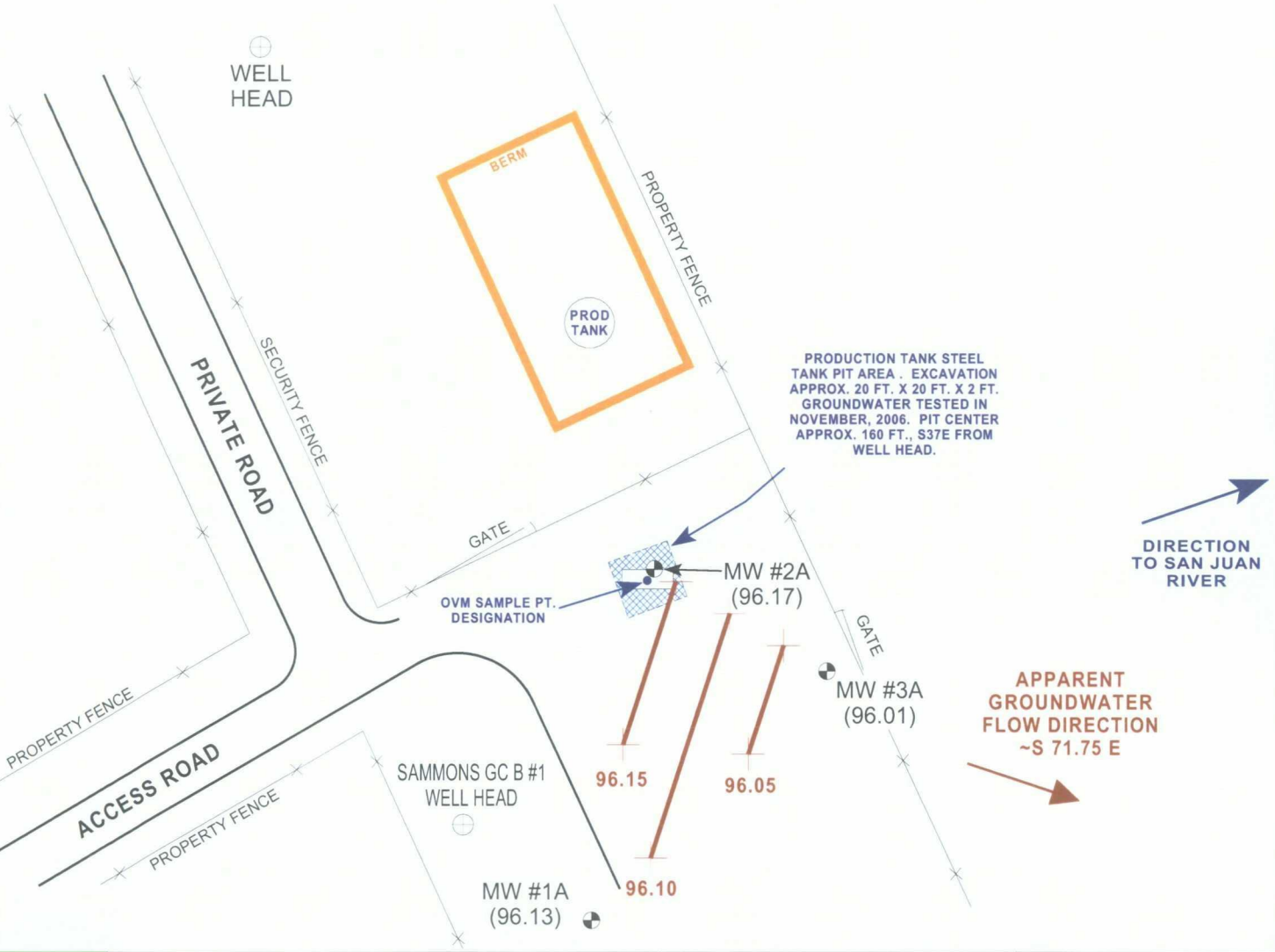
GROUNDWATER CONTOUR MAP

08/08

FIGURE 4
(4th 1/4, 2008)

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.

	Top of Well Elevation
MW #1A	(102.05)
MW #2A	(100.26)
MW #3A	(99.76)
MW #1A (96.13)	Groundwater Elevation as of 12/19/08.



BP AMERICA PRODUCTION CO.

SAMMONS GC F # 1

NE/4 NE/4 SEC. 18, T29N, R9W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 12-19-08-GW.SKF

REVISED: 12-31-08

GROUNDWATER CONTOUR MAP

12/08

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : 156388

SAMMONS GC F # 1 - PROD. TANK PIT
UNIT A, SEC. 18, T29N, R9W

LABORATORY (S) USED : PACE ANALYTICAL

Date : **April 4, 2008**

SAMPLER : N J V

Filename : **04-04-08.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.)
1A	102.05	97.65	4.40	15.00	-	-	-	-	-
2A	100.26	97.67	2.59	11.22	1510	6.90	1,000	14.0	4.25
3A	99.76	97.61	2.15	13.50	1430	6.88	900	15.2	5.50
					INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800		
					DATE & TIME =	04/03/08	1030		

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 in MW #2A & # 3A . Collected samples for BTEX per US EPA Method 8260 from MW # 2A & # 3A only .

Top of casing MW # 1A ~ 2.40 ft. , MW # 2A ~ 0.20 ft. below grade , MW # 3A ~ 0.35 ft. below grade .

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: SAMMONS GC F #1
Pace Project No.: 6038271

Sample: MW #2A **Lab ID: 6038271001** Collected: 04/04/08 15:10 Received: 04/08/08 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	**2.3**	ug/L	1.0	1		04/12/08 08:09	71-43-2	
Ethylbenzene	**1.2**	ug/L	1.0	1		04/12/08 08:09	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/08 08:09	108-88-3	
Xylene (Total)	**1100**	ug/L	30.0	10		04/14/08 13:16	1330-20-7	
Dibromofluoromethane (S)	96	%	85-114	1		04/12/08 08:09	1868-53-7	
Toluene-d8 (S)	105	%	82-114	1		04/12/08 08:09	2037-26-5	
4-Bromofluorobenzene (S)	99	%	85-119	1		04/12/08 08:09	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	81-118	1		04/12/08 08:09	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/12/08 08:09		

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ANALYTICAL RESULTS

Project: SAMMONS GC F #1
Pace Project No.: 6038271

Sample: MW #3A **Lab ID: 6038271002** Collected: 04/04/08 14:30 Received: 04/08/08 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/12/08 08:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/12/08 08:25	100-41-4	
Toluene	ND	ug/L	1.0	1		04/12/08 08:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/12/08 08:25	1330-20-7	
Dibromofluoromethane (S)	99	%	85-114	1		04/12/08 08:25	1868-53-7	
Toluene-d8 (S)	98	%	82-114	1		04/12/08 08:25	2037-26-5	
4-Bromofluorobenzene (S)	92	%	85-119	1		04/12/08 08:25	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	81-118	1		04/12/08 08:25	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/12/08 08:25		

REPORT OF LABORATORY ANALYSIS

156388

Page 1 of 1

Chain of Custody Record

Project Name: SAMMONS GC F #1
BP BU/AR Region/Enfos Segment:
State or Lead Regulatory Agency: NMOCD
Requested Due Date (mm/dd/yy): 4/18/08

On-site Time:	12:55	Temp:	60 °F
Off-site Time:	3:25	Temp:	62°F
Sky Conditions:	SUNNY TO PARTLY SUNNY		
Meteorological Events:			
Wind Speed:	5-10 MPH	Direction:	WEST/NW

Lab Name:	PACE ANALYTICAL	BP/AR Facility No.:	WR192173
Address:	9608 LOIRET BLVD. LENEXA, KS 66219	BP/AR Facility Address:	
Lab PM:	MARY JANE WALLS	Site Lat/Long:	
Tele/Fax:	(913)599-5665 FAX: (913)599-1759	California Global ID No.:	
BP/AR PM Contact:	MIKE WHELAN, PG	Enfos Project No.:	0019D
Address:	501 WESTLAKE PARK BLVD. Rm 28.144B HOUSTON, TX 77079	Provision or RCOP (circle one)	
Tele/Fax:	(281) 366-7485 FAX: (281) 366-7094	Phase/WBS:	
		Sub Phase/Task:	
		Cost Element:	01

Consultant/Contractor:	BLAGG/URS
Address:	110 N. FORTH ST. BLOOMFIELD, NM 87413
Consultant/Contractor Project No.:	41008725
Consultant/Contractor PM:	NELSON VELEZ
Tele/Fax:	(505) 632-1199 FAX: (505) 632-3903
Report Type & QC Level:	STANDARD
E-mail EDD To:	blagg-niv@yahoo.com
Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No: 6038271

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: BTEX 8021	Requested Analysis: BTEX/TPH	Requested Analysis: BTEX/Oxy/TPH	Requested Analysis: EPA 8260	Requested Analysis: EPA 8270	Requested Analysis:					Sample Point Lat/Long and Comments
1	MW #2A	1510	4/4/08		✓			3				✓					✓		3040	10				001
2	MW #3A	1430	4/4/08		✓			3				✓					✓			4				002
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

Sampler's Name:	NELSON VELEZ	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	BLAGG ENGINEERING, INC.	Nelson Velez - BLAGG ENG.	4/7/08	1530		4/8/08	8:45
Shipment Date:	APRIL 7, 2008						
Shipment Method:	FED. EX OVERNITE						
Shipment Tracking No:							

Special Instructions: REPORT BTEX CONSTITUENTS ONLY. SAN JUAN COUNTY, NM

Custody Seals In Place Yes X No ___ Temp Blank Yes X No ___ Cooler Temperature on Receipt 3.9 °F/C Trip Blank Yes X No ___

LABORATORY

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: SAMMONS GC F #1
Pace Project No.: 6038271

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6038271001	**MW #2A**	Water	04/04/08 15:10	04/08/08 08:45
6038271002	**MW #3A**	Water	04/04/08 14:30	04/08/08 08:45

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(913)599-5665

SAMPLE ANALYTE COUNT

Project: SAMMONS GC F #1
Pace Project No.: 6038271

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6038271001	**MW #2A**	EPA 8260	JKL	9
6038271002	**MW #3A**	EPA 8260	JKL	9

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PROJECT NARRATIVE

Project: SAMMONS GC F #1
Pace Project No.: 6038271

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: BP-Blagg Engineering
Date: April 15, 2008

General Information:
2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/13967

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: SAMMONS GC F #1
Pace Project No.: 6038271

QC Batch: MSV/13967
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 6038271001, 6038271002

METHOD BLANK: 311355
Associated Lab Samples: 6038271001, 6038271002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	3.0	
1,2-Dichloroethane-d4 (S)	%	108	81-118	
4-Bromofluorobenzene (S)	%	93	85-119	
Dibromofluoromethane (S)	%	99	85-114	
Toluene-d8 (S)	%	101	82-114	

LABORATORY CONTROL SAMPLE: 311356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	10	9.2	92	87-117	
Ethylbenzene	ug/L	10	8.9	89	84-123	
Toluene	ug/L	10	8.7	87	81-124	
Xylene (Total)	ug/L	30	26.7	89	83-125	
1,2-Dichloroethane-d4 (S)	%			106	81-118	
4-Bromofluorobenzene (S)	%			91	85-119	
Dibromofluoromethane (S)	%			101	85-114	
Toluene-d8 (S)	%			101	82-114	

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: SAMMONS GC F #1
Pace Project No.: 6038271

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/13967

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: SAMMONS GC F #1
Pace Project No.: 6038271

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6038271001	**MW #2A**	EPA 8260	MSV/13967		
6038271002	**MW #3A**	EPA 8260	MSV/13967		

Pace Analytical

Client Name: Bowes Project # C038271

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 4994348715

Optional
Proj. Due Date:
Proj. Name: 4/18/08
Semass GCFR1

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: T-168 / T-169 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 3.6 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/18/08 RW RW

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	Initial when completed: GR Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16. 3 TBs sent w/ multiple projects
Trip Blank Custody Seals Present	☐Yes ☑No ☐N/A	
Pace Trip Blank Lot # (if purchased): 63708-3		GR

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AMW 4/18/08 **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

SAMMONS GC F # 1 - PROD. TANK PIT
UNIT A, SEC. 18, T29N, R9W

LABORATORY (S) USED : PACE ANALYTICAL

Date : **June 23, 2008**

SAMPLER : N J V

Filename : **06-23-08.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.)
1A	102.05	98.93	3.12	15.00	-	-	-	-	-
2A	100.26	98.95	1.31	11:22	0910	6.97	1,200	23.6	4.75
3A	99.76	98.82	0.94	13.50	0830	7.02	800	24.0	6.25
					INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800		
					DATE & TIME =	06/23/08	0634		

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 in MW #2A & # 3A . Collected samples for BTEX per US EPA Method 8260 from MW # 2A & # 3A only .

Top of casing MW # 1A ~ 2.40 ft. , MW # 2A ~ 0.20 ft. below grade , MW # 3A ~ 0.35 ft. below grade .

on-site	8:01	temp	72 F
off-site	9:26	temp	81 F
sky cond.	Sunny		
wind speed	0-5	direct.	east

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ANALYTICAL RESULTS

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Sample: MW #2A **Lab ID: 6042389001** Collected: 06/23/08 09:10 Received: 06/25/08 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	**3.8**	ug/L	1.0	1		06/27/08 11:51	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/27/08 11:51	100-41-4	
Toluene	ND	ug/L	1.0	1		06/27/08 11:51	108-88-3	
Xylene (Total)	**534**	ug/L	3.0	1		06/27/08 11:51	1330-20-7	1e,E
Dibromofluoromethane (S)	97	%	85-114	1		06/27/08 11:51	1868-53-7	
Toluene-d8 (S)	105	%	82-114	1		06/27/08 11:51	2037-26-5	
4-Bromofluorobenzene (S)	103	%	85-119	1		06/27/08 11:51	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	81-118	1		06/27/08 11:51	17060-07-0	
Preservation pH	**1.0**		1.0	1		06/27/08 11:51		

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ANALYTICAL RESULTS

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Sample: MW #3A **Lab ID: 6042389002** Collected: 06/23/08 08:30 Received: 06/25/08 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		06/27/08 02:47	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/27/08 02:47	100-41-4	
Toluene	ND	ug/L	1.0	1		06/27/08 02:47	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/27/08 02:47	1330-20-7	
Dibromofluoromethane (S)	98	%	85-114	1		06/27/08 02:47	1868-53-7	
Toluene-d8 (S)	100	%	82-114	1		06/27/08 02:47	2037-26-5	
4-Bromofluorobenzene (S)	102	%	85-119	1		06/27/08 02:47	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	81-118	1		06/27/08 02:47	17060-07-0	
Preservation pH	**1.0**		1.0	1		06/27/08 02:47		

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name: SAMMONS GC F 1
BP BU/AR Region/Enfos Segment: SJOC SOUTH
State or Lead Regulatory Agency: NMOCD
Requested Due Date (mm/dd/yy): 6/27/08

On-site Time:	8:01	Temp:	72 °F
Off-site Time:	9:26	Temp:	81 °F
Sky Conditions:	SUNNY		
Meteorological Events:			
Wind Speed:	0-5	Direction:	EAST

Lab Name: **Pace Analytical Services, Inc.**	BP/AR Facility No.:	Consultant/Contractor: **Blagg/URS**
Address: **9609 Loiret Blvd**	BP/AR Facility Address:	Address: **110 N. Forth St.**
Lenexa, KS 66219	Site Lat/Long:	**Bloomfield, NM 87413**
Lab PM: **MJ Walls**	California Global ID No.:	Consultant/Contractor Project No.:
Tele/Fax: **913-563-1401**	Enfos Project No.: 0019C-0001	Consultant/Contractor PM: **Nelson Velez**
BP/AR EMB: **Mike Whelan**	Provision or OOC (circle one)	Tele: **(505) 632-1199** Fax: **(505) 632-3903**
Address: **501 Westlake Park Blvd.**	Phase/WBS:	Report Type & QC Level: **STD**
Rm28, 144B Houston, TX 77079	Sub Phase/Task:	E-Mail EDD To: **blagg-njve@yahoo.com**
Tele: **(281) 366-7485** Fax: **(281) 366-7094**	Cost Element:	Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No: 17713

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: BTEX (8260)	Requested Analysis: 3(DCGWH)	Sample Point Lat/Long and Comments
1	MW # 2A	0910	6/26/08		✓		001	3				✓		✓	3(DCGWH)	
2	MW # 3A	0830	6/26/08		✓		002	3				✓		✓	↓	
3			23													
4			24													
5																
6																
7																
8																
9																
10																

Sampler's Name:	NELSON VELEZ	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	BLAGG ENER. INC.	Nelson VM	6/24/08	1645		6/25	901
Shipment Date:	6/24/08		24				
Shipment Method:	FED. EX.						
Shipment Tracking No:	8643 6004 9420						

Special Instructions: REPORT BTEX CONSTITUENTS ONLY. SAN JUAN COUNTY, N.M.

Yes / No | Temp Blank: (Yes) / No | Cooler Temp on Receipt: 3.5 °F/C | Trip Blank: (Yes) / No | MS/MSD Sample Submitted: Yes / (No)

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SAMPLE SUMMARY

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6042389001	**MW #2A**	Water	06/23/08 09:10	06/25/08 09:00
6042389002	**MW #3A**	Water	06/23/08 08:30	06/25/08 09:00

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SAMPLE ANALYTE COUNT

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6042389001	**MW #2A**	EPA 8260	SSM	9
6042389002	**MW #3A**	EPA 8260	SSM	9

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PROJECT NARRATIVE

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: BP-Blagg Engineering
Date: June 27, 2008

General Information:
2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/15384

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/15384

1e: As per method 5035; a dilution analysis was performed. However the results were not consistent. Sample determined to be non-homogeneous.

- MW #2A (Lab ID: 6042389001)
  - Xylene (Total)

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MW #2A (Lab ID: 6042389001)
  - Xylene (Total)

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PROJECT NARRATIVE

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: BP-Blagg Engineering
Date: June 27, 2008

This data package has been reviewed for quality and completeness and is approved for release.

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QUALITY CONTROL DATA

Project: SAMMONS GC F 1
Pace Project No.: 6042389

QC Batch: MSV/15384
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 6042389001, 6042389002

METHOD BLANK: 344275
Associated Lab Samples: 6042389001, 6042389002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	3.0	
1,2-Dichloroethane-d4 (S)	%	95	81-118	
4-Bromofluorobenzene (S)	%	101	85-119	
Dibromofluoromethane (S)	%	94	85-114	
Toluene-d8 (S)	%	103	82-114	

LABORATORY CONTROL SAMPLE: 344276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	10	9.1	91	87-117	
Ethylbenzene	ug/L	10	9.6	96	84-123	
Toluene	ug/L	10	9.4	94	81-124	
Xylene (Total)	ug/L	30	27.3	91	83-125	
1,2-Dichloroethane-d4 (S)	%			94	81-118	
4-Bromofluorobenzene (S)	%			103	85-119	
Dibromofluoromethane (S)	%			97	85-114	
Toluene-d8 (S)	%			101	82-114	

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QUALIFIERS

Project: SAMMONS GC F 1
Pace Project No.: 6042389

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/15384

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e As per method 5035; a dilution analysis was performed. However the results were not consistent. Sample determined to be non-homogeneous.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: SAMMONS GC F 1
Pace Project No.: 6042389

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6042389001	**MW #2A**	EPA 8260	MSV/15384		
6042389002	**MW #3A**	EPA 8260	MSV/15384		

Sample Condition Upon Receipt

Pace Analytical

Client Name: BP BLAKE Project # 6042389

Optional
Proj. Due Date: 6/27
Proj. Name: Simmons GC
F1

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: on COC

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used T-169 / T-179 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.5 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: BW 6/25
S: 1006 E: 1015

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 2DAY
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☑No	☐N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT				
All containers needing preservation have been checked.	☐Yes	☐No	☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	
exceptions: (VOA) coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☐Yes	☑No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☑No	☐N/A	
Pace Trip Blank Lot # (if purchased): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AMW 6/25/08 **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

SAMMONS GC F # 1 - PROD. TANK PIT
UNIT A, SEC. 18, T29N, R9W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **August 25, 2008**

SAMPLER : N J V

Filename : **08-25-08.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.)
1A	102.05	97.58	4.47	15.00	-	-	-	-	-
2A	100.26	97.61	2.65	11.22	1035	7.03	1,100	27.2	4.25
3A	99.76	97.49	2.27	13.50	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	08/25/08	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 in MW #2A. Collected samples for BTEX per US EPA Method 8021B from MW # 2A & duplicate labeled MW # 4A with time 1050.

Top of casing MW # 1A ~ 2.40 ft., MW # 2A ~ 0.20 ft. below grade, MW # 3A ~ 0.35 ft. below grade.

on-site	9:59	temp	76 F
off-site	10:47	temp	80 F
sky cond.	Mostly sunny		
wind speed	0-5	direct.	southwest

Hall Environmental Analysis Laboratory, Inc.

Date: *27-Aug-07*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2A
Lab Order:	0708246	**Collection Date:**	8/16/2007 11:50:00 AM
Project:	Sammons GC F #1	**Date Received:**	8/17/2007
Lab ID:	0708246-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	4.9	1.0		µg/L	1	8/23/2007 10:53:39 PM
Toluene	ND	1.0		µg/L	1	8/23/2007 10:53:39 PM
Ethylbenzene	7.8	1.0		µg/L	1	8/23/2007 10:53:39 PM
Xylenes, Total	2300	40		µg/L	20	8/24/2007 1:34:20 PM
Surr: 4-Bromofluorobenzene	98.1	70.2-105		%REC	20	8/24/2007 1:34:20 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
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: SAMMONS GC F #1
Address: P.O. BOX 87 BLFD., NM 87413
Project #: 710
Project Manager: NV
Phone #: 632-1199
Sampler: NV
Fax #:
Sample Temperature: 1°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	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)
8/16/07 AS								0708246																
8/17/07	1150	WATER	MW #2A	2-40ml	✓			1	✓															

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	Remarks:
8/16/07	1545		8/20/07 1416	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Sammons GC F #1 **Work Order:** 0708246

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R24885**	Analysis Date:	8/23/2007 9:10:07 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		*MBLK*			Batch ID:	**R24905**	Analysis Date:	8/24/2007 10:01:20 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: B		*MBLK*			Batch ID:	**R24905**	Analysis Date:	8/24/2007 6:25:38 PM	
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:	**R24885**	Analysis Date:	8/23/2007 2:37:33 PM	
Benzene	17.77	µg/L	1.0	88.9	85.9	113			
Toluene	17.37	µg/L	1.0	86.9	86.4	113			
Ethylbenzene	18.05	µg/L	1.0	90.2	83.5	118			
Xylenes, Total	54.72	µg/L	2.0	90.9	83.4	122			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R24905**	Analysis Date:	8/24/2007 11:31:32 AM	
Benzene	17.89	µg/L	1.0	89.4	85.9	113			
Toluene	17.92	µg/L	1.0	89.6	86.4	113			
Ethylbenzene	18.15	µg/L	1.0	90.3	83.5	118			
Xylenes, Total	54.67	µg/L	2.0	90.5	83.4	122			
Sample ID: 100NG BTEX LCS B		*LCS*			Batch ID:	**R24905**	Analysis Date:	8/25/2007 11:02:46 PM	
Benzene	18.86	µg/L	1.0	94.3	85.9	113			
Toluene	19.72	µg/L	1.0	98.6	86.4	113			
Ethylbenzene	20.17	µg/L	1.0	100	83.5	118			
Xylenes, Total	62.26	µg/L	2.0	102	83.4	122			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID:	**R24885**	Analysis Date:	8/23/2007 3:07:41 PM	
Benzene	18.32	µg/L	1.0	91.6	85.9	113	3.04	27	
Toluene	18.12	µg/L	1.0	90.6	86.4	113	4.23	19	
Ethylbenzene	18.75	µg/L	1.0	93.7	83.5	118	3.81	10	
Xylenes, Total	56.41	µg/L	2.0	93.7	83.4	122	3.04	13	

Qualifiers:

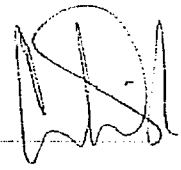
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 8/17/2007

Work Order Number 0708246 | Received by TLS

Checklist completed by  8/17/07
Signature | Date

Matrix | Carrier name UPS

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

Container/Temp Blank temperature? 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

SAMMONS GC F # 1 - PROD. TANK PIT
UNIT A, SEC. 18, T29N, R9W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : **December 19, 2008**

SAMPLER : N J V

Filename : **12-19-08.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.)
1A	102.05	96.13	5.92	15.00	-	-	-	-	-
2A	100.26	96.17	4.09	11.22	1525	7.30	900	11.2	1.75
3A	99.76	96.01	3.75	13.50	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	12/19/08	1515

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 ".

Fair recovery in MW #2A . Collected samples for BTEX per US EPA Method 8021B from MW # 2A only .

Top of casing MW # 1A ~ 2.40 ft., MW # 2A ~ 0.20 ft. below grade , MW # 3A ~ 0.35 ft. below grade .

Hall Environmental Analysis Laboratory, Inc.

Date: *05-Jan-09*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2A
Lab Order:	0812494	**Collection Date:**	12/19/2008 3:25:00 PM
Project:	Sammons GC F #1	**Date Received:**	12/23/2008
Lab ID:	0812494-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	2.2	2.0		µg/L	2	1/1/2009 10:27:36 AM
Toluene	ND	2.0		µg/L	2	1/1/2009 10:27:36 AM
Ethylbenzene	ND	2.0		µg/L	2	1/1/2009 10:27:36 AM
Xylenes, Total	740	20		µg/L	10	12/30/2008 4:49:28 PM
Surr: 4-Bromofluorobenzene	94.5	65.9-130		%REC	10	12/30/2008 4:49:28 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike recovery outside accepted recovery limits		

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☒ Level 4 ☐
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 ENGR. / BP AMERICA
Address: P.O. BOX 87, BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: SAMMONS GC F #1
Project #:
Project Manager: NELSON VELEZ
Sampler: NELSON VELEZ
Sample Temperature: 1°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative HCl	HEAL No. 0812494
12/19/08	1525	WATER	MW #2A	2-40ml			✓	-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)	
12/22/08	1545			1030
			12/23/08	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Sammons GC F #1 **Work Order:** 0812494

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R31821**		Analysis Date:	12/30/2008 9:43:24 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: **R31821**		Analysis Date:	12/30/2008 7:54:57 PM	
Benzene	21.74	µg/L	1.0	109	85.9	113			
Toluene	21.32	µg/L	1.0	107	86.4	113			
Ethylbenzene	20.84	µg/L	1.0	104	83.5	118			
Xylenes, Total	61.77	µg/L	2.0	103	83.4	122			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date Received: 12/23/2008

Work Order Number 0812494 | Received by: TLS

Checklist completed by: Signature 12/23/08 Date | Sample ID labels checked by: TLS 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 _____