3R - 410

CLOSURE REQUEST

09 / 22 / 2010

BLAGG ENGINEERING, INC.

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



September 22, 2010

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

RE: REQUEST FOR PERMANENT CLOSURE

BP America Production Company 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, May 1, 2009. BP has followed its NMOCD approved groundwater management plan and is requesting permanent closure for this site.

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

Respectfully submitted:

Blagg Engineering, Inc.

Then the

Nelson J. Velez Staff Geologist

Attachment:

Groundwater Report (2 copies)

cc:

Mr. Brandon Powell, Environmental Specialist, NMOCD District III Office, Aztec, NM

Mr. Jeff Peace, Environmental Advisor, BP, Farmington, NM

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

AUGUST 2010

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

Remediation via Excavation Date: 5/28/09

Monitor Well Installation Dates: 10/20/09 (MW # 2R)

Monitor Well Sampling Dates: 3/31/09, 5/16/09, 10/26/09, 2/24/10, 5/12/10

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. The reporting herein is for site monitoring from March 2009 to May 2010.

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 were managed by discarding into the separator below-grade tank (BGT) located on the well site. The BGT contents were then disposed through approved NMOCD operational procedures for removal of produced fluids.

Soil and Groundwater Abatement:

On May 28, 2009, excavation of the source area was conducted using a trackhoe (Figure 2). Groundwater depth was recorded at approximately five (5) feet below surface grade during the removal of impacted soils. The excavation perimeter was measured at approximately 25 X 28 X 6 feet depth. Approximately 96 cubic yards of soil were removed and transported to BP's Crouch Mesa Facility.

MW #2R was installed on October 20, 2009 and quarterly sampling was initiated thereafter. Boring log of MW #2R along with its well completion information is contained within this report.

Water Quality and Gradient Information:

MW #2R has tested below the New Mexico Water Quality Control Commission (**NMWQCC**) standards for at least four (4) consecutive sampling events. 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 (Figure 3 through Figure 7) reveal the relative elevations from the site wells have consistently shown an apparent southeast flow direction toward MW #3A.

Summary and/or Recommendations:

Hydrocarbon impacted soils and groundwater at the site appear to have been remediated via excavation. All site monitor wells tested at non-detectable or below NMWQCC's standards for BTEX for at least four (\$) consecutive sampling events; therefore, meeting sections 2.1, 2.3, and 2.7 of BP's Groundwater Management Plan (GMP). Permanent site closure is recommended. Following approval by the NMOCD, site monitor wells will be abandoned pursuant to the approved GMP.

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: May 26 2010 FILENAME: (SF1-2Q10.WK4) NJV

		v						BTEX	EPA METH	IOD 8021B (ppb)
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D.	TDS (mg/L)	COND.	рН	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	**			**	19		3.3	ND	ND	1,700
19-Dec-08		4.09			900	7.30		2.2	ND	ND	740
31-Mar-09		4.45			800	7.22		3.3	1.1	1.4	240
16-May-09		1.99			900	7.05		9.7	2.2	1.5	570
26-Oct-09	MW # 2R	3.72	10.93		1,600	7.25		ND	6.0	16	330
24-Feb-10		2.96			2,900	7.37		1.0	ND	1.2	16
12-May-10		2.63			2,100	7.35		2.6	ND	3.4	9.3
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
12-May-10		2.62			900	7.22		ND	ND	ND	ND
		NMW	QCC GR	ROUNDW	ATER S	TAND	ARDS	10	750	750	620

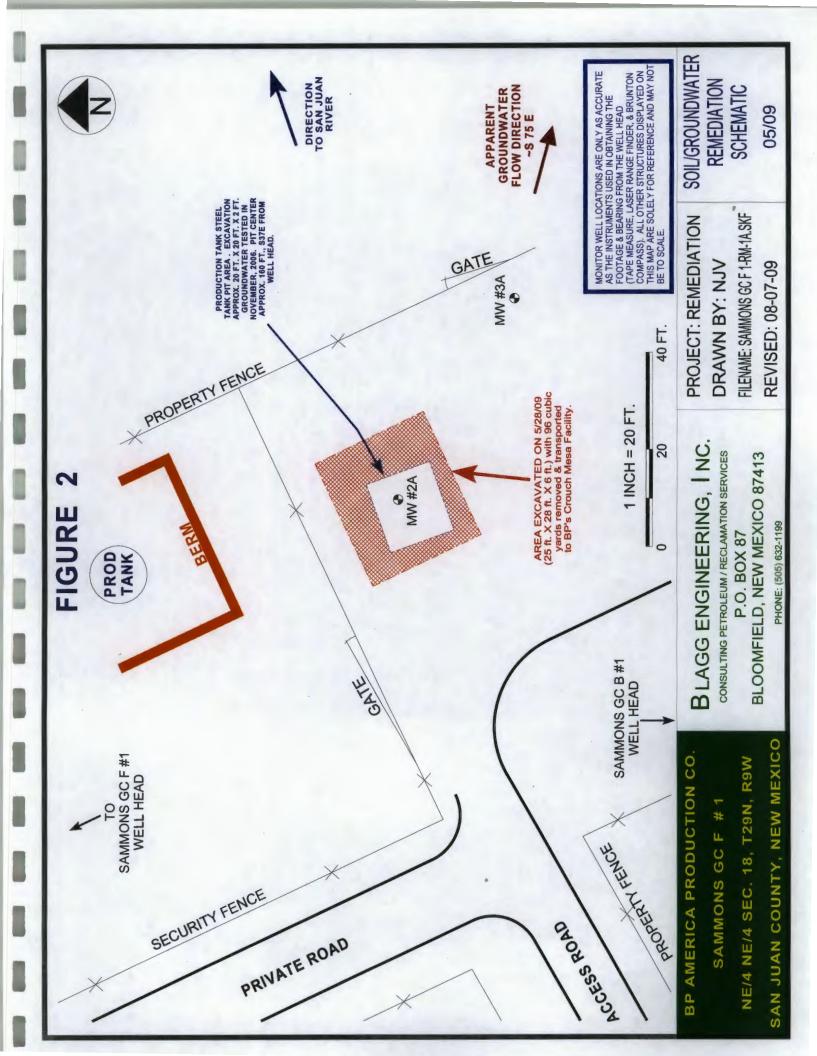
NOTES: 1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS.

- 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).
- 4) NMWQCC INDICATES NEW MEXICO WATER QUALITY CONTROL COMMISSION.

SITE FILENAME: SAMMONS GC F 1-SM3.SKF PROJECT: GW MONITORING PRODUCTION TANK STEEL
TANK PIT AREA. EXCAVATION
APROX. 20 FT. X 20 FT. X 2 FT.
GROUNDWATER TESTED IN
NOVEMBER, 2006. PIT CENTER
APPROX. 160 FT. S37E FROM
WELL HEAD. REVISED: 08-03-10 **DRAWN BY: NJV** GATE **MW #3A** • -MW #2A PROPERTY FENCE BLAGG ENGINEERING, I NC. CONSULTING PETROLEUM / RECLAMATION SERVICES BLOOMFIELD, NEW MEXICO 87413 MW #1A PROD PHONE: (505) 632-1199 OVM SAMPLE PT. DESIGNATION P.O. BOX 87 SAMMONS GC B #1 WELL HEAD 0 SECURITY FENCE WELL HEAD PRIVATE ROAD ACCESS ROAD SAN JUAN COUNTY, NEW MEXICO BP AMERICA PRODUCTION CO. NE/4 NE/4 SEC. 18, T29N, R9W PROPERTY PENCE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE & BEARING FROM THE WELL HEAD (TAPE MESURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE. SAMMONS GC F #1 80 FT. 1 INCH = 40 FT. 4

FIGURE 1

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE



DIRECTION TO SAN JUAN RIVER GROUNDWATER GROUNDWATER FLOW DIRECTION APPARENT -S 74.75 E PRODUCTION TANK STEEL
TANK PIT AREA. EXCAVATION
APPROX. 20 FT. X 20 FT. X 2 FT.
GROUNDWATER TESTED IN
NOVEMBER, 2006. PIT CENTER
APPROX. 160 FT. S37E FROM
WELL HEAD. PROJECT: MW SAMPLING MW #3A (95.56)GATE MW #2A (95.81)PROPERTY FENCE 95.69 WW #1A (95.74 95.79 PROD BLAGG ENGINEERING, INC. 1st 1/4, 2009) SAMMONS GC B #1 WELL HEAD FIGURE 0 SECURITY FENCE PROPERTY PENCE WELL PRIVATE ROAD ACCESS ROAD STATE OF THE PRICE BP AMERICA PRODUCTION CO. 80 FT. (TAPE MEASURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT Top of Well Elevation Groundwater Elevation as of 3/31/09. MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE (100.26)(99.76) (102.05)FOOTAGE & BEARING FROM THE WELL HEAD 1 INCH = 40 FT. 40 ₩ #1A (95.77) BE TO SCALE. MW #2A MW #1A MW #3A

CONTOUR

MAP

FILENAME: 03-31-09-GW.SKF

REVISED: 04-01-09

DRAWN BY: NJV

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

SAN JUAN COUNTY, NEW MEXICO

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

SAMMONS GC F # 1

03/09

DIRECTION TO SAN JUAN RIVER GROUNDWATER CONTOUR 60/90 MAP GROUNDWATER FLOW DIRECTION ~S 76.75 E APPARENT PRODUCTION TANK STEEL
TANK PIT AREA. EXCAVATION
APPROX. 20 FT. X 2 FT.
GROUNDWATER TESTED IN
NOVEMBER, 2006. PIT CENTER
APPROX. 160 FT., 337E FROM
WELL HEAD. PROJECT: MW SAMPLING FILENAME: 05-16-09-GW.SKF MW #3A (98.07)DRAWN BY: NJV GATE **MW #2A** (98.27) 98.16 PROPERTY FENCE 98.21 98.26 PROD BLAGG ENGINEERING, INC. • CONSULTING PETROLEUM / RECLAMATION SERVICES BLOOMFIELD, NEW MEXICO 87413 **MW #1A** (2nd 1/4, 2009) (98.25)SAMMONS GC B #1 WELL HEAD FIGURE 0 P.O. BOX 87 SECURITY FENCE PROPERTY FEMOR WELL PRIVATE ROAD \oplus ACCESS ROAD PROPERTY FEWCE. BP AMERICA PRODUCTION CO. NE/4 NE/4 SEC. 18, T29N, R9W 80 FT. (TAPE MEASURE, LASER RANGE FINDER, & BRUNTON COMPASS). ALL OTHER STRUCTURES DISPLAYED ON THIS MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE. Groundwater Elevation as of 5/16/09. Top of Well Elevation SAMMONS GC F # MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE (102.05)(100.26)(99.78)FOOTAGE & BEARING FROM THE WELL HEAD 1 INCH = 40 FT. 40 @ MW #1A (97.25) MW #1A MW #2A MW #3A

REVISED: 05-23-09

PHONE: (505) 632-1199

SAN JUAN COUNTY, NEW MEXICO

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

(100.00) (102.04) (99.74) MW#1A (96.22) MW #1A MW #2R MW #3A

(4th 1/4, 2009) FIGURE





BP AMERICA PRODUCTION CO.

SAMMONS GC

SAN JUAN COUNTY, NEW MEXICO NE/4 NE/4 SEC. 18, T29N, R9W

BLOOMFIELD, NEW MEXICO 87413 PHONE: (505) 632-1199

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLAGG ENGINEERING,

NC.

REVISED: 10-26-09

PROJECT: MW SAMPLING DRAWN BY: NJV

FILENAME: 10-26-09-GW.SKF

GROUNDWATER CONTOUR MAP

10/09

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

Groundwater Elevation as of 2/24/10. Top of Well Elevation (100.001)(102.04)(99.74)Well tops resurveyed on 10/22/09. MW #1A (96.89) **MW #2R MW #3A** MW #1A •

(1st 1/4, 2010) FIGURE 6





BP AMERICA PRODUCTION CO.

SAMMONS GCF #

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

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES BLOOMFIELD, NEW MEXICO 87413 P.O. BOX 87

PHONE: (505) 632-1199

DRAWN BY: NJV

FILENAME: 02-24-10-GW.SKF REVISED: 02-24-10

CONTOUR MAP

02/10

DIRECTION TO SAN JUAN RIVER GROUNDWATER CONTOUR GROUNDWATER FLOW DIRECTION APPARENT ~S 65.5 E PRODUCTION TANK STEEL
TANK PIT AREA. EXCAVATION
APPROX. 20 FT. X 20 FT. X 2 FT.
GROUNDWATER TESTED IN
NOVEMBER, 2006. PIT CENTER
APPROX. 160 FT., S37E FROM
WELL HEAD. PROJECT: MW SAMPLING **MW #3A** (97.12)DRAWN BY: NJV GATE MW #2R (97.37) PROPERTY FENCE 97.35 97.25 BLAGG ENGINEERING, INC. PROD MW #1A (97.26) (2nd 1/4, 2010) AREA EXCAVATED ON 5/28/09 (25 ft. X 28 ft. X 6 ft.) with 96 cubic yards removed & transported to BP's Crouch Mesa Facility. SAMMONS GC B #1 WELL HEAD FIGURE 0 SECURITY FENCE PROPERTY PENCE WELL PRIVATE ROAD 0 ACCESS ROAD STATE STATE STATE BP AMERICA PRODUCTION CO. 80 FT. 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 Top of Well Elevation Groundwater Elevation as of 5/12/10. SAMMONS GC F # MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE (102.04)(100.00)(99.74) 1 INCH = 40 FT. 40 (97.26) BE TO SCALE. MW #1A **MW #2R** MW #3A

05/10

MAP

FILENAME: 05-12-10-GW.SKF

REVISED: 05-12-10

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

SAN JUAN COUNTY, NEW MEXICO

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

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLAGG ENGINEERING, INC.

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

MW #2R

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.

SAMMONS GC F #1 UNIT A, SEC. 18, T29N, R9W

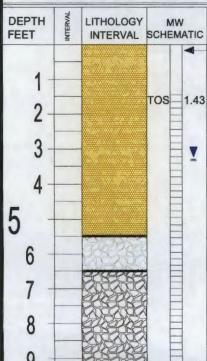
CONTRACTOR: BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

EQUIPMENT USED: MOBILE DRILL RIG (CME 75)

BORING LOCATION: 156 FT., \$37.5E FROM WELL HEAD.

BH - 4

BORING #.....



11

12

13

14

5

16

17

18

LOCATION NAME:

FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 0.50 FEET BELOW GRADE.

DARK YELLOWISH BROWN SAND AND GRAVEL (FILL MATERIAL), NON COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 5.5 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 3.22 FT. FROM GROUND SURFACE MEASURED ON 10/26/09.

DARK GRAY TO GRAYISH BLACK SAND AND GRAVEL, NON COHESIVE, SATURATED, FIRM, APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (5.5 - 6.5 FT. BELOW GRADE).

SAME AS ABOVE EXCEPT GRAYISH TO OLIVE BLACK AND WITH NO APPARENT HYDRO - CARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (6.5 - 11.5 FT. BELOW GRADE).

NOTES:

- SAND.

- SAND AND GRAVEL.

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 0.50 ft. to 1.43 ft. below grade, 0.010 slotted screen between 1.43 to 11.43 ft. below grade, sand packed annular to 1.0 ft. below grade. Completed with concreting flush mount well cover encompassing 0.4 ft. of casing below grade casing and secured with locking cap and padlock.

DRAWING: SAMMONS GC F1 MW 2R-BH4. SKF DATE: 11/23/09 DWN BY: NJV

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

SAMPLER:

LABORATORY (S) USED: HALL ENVIRONMENTAL

NJV

Date: March 31, 2009

Filename: 03-31-09.WK4

PROJECT MANAGER:

NJV

WELL #	WELL ELEV.	ELEV.	WATER	DEPTH	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1A	102.05	95.77	6.28	15.00	-	-	-		-
2A	100.26	95.81	4.45	11.22	1110	7.22	800	11.6	1.75
3A	99.76	95.56	4.20	13.50		-		<u> </u>	

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00

2,800 0945

DATE & TIME = 03/31/09

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 sample from MW #2A only for BTEX analysis.

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

10:24 45 F on-site temp 11:20 off-site temp 48 F sky cond. Sunny 0-10 direct. W wind speed

Date: 10-Apr-09

CLIENT:

Blagg Engineering

Lab Order:

0904021

Sammons GC F #1

Project: Lab ID:

0904021-01

Client Sample ID: MW #2A

Collection Date: 3/31/2009 11:10:00 AM

Date Received: 4/1/2009

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	3.3	1.0	μg/L	1	4/7/2009 3:13:54 PM
Toluene	1.1	1.0	μg/L	1	4/7/2009 3:13:54 PM
Ethylbenzene	1.4	1.0	μg/L	1	4/7/2009 3:13:54 PM
Xylenes, Total	240	20	μg/L	10	4/8/2009 2:35:48 PM
Surr: 4-Bromofluorobenzene	105	65.9-130	%REC	1	4/7/2009 3:13:54 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

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	Single Substance Substan	
Dther: StdX Level 4 □ Other: Project Name: SquandalS & F #	dilume di	Received By: (Signature)
CHAIN-OF-CUSTODY RECORD Client: BLAKE ENER. BP American	110 817 0 81	Date: Relinquished By: (Signat(ye)

Date: 10-Apr-09

QA/QC SUMMARY REPORT

Client:

Blagg Engineering

Project:

Sammons GC F #1

Work Order:

0904021

Analyte	Result	Units	PQL	%Rec	LowLimit I	HighLimit	%RPD	RPDI	_imit Qual
Method: EPA Method 8021B: V	olatiles								
Sample ID: 5ML RB		MBLK			Batch ID	R33112	Analysis Da	ate:	4/6/2009 10:05:03 /
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: 6ML RB		MBLK			Batch ID	: R33137	Analysis Da	ate:	4/7/2009 9:38:13
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	R33112	Analysis Da	ate:	4/6/2009 8:13:23 F
Benzene	21.79	μg/L	1.0	109	85.9	113			
Toluene	22.74	μg/L	1.0	114	86.4	113			s
Ethylbenzene	21.76	µg/L	1.0	109	83.5	118			
Xylenes, Total	64.38	μg/L	2.0	107	83.4	122			
Sample ID: 100NG BTEX LCS		LCS			Batch ID	R33137	Analysis Da	ate:	4/7/2009 8:19:01 F
Benzene	21.36	μg/L	1.0	107	85.9	113			
Toluene	22.01	μg/L	1.0	110	86.4	113			
Ethylbenzene	21.38	μg/L	1.0	107	83.5	118			
Xylenes, Total	63.41	µg/L	2.0	106	83.4	122			
Sample ID: 100NG BTEX LCSD		LCSD			Batch ID	R33137	Analysis Da	ite:	4/7/2009 8:49:21 F
Benzene	20.65	μg/L	1.0	103	85.9	113	3.39	27	
Toluene	20.87	μg/L	1.0	104	86.4	113	5.31	19	
Ethylbenzene	20.36	μg/L	1.0	102	83.5	118	4.86	10	
Xylenes, Total	60.47	μg/L	2.0	101	83.4	122	4.75	13	

Qualifiers:

E Estimated value

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

Sample Receipt Checklist

Client Name BLAGG				Date Receive	ea:	4/1/2009	
Work Order Number 0904021				Received b	y: AT	11	
Checklist completed by:			Allale	Sample ID	labels checked by:	Initials	
Matrix:	Carrier name:	<u>Gre</u> y	/hound				
Shipping container/cooler in good condition?		Yes	$ \checkmark $	No 🗆	Not Present		
Custody seals intact on shipping container/cool	ler?	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	V	No 🗌			
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗆			
Samples in proper container/bottle?		Yes	\checkmark	No 🗌			
Sample containers intact?		Yes	\checkmark	No 🗔			
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗌			
All samples received within holding time?		Yes	V	No 🗆			
Water - VOA vials have zero headspace?	No VOA vials subm	nitted		Yes 🗹	No 🗆		
Water - Preservation labels on bottle and cap n	natch?	Yes		No 🗌	N/A ✓		
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹		
Container/Temp Blank temperature?			_	<6° C Accepted			
COMMENTS:				If given sufficier	nt time to cool.		
		===					
Client contacted	Date contacted:			Per	son 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

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT A, SEC. 18, T29N, R9W

Date: May 16, 2009

SAMPLER:

NJV

Filename: 05-16-09.WK4

PROJECT MANAGER:

NJV

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1A	102.05	98.25	3.80	15.00	-		-	_	-
2A	100.26	98.27	1.99	11.22	1050	7.05	900	21.6	4.50
3A	99.76	98.07	1.69	13.50	- !	-	-		-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00

2,800

DATE & TIME = 05/16/09 0810

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 sample 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.

10:15 on-site temp 72 F off-site 11:08 77 F temp Mostly sunny sky cond. 0 - 5 wind speed direct. W

Date: 02-Jun-09

CLIENT:

Blagg Engineering

Lab Order:

0905357

Client Sample ID: MW #2A

Collection Date: 5/16/2009 10:50:00 AM

Project:

Sammons GC F #1

Date Received: 5/20/2009

Matrix: AQUEOUS

La	h	I	D:

0905357-01

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	. 9.7	1.0	μg/L	1	5/29/2009 12:08:45 PM
Toluene	2.2	1.0	μg/L	1	5/29/2009 12:08:45 PM
Ethylbenzene	1.5	1.0	μg/L	1	5/29/2009 12:08:45 PM
Xylenes, Total	570	20	μg/L	10	5/28/2009 11:25:55 PM
Surr: 4-Bromofluorobenzene	110	65.9-130	%REC	1	5/29/2009 12:08:45 PM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits J
- ИD Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

	ANALYSIS REQUEST	°°° - 10°° - 10°° -	f.8f4 bo f.808 bo f.508 bo (HAQ no sles ou .gou , do (AOV-	TPH (Methor EDE (Methor EDE (Methor EDE (Methor EDE (Methor EDE EDE EDE EDE EDE EDE EDE EDE EDE ED						
Other: Stock Level 4 □ Other: Project Name: SAMMIN ONS SC F # /		(Casoline Only)	qT + 38	HEAL No.	2-40ml V -1 V					Received By (Signature) Received By (Signature)
	Address: P.O. BOX 87 82FD. NM 87473	Phone #:	6.2 & -11 / 1 / Fax#:	Date Time Matrix Sample I.D. No.	5/16/09/1050 WATHER MIN #2A				_	S/19/59/1400 Relinquished By: (Signature) Date: Time: Relinquished By: (Signature)

Date: 02-Jun-09

QA/QC SUMMARY REPORT

Client:

Blagg Engineering

Project: Sammons GC F #1

Work Order:

0905357

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPD	Limit Qual
Method: EPA Method 8021	B: Volatiles								
Sample ID: 5ML RB		MBLK			Batch I	D: R33871	Analysis E	Date:	5/28/2009 8:39:43 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 LC	s	LCS			Batch it	D: R33871	Analysis D	ate:	5/29/2009 3:29:31 AM
Benzene '	20.76	μg/L	1.0	104	85.9	113			
Toluene	20.87	µg/L	1.0	102	86.4	113			
Ethylbenzene	21.00	µg/L	1.0	104	83.5	118			
Xylenes, Total	63.28	μg/L	2.0	105	83.4	122			
Sample ID: 100NG BTEX LC	SD	LCSD			Batch II	D: R33871	Analysis D	ate:	5/29/2009 4:00:07 AM
Benzene	20.80	μg/L	1.0	104	85.9	113	0.183	27	
Toluene	20.71	µg/L	1.0	101	86.4	113	0.750	19	
Ethylbenzene	20.97	µg/L	1.0	104	83.5	118	0.152	10	
Xylenes, Total	62.85	μg/L	2.0	105	83.4	122	0.685	13	

Qualifiers:

E Estimated value

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

Sample Receipt Checklist

Client Name BLAGG		Date Received:		5/20/2009
Work Order Number 0905357		Received by:	TLS	Λ Λ
Checklist completed by:	5 20 Date	Sample ID label	s checked by:	Initials
Matrix: Ca	arrier name: <u>Greyhound</u>			
Shipping container/cooler in good condition?	Yes 🗹	No □ N	ot Present	
Custody seals intact on shipping container/cooler?	Yes 🗹	No □ N	ot 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 🗀		Number of preserved
Water - VOA vials have zero headspace? No VO	A vials submitted	Yes 🗹	No 🗆	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes	No 🗔	N/A 🗹	
Water - pH acceptable upon receipt?	Yes 🗌 .	No 🗆	N/A	<2 >12 unless noted below.
Container/Temp Blank temperature?	***	<6° C Acceptable		below.
COMMENTS:		If given sufficient tim	ne to cool.	
=======================================	======	======		====================================
Client contacted Date cor	ntacted:	Person	contacted	
Contacted by: Regardin	ng:			
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

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT A, SEC. 18, T29N, R9W

Date: October 26, 2009

DEVELOPER / SAMPLER:

NJV

Filename: 10-26-09.WK4

PROJECT MANAGER:

NJV

V	VELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
	#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
		(ft)	(ft)	(ft)	(ft)					(gal.)
	1A	102.04	96.22	5.82	15.00	-	_	-	-	_
	2R	100.00	96.28	3.72	10.93	1325	7.25	1,600	17.2	3.50
	3A	99.74	96.06	3.68	13.50			-		-

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00

2.800

DATE & TIME = 10/26/09

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".

MW #2R - excellent recovery, dark yellowish orange color in appearance. Collected sample

from MW #2R and analyzed for BTEX per US EPA Method 8021B.

Monitor well top elevations surveyed on 10/22/09.

Top of casing MW #1A \sim 2.40 ft., MW #2R \sim 0.50 ft. below grade, MW #3A \sim 0.35 ft. below grade.

on-site	12:50	temp	48 F	
off-site	1:40	temp	50 F	
sky cond.	mostly	sunny		
wind speed	0 - 5	direct.	SE	

Date: 04-Nov-09

CLIENT:

Blagg Engineering

Lab Order:

0910478

Client Sample ID: MW #2R

Collection Date: 10/26/2009 1:25:00 PM

Project:

Sammons GC F #1

Date Received: 10/27/2009

Lab ID:

0910478-01

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: DAM
Benzene	ND	5.0	μg/L	5	10/30/2009 11:07:21 AM
Toluene	6.0	5.0	μg/L	5	10/30/2009 11:07:21 AM
Ethylbenzene	16	5.0	µg/L	5	10/30/2009 11:07:21 AM
Xylenes, Total	330	10	μg/L	5	10/30/2009 11:07:21 AM
Surr: 4-Bromofluorobenzene	99.3	65.9-130	%REC	5	10/30/2009 11:07:21 AM

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

Page 1 of 1

NTAL	(N to Y	/ir Bubbles (la labort
HALL ENVIRONMENTAL ANALYSIS LABORATOR www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107		AOV) 80828 /-ime2) 0738			ted on the analytic
HALL ENVIRON NALYSIS LAB www.hallenvironmental.com ns NE - Albuquerque, NM 15-3975 Fax 505-345-41	MO ₃ , MO ₂ , PO ₄ , SO ₄)				learly nota
HALL ENVI ANALYSIS www.hallenvironme kins NE - Albuquer 45-3975 Fax 50	<u> </u>	3CRA 8 Met	-		e e e e e e e e e e e e e e e e e e e
M.hall W.hall	(HA9 1	o AN9) 0158			po data
AN ww wkins 345-3		PH (Method			- Indiana in the state of the s
######################################	(Gas/Diesel)				
1el Tel	(Cas only)				Remarks:
	8(8021)8	BTM X3TE			88 88 88 88 88 88 88 88 88 88 88 88 88
Rush_	HELEZ SON VELEZ	Preservative Type	- 1	(Date Time UD 31 US Time Jaboratories. This serves as notice of this
Time:	S E.	12	50		occedine
Turn-Around Time: **Exstandard Ru Project Name: **SAMMONS** Project #:	Project Manage Weus Sampler: On tice	Container Type and #	2-40m		Received by:
AMERIA STUB M 87413	Level 4 (Full Validation)	Sample Request ID	MW # 2R		y: d to Hall Environmental may be subco
of-Cu EVER P.O.	1305	Matrix	WATER		Refinquished by: Relinquished by:
Hain-	Fax#: ackage: ard Type)	Time	1325		Time:
Client: RALE	Phone #: email or Fax#: QA/QC Package: XStandard Other	Date	10/व्यंव		Date: T

Date: 04-Nov-09

QA/QC SUMMARY REPORT

Client: Project: Blagg Engineering

Sammons GC F #1

Work Order:

0910478

	······································									Oruci.	J91V4/0
Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec l	LowLimit H	ighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: \	/olatiles										
Sample ID: 5ML RB		MBLK				Batch ID:	R35953	Analysi	is Date:	10/29/2009	8:23:38 AN
Benzene	.ND	μg/L	1.0								
Toluene	ФИ	μg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND ·	µg/L	2.0								
Sample ID: 5ML RB		MBLK				Batch ID:	R35973	Analysi	s Date:	10/30/2009 8	3:35:09 An
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 5		MBLK				Batch ID:	R35973	Analysi	s Date:	10/30/2009 10	:36:51 AN
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:	R35953	Analysis	s Date:	10/30/2009 3	:36:59 AN
Benzene	18.39	μg/L	1.0	20	0	91.9	85.9	113			
Toluene	18.18	µg/L	1.0	20	0	90.9	86.4	113			
Ethylbenzene	17.96	μg/L	1.0	20	0	89.8	83.5	118			
Xylenes, Total	52.51	μg/L	2.0	60	0	87.5	83.4	122			
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R35973	Analysis	s Date:	10/30/2009 5	:41:56 PM
Benzene	18.93	μg/L	1.0	20	0	94.7	85.9	113			
Toluene	19.83	µg/L	1.0	20	· 0	99.2	86.4	113			
Ethylbenzene	19.82	µg/L	1.0	20	0	99.1	83.5	118			
Xylenes, Total	58.39	µg/L	2.0	60	0	97.3	83.4	122			
Sample ID: 100NG BTEX LCS-II		LCS				Batch ID:	R35973	Analysis	Date: 1	10/31/2009 10	:53:36 AM
Benzene	19.07	μg/L	1.0	20	0	95.3	85.9	113			
Toluene	18.74	μg/L	1.0	20	0.23	92.6	86.4	113			
Ethylbenzene	18.26	μg/L	1.0	20	0	91.3	83.5	118			
(ylenes, Total	54.21	μg/L	2.0	60	0	90.3	83.4	122			

Qu	al	ifi	er	ŝ
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E Estimated value

R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

Date: 04-Nov-09

CLIENT:

Blagg Engineering

Project:

Sammons GC F #1

Lab Order:

0910478

CASE NARRATIVE

Analytical Comments for METHOD 8021BTEX_W, SAMPLE 0910478-01A: necessary dilution due to late eluting hydrocarbons

Sample Receipt Checklist

Client Name BLAGG			Date Received) :	10/27/2009	
Work Order Number 0910478			Received by:	TLS	10	
Checklist completed by:		10 To	Sample ID la	bels checked	by: (V)	-
Matrix:	Carrier name: G	revhound				
Shipping container/cooler in good condition?	Y	es 🗹	No 🗌	Not Present		
Custody seals intact on shipping container/cooler?	Y	es 🗹	No 🗌	Not Present	☐ Not Shipped	
Custody seals intact on sample bottles?	Y	es 🗌	No 🗌	N/A	$ \mathbf{Z} $	
Chain of custody present?	Y	es 🗹	No 🗌			
Chain of custody signed when relinquished and red	ceived? Y	as 🗸	No 🗌			
Chain of custody agrees with sample labels?	Y	es 🗹	No 🗌			
Samples in proper container/bottle?	Y	es 🗹	No 🗔			
Sample containers intact?	Y	es 🗹	No 🗌			
Sufficient sample volume for indicated test?	Ye	es 🗹	No 🗆			
All samples received within holding time?	Ye	es 🗹	No 🗀			fpreserved
Water - VOA vials have zero headspace?	No VOA vials submitte	d 🗌	Yes 🗹	No 🗌	bottles ch pH:	ecked for
Water - Preservation labels on bottle and cap mate	h? Ye	es 🗌	No 🗌	N/A 🗹		
Water - pH acceptable upon receipt?	Ye	s 🗌	No 🗀	N/A 🗹	<2 >12 uni below.	ess noted
Container/Temp Blank temperature?		1.9°	<6° C Acceptable		below.	
COMMENTS:			If given sufficient t	lme to cool.		
Client contacted Da	te contacted:		Perso	n contacted		
Contacted by:	garding:				,	
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

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT A, SEC. 18, T29N, R9W

Date: February 24, 2010

DEVELOPER / SAMPLER:

NJV

Filename: 02-24-10.WK4

PROJECT MANAGER:

NJV

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	pН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1A	102.04	96.89	5.15	15.00	-	-	-	-	-
2R	100.00	97.04	2.96	10.93	1145	7.37	2,900	9.4	4.00
3A	99.74	96.77	2.97	13.50			-	<u>-</u>	<u>-</u>

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 **DATE & TIME =** 02/23/10

2.800 1000

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".

MW #2R - excellent recovery, light gray color in appearance. Collected sample from MW #2R

and analyzed for BTEX per US EPA Method 8021B.

Top of casing MW #1A \sim 2.40 ft., MW #2R \sim 0.50 ft. below grade, MW #3A \sim 0.35 ft. below grade.

10:58 on-site temp 32 F off-site 11:57 temp 35 F Partly cloudy sky cond. wind speed 0 - 5direct. Ε

Date: 03-Mar-10

CLIENT:

Blagg Engineering

Lab Order:

1002518

Project:

Sammons GC F #1

Lab ID:

1002518-01

Client Sample ID: MW #2R

Collection Date: 2/24/2010 11:45:00 AM

Date Received: 2/26/2010

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	1.0	1.0	μg/L	1	3/2/2010 1:41:51 PM
Toluene	ND	1.0	μg/L	1	3/2/2010 1:41:51 PM
Ethylbenzene	1.2	1.0	μg/L	1	3/2/2010 1:41:51 PM
Xylenes, Total	16	2.0	µg/L	,1	3/2/2010 1:41:51 PM .
Surr: 4-Bromofluorobenzene	106	65.9-130	%REC	1	3/2/2010 1:41:51 PM

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v	ш	а	L	м	c	10	٠.

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits Page 1 of 1

ITAL		(V or V)	du8 niA		
HALL ENVIRONMENTAL ANALYSIS LABORATORY	environmental.com Albuquerque, NM 87109 Fax 505-345-4107		8260B		
FNVI	www.hallenvironmental.comins NE - Albuquerque, NM 15-3975 Fax 505-345-41 Analysis Request	B Metals (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) esticides / 8082 PCB's	snoinA		
IALL		(h. \$08 borthel (HAG 10 AM)			
	www.hall 4901 Hawkins NE - Tel. 505-345-3975	(leselO\ss2) 83108 borite (1.814 borite	M H9T		is in the second
	24 T	(\$1208) STAT + 38TM - (VINO 189)	X3T8 + X3T8		Remarks
I um-Around Time: ✓ Standard □ Rush Project Name:	SAMMONS GC F # / Project #.	3 S 3	Type and # Type Type	2-40m Mage -1	Received by: Date Time Date Time Proceived by:
Chain-of-Custody Record LAGE ENER. BP AMERICA	80X 87 1 NM 87413	□ Level 4 (Full Validation)	Sample Request ID	MW# 2R	Why. By.
of-Cu	81.40. A 81.40. A		Matrix	WATER	Relinquished by
SLABE	취	email or Fax#: QA/QC Package: A Standard Other EDD (Type)	Тіте	1142	Date: Time: 753 O Date: Time:
Client	Mailing Ad	email or Fax#: QA/QC Package Standard □ Other □ EDD (Type	Date	०।/भये/	2/25/10 Date:

Date: 03-Mar-10

QA/QC SUMMARY REPORT

Client:

Blagg Engineering

Project:

Sammons GC F #1

Work Order:

1002518

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hi	ghLimit %RP	D RPDLimit Qual
Method: EPA Method 8021B:	Volatiles			<u> </u>					
Sample ID: 5ML RB		MBLK				Batch ID:	R37565	Analysis Date:	3/1/2010 9:25:06 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:	R37588	Analysis Date:	3/2/2010 9:39:39 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:	R37565	Analysis Date:	3/2/2010 6:07:50 AM
Benzene	22.44	μg/L	1.0	20	0	112	85.9	113	
Toluene	22.13	µg/L	1.0	20	0	111	86.4	113	
Ethylbenzene	21.98	μg/L	1.0	20	0.148	109	83.5	118	
Xylenes, Total	65.70	μg/L	2.0	60	0	110	83.4	122	
Sample ID: 100NG BTEX LCS		LCS				Batch ID:	R37588	Analysis Date:	3/2/2010 9:17:15 PM
Benzene	21.05	µg/L	1.0	20	0	105	85.9	113	
Toluene	20.63	µg/L	1.0	20	0	103	86.4	113	
Ethylbenzene	20.52	µg/L	1.0	20	0	103	83.5	118	
Xylenes, Total	61.99	µg/L	2.0	60	0	103	83.4	122	

Qualiflers:

R RPD outside accepted recovery limits

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chtorinated

Sample Receipt Checklist

Client Name BLAGG				Date Receive	d:		2/26/2010	
Work Order Number 1002518				Received by	TLS		~	
10			ماما	Sample ID la	ibels checked		initials.	-
Checklist completed by:			Date	6/10			Initials	
Matrix:	Carrier name	Grev	hound					
Shipping container/cooler in good condition?		Yes	\checkmark	No 🗌	Not Present			
Custody seals intact on shipping container/cooler	?	Yes	V	No 🗌	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes		No 🗆	N/A	V		
Chain of custody present?		Yes	✓	No 🗆				
Chain of custody signed when relinquished and re	eceived?	Yes	\checkmark	No 🗀				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗆				
Samples in proper container/bottle?		Yes	V	No 🗌				
Sample containers intact?		Yes	\checkmark	No 🗌				
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗌				
All samples received within holding time?		Yes	\checkmark	No 🗌				of preserved
Water - VOA vials have zero headspace?	No VOA vials subm	itted		Yes 🔽	No 🗌		bottles ch pH:	ескеа тог
Water - Preservation labels on bottle and cap material	tch?	Yes		No 🗔	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A		<2 >12 uni below.	less noted
Container/Temp Blank temperature?		3.	•	<6° C Acceptabl			Delow,	
COMMENTS:				If given sufficient	time to cool.			
							-	
•								
Client contacted	Pate contacted:	··-		Perso	on contacted			
Contacted by:	tegarding:							
Comments:								
Corrective Action						· <u>-</u> .		
Concours Action								
								

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #:

LABORATORY (S) USED: HALL ENVIRONMENTAL

N/A

SAMMONS GC F #1 - PROD. TANK PIT

UNIT A, SEC. 18, T29N, R9W

DEVELOPER / SAMPLER :

NJV

Date: May 12, 2010

Filename: 05-12-10.WK4

PROJECT MANAGER:

NJV

WEI	L WELL	WATER	DEPTH TO	TOTAL	SAMPLING	pН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)	<u> </u>				(gal.)
1A	102.04	97.26	4.78	15.00	-	-	-	-	-
2R	100.00	97.37	2.63	10.93	1610	7.35	2,100	16.2	4.00
3A	99.74	97.12	2.62	13.50	1535	7.22	900	16.3	5.25

INSTRUMENT CALIBRATIONS =

4.01/7.00/10.00 2,800

DATE & TIME = 05/10/10

05/10/10 0915

NOTES: Volume of water purged from well prior to sampling; $V = pi \times r2 \times h \times 7.48 \text{ gal./ft3} \times 3 \text{ (wellbores)}$. (i.e. 2" MW r = (1/12) 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 both MW #2R & #3A. Collected samples from MW #2R & #3A for BTEX analysis per US EPA Method 8021B.

Top of casing MW #1A ~ 2.40 ft., MW #2R ~ 0.50 ft. below grade, MW #3A ~ 0.35 ft. below grade.

on-site 3:03 temp 61 F
off-site 4:15 temp 61 F
sky cond. Sunny

wind speed 5 - 15 G-20 direct. W - NW

Date: 25-May-10

CLIENT:

Blagg Engineering

Project:

Sammons GC F #1

Lab Order:

1005383

Lab ID:

1005383-01

Collection Date: 5/12/2010 4:10:00 PM

Client Sample ID: MW #2R

Matrix: AQUEOUS

Analyses	Result	PQL Qu	sal Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES S		Analyst: BDH			
Benzene	2.6	1.0	μg/L	1	5/24/2010 8:27:06 PM
Toluene	ND	1,0	μg/L	1	5/24/2010 8:27:06 PM
Ethylbenzene	3.4	1.0	μg/L	1	5/24/2010 8:27:06 PM
Xylenes, Total	9.3	2.0	μg/L	1	5/24/2010 8:27:06 PM
Surr: 4-Bromofluorobenzene	103	60.1-133	%REC	1	5/24/2010 8:27:06 PM

Lab ID:

1005383-02

Collection Date: 5/12/2010 3:35:00 PM

Client Sample ID: MW #3A				Matrix: AQUE	OUS
Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SI	HORT LIST				Analyst: BDH
Benzene	ND	1.0	μg/L	1	5/24/2010 8:55:09 PM
Toluene	ND	1.0	μg/L	1	5/24/2010 8:55:09 PM
Ethylbenzene	ND	1.0	μg/L	1	5/24/2010 8:55:09 PM
Xylenes, Total	ND	2.0	μg/L	1	5/24/2010 8:55:09 PM
Surr: 4-Bromofluorobenzene	99.3	60.1-133	%REC	1	5/24/2010 8:55:09 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

Non-Chlorinated

PQL Practical Quantitation Limit

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

MCL Maximum Contaminant Level

Not Detected at the Reporting Limit Spike recovery outside accepted recovery limits

	MALL ENVIKONMENTAL ANALYSTS LABORATORY		ത					(N ro) A)	səldduB 1iA											dical report.
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Turn-Around Time:	X Standard	Project Name:	Show out	Project #:		Project Manage	NEUSO	Sampler: //E	Sample Temper	Container F	2-40ml Held	2 4501	-1							Received by:	Contraction of bottom
Chain-of-Custody Record	ENGR. BY AMERICA		P.O. BOX 87	BLFD, NM 87413	5 632-1199		☐ Level 4 (Full Validation)	□ Other		Matrix Sample Request ID	THER MU # 2R	SER SIST								Relinquished by:	erme at the common common to the common comm
1-of	单		1	100	505		2.				3				-	_	-				-
hain	F		Addres			Fax#:	ackage ard	ation P	EDD (Type)	Time	2/9/	33								Time: Time:	1000000
ರ	Client: B. Aes		Mailing Address:		Phone #:	email or Fax#:	OA/QC Package:	Accreditation	□ EDD	Date	1/2/10/610 WATER	5/17/2	2)	

Date: 25-May-10

QA/QC SUMMARY REPORT

Client:

Blagg Engineering

Project:

Sammons GC F #1

Work Order:

1005383

										70000
Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260	: Volatiles Shor	t List								
Sample ID: 5mL rb		MBLK			Batch ID:	R38881	Analysis	s Date:	5/24/2010 11:	59:38 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 ics		LCS			Batch ID:	R38881	Analysis	s Date:	5/24/2010 12:	56:02 PM
Benzene	21.58	μg/L	1.0	20 0	108	82.4	116			
Toluene	23.39	μg/L	1.0	20 0	117	89.5	123			

Qualifiers:

ND Not Detected at the Reporting Limit

NC Non-Chlorinated

R RPD outside accepted recovery limits

E Estimated value

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

Sample Receipt Checklist

Client Name BLAGG		Date Received:		5/14/2010
Work Order Number 1005383		Received by:	ARS	6
A0	راء	ample ID labe	ls checked by: '	Initials
Checklist completed by: Signature	Date	T (K)	•	mudis
Matrix: Carrier nam	e: <u>Greyhound</u>			
Shipping container/cooler in good condition?	Yes 🔽	№ 🗆 м	ot Present	
Custody seals intact on shipping container/cooler?	Yes 🗹	No 🗌 N	ot 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 🗌		Number of preserved
Water - VOA vials have zero headspace? No VOA vials su	ıbmitted	Yes 🗹	No 🗌	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes 🗌	No 🗀	N/A 🔽	
Water - pH acceptable upon receipt?	Yes 🗌	No 🗌	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?	2.6°	<6° C Acceptable		Delow.
COMMENTS:		If given sufficient tin	ne to cool.	
Client contacted Date contacted:		Person :	contacted	
Contacted by: Regarding:				
Comments:				
Corrective Action				