

3R - 204

AGWMR

AUGUST 2010

3R 204

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

**GCU # 204E
(I) SECTION 34, T28N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

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

DECEMBER 2010

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

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

BP AMERICA PRODUCTION COMPANY
GCU # 204E - Blow Pit
NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 34, T28N, R12W

Remediation via Excavation Date: July 2009

Monitor Well Installation Dates: 11/1/06 (MW #2), 1/18/07 (MW #1, MW #3), 10/1/09 (MW #2R, MW #4, MW #5)

Monitor Well Sampling Dates: 5/19/09, 11/16/09, 2/19/10, 5/19/10, 10/30/10

Pit Closure & Background:

A site earthen blow pit closure was initiated in June 2003. Groundwater impacts were identified from sampling and testing of MW #2 in November 2006. After receipt of the laboratory results, the New Mexico Oil Conservation Division (NMOCD) was notified with a letter dated March 2, 2007 of the groundwater impacts. Documentation of this work and subsequent groundwater monitoring data for the site was previously submitted to NMOCD for review. Further site delineation and limited excavation of the source area was proposed. In addition, continued bi-annual sampling pursuant to BP's NMOCD approved Groundwater Management Plan (GMP) was also suggested within the report. Reporting herein is for further site soil remediation, groundwater monitor well installations, and site monitoring conducted in 2009 and 2010.

Soil Remediation and Groundwater Abatement:

In July 2009, excavation of the source area was conducted using a trackhoe (Figure 1B). Groundwater was not detected during the removal of the apparent impacted soils. Depths of the excavation averaged fifteen (15) feet below ground surface with sandstone bedrock being observed at the base. The excavation perimeter was calculated approximately 2,600 square feet. An estimated 500 cubic yards of soil were removed and transported to BP's Crouch Mesa Facility.

Groundwater monitor wells MW #2R, MW #4, and MW #5 were installed on October 1, 2009 and sampling initiated in November 2009 (Figure 1C). Boring log of the three (3) newly installed wells along with completion information are contained within this report.

Groundwater Monitor Well Sampling Procedures:

Each groundwater monitor well was purged approximately three (3) well bore volumes or at a minimum, its well bore using new disposable bailers, then given a sufficient amount of time to allow recovery prior to sample collections. 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 was conducted.

Fluids generated during monitor well development and purging were managed by discarding into the separator/compressor below-grade tank (BGT) located south-southwest of the test wells. The BGT contents are eventually disposed through approved NMOCD operational procedures for removal of produced fluids.

Water Quality and Gradient Information:

The analytical results for MW #2R have shown a significant decrease in all BTEX constituents since the remediation effort in July 2009. MW #3 results appear to be in a steady state condition, especially the benzene and total xylenes constituents. Both MW #4 and MW #5 have elevated benzene and total xylenes concentrations well above the NMWQCC standards. A historical summary of laboratory analytical BTEX results are included within the tables on the following pages. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included.

Groundwater contour maps (Figure 2 through Figure 6) reveal the relative elevations from the site wells have shown an apparent north-northwest flow direction.

Summary and/or Recommendations:

The well site is located in a very remote area of San Juan County near Navajo Agricultural Product Industry (NAPI) area. The presence of BTEX well above NMWQCC standards down gradient of the source area (MW #2R) and lateral gradient (MW #3) indicates possible long term monitoring. Down gradient delineation to the north of the source area is necessary with at least one (1) or more groundwater test wells. Alternative remedial actions such as introducing an oxygenated compound may be suitable for groundwater abatement of high dissolved BTEX concentrations. Quarterly sampling of MW #2R is recommended. At a minimum, bi-annual sampling of MW #3, MW #4, and MW #5 should be considered unless changes in their analytical data suggest otherwise. This site will continue to have sampling and testing pursuant to BP's GMP.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 204E

REVISED DATE: November 11, 2010

UNIT I, SEC. 34, T28N, R12W

FILENAME: (204E4Q10.WK4) NJV

SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
30-Jan-07	MW #1	18.57	27.00	584	1,100	7.33		ND	3.0	2.3	13
14-Nov-06	MW #2	16.69	27.50	924	1,400	6.80		1,000	3,900	1,100	9,700
30-Jan-07		16.97			1,200	6.89		900	1,600	1,400	12,000
25-Apr-07		16.37			1,000	6.78		790	1,200	1,100	13,000
23-Jul-07		15.16			1,000	6.82		940	630	1,800	12,000
26-Jun-08		14.36			700	7.34		200	410	1,700	12,000
26-Aug-08		13.36			800	7.27		160	210	1,400	11,000
19-May-09		14.60			800	7.32		140	83	1,200	6,700
"	dup.)	"			"	"		150	68	1,300	7,200
16-Nov-09	MW #2R	15.61			900	7.71		13	ND	240	1,900
19-Feb-10		16.05			1,000	7.86		ND	ND	150	1,300
19-May-10		15.88			1,100	7.75		11	1.8	220	1,800
30-Oct-10		15.55			1,000	7.82		6.3	ND	86	410
30-Jan-07	MW #3	13.92	25.00	620	1,000	7.00		8.2	ND	71	120
25-Apr-07		11.81			900	6.91		8.3	ND	25	140
23-Jul-07		11.89			1,000	6.74		26	ND	90	270
25-Oct-07		10.37			1,100	7.00		2.4	ND	4.7	11
14-Apr-08		11.43			700	6.99		1,360	14	116	381
26-Aug-08		9.96			1,200	6.99		520	ND	64	140
19-May-09		12.00			800	7.01		350	170	380	700
16-Nov-09		13.21			800	7.18		240	1,700	600	1,500
19-Feb-10		13.44			800	7.36		96	940	480	1,100
19-May-10		13.45			1,000	7.19		210	2,200	680	2,500
30-Oct-10		12.69			1,000	6.95		350	210	340	1,100
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 204E

UNIT I, SEC. 34, T28N, R12W

REVISED DATE: November 11, 2010

FILENAME: (204E4Q10.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
16-Nov-09	MW #4	15.66		2,010	1,600	7.10		2,200	14	140	950
19-Feb-10		15.82			2,000	7.02		5,800	14	500	1,800
19-May-10		15.78			2,700	6.85		5,200	42	470	1,500
30-Oct-10		15.47			1,900	6.73		6,500	63	600	1,500
16-Nov-09	MW #5	13.77		1,090	1,300	7.01		1,100	200	430	2,800
19-Feb-10		13.84			1,900	6.99		790	100	370	2,600
19-May-10		13.94			2,600	6.82		1,200	180	370	2,600
30-Oct-10		13.32			1,300	6.88		380	140	450	2,200
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



Agricultural
Field

ROAD WAY (agricultural purposes)

Blow Pit excavated
18 ft. X 18 ft. X 10 ft.
June, 2003

MW #3

MW #2

MW #1

0 30 60 FT.

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

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALL.

DRAWN BY: NJV

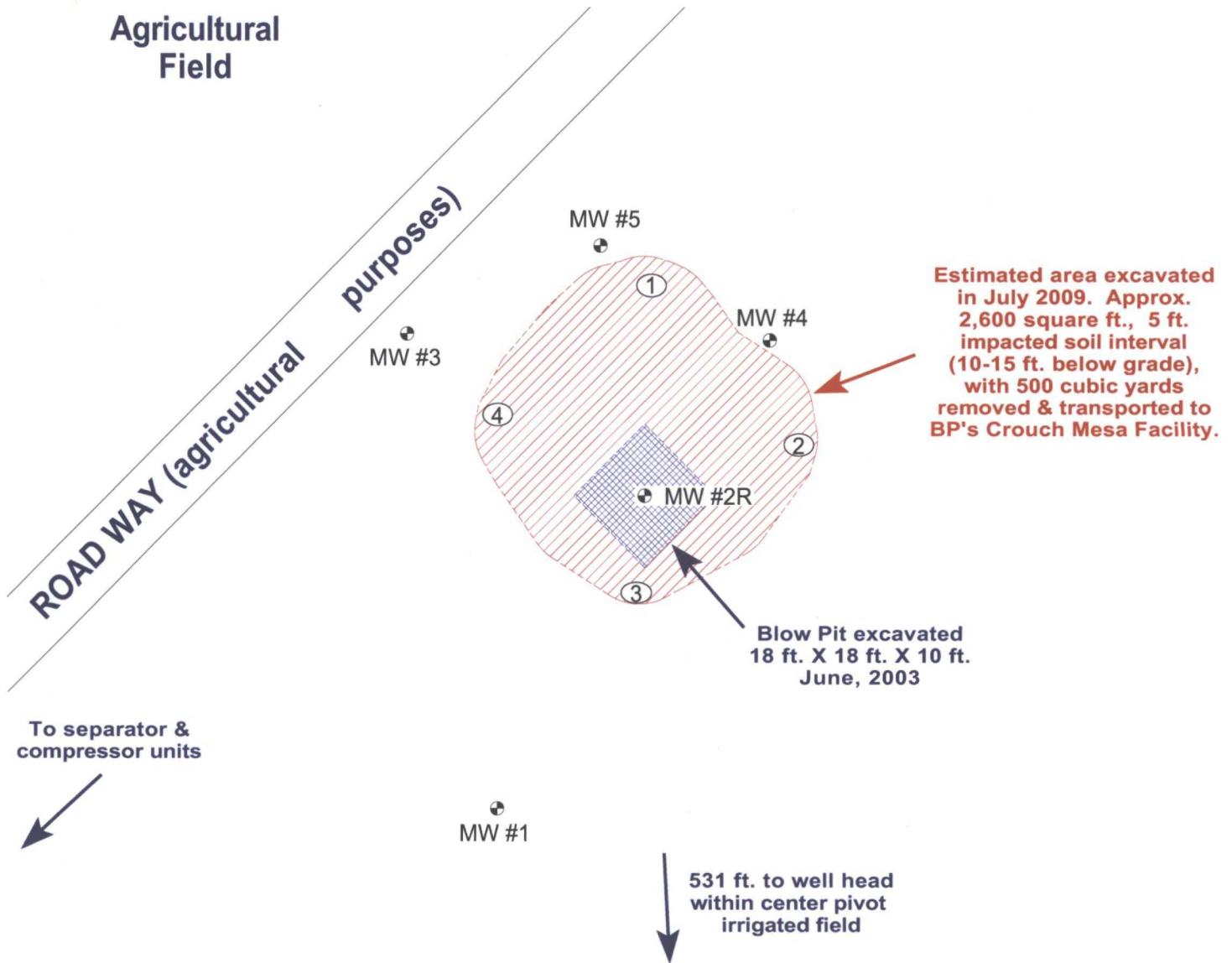
FILENAME: GCU 204E-SM.SKF

DRAFTED: 01-30-07 NJV

SITE
MAP

01/07

FIGURE 1B



SAMPLE I.D.	DATE	TIME	OVM (ppm)	TPH (ppm)	Benzene (ppm)	Tot. BTEX (ppm)
1 @ 12.5 ft.	7/8/09	1117	0.0	ND	ND	ND
2 @ 13.5 ft.	7/8/09	1030	280	120	ND	2.36
3 @ 14 ft.	7/8/09	1012	0.0	ND	ND	ND
4 @ 15 ft.	7/8/09	1053	0.0	ND	ND	ND
NMOCD CLOSURE STANDARDS				100	10	50

NOTE: OVM - Organic Vapor Meter or Photo Ionization Detector (P.I.D.); TPH - Total petroleum hydrocarbon; BTEX - benzene, toluene, ethylbenzene, total xylenes; ppm - parts per million or milligrams/Kilograms (mg/Kg); NMOCD - New Mexico Oil Conservation Division.

OVM CALIBRATION
 52.8 ppm; RF = 0.52
 (RF = response factor).
 100 ppm calibration gas
 - isobutylene.
 Date - 7/8/09 Time - 1130.

0 30 60 FT.

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

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: REMEDIATION

DRAWN BY: NJV

FILENAME: 07-08-09-SM.SKF

REVISED: 11-16-09 NJV

**SITE
MAP**

07/09

Hall Environmental Analysis Laboratory, Inc.

Date: 21-Jul-09

CLIENT: Blagg Engineering
Lab Order: 0907162
Project: GCU #204E- Blow Pit
Lab ID: 0907162-01

Client Sample ID: 1 @ 12.5'
Collection Date: 7/8/2009 11:17:00 AM
Date Received: 7/9/2009
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/16/2009
Surr: DNOP	90.2	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2009 2:01:48 PM
Surr: BFB	88.5	58.8-123		%REC	1	7/15/2009 2:01:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	7/15/2009 2:01:48 PM
Toluene	ND	0.050		mg/Kg	1	7/15/2009 2:01:48 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2009 2:01:48 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2009 2:01:48 PM
Surr: 4-Bromofluorobenzene	91.6	66.8-139		%REC	1	7/15/2009 2:01:48 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, Inc.

Date: 21-Jul-09

CLIENT: Blagg Engineering
Lab Order: 0907162
Project: GCU #204E- Blow Pit
Lab ID: 0907162-02

Client Sample ID: 2 @ 13.5'
Collection Date: 7/8/2009 10:30:00 AM
Date Received: 7/9/2009
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	41	10		mg/Kg	1	7/16/2009
Surr: DNOP	90.6	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: DAM
Gasoline Range Organics (GRO)	79	25		mg/Kg	5	7/15/2009 2:32:15 PM
Surr: BFB	193	58.8-123	S	%REC	5	7/15/2009 2:32:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.25		mg/Kg	5	7/15/2009 2:32:15 PM
Toluene	0.56	0.25		mg/Kg	5	7/15/2009 2:32:15 PM
Ethylbenzene	ND	0.25		mg/Kg	5	7/15/2009 2:32:15 PM
Xylenes, Total	1.8	0.50		mg/Kg	5	7/15/2009 2:32:15 PM
Surr: 4-Bromofluorobenzene	96.4	66.8-139		%REC	5	7/15/2009 2:32:15 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, Inc.

Date: 21-Jul-09

CLIENT: Blagg Engineering
Lab Order: 0907162
Project: GCU #204E- Blow Pit
Lab ID: 0907162-03

Client Sample ID: 3 @ 14'
Collection Date: 7/8/2009 10:12:00 AM
Date Received: 7/9/2009
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/16/2009
Surr: DNOP	91.9	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2009 3:02:38 PM
Surr: BFB	110	58.8-123		%REC	1	7/15/2009 3:02:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	7/15/2009 3:02:38 PM
Toluene	ND	0.050		mg/Kg	1	7/15/2009 3:02:38 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2009 3:02:38 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2009 3:02:38 PM
Surr: 4-Bromofluorobenzene	98.9	66.8-139		%REC	1	7/15/2009 3:02:38 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, Inc.

Date: 21-Jul-09

CLIENT: Blagg Engineering
Lab Order: 0907162
Project: GCU #204E- Blow Pit
Lab ID: 0907162-04

Client Sample ID: 4 @ 15'
Collection Date: 7/8/2009 10:53:00 AM
Date Received: 7/9/2009
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/16/2009
Surr: DNOP	92.1	61.7-135		%REC	1	7/16/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/15/2009 3:33:05 PM
Surr: BFB	93.5	58.8-123		%REC	1	7/15/2009 3:33:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	7/15/2009 3:33:05 PM
Toluene	ND	0.050		mg/Kg	1	7/15/2009 3:33:05 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/15/2009 3:33:05 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/15/2009 3:33:05 PM
Surr: 4-Bromofluorobenzene	89.1	66.8-139		%REC	1	7/15/2009 3:33:05 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

•

☒ Standard ☐ Rush

6-cu #204E-BLOW PT7

Project #:

Project M:

1

7

Sampler.

Quesadillas

Container Type and #	Preservative Type
-------------------------	----------------------

EVENTS

1-4 oz.	COOL
---------	------

1-4oz.	Cool
--------	------

1-4oz.	cool
--------	------

1-4oz.	COOL
--------	------

Received by:

9

Received by:

Date _____ Time _____

Date _____ Time _____

1430

Date _____ Time _____

Remarks:

GRD + DRD only on TP47.

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: GCU #204E- Blow Pit

Work Order: 0907162

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: 0907162-01AMSD		MSD			Batch ID: 19611	Analysis Date:			7/16/2009
Diesel Range Organics (DRO)	55.90	mg/Kg	10	112	67.4	117	13.4	17.4	
Sample ID: MB-19611		MBLK			Batch ID: 19611	Analysis Date:			7/15/2009
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Sample ID: LCS-19611		LCS			Batch ID: 19611	Analysis Date:			7/15/2009
Diesel Range Organics (DRO)	43.07	mg/Kg	10	86.1	64.6	116			
Sample ID: LCSD-19611		LCSD			Batch ID: 19611	Analysis Date:			7/16/2009
Diesel Range Organics (DRO)	44.12	mg/Kg	10	88.2	64.6	116	2.41	17.4	
Sample ID: 0907162-01AMS		MS			Batch ID: 19611	Analysis Date:			7/16/2009
Diesel Range Organics (DRO)	48.87	mg/Kg	10	97.7	67.4	117			
Method: EPA Method 8015B: Gasoline Range									
Sample ID: MB-19584		MBLK			Batch ID: 19584	Analysis Date:			7/14/2009 8:43:33 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: LCS-19584		LCS			Batch ID: 19584	Analysis Date:			7/14/2009 6:41:42 PM
Gasoline Range Organics (GRO)	28.93	mg/Kg	5.0	108	64.4	133			
Sample ID: LCSD-19584		LCSD			Batch ID: 19584	Analysis Date:			7/14/2009 7:12:12 PM
Gasoline Range Organics (GRO)	30.24	mg/Kg	5.0	113	69.5	120	4.43	11.6	
Method: EPA Method 8021B: Volatiles									
Sample ID: MB-19584		MBLK			Batch ID: 19584	Analysis Date:			7/14/2009 8:43:33 PM
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: LCS-19584		LCS			Batch ID: 19584	Analysis Date:			7/14/2009 7:42:38 PM
Benzene	0.8925	mg/Kg	0.050	88.1	78.8	132			
Toluene	0.8836	mg/Kg	0.050	88.4	78.9	112			
Ethylbenzene	0.9013	mg/Kg	0.050	90.1	69.3	125			
Xylenes, Total	2.675	mg/Kg	0.10	89.2	73	128			
Sample ID: LCSD-19584		LCSD			Batch ID: 19584	Analysis Date:			7/14/2009 8:13:03 PM
Benzene	0.9255	mg/Kg	0.050	91.4	78.8	132	3.63	27	
Toluene	0.9262	mg/Kg	0.050	92.6	78.9	112	4.71	19	
Ethylbenzene	0.9596	mg/Kg	0.050	96.0	69.3	125	6.27	10	
Xylenes, Total	2.849	mg/Kg	0.10	95.0	73	128	6.29	13	

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:

7/9/2009

Work Order Number **0907162**

Received by: **TLS**

Sample ID labels checked by:

Initials

Checklist completed by:

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?

4.6°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:

<2 >12 unless noted
below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

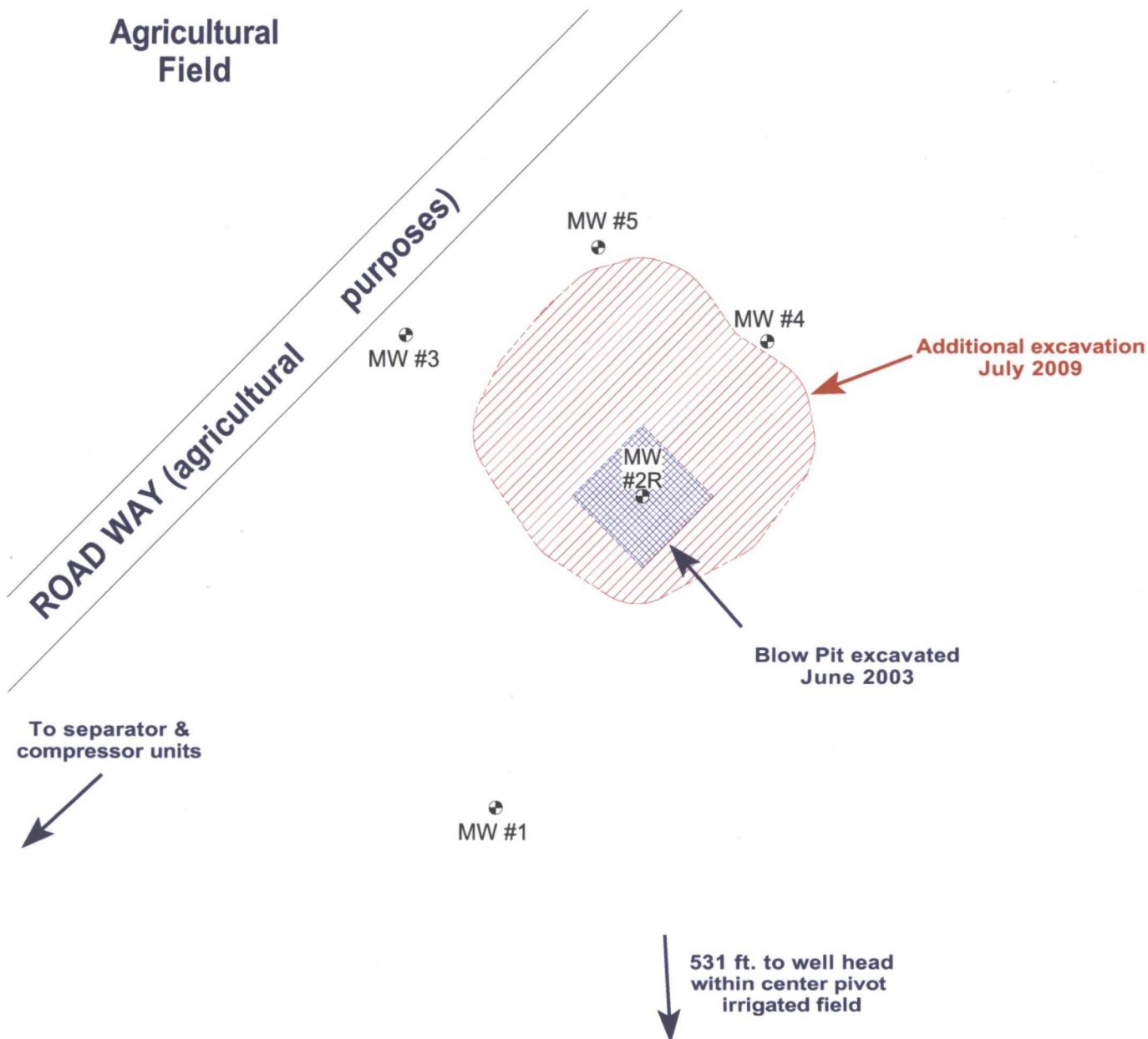
Contacted by:

Regarding:

Comments:

Corrective Action

FIGURE 1C



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.

0 30 60 FT.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALLATIONS

DRAWN BY: NJV

FILENAME: 10-19-09-SM.SKF

REVISED: 11-16-09 NJV

**SITE
MAP**

10/09

FIGURE 2
(2nd 1/4, 2009)



**Agricultural
Field**

ROAD WAY (agricultural purposes)

MW #3
(83.66)

Blow Pit excavated
18 ft. X 18 ft. X 10 ft.
June, 2003

84.00

85.00

86.00

MW #2
(85.40)

MW #1
(87.06)

APPARENT
GROUNDWATER
FLOW DIRECTION
~N22.75W

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.

0 30 60 FT.

Top of Well Elevation	
MW #1	(103.89)
MW #2	(100.00)
MW #3	(95.66)
Groundwater Elevation as of 5/19/09.	
MW #1	(87.06)

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

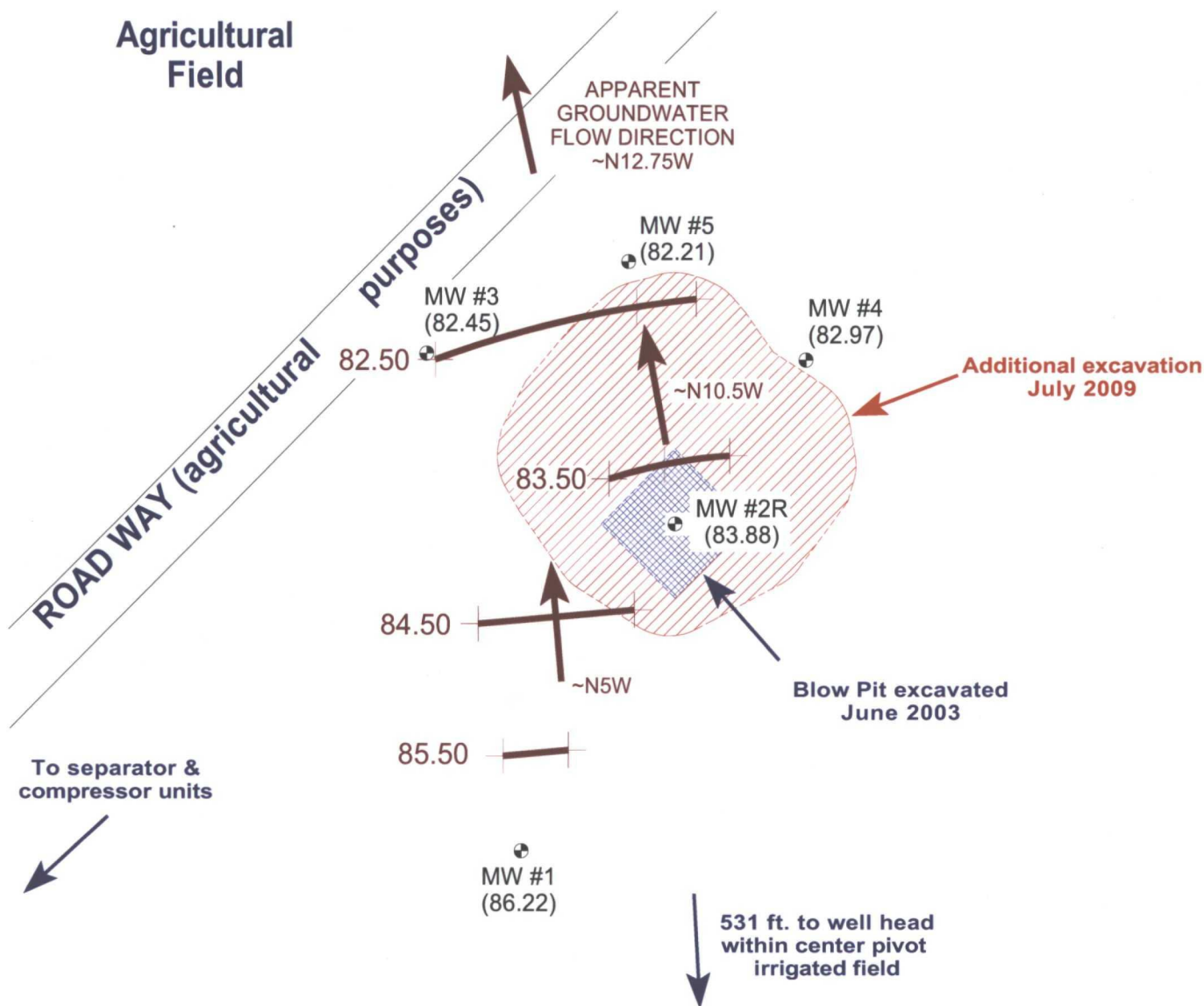
FILENAME: 05-19-09-GW.SKF

DRAFTED: 5-22-09 NJV

**GROUNDWATER
CONTOUR
MAP**

05/09

FIGURE 3 (4th 1/4, 2009)



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.

0 30 60 FT.

	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (86.22)	Groundwater Elevation as of 11/16/09.

Monitor well tops resurveyed on 10/16/09.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

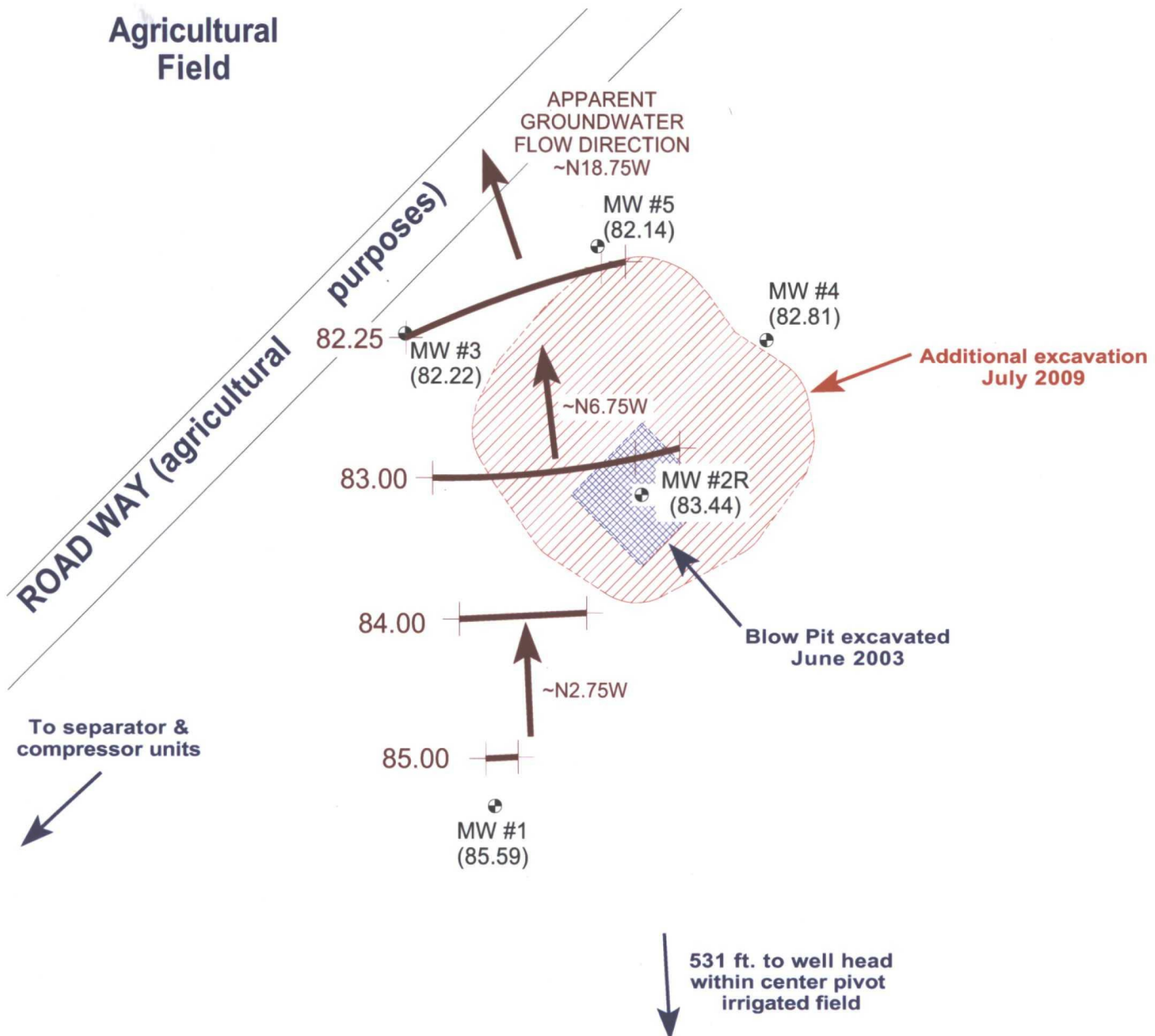
FILENAME: 11-16-09-GW.SKF

REVISED: 11-16-09 NJV

GROUNDWATER
CONTOUR
MAP

11/09

FIGURE 4 (1st 1/4, 2010)



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.

0 30 60 FT.

		Top of Well Elevation
MW #1	_____	(103.89)
MW #2R	_____	(99.49)
MW #3	_____	(95.66)
MW #4	_____	(98.63)
MW #5	_____	(95.98)
MW #1	_____	Groundwater Elevation as of 2/19/10.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

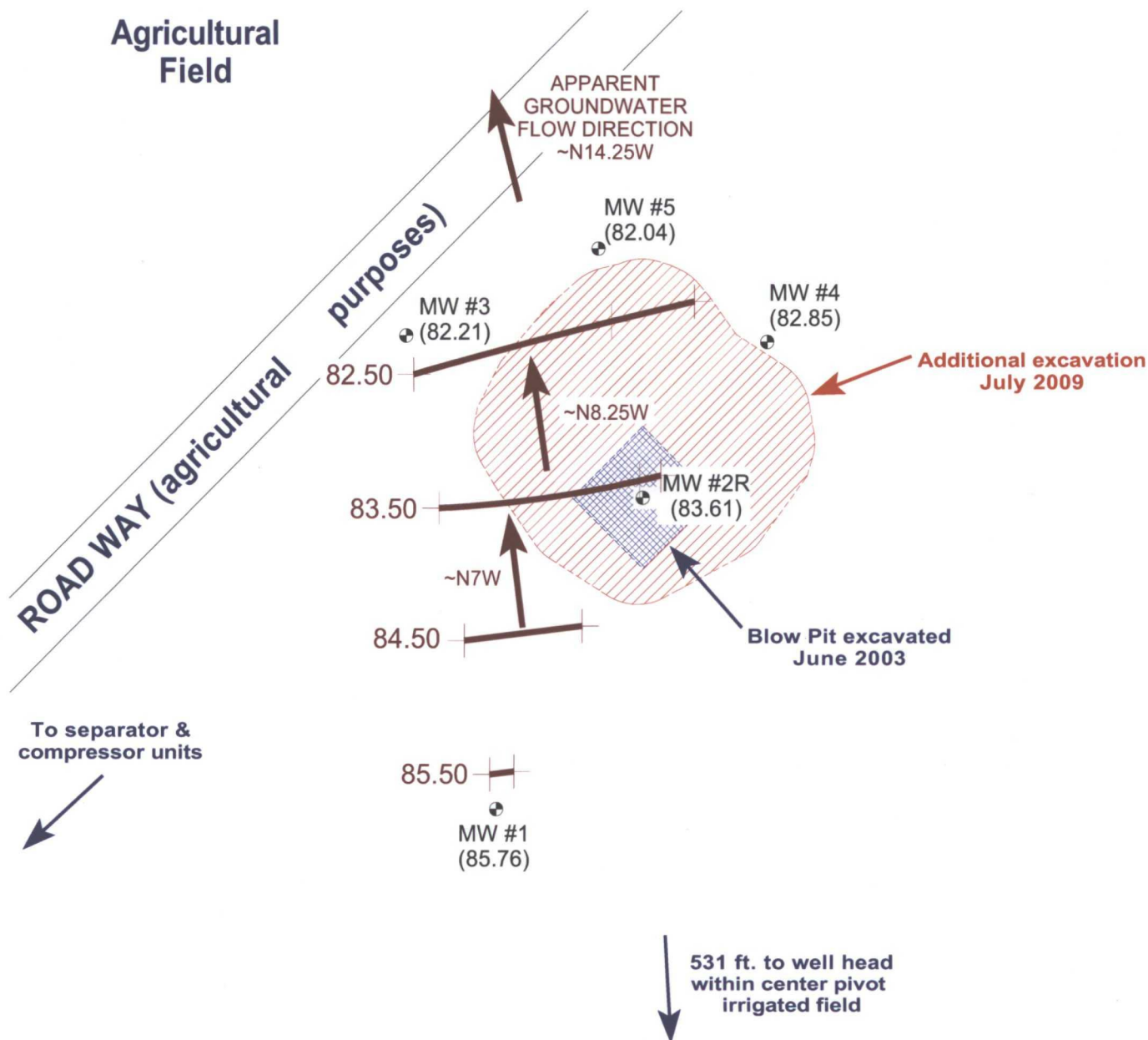
FILENAME: 02-19-10-GW.SKF

REVISED: 02-19-10 NJV

GROUNDWATER
CONTOUR
MAP

02/10

FIGURE 5 (2nd 1/4, 2010)



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.

0 30 60 FT.

	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (85.76)	Groundwater Elevation as of 5/19/10.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

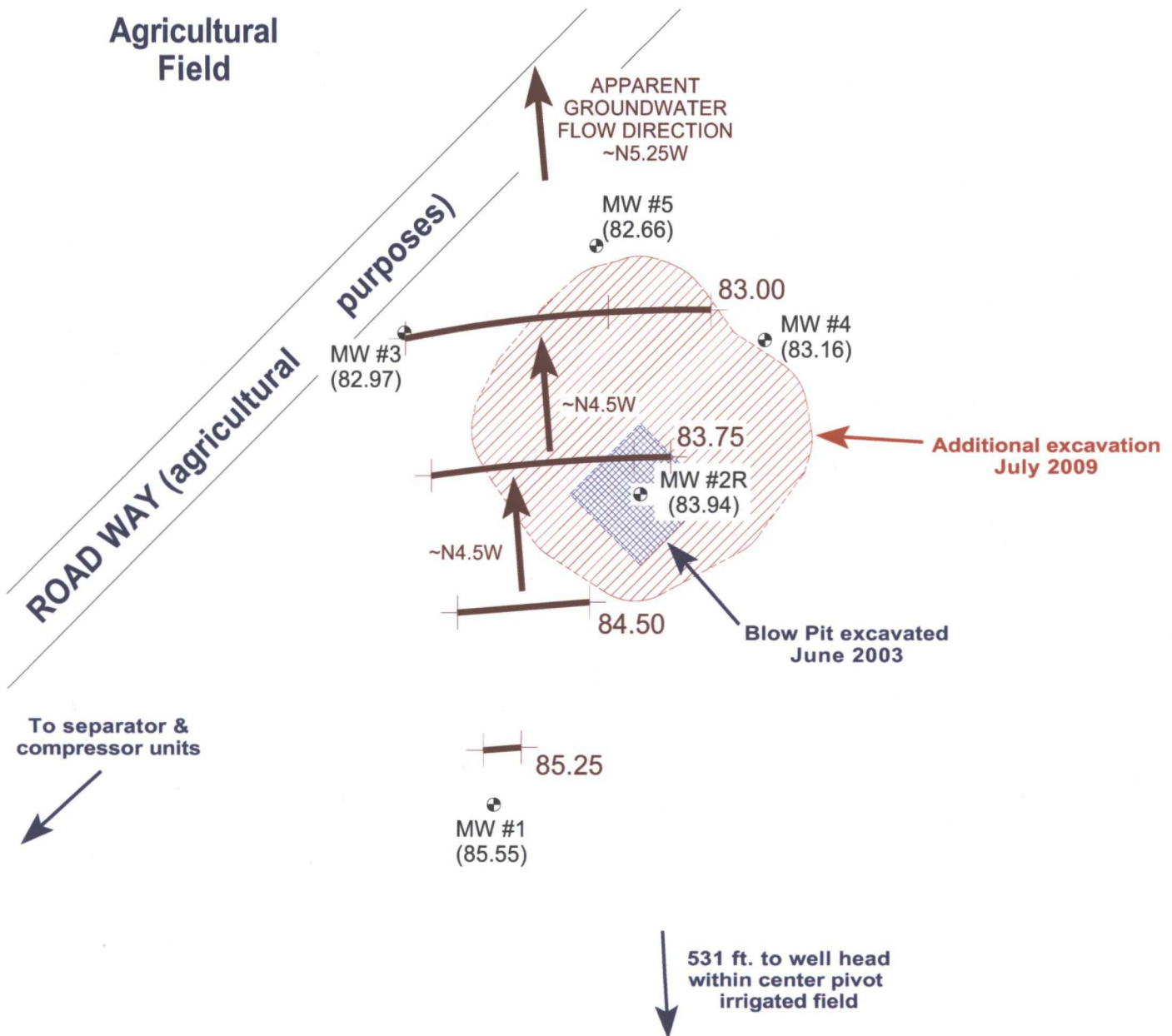
FILENAME: 05-19-10-GW.SKF

REVISED: 05-19-10 NJV

GROUNDWATER
CONTOUR
MAP

05/10

FIGURE 6 (4th 1/4, 2010)



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.

0 30 60 FT.

	Top of Well Elevation
MW #1	(103.89)
MW #2R	(99.49)
MW #3	(95.66)
MW #4	(98.63)
MW #5	(95.98)
MW #1 (85.55)	Groundwater Elevation as of 10/30/10.

BP AMERICA PRODUCTION CO.

GCU #204E

NE/4 SE/4 SEC. 34, T28N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 10-30-10-GW.SKF

REVISED: 10-30-10 NJV

GROUNDWATER
CONTOUR
MAP

10/10

BLAGG ENGINEERING, Inc.

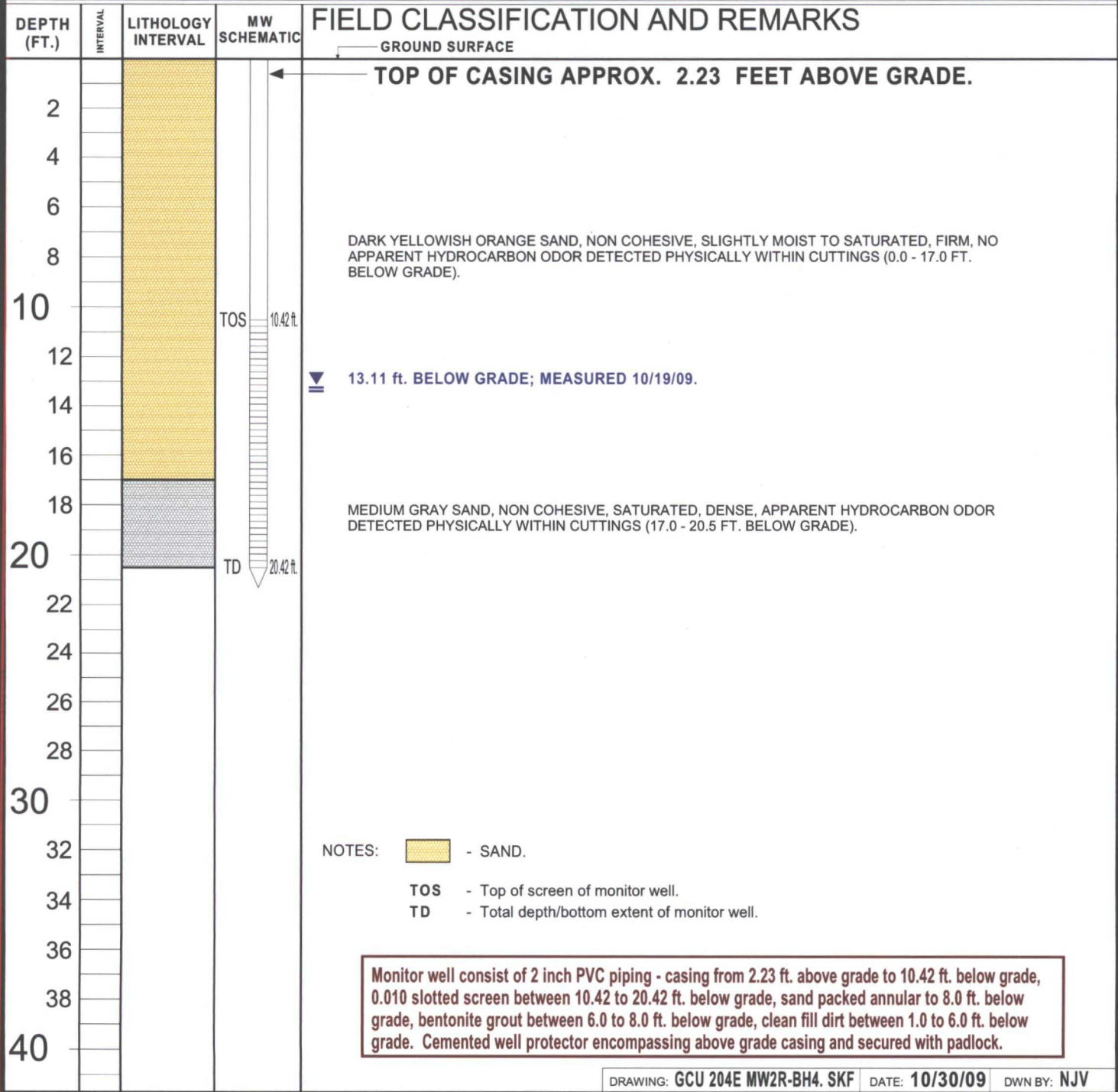
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2R

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU # 204E UNIT I, SEC. 34, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 61.5 FEET, S25.5W FROM MW #1.

BORING #..... BH - 4
MW #..... 2R
PAGE #..... 4
DATE STARTED 10/13/09
DATE FINISHED 10/13/09
OPERATOR..... KP
PREPARED BY NJV



BLAGG ENGINEERING, Inc.

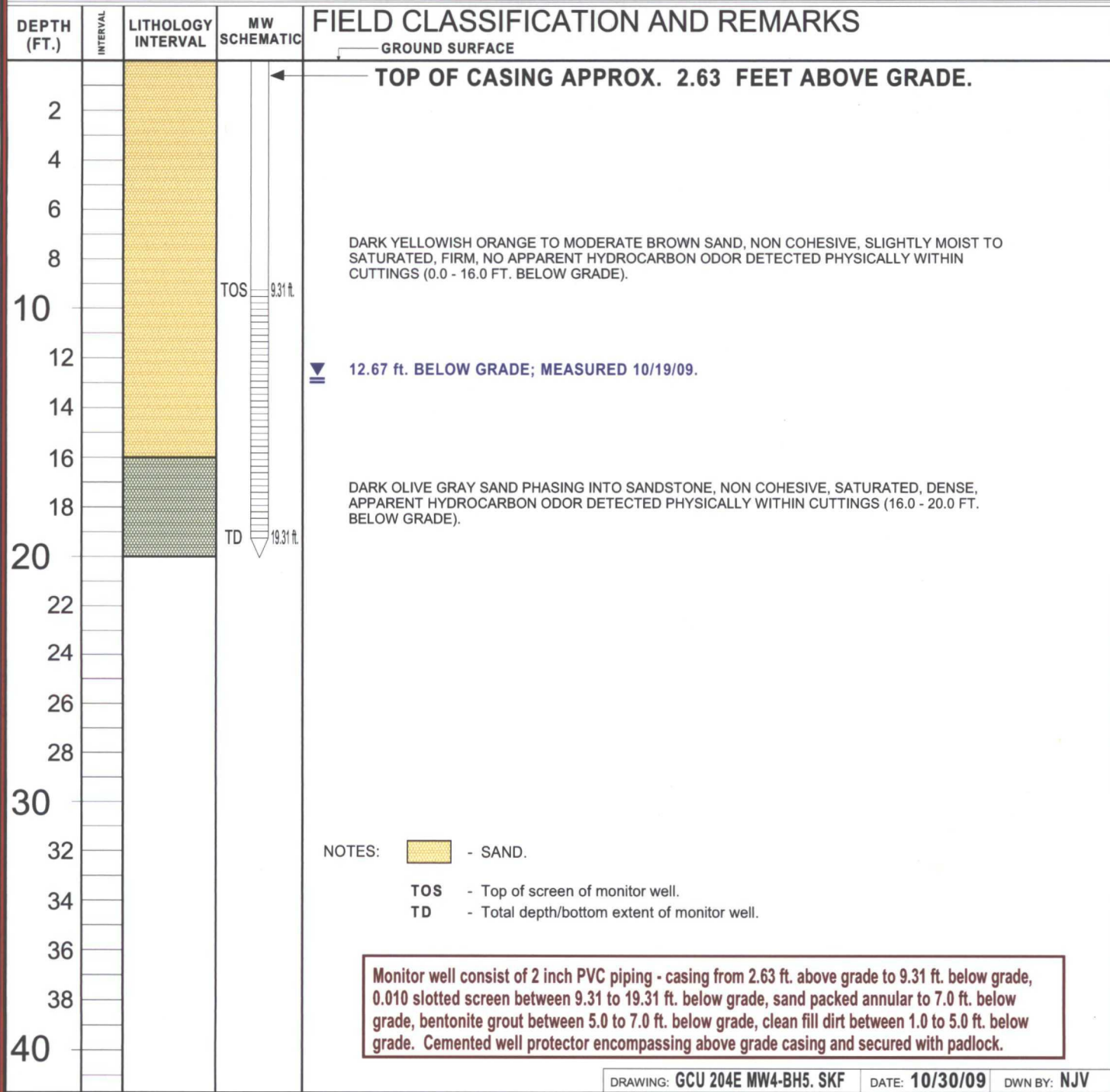
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #4

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU # 204E UNIT I, SEC. 34, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 96.5 FEET, S30.5W FROM MW #1.

BORING #..... BH - 5
MW #..... 4
PAGE #..... 5
DATE STARTED 10/13/09
DATE FINISHED 10/13/09
OPERATOR..... KP
PREPARED BY NJV



BLAGG ENGINEERING, Inc.

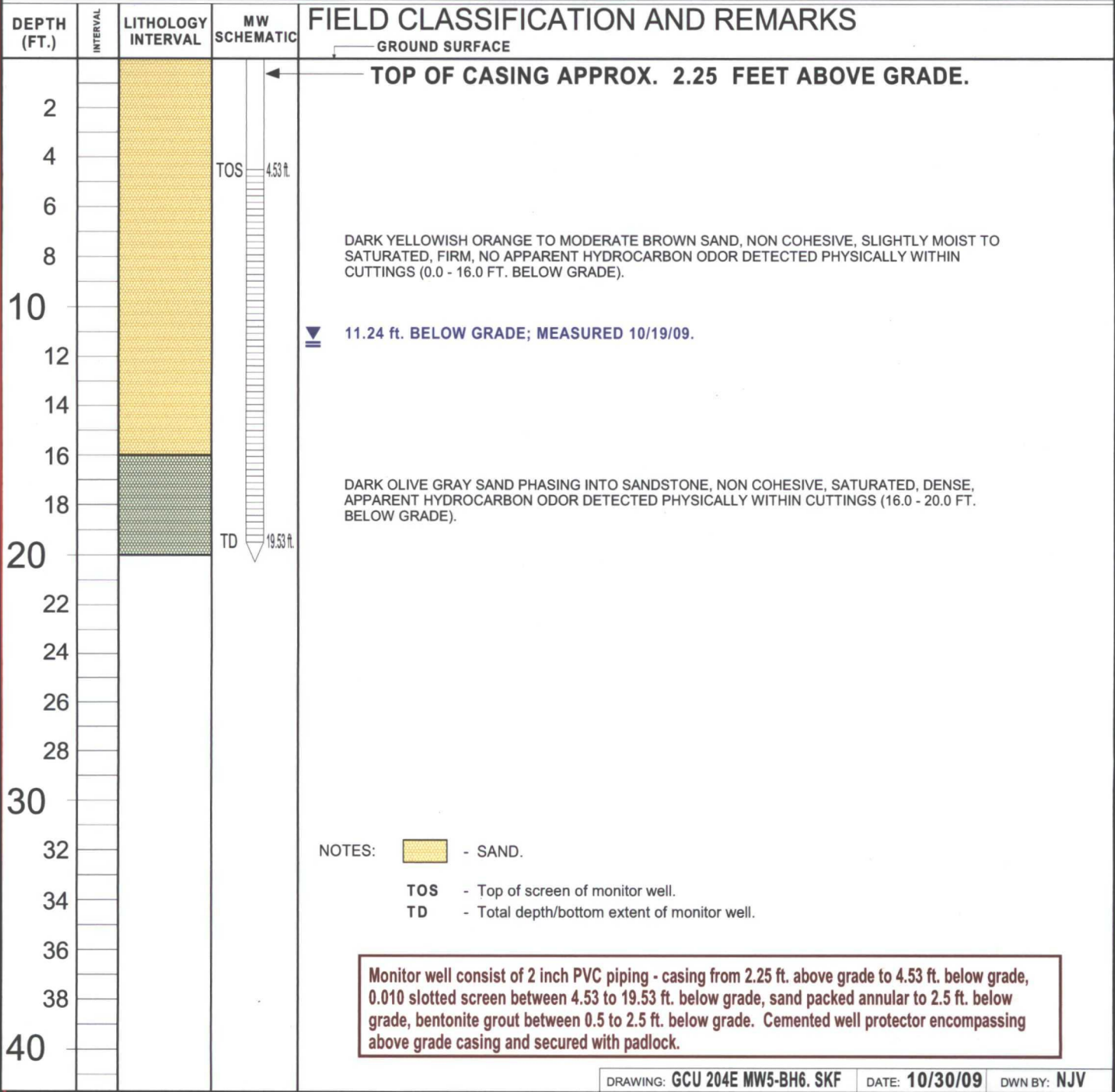
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #5

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION CO.
LOCATION NAME: GCU # 204E UNIT I, SEC. 34, T28N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 101.5 FEET, S10.5W FROM MW #1.

BORING #..... BH - 6
MW #..... 5
PAGE #..... 6
DATE STARTED 10/13/09
DATE FINISHED 10/13/09
OPERATOR..... KP
PREPARED BY NJV



BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT &/OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 204E - BLOW PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT I, SEC. 34, T28N, R12W

Date: May 19, 2009

SAMPLER: N J V

Filename: 05-19-09.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW - 1	103.89	87.06	16.83	27.00	-	-	-	-	-
MW - 2	100.00	85.40	14.60	27.50	1430	7.32	800	19.9	6.25
MW - 3	95.66	83.66	12.00	25.00	1350	7.01	800	18.8	6.50

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: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery in MW # 2 & # 3. Collected samples for BTEX per US EPA Method 8021B from MW # 2 & # 3. Collected duplicate from MW # 2 - labeled as MW # 1X and recorded on separate COCR as GCU # 1X.

Top of casing MW # 1 ~ 2.40 ft., MW # 2 ~ 2.30 ft., MW # 3 ~ 2.30 ft. above grade.

on-site	1:22	temp	87 F
off-site	2:41	temp	88 F
sky cond.	Partly cloudy		
wind speed	5 - 10	direct.	West

Hall Environmental Analysis Laboratory, Inc.

Date: 02-Jun-09

CLIENT: Blagg Engineering
Project: GCU #204E**Lab Order:** 0905360**Lab ID:** 0905360-01**Collection Date:** 5/19/2009 2:30:00 PM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	140	50		µg/L	50	5/29/2009 11:19:31 PM
Toluene	83	50		µg/L	50	5/29/2009 11:19:31 PM
Ethylbenzene	1200	50		µg/L	50	5/29/2009 11:19:31 PM
Xylenes, Total	6700	100		µg/L	50	5/29/2009 11:19:31 PM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	50	5/29/2009 11:19:31 PM

Lab ID: 0905360-02**Collection Date:** 5/19/2009 1:50:00 PM**Client Sample ID:** MW #3**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	350	10		µg/L	10	5/29/2009 11:49:54 PM
Toluene	170	10		µg/L	10	5/29/2009 11:49:54 PM
Ethylbenzene	380	10		µg/L	10	5/29/2009 11:49:54 PM
Xylenes, Total	700	20		µg/L	10	5/29/2009 11:49:54 PM
Surr: 4-Bromofluorobenzene	96.5	65.9-130		%REC	10	5/29/2009 11:49:54 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, Inc.

Date: 02-Jun-09

CLIENT: Blagg Engineering
Lab Order: 0905366
Project: GCU #1X
Lab ID: 0905366-01

Client Sample ID: MW #1X
Collection Date: 5/18/2009
Date Received: 5/20/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	150	10		µg/L	10	5/30/2009 2:21:49 AM
Toluene	68	10		µg/L	10	5/30/2009 2:21:49 AM
Ethylbenzene	1300	50		µg/L	50	5/30/2009 3:02:38 PM
Xylenes, Total	7200	100		µg/L	50	5/30/2009 3:02:38 PM
Surr: 4-Bromofluorobenzene	111	65.9-130		%REC	10	5/30/2009 2:21:49 AM

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

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: BLAGE ENER / BP AMERICA

☒ Standard ☐ Rush

Project Name:

6CU # 204E

Mailing Address:

P.O. BOX 87

BLFD, NM 87413

Phone #:

632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other

☐ EDD (Type)

Project Manager:

Nelson Velez

Sampler:

Nelson Velez

Container Type and #

Preservative Type

Sample Temperature

Date Time Matrix Sample Request ID

5/19/09 1430 WATER MW #2

5/19/09 1350 WATER MW #3

40m/-2 HCl

40m/-2 HCl

Analysis Request

(BTEX + MTBE + TMBs (80218)) ✓ 8270 (Semi-VOA) 8260B (VOA) 8081 Pesticides / 8082 PCBs Anions (F, Cl, NO₃, NO₂, PO₄, SO₄) RCRA 8 Metals 8310 (PNA or PAH) EDB (Method 504.1) TPH (Method 418.1) TPH Method 8015B (Gas/Diesel) BTEX + MTBE + TPH (Gas only)

Air Bubbles (Y or N)

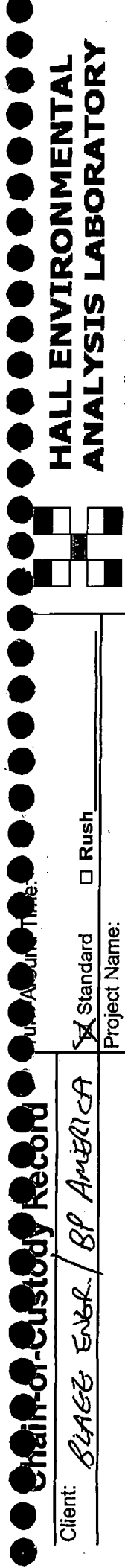
Remarks:

Received by: [Signature] Date: 5/20/09 Time: 0800

Date: 5/19/09 1425 Relinquished by: [Signature]

Received by: [Signature] Date: 5/20/09 Time: 0800

Date: 5/19/09 1425 Relinquished by: [Signature]



Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: BLAZE ENR / BP AMERICA

Mailing Address: P.O. BOX 87

BFD, NM 87413

Phone #: 632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other

☐ EDD (Type) _____

Project Manager: Nelson Velez

Sampler: Nelson Velez

On Ice: Yes NO

Sample Temperature: 30

Container Type and #

Preservative Type

40 ml - 2 HCl

HEALING

091053109

-1

✓

BTEX + MTBE + TMBE (80218)

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)

Air Bubbles (Y or N)

Received by: [Signature] Date: 5/20/09 Time: 830

Relinquished by: Nelson Velez Date: 5/19/09 Time: 1425

Received by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Remarks:

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #204E

Work Order: 0905360

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

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R33878 Analysis Date: 5/29/2009 9:06:58 AM

Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R33878 Analysis Date: 5/30/2009 5:24:25 AM

Benzene	19.92	µg/L	1.0	99.6	85.9	113			
Toluene	19.82	µg/L	1.0	99.1	86.4	113			
Ethylbenzene	20.29	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.55	µg/L	2.0	101	83.4	122			

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R33878 Analysis Date: 5/30/2009 5:54:51 AM

Benzene	20.56	µg/L	1.0	103	85.9	113	3.18	27	
Toluene	20.46	µg/L	1.0	102	86.4	113	3.14	19	
Ethylbenzene	20.86	µg/L	1.0	104	83.5	118	2.79	10	
Xylenes, Total	62.33	µg/L	2.0	104	83.4	122	2.90	13	

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:

5/20/2009

Work Order Number 0905360

Received by: **TLS**

Checklist completed by:

Signature

Date

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 ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3.8°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:

<2 >12 unless noted
below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #1X

Work Order: 0905366

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

Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R33878 Analysis Date: 5/29/2009 9:06:58 AM

Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R33878 Analysis Date: 5/30/2009 5:24:25 AM

Benzene	19.92	µg/L	1.0	99.6	85.9	113			
Toluene	19.82	µg/L	1.0	99.1	86.4	113			
Ethylbenzene	20.29	µg/L	1.0	101	83.5	118			
Xylenes, Total	60.55	µg/L	2.0	101	83.4	122			

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R33878 Analysis Date: 5/30/2009 5:54:51 AM

Benzene	20.56	µg/L	1.0	103	85.9	113	3.18	27	
Toluene	20.46	µg/L	1.0	102	86.4	113	3.14	19	
Ethylbenzene	20.86	µg/L	1.0	104	83.5	118	2.79	10	
Xylenes, Total	62.33	µg/L	2.0	104	83.4	122	2.90	13	

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:

5/20/2009

Work Order Number 0905366

Received by: **TLS**

Checklist completed by:

Signature

Date

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 ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3.8°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:

<2 >12 unless noted
below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

per NV use 5/17/09 for collection date / 5/20/09

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 204E - BLOW PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT 1, SEC. 34, T28N, R12W

Date: November 16, 2009

DEVELOPER / SAMPLER: N J V

Filename: 11-16-09.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	103.89	86.22	17.67	27.00	-	-	-	-	-
2R	99.49	83.88	15.61	22.65	1405	7.71	900	13.8	3.50
3	95.66	82.45	13.21	25.00	1415	7.18	800	13.8	5.75
4	98.63	82.97	15.66	21.94	1315	7.10	1,600	13.5	3.00
5	95.98	82.21	13.77	21.78	1345	7.01	1,300	13.4	4.00

INSTRUMENT CALIBRATIONS =

4.01/7.00/10.00

2,800

DATE & TIME =

11/16/09

1330

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery in all MW's sampled. Collected BTEX sample from MW #3, collected samples for BTEX, TDS, chloride, fluoride, nitrate, sulfate, & iron from MW #2R, #4, & #5.

Top of casing MW #1 ~ 2.40 ft., MW #2R ~ 2.23 ft., MW #3 ~ 2.30 ft., MW #4 ~ 2.63 ft., MW #5 ~ 2.25 ft. above grade.

on-site	12:00	temp	34 F
off-site	3:00	temp	40 F
sky cond.	sunny		
wind speed	0 - 5	direct.	SW

Hall Environmental Analysis Laboratory, Inc.

Date: 30-Nov-09

CLIENT: Blagg Engineering
Lab Order: 0911317
Project: GCU #204E
Lab ID: 0911317-01

Client Sample ID: MW #2R
Collection Date: 11/16/2009 2:05:00 PM
Date Received: 11/17/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	13	10		µg/L	10	11/24/2009 3:39:22 AM
Toluene	ND	10		µg/L	10	11/24/2009 3:39:22 AM
Ethylbenzene	240	10		µg/L	10	11/24/2009 3:39:22 AM
Xylenes, Total	1900	20		µg/L	10	11/24/2009 3:39:22 AM
Surr: 4-Bromofluorobenzene	100	65.9-130		%REC	10	11/24/2009 3:39:22 AM
EPA METHOD 300.0: ANIONS						Analyst: TAF
Fluoride	0.47	0.10		mg/L	1	11/17/2009 1:15:30 PM
Chloride	30	2.0		mg/L	20	11/17/2009 1:32:54 PM
Nitrogen, Nitrite (As N)	1.9	0.10		mg/L	1	11/17/2009 1:15:30 PM
Nitrogen, Nitrate (As N)	0.73	0.10		mg/L	1	11/17/2009 1:15:30 PM
Sulfate	96	10		mg/L	20	11/17/2009 1:32:54 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: RAGS
Iron	ND	0.020		mg/L	1	11/20/2009 5:59:11 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: MMS
Total Dissolved Solids	710	20.0		mg/L	1	11/19/2009 3:11:00 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, Inc.

Date: 30-Nov-09

CLIENT: Blagg Engineering
Lab Order: 0911317
Project: GCU #204E
Lab ID: 0911317-02

Client Sample ID: MW #4
Collection Date: 11/16/2009 1:15:00 PM
Date Received: 11/17/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	2200	50		µg/L	50	11/24/2009 5:02:34 PM
Toluene	14	10		µg/L	10	11/24/2009 4:09:41 AM
Ethylbenzene	140	10		µg/L	10	11/24/2009 4:09:41 AM
Xylenes, Total	950	20		µg/L	10	11/24/2009 4:09:41 AM
Surr: 4-Bromofluorobenzene	103	65.9-130		%REC	10	11/24/2009 4:09:41 AM
EPA METHOD 300.0: ANIONS						Analyst: TAF
Fluoride	0.57	0.10		mg/L	1	11/17/2009 1:50:19 PM
Chloride	950	5.0		mg/L	50	11/18/2009 7:33:37 PM
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/17/2009 2:07:44 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/17/2009 1:50:19 PM
Sulfate	63	10		mg/L	20	11/17/2009 2:07:44 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: RAGS
Iron	ND	0.020		mg/L	1	11/20/2009 6:16:05 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: MMS
Total Dissolved Solids	2010	20.0		mg/L	1	11/20/2009 2:54:00 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, Inc.

Date: 30-Nov-09

CLIENT: Blagg Engineering
Lab Order: 0911317
Project: GCU #204E
Lab ID: 0911317-03

Client Sample ID: MW #5
Collection Date: 11/16/2009 1:45:00 PM
Date Received: 11/17/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1100	50		µg/L	50	11/24/2009 10:08:16 PM
Toluene	200	10		µg/L	10	11/24/2009 4:40:00 AM
Ethylbenzene	430	10		µg/L	10	11/24/2009 4:40:00 AM
Xylenes, Total	2800	20		µg/L	10	11/24/2009 4:40:00 AM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	10	11/24/2009 4:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: TAF
Fluoride	0.60	0.10		mg/L	1	11/17/2009 2:25:09 PM
Chloride	370	2.0		mg/L	20	11/17/2009 3:17:22 PM
Nitrogen, Nitrite (As N)	2.5	2.0		mg/L	20	11/17/2009 3:17:22 PM
Nitrogen, Nitrate (As N)	2.2	0.10		mg/L	1	11/17/2009 2:25:09 PM
Sulfate	23	0.50		mg/L	1	11/17/2009 2:25:09 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: RAGS
Iron	6.0	0.20		mg/L	10	11/23/2009 12:59:37 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: MMS
Total Dissolved Solids	1090	20.0		mg/L	1	11/20/2009 2:54:00 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, Inc.

Date: 30-Nov-09

CLIENT: Blagg Engineering
Lab Order: 0911317
Project: GCU #204E
Lab ID: 0911317-04

Client Sample ID: MW #3
Collection Date: 11/16/2009 2:15:00 PM
Date Received: 11/17/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	240	10		µg/L	10	11/24/2009 5:10:15 AM
Toluene	1700	50		µg/L	50	11/24/2009 10:36:37 PM
Ethylbenzene	600	10		µg/L	10	11/24/2009 5:10:15 AM
Xylenes, Total	1500	20		µg/L	10	11/24/2009 5:10:15 AM
Surr: 4-Bromofluorobenzene	104	65.9-130		%REC	10	11/24/2009 5:10:15 AM

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #204E

Work Order: 0911317

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 300.0: Anions

Sample ID: MB

MBLK

Batch ID: R36209 Analysis Date: 11/17/2009 11:48:27 AM

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

Sample ID: MB

MBLK

Batch ID: R36234 Analysis Date: 11/18/2009 7:22:24 AM

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

Sample ID: LCS

LCS

Batch ID: R36209 Analysis Date: 11/17/2009 12:05:52 PM

Fluoride	0.5238	mg/L	0.10	0.5	0	105	90	110			
Chloride	5.072	mg/L	0.10	5	0	101	90	110			
Nitrogen, Nitrite (As N)	1.019	mg/L	0.10	1	0	102	90	110			
Nitrogen, Nitrate (As N)	2.535	mg/L	0.10	2.5	0	101	90	110			
Sulfate	10.16	mg/L	0.50	10	0	102	90	110			

Sample ID: LCS

LCS

Batch ID: R36234 Analysis Date: 11/18/2009 7:39:49 AM

Fluoride	0.5259	mg/L	0.10	0.5	0	105	90	110			
Chloride	5.065	mg/L	0.10	5	0	101	90	110			
Nitrogen, Nitrite (As N)	0.9799	mg/L	0.10	1	0	98.0	90	110			
Nitrogen, Nitrate (As N)	2.510	mg/L	0.10	2.5	0	100	90	110			
Sulfate	10.05	mg/L	0.50	10	0	100	90	110			

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #204E

Work Order: 0911317

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: R36309											
Analysis Date: 11/23/2009 9:27:00 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: R36327											
Analysis Date: 11/24/2009 9:30:18 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: R36309											
Analysis Date: 11/23/2009 7:34:42 PM											
Benzene	20.32	µg/L	1.0	20	0	102	85.9	113			
Toluene	21.67	µg/L	1.0	20	0	108	86.4	113			
Ethylbenzene	21.49	µg/L	1.0	20	0.116	107	83.5	118			
Xylenes, Total	63.92	µg/L	2.0	60	0	107	83.4	122			
Sample ID: 100NG BTEX LCS		LCS									
Batch ID: R36327											
Analysis Date: 11/24/2009 6:03:12 PM											
Benzene	19.83	µg/L	1.0	20	0	99.1	85.9	113			
Toluene	20.24	µg/L	1.0	20	0	101	86.4	113			
Ethylbenzene	19.72	µg/L	1.0	20	0	98.6	83.5	118			
Xylenes, Total	59.28	µg/L	2.0	60	0	98.8	83.4	122			
Method: EPA Method 6010B: Dissolved Metals											
Sample ID: MB		MBLK									
Batch ID: R36271											
Analysis Date: 11/20/2009 4:08:59 PM											
Iron	ND	mg/L	0.020								
Sample ID: MB		MBLK									
Batch ID: R36296											
Analysis Date: 11/23/2009 12:50:27 PM											
Iron	ND	mg/L	0.020								
Sample ID: LCS		LCS									
Batch ID: R36271											
Analysis Date: 11/20/2009 4:11:44 PM											
Iron	0.4764	mg/L	0.020	0.5	0	95.3	80	120			
Sample ID: LCS		LCS									
Batch ID: R36296											
Analysis Date: 11/23/2009 12:53:21 PM											
Iron	0.4981	mg/L	0.020	0.5	0	99.6	80	120			
Method: SM2540C MOD: Total Dissolved Solids											
Sample ID: MB-20663		MBLK									
Batch ID: 20663											
Analysis Date: 11/19/2009 3:11:00 PM											
Total Dissolved Solids	ND	mg/L	20.0								
Sample ID: MB-20676		MBLK									
Batch ID: 20676											
Analysis Date: 11/20/2009 2:54:00 PM											
Total Dissolved Solids	ND	mg/L	20.0								
Sample ID: LCS-20663		LCS									
Batch ID: 20663											
Analysis Date: 11/19/2009 3:11:00 PM											
Total Dissolved Solids	1021	mg/L	20.0	1000	0	102	80	120			
Sample ID: LCS-20676		LCS									
Batch ID: 20676											
Analysis Date: 11/20/2009 2:54:00 PM											
Total Dissolved Solids	1012	mg/L	20.0	1000	0	101	80	120			

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:

11/17/2009

Work Order Number **0911317**

Received by:

ARS

Checklist completed by:

Signature

Date

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 ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☒

No ☐

N/A ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

4.6°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

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

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

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

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

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

Date : **February 19, 2010**

DEVELOPER / SAMPLER : **N J V**

Filename : **02-19-10.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	103.89	85.59	18.30	27.00	-	-	-	-	-
2R	99.49	83.44	16.05	22.65	0815	7.86	1,000	11.3	3.25
3	95.66	82.22	13.44	25.00	0900	7.36	800	10.9	5.75
4	98.63	82.81	15.82	21.94	0940	7.02	2,000	11.6	3.00
5	95.98	82.14	13.84	21.78	1020	6.99	1,900	10.5	4.00

INSTRUMENT CALIBRATIONS =

4.01/7.00/10.00 2,800

DATE & TIME =

02/18/10 1325

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW's sampled (MW #2R, #3, #4, & #5). MW #2R, #4, #5 - pale yellowish orange tint in appearance. MW #3 - dark gray tint in appearance. Collected samples for BTEX per US EPA Method 8021B.

Top of casing MW #1 ~ 2.40 ft., MW #2R ~ 2.23 ft., MW #3 ~ 2.30 ft., MW #4 ~ 2.63 ft., MW #5 ~ 2.25 ft. above grade.

on-site	7:33	temp	30 F
off-site	10:30	temp	32 F
sky cond.	cloudy		
wind speed	0-10	direct.	E

Hall Environmental Analysis Laboratory, Inc.

Date: 02-Mar-10

CLIENT: Blagg Engineering
Project: GCU #204E

Lab Order: 1002460

Lab ID: 1002460-01

Collection Date: 2/19/2010 8:15:00 AM

Client Sample ID: MW #2R

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	10		µg/L	10	2/27/2010 2:51:09 AM
Toluene	ND	10		µg/L	10	2/27/2010 2:51:09 AM
Ethylbenzene	150	10		µg/L	10	2/27/2010 2:51:09 AM
Xylenes, Total	1300	20		µg/L	10	2/27/2010 2:51:09 AM
Surr: 4-Bromofluorobenzene	104	65.9-130		%REC	10	2/27/2010 2:51:09 AM

Lab ID: 1002460-02

Collection Date: 2/19/2010 9:00:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	96	10		µg/L	10	2/27/2010 4:22:18 AM
Toluene	940	10		µg/L	10	2/27/2010 4:22:18 AM
Ethylbenzene	480	10		µg/L	10	2/27/2010 4:22:18 AM
Xylenes, Total	1100	20		µg/L	10	2/27/2010 4:22:18 AM
Surr: 4-Bromofluorobenzene	108	65.9-130		%REC	10	2/27/2010 4:22:18 AM

Lab ID: 1002460-03

Collection Date: 2/19/2010 9:40:00 AM

Client Sample ID: MW #4

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	5800	100		µg/L	100	3/1/2010 4:59:47 PM
Toluene	14	10		µg/L	10	2/27/2010 6:53:39 AM
Ethylbenzene	500	10		µg/L	10	2/27/2010 6:53:39 AM
Xylenes, Total	1800	20		µg/L	10	2/27/2010 6:53:39 AM
Surr: 4-Bromofluorobenzene	109	65.9-130		%REC	10	2/27/2010 6:53:39 AM

Lab ID: 1002460-04

Collection Date: 2/19/2010 10:20:00 AM

Client Sample ID: MW #5

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	790	10		µg/L	10	2/27/2010 8:24:19 AM
Toluene	100	10		µg/L	10	2/27/2010 8:24:19 AM
Ethylbenzene	370	10		µg/L	10	2/27/2010 8:24:19 AM
Xylenes, Total	2600	100		µg/L	50	2/27/2010 7:54:11 AM
Surr: 4-Bromofluorobenzene	103	65.9-130		%REC	10	2/27/2010 8:24:19 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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #204E

Work Order: 1002460

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: R37547 Analysis Date: 2/26/2010 9:10:28 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: 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: 100NG BTEX LCS

LCS

Batch ID: R37547 Analysis Date: 2/26/2010 8:48:12 PM

Benzene	22.46	µg/L	1.0	20	0	112	85.9	113			
Toluene	22.01	µg/L	1.0	20	0	110	86.4	113			
Ethylbenzene	22.18	µg/L	1.0	20	0	111	83.5	118			
Xylenes, Total	66.34	µg/L	2.0	60	0	111	83.4	122			

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			

Qualifiers:

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-Chlorinated
R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

2/24/2010

Work Order Number 1002460

Received by: TLS

Checklist completed by:

Signature

Date

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 ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3.4°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved
bottles checked for
pH:

<2 >12 unless noted
below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & /OR SAMPLING DATA

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

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

GCU # 204E - BLOW PIT

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

UNIT I, SEC. 34, T28N, R12W

Date: **May 19, 2010**

DEVELOPER / SAMPLER: **N J V**

Filename: **05-19-10.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	103.89	85.76	18.13	27.00	-	-	-	-	-
2R	99.49	83.61	15.88	22.65	1045	7.75	1,100	17.9	3.25
3	95.66	82.21	13.45	25.00	1115	7.19	1,000	15.9	5.75
4	98.63	82.85	15.78	21.94	1145	6.85	2,700	17.3	3.00
5	95.98	82.04	13.94	21.78	1215	6.82	2,600	15.0	3.75

INSTRUMENT CALIBRATIONS =

4.01/7.00/10.00

2,800

DATE & TIME =

05/19/10

1035

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW's sampled (MW # 2R , # 3 , # 4 , & # 5). MW # 2R , # 4 , # 5 - pale yellowish orange tint in appearance . MW # 3 - dark gray tint in appearance . Collected samples for BTEX per US EPA Method 8021B .

Top of casing MW # 1 ~ 2.40 ft. , MW # 2R ~ 2.23 ft. , MW # 3 ~ 2.30 ft. , MW # 4 ~ 2.63 ft. , MW # 5 ~ 2.25 ft. above grade .

on-site	10:22	temp	62 F
off-site	12:25	temp	67 F
sky cond.	Sunny		
wind speed	10 - 20	direct.	W - WNW

Hall Environmental Analysis Laboratory, Inc.

Date: 04-Jun-10

CLIENT: Blagg Engineering
Lab Order: 1005611
Project: GCU #204E
Lab ID: 1005611-01

Client Sample ID: MW #2R
Collection Date: 5/19/2010 10:45:00 AM
Date Received: 5/21/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	11	1.0		µg/L	1	6/1/2010 5:20:24 PM
Toluene	1.8	1.0		µg/L	1	6/1/2010 5:20:24 PM
Ethylbenzene	220	10		µg/L	10	6/1/2010 4:50:14 PM
Xylenes, Total	1800	20		µg/L	10	6/1/2010 4:50:14 PM
Surr: 4-Bromofluorobenzene	101	65.9-130		%REC	10	6/1/2010 4:50:14 PM

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

Hall Environmental Analysis Laboratory, Inc.

Date: 04-Jun-10

CLIENT: Blagg Engineering
Lab Order: 1005611
Project: GCU #204E
Lab ID: 1005611-02

Client Sample ID: MW #3
Collection Date: 5/19/2010 11:15:00 AM
Date Received: 5/21/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	210	10		µg/L	10	6/1/2010 6:51:41 PM
Toluene	2200	100		µg/L	100	6/2/2010 1:17:28 PM
Ethylbenzene	680	10		µg/L	10	6/1/2010 6:51:41 PM
Xylenes, Total	2500	20		µg/L	10	6/1/2010 6:51:41 PM
Surr: 4-Bromofluorobenzene	118	65.9-130		%REC	10	6/1/2010 6:51:41 PM

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

Hall Environmental Analysis Laboratory, Inc.

Date: 04-Jun-10

CLIENT: Blagg Engineering
Lab Order: 1005611
Project: GCU #204E
Lab ID: 1005611-03

Client Sample ID: MW #4
Collection Date: 5/19/2010 11:45:00 AM
Date Received: 5/21/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	5200	100		µg/L	100	6/1/2010 10:54:06 PM
Toluene	42	10		µg/L	10	6/1/2010 11:24:15 PM
Ethylbenzene	470	10		µg/L	10	6/1/2010 11:24:15 PM
Xylenes, Total	1500	20		µg/L	10	6/1/2010 11:24:15 PM
Surr: 4-Bromofluorobenzene	102	65.9-130		%REC	10	6/1/2010 11:24:15 PM

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

Hall Environmental Analysis Laboratory, Inc.

Date: 04-Jun-10

CLIENT: Blagg Engineering
Lab Order: 1005611
Project: GCU #204E
Lab ID: 1005611-04

Client Sample ID: MW #5
Collection Date: 5/19/2010 12:15:00 PM
Date Received: 5/21/2010
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1200	100		µg/L	100	6/2/2010 12:24:49 AM
Toluene	180	10		µg/L	10	6/2/2010 12:55:07 AM
Ethylbenzene	370	10		µg/L	10	6/2/2010 12:55:07 AM
Xylenes, Total	2600	200		µg/L	100	6/2/2010 12:24:49 AM
Surr: 4-Bromofluorobenzene	100	65.9-130		%REC	10	6/2/2010 12:55:07 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: BLAGE EVER. / BP America

Mailing Address: P.O. Box 87

Phone #: BLFD. NM 87413

email or Fax#: (505) 632-1199

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Project Manager:

Nelson Velez

Sampler: Nelson Velez

Container Type and #

Date Time Matrix Sample Request ID

5/19/10 1045

WATER

MW #2, R

2-40ml HCl & cool

1

5/19/10 1115

WATER

MW #3

2-40ml HCl & cool

2

5/19/10 1145

WATER

MW #4

2-40ml HCl & cool

3

5/19/10 1215

WATER

MW #5

2-40ml HCl & cool

4

Date: 5/19/10 1600

Relinquished by: [Signature]

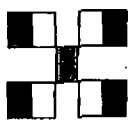
Relinquished by: [Signature]

Received by: [Signature]

Date: 5/21/10

Time: 0900

Remarks:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

TPH Method 8015B (Gas/Diesel)
BTEX + MTBE + TPH (Gas only)
BTEX + MTBE + TMBs (8021B)
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 PCBs
8260B (VOA)
8270 (Semi-VOA)
Air Bubbles (Y or N)

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #204E

Work Order: 1005611

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		MBLK				Batch ID: R39030	Analysis Date: 6/1/2010 9:34:51 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								
Surr: 4-Bromofluorobenzene	18.26	µg/L	0	20	0	91.3	65.9	130			
Sample ID: 100NG BTEX LCS		LCS				Batch ID: R39030	Analysis Date: 6/1/2010 7:52:20 PM				
Benzene	19.46	µg/L	1.0	20	0	97.3	87.9	121			
Toluene	19.81	µg/L	1.0	20	0	99.0	83	124			
Ethylbenzene	19.87	µg/L	1.0	20	0	99.4	81.7	122			
Xylenes, Total	62.71	µg/L	2.0	60	0	105	85.6	121			
Surr: 4-Bromofluorobenzene	20.45	µg/L	0	20	0	102	81.2	129			
Sample ID: 100NG BTEX LCSD		LCSD				Batch ID: R39030	Analysis Date: 6/1/2010 8:22:56 PM				
Benzene	20.08	µg/L	1.0	20	0	100	87.9	121	3.15	14.6	
Toluene	20.67	µg/L	1.0	20	0	103	83	124	4.27	18	
Ethylbenzene	20.96	µg/L	1.0	20	0	105	81.7	122	5.36	15.8	
Xylenes, Total	65.03	µg/L	2.0	60	0	108	85.6	121	3.64	15.9	
Surr: 4-Bromofluorobenzene	22.49	µg/L	0	20	0	112	81.2	129	0	0	

Qualifiers:

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-Chlorinated

R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

5/21/2010

Work Order Number 1005811

Received by: TLS

Checklist completed by:

Signature

Date

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 ☐

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?

-0.6°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

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

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

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

GCU # 204E - BLOW PIT
UNIT I, SEC. 34, T28N, R12W

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

Date : **October 30, 2010**

DEVELOPER / SAMPLER : **N J V**

Filename : **10-30-10.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	103.89	85.55	18.34	27.00	-	-	-	-	-
2R	99.49	83.94	15.55	22.65	1010	7.82	1,000	16.9	3.50
3	95.66	82.97	12.69	25.00	1045	6.95	1,100	16.2	6.00
4	98.63	83.16	15.47	21.94	1140	6.73	1,900	17.1	3.25
5	95.98	82.66	13.32	21.78	1215	6.88	1,300	17.4	4.25

INSTRUMENT CALIBRATIONS =

4.01/7.00/10.00

2,800

DATE & TIME =

10/28/10

0800

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in all MW's sampled (MW #2R, #3, #4, & #5). MW #2R, #4, #5 - pale yellowish orange tint in appearance. MW #3 - dark gray tint in appearance. Collected samples for BTEX per US EPA Method 8021B.

Top of casing MW #1 ~ 2.40 ft., MW #2R ~ 2.23 ft., MW #3 ~ 2.30 ft., MW #4 ~ 2.63 ft., MW #5 ~ 2.25 ft. above grade.

on-site	9:30	temp	47 F
off-site	12:30	temp	66 F
sky cond.	Sunny		
wind speed	0 - 10	direct.	E -ESE

Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-10

CLIENT: Blagg Engineering
Project: GCU #204E

Lab Order: 1011106

Lab ID: 1011106-01

Collection Date: 10/30/2010 10:00:00 AM

Client Sample ID: MW #2R

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	6.3	1.0		µg/L	1	11/8/2010 5:44:18 PM
Toluene	ND	1.0		µg/L	1	11/8/2010 5:44:18 PM
Ethylbenzene	86	1.0		µg/L	1	11/8/2010 5:44:18 PM
Xylenes, Total	410	20		µg/L	10	11/8/2010 5:18:04 PM
Surr: 4-Bromofluorobenzene	97.7	76.4-106		%REC	1	11/8/2010 5:44:18 PM

Lab ID: 1011106-02

Collection Date: 10/30/2010 10:45:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	350	10		µg/L	10	11/8/2010 6:36:54 PM
Toluene	210	10		µg/L	10	11/8/2010 6:36:54 PM
Ethylbenzene	340	10		µg/L	10	11/8/2010 6:36:54 PM
Xylenes, Total	1100	20		µg/L	10	11/8/2010 6:36:54 PM
Surr: 4-Bromofluorobenzene	98.4	76.4-106		%REC	10	11/8/2010 6:36:54 PM

Lab ID: 1011106-03

Collection Date: 10/30/2010 11:35:00 AM

Client Sample ID: MW #4

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	6500	100		µg/L	100	11/8/2010 7:03:23 PM
Toluene	63	10		µg/L	10	11/8/2010 7:29:44 PM
Ethylbenzene	600	10		µg/L	10	11/8/2010 7:29:44 PM
Xylenes, Total	1500	20		µg/L	10	11/8/2010 7:29:44 PM
Surr: 4-Bromofluorobenzene	98.7	76.4-106		%REC	10	11/8/2010 7:29:44 PM

Lab ID: 1011106-04

Collection Date: 10/30/2010 12:15:00 PM

Client Sample ID: MW #5

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	380	10		µg/L	10	11/8/2010 8:22:41 PM
Toluene	140	10		µg/L	10	11/8/2010 8:22:41 PM
Ethylbenzene	450	10		µg/L	10	11/8/2010 8:22:41 PM
Xylenes, Total	2200	200		µg/L	100	11/8/2010 7:56:09 PM
Surr: 4-Bromofluorobenzene	98.5	76.4-106		%REC	10	11/8/2010 8:22:41 PM

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: BLACK ENERGY / BP AMERICA

Mailing Address: P.O. BOX 87

Phone #: BUFD, NM 87413

(505) 632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Sample Request ID

Date

Time

Matrix

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Gen # 204E

Project #:

Project Manager:

Nelson Velez

Sampler: Nelson Velez

On Ice: Yes NO

Sample Temperature: 0.8°

Preservative Type

Container Type and #

HEATING

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

Received by:

Michael Spino

Received by:

11/10 14:50

Date

Time

Date

Time

Remarks:

Analysis Request

BTEX + MTBE + TMBs (80218)

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)

Air Bubbles (Y or N)

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: GCU #204E

Work Order: 1011106

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 5ml-rb		MBLK				Batch ID: R42024		Analysis Date: 11/8/2010 9:50:36 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: b5		MBLK				Batch ID: R42024		Analysis Date: 11/8/2010 9:14:52 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 lcs		LCS				Batch ID: R42024		Analysis Date: 11/8/2010 10:43:06 AM			
Benzene	20.74	µg/L	1.0	20	0	104	84.6	109			
Toluene	19.27	µg/L	1.0	20	0	96.3	81	114			
Sample ID: 100ng lcs2		LCS				Batch ID: R42024		Analysis Date: 11/8/2010 10:07:09 PM			
Benzene	19.45	µg/L	1.0	20	0	97.2	84.6	109			
Toluene	19.15	µg/L	1.0	20	0	95.8	81	114			

Qualifiers:

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-Chlorinated
 R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date Received:

11/2/2010

Work Order Number **1011106**

Received by: **MMG**

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name: Priority US Mail

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?

0.8°

<6° C Acceptable

If given sufficient time to cool.

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action