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

January 30, 2012

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
Hutton GC # 1E, Unit F, Sec. 6, T29N, R12W, NMPM
San Juan County, New Mexico

NMOCD Administrative/Environmental Order #: 3RP-423-0

Dear Mr. von Gonten:

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

The last formal correspondence to NMOCD was conducted with letter dated, February 1, 2011. Since then, 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.

Nelson J. Velez
Staff Geologist

Attachment: Groundwater Report (2 copies)

cc: Mr. Brandon Powell, Inspection and Enforcement Supervisor, NMOCD District III Office, Aztec, NM
Mr. Jeff Peace, Environmental Advisor, BP, Farmington, NM

NJV/njv

Hutton GC 1E 01-30-12 CVL.DOC

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

HUTTON GC #1E
(F) SECTION 6, T29N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO

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

DECEMBER 2011

PREPARED BY:
BLAGG ENGINEERING, INC.

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

BP AMERICA PRODUCTION COMPANY
Hutton GC #1E
SW¼ NE¼, Sec. 6, T29N, R12W

Remediation via Excavation Date: October 2008

Monitor Well Installation Dates: September 2006, 10/20/09 (MW # 2R)

Monitor Well Sampling Dates: 2/25/11, 5/31/11, 9/28/11

Pit Closure & Background:

Site separator and production tank pit closures were conducted in June 1994 and February 1995 respectively by removing impacted soils via excavation. Groundwater impact was identified within the source area via installation of a monitor well in September 2006 (MW #2). In October 2008, additional excavation near the site separator unit was conducted. A replacement monitor well (MW #2R) was installed and quarterly sampling of groundwater reinitiated in January 2010. Documentation for this work and subsequent groundwater monitoring data for the site has been previously submitted for New Mexico Oil Conservation Division (**NMOCD**) review. The reporting herein is for site monitoring from February 2011 to September 2011.

Surface owner notification requesting approval of a down gradient groundwater monitor well relative to MW #2R was denied by the landowner (outside the site's western security perimeter fencing). It was communicated to the landowner that future liability of groundwater impact confirmation data may be their obligation if such action is required by any applicable regulatory agency(ies).

Groundwater Monitor Well Sampling Procedures:

Monitor well MW #2R was purged by hand-bailing, using new disposable bailers during the February and May 2011 sampling events. A two (2) inch submersible electrical pump with new, clear vinyl tubing was utilized during the September 2011 sampling event. Prior to sample collections, the monitor well was purged approximately three (3) well bore volumes. 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 BTEX per US EPA Method 8021B was conducted.

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

Water Quality and Gradient Information:

Sampling of groundwater from monitor well MW #2R was conducted quarterly in 2011. A historical summary of laboratory analytical BTEX results are included within the table on the following page. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included within this report.

Groundwater contour maps (Figure 2 through Figure 4) reveal the relative elevations from the site wells have shown an apparent south-southwest or southwest flow direction.

Summary and/or Recommendations:

Hydrocarbon impacted soils and groundwater at the site appear to have been remediated via excavation and natural attenuation. All site monitor wells tested at non-detectable or below the New Mexico Water Quality Control Commission's groundwater BTEX standards for at least four (4) consecutive sampling events; therefore, meeting sections 2.1, 2.2, and 2.3 of BP's NMOCD approved Groundwater Management Plan (**GMP**). Permanent site closure is recommended. Following approval by the NMOCD, site monitor wells will be abandoned pursuant to section 6.2 of the GMP.

BP AMERICA PRODUCTION CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

Hutton GC # 1E
UNIT F, SEC. 6, T29N, R12W

REVISED DATE: October 11 , 2011

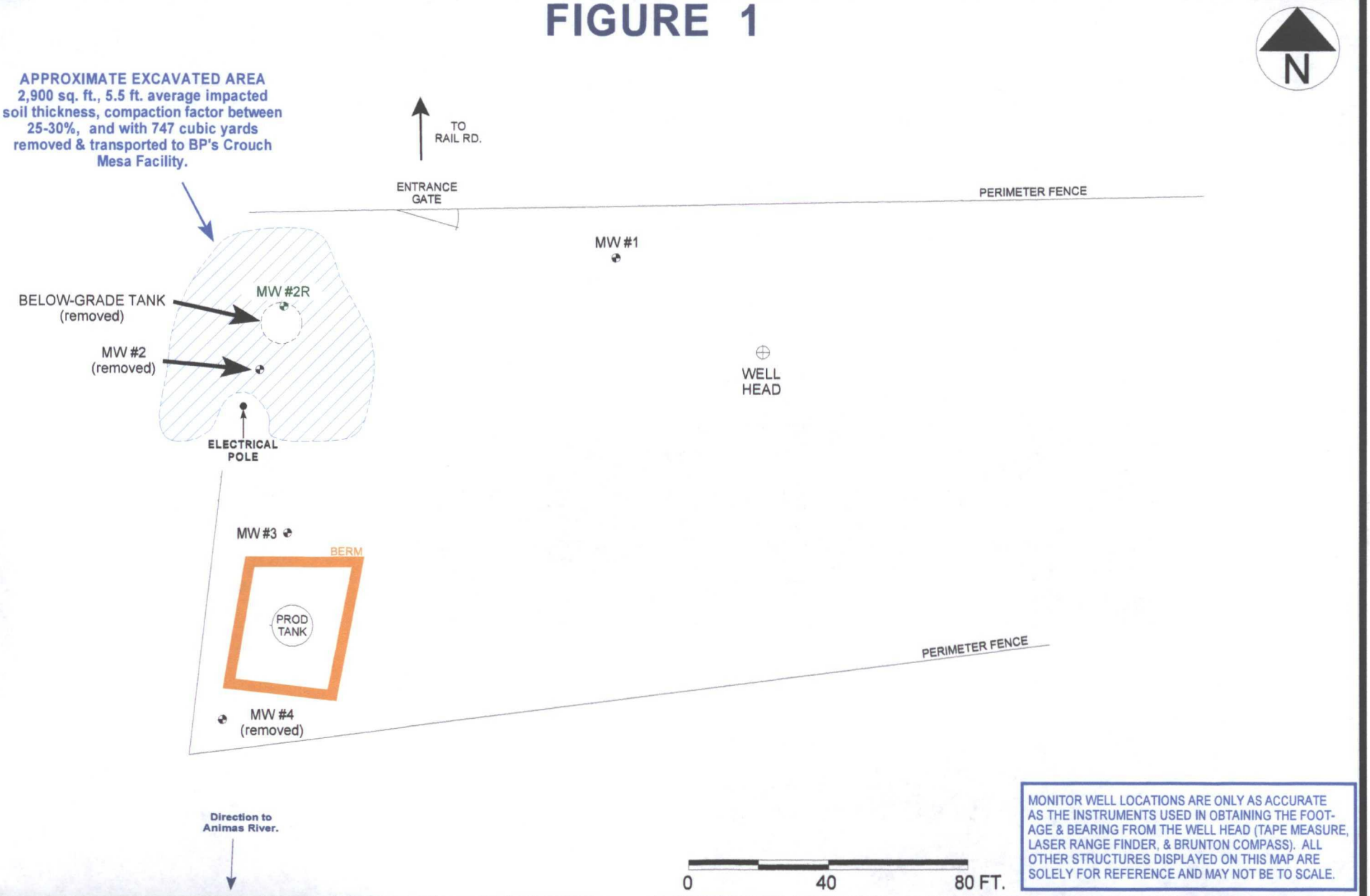
FILENAME: (Hut-3Q11.WK4) NJV

								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
02-Oct-06	MW #1	6.80	15.00		2,100	6.93		ND	ND	ND	ND
02-Oct-06	MW #2	7.39	15.00		2,000	7.14		2.4	13	12	81
20-Dec-06		6.75			2,100	7.25		1.7	24	58	**1,000**
17-May-07		7.03					**0.04**				
12-Sep-08		7.71			1,500	7.36		ND	ND	ND	**ND**
13-Jan-10	MW #2R	5.88			1,500	7.35		**40**	20	86	**770**
"	dup.	"			"	"		**38.4**	ND	92.0	**816**
29-Apr-10		5.87			1,600	7.18		**20**	5.3	13	**110**
21-Jul-10		7.31			2,100	7.08		**37**	5.4	61	**100**
12-Oct-10		6.56			1,800	7.11		**1.9**	ND	1.3	**ND**
25-Feb-11		5.83			2,000	7.30		**2.2**	ND	ND	**ND**
31-May-11		6.05			1,900	7.36		**3.1**	ND	ND	**ND**
28-Sep-11		6.67			2,400	7.01		**1.9**	ND	ND	**ND**
02-Oct-06	MW #3	7.63	15.00		1,900	7.39		ND	ND	4.9	34
20-Dec-06		7.04			2,000	7.44		ND	ND	ND	ND
21-Feb-07		6.95			1,900	7.31		ND	ND	ND	ND
17-May-07		7.34			2,100	7.25		ND	ND	ND	ND
02-Oct-06	MW #4	7.01	15.00		2,200	7.17		ND	ND	ND	ND
20-Dec-06		6.65			1,900	7.49		ND	ND	ND	ND
21-Feb-07		6.59			1,800	7.34		ND	ND	ND	ND
17-May-07		6.96			2,000	7.35		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 PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED .**
3) **ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10) .**
4) **NMWQCC INDICATES NEW MEXICO WATER QUALITY CONTROL COMMISSION.**

FIGURE 1



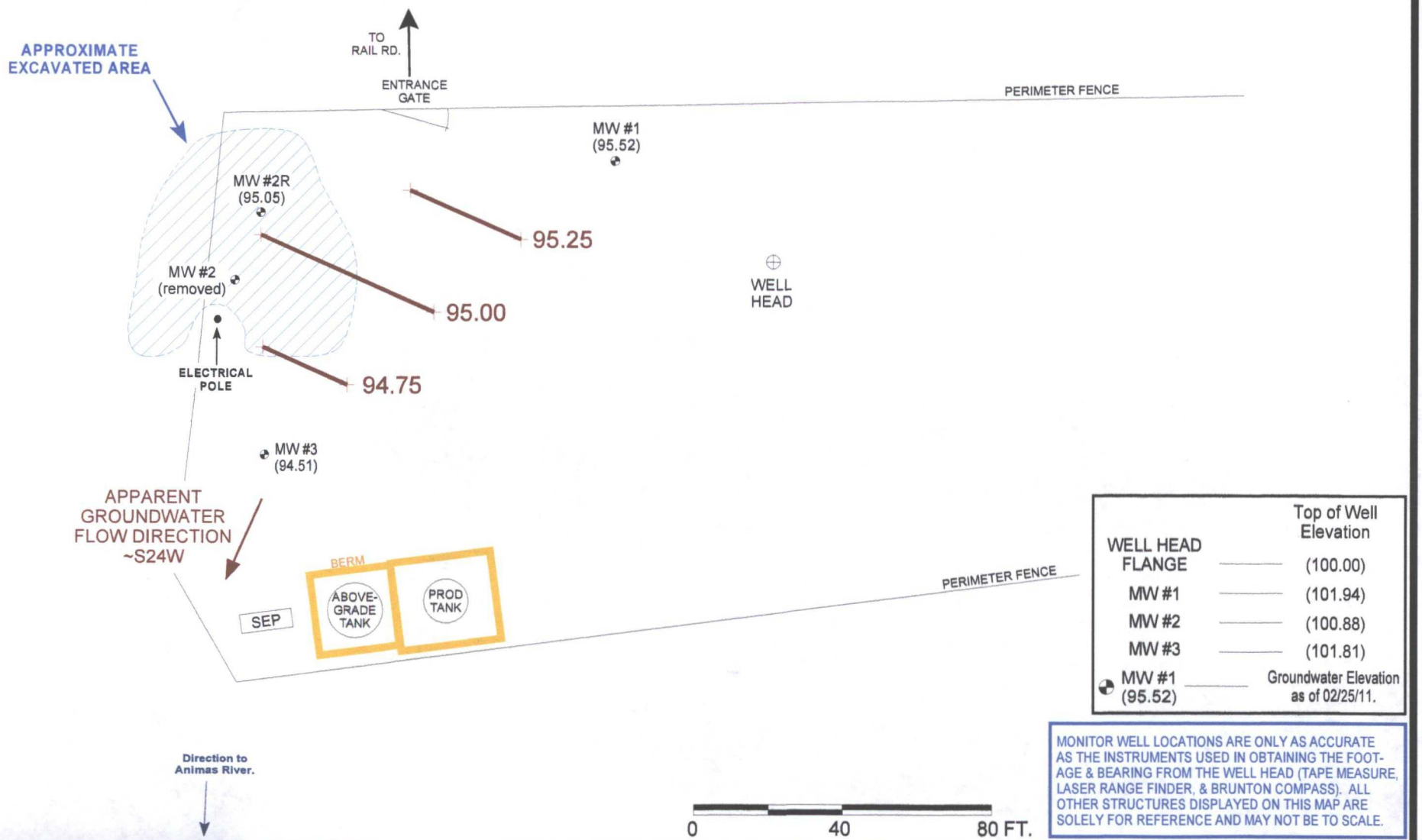
BP AMERICA PRODUCTION CO.
HUTTON GC # 1E
SE/4 NW/4 SEC. 6, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

B LAGG ENGINEERING, I NC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: MW INSTALLATION
DRAWN BY: NJV
FILENAME: HUTTON GC 1E-SM3.SKF
REVISED: 04-30-10 NJV

EXCAVATION & MONITOR WELL INSTALLATION SCHEMATIC
08/09

FIGURE 2
(1st 1/4, 2011)



BP AMERICA PRODUCTION CO.

HUTTON GC # 1E

SE/4 NW/4 SEC. 6, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

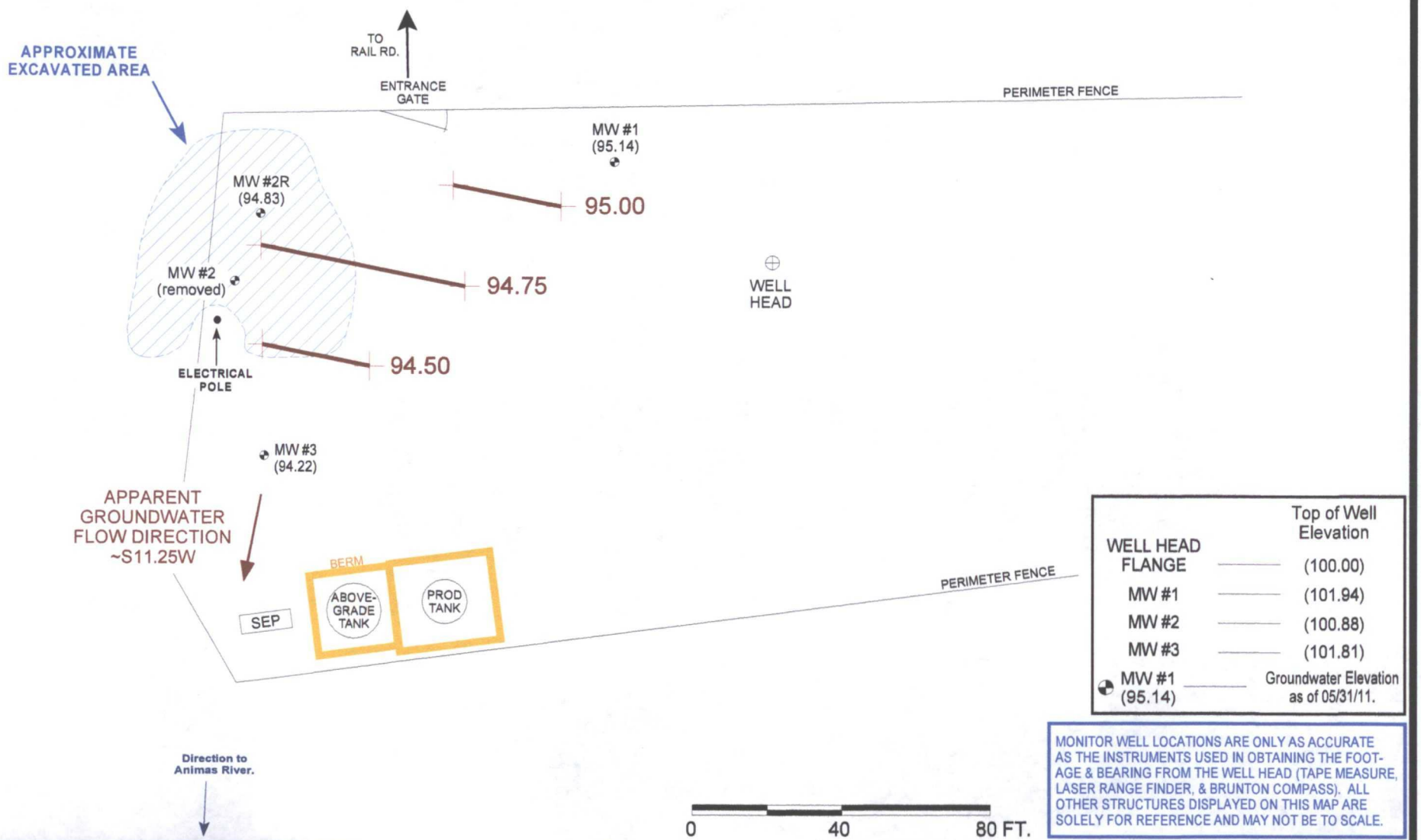
FILENAME: 02-25-11-GW.SKF

REVISED: 02-25-11 NJV

GROUNDWATER CONTOUR MAP

02/11

FIGURE 3
(2nd 1/4, 2011)



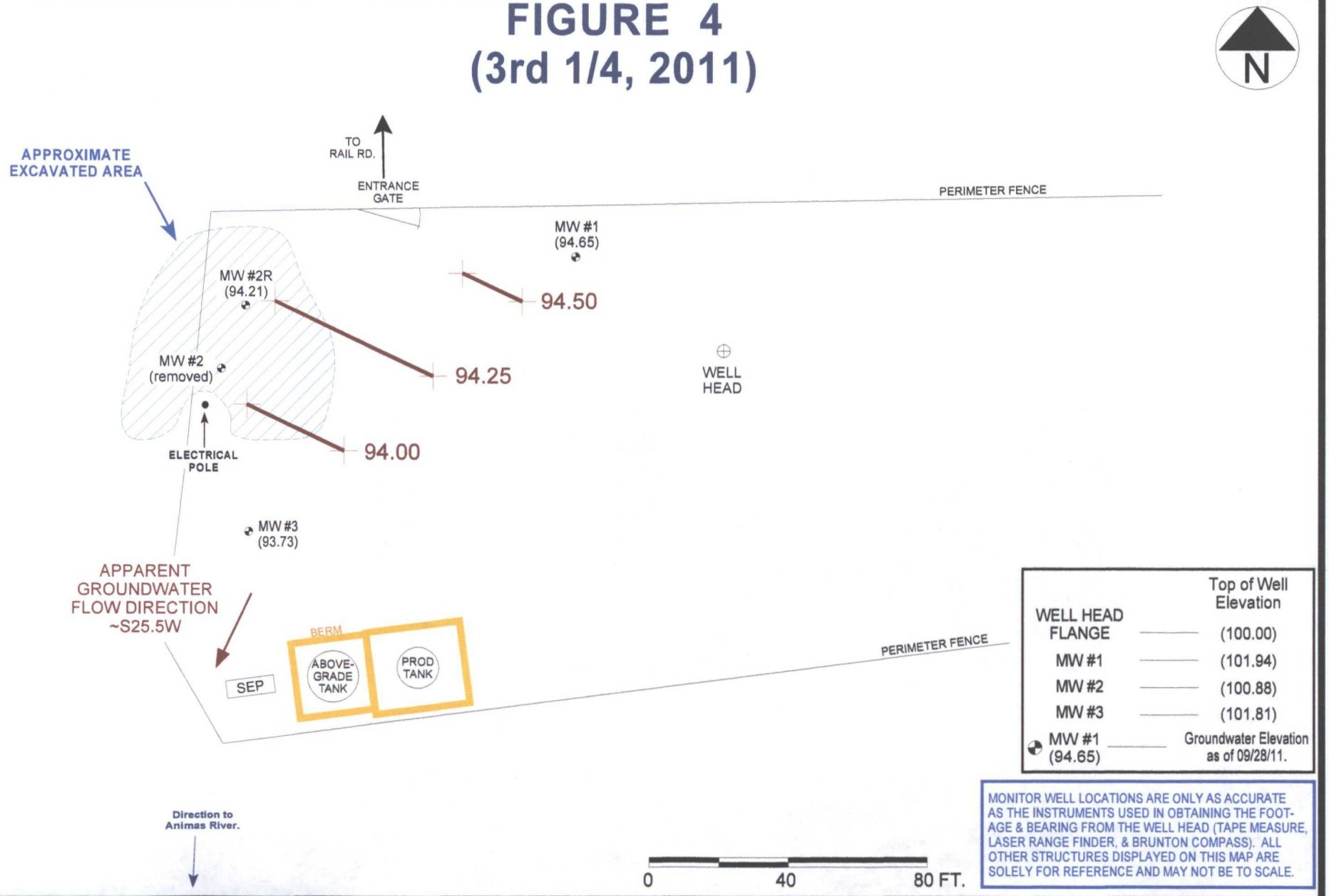
BP AMERICA PRODUCTION CO.
HUTTON GC # 1E
SE/4 NW/4 SEC. 6, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 05-31-11-GW.SKF
REVISED: 05-31-11 NJV

GROUNDWATER CONTOUR MAP
05/11

FIGURE 4
(3rd 1/4, 2011)



BP AMERICA PRODUCTION CO.
HUTTON GC # 1E
SE/4 NW/4 SEC. 6, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 09-28-11-GW.SKF
REVISED: 09-29-11 NJV

GROUNDWATER CONTOUR MAP
09/11

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : **BP AMERICA PROD. CO.**

CHAIN-OF-CUSTODY # : **N / A**

HUTTON GC # 1E
UNIT F, SEC. 6, T29N, R12W

LABORATORY (S) USED : **HALL ENVIRONMENTAL**

Date : **February 25, 2011**

DEVELOPER / SAMPLER : N J V

Filename : **02-25-11.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.)
1	101.94	95.52	6.42	15.00	-	-	-	-	-
2R	100.88	95.05	5.83	14.50	1515	7.30	2,000	10.1	4.25
3	101.81	94.51	7.30	15.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	02/22/2011	1010

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 # 2R , Collected sample from MW # 2R only for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.70 ft. , MW # 2R ~ 2.50 ft. , MW # 3 ~ 2.80 ft. above grade .

on-site	**2:30**	temp	**47 F**
off-site	**3:30**	temp	**47 F**
sky cond.	**Cloudy**		
wind speed	**0 - 10**	direct.	**NNE - E**

Hall Environmental Analysis Laboratory, Inc.

Date: *09-Mar-11*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2R
Lab Order:	1103121	**Collection Date:**	2/25/2011 3:15:00 PM
Project:	Hutton GC #1E	**Date Received:**	3/2/2011
Lab ID:	1103121-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **BDH**
Benzene	2.2	1.0		µg/L	1	3/5/2011 5:11:39 AM
Toluene	ND	1.0		µg/L	1	3/5/2011 5:11:39 AM
Ethylbenzene	ND	1.0		µg/L	1	3/5/2011 5:11:39 AM
Xylenes, Total	ND	2.0		µg/L	1	3/5/2011 5:11:39 AM
Surr: 4-Bromofluorobenzene	111	96.8-145		%REC	1	3/5/2011 5:11:39 AM

Qualifiers:

*	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

Chain-of-Custody Record

Client: BLAGG ENER. / BP AMERICA

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

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: HUTTON GC #1E

Project #:

Project Manager: NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1103 12	Analysis Request: BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
2/25/11	1515	WATER	MW #2R	40ml-2	HCl & COOL	-1	✓															

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/1/11	936	Nelson Velez	Christine Walters	3/1/11	936
3/1/11	1311	Christine Walters	Michelle Gpiz	3/2/11	10:45

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Hutton GC #1E **Work Order:** 1103121

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R43957**	Analysis Date:		3/4/2011 9:06:28 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:	**R43957**	Analysis Date:		3/4/2011 8:10:00 PM	
Benzene	20.94	µg/L	1.0	20	0	105	93.4	120			
Toluene	21.44	µg/L	1.0	20	0	107	96.2	122			
Ethylbenzene	20.92	µg/L	1.0	20	0	105	95	121			
Xylenes, Total	64.43	µg/L	2.0	60	0	107	97.6	122			
Sample ID: 100NG BTEX LCSD		*LCSD*				Batch ID:	**R43957**	Analysis Date:		3/4/2011 8:40:11 PM	
Benzene	20.56	µg/L	1.0	20	0	103	93.4	120	1.83	10.1	
Toluene	21.17	µg/L	1.0	20	0	106	96.2	122	1.28	14.3	
Ethylbenzene	20.72	µg/L	1.0	20	0	104	95	121	0.951	15.5	
Xylenes, Total	63.92	µg/L	2.0	60	0	107	97.6	122	0.798	10.4	

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date Received: 3/2/2011

Work Order Number 1103121 | Received by: MMG

Checklist completed by: _____ 03/02/11 (Signature / Date) | Sample ID labels checked by: MH (Initials)

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	4.5°	*<6° C 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**

HUTTON GC # 1E
UNIT F, SEC. 6, T29N, R12W

LABORATORY (S) USED : **HALL ENVIRONMENTAL**

Date : **May 31, 2011**

DEVELOPER / SAMPLER : N J V

Filename : **05-31-11.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.)
1	101.94	95.14	6.80	15.00	-	-	-	-	-
2R	100.88	94.83	6.05	14.50	1025	7.36	1,900	15.2	4.25
3	101.81	94.22	7.59	15.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	05/31/2011	1020

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 # 2R , Collected sample from MW # 2R only for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.70 ft., MW # 2R ~ 2.50 ft., MW # 3 ~ 2.80 ft. above grade .

on-site	**9:47**	temp	**61 F**
off-site	**10:40**	temp	**67 F**
sky cond.	**Sunny**		
wind speed	**0 - 10**	direct.	**ESE - SE**

Hall Environmental Analysis Laboratory, Inc.

Date: *06-Jun-11*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2R
Lab Order:	1106059	**Collection Date:**	5/31/2011 10:25:00 AM
Project:	Hutton GC #1E	**Date Received:**	6/1/2011
Lab ID:	1106059-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	3.1	1.0		µg/L	1	6/2/2011 3:54:05 PM
Toluene	ND	1.0		µg/L	1	6/2/2011 3:54:05 PM
Ethylbenzene	ND	1.0		µg/L	1	6/2/2011 3:54:05 PM
Xylenes, Total	ND	2.0		µg/L	1	6/2/2011 3:54:05 PM
Surr: 4-Bromofluorobenzene	106	96.8-145		%REC	1	6/2/2011 3:54:05 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
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name:
HUTTON GC # 1E

Project #:

Project Manager:
NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1106057	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2, PO4, SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (300.0)			5 pt. composite sample	Air Bubbles (Y or N)
5/31/11	1025	WATER	MW #3R	40 ml VOA - 2	HCl & Cool	-1	✓															

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/31/11	1445			5/31/11	1445
5/31/11	1602			6/1/11	9:50

Remarks:

Bill to Blagg Engineering, Inc.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Hutton GC #1E **Work Order:** 1106059

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R45717**	Analysis Date:		6/2/2011 9:23:06 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: 100NG BTEX LCS		*LCS*				Batch ID:	**R45717**	Analysis Date:		6/2/2011 11:53:29 AM	
Benzene	22.42	µg/L	1.0	20	0	112	93.4	120			
Toluene	22.61	µg/L	1.0	20	0	113	96.2	122			
Ethylbenzene	21.44	µg/L	1.0	20	0	107	95	121			
Xylenes, Total	66.46	µg/L	2.0	60	0	111	97.6	122			
Sample ID: 100NG BTEX LCSD		*LCSD*				Batch ID:	**R45717**	Analysis Date:		6/2/2011 12:23:35 PM	
Benzene	21.67	µg/L	1.0	20	0	108	93.4	120	3.40	10.1	
Toluene	22.20	µg/L	1.0	20	0	111	96.2	122	1.83	14.3	
Ethylbenzene	20.95	µg/L	1.0	20	0	105	95	121	2.29	15.5	
Xylenes, Total	65.05	µg/L	2.0	60	0	108	97.6	122	2.14	10.4	

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date Received: 6/1/2011

Work Order Number 1106059 | Received by: MMG

Checklist completed by: _____ 6/1/11 | Sample ID labels checked by: MMG

Signature | Date | Initials

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
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 ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	1.4°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: spoke w/Nelson on 6/1/11, said sample name should be MW#2R MG 6/1/11

Corrective Action _____

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : **BP AMERICA PROD. CO.**

CHAIN-OF-CUSTODY # : **N / A**

HUTTON GC # 1E
UNIT F, SEC. 6, T29N, R12W

LABORATORY (S) USED : **HALL ENVIRONMENTAL**

Date : **September 28, 2011**

DEVELOPER / SAMPLER : N J V

Filename : **09-28-11.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.)
1	101.94	94.65	7.29	15.00	-	-	-	-	-
2R	100.88	94.21	6.67	14.50	1600	7.01	2,400	21.1	4.00
3	101.81	93.73	8.08	15.00	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	4.01/7.00/10.00	2,800
DATE & TIME =	09/28/2011	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 # 2R , Collected sample from MW # 2R only for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.70 ft., MW # 2R ~ 2.50 ft., MW # 3 ~ 2.80 ft. above grade .

on-site	**3:42**	temp	**86 F**
off-site	**4:27**	temp	**86 F**
sky cond.	**Sunny**		
wind speed	**5 - 15**	direct.	**W**

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Oct-11*

Analytical Report

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW # 2R
Lab Order:	1109C45	**Collection Date:**	9/28/2011 4:00:00 PM
Project:	Hutton GC #1E	**Date Received:**	9/30/2011
Lab ID:	1109C45-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	1.9	1.0		µg/L	1	10/4/2011 8:59:28 PM
Toluene	ND	1.0		µg/L	1	10/4/2011 8:59:28 PM
Ethylbenzene	ND	1.0		µg/L	1	10/4/2011 8:59:28 PM
Xylenes, Total	ND	2.0		µg/L	1	10/4/2011 8:59:28 PM
Surr: 4-Bromofluorobenzene	95.0	76.5-115		%REC	1	10/4/2011 8:59:28 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
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Chain-of-Custody Record

Client: BLAGG ENGR. / BP AMERICA

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name:
HUTTON GC #1E

Project #:

Project Manager:
NELSON VELEZ

Sampler: NELSON VELEZ nv

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2, PO4, SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (300.0)				Air Bubbles (Y or N)
9/28/11	1600	WATER	MW # 2R	40 ml VOA - 2	HCl & Cool	1109045-1	✓															

Remarks:

BILL DIRECTLY TO BP:
Jeff Peace, 200 Energy Court, Farmington, NM 87401

Work Order: N1261939 Paykey: ZPEACJDENV

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/29/11	1320		Christine Walters	9/29/11	1826
9/29/11	1545	Christine Walters		9/30/11	1308

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Hutton GC #1E **Work Order:** 1109C45

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML-RB		*MBLK*				Batch ID: **R48181**		Analysis Date:	10/4/2011 10:04:45 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: **R48181**		Analysis Date:	10/4/2011 12:29:15 PM		
Benzene	19.23	µg/L	1.0	20	0.3422	94.4	80	120			
Toluene	19.46	µg/L	1.0	20	0	97.3	80	120			
Ethylbenzene	19.31	µg/L	1.0	20	0	96.6	80	120			
Xylenes, Total	58.35	µg/L	2.0	60	0	97.3	80	120			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG | Date Received: 9/30/2011

Work Order Number 1109C45 | Received by: AMF

Checklist completed by: Signature | Date 9/30/11 | Sample ID labels checked by: Initials

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ✔	No	Not Present	
Custody seals intact on shipping container/cooler?	Yes ✔	No	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes ✔	No	N/A	
Chain of custody present?	Yes ✔	No		
Chain of custody signed when relinquished and received?	Yes ✔	No		
Chain of custody agrees with sample labels?	Yes ✔	No		
Samples in proper container/bottle?	Yes ✔	No		
Sample containers intact?	Yes ✔	No		
Sufficient sample volume for indicated test?	Yes ✔	No		
All samples received within holding time?	Yes ✔	No		Number of preserved bottles checked for pH:
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 ✔	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**4.7°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding:

Comments:

Corrective Action