

3R - 0396

**ANNUAL
MONITORING
REPORT**

04/25/2008

BLAGG ENGINEERING, INC.

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

Phone: (505)632-1199 Fax: (505)632-3903

3R396

RECEIVED

2008 APR 30 PM 3 31

April 25, 2008

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

**Re: BP America Production Company
Groundwater Monitoring Report
GCU # 188, Unit J, Sec. 30, T29N, R12W, NMPM
San Juan County, New Mexico**

NMOCD Administrative/Environmental Order #: 3RP-396-0

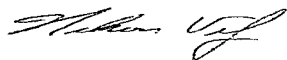
Dear Mr. von Gonten:

BP America Production Company (BP) has retained Blagg Engineering, Inc. (BEI) to conduct environmental monitoring of groundwater at the GCU # 188.

The last formal correspondence to NMOCD was conducted with a letter dated February 10, 2006. Since then, BP has followed its NMOCD approved groundwater management plan and continues to monitor the site. No permanent closure is requested at this time.

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

Respectfully submitted:
Blagg Engineering, Inc.



Nelson J. Velez
Staff Geologist

Attachment: Groundwater Report (2 copies)

cc: Mr. Brandon Powell, Environmental Specialist, NMOCD District III Office, Aztec, NM
Mr. Larry Schlotterback, Environmental Coordinator, BP, Farmington, NM (without lab report)
Ms. Shannon Hoover, Senior Geologist, URS Corp., Austin, Texas

3R396

BP AMERICA PRODUCTION CO.

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2008 APR 30 PM 3 31

GROUNDWATER REMEDIATION REPORT

**GCU #188
(J) SECTION 30, T29N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

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

APRIL 2008

**PREPARED BY:
BLAGG ENGINEERING, INC.
Consulting Petroleum / Reclamation Services
P.O. Box 87
Bloomfield, New Mexico 87413**

BP AMERICA PRODUCTION COMPANY
GCU # 188 - Production Tank Pit
NW/4 SE/4, Sec. 30, T29N, R12W

Pit Closure Date: 6/26/02

Monitor Well Installation Date: 3/11/03 (MW #2), 7/13/06 (MW #1 & #3), 5/23/07 (MW #4),
5/24/07 (MW #5 & #6)

Monitor Well Sampling Dates: 8/03/06, 10/30/06, 2/22/07, 5/08/07, 5/31/07, 6/25/07, 8/15/07,
11/15/07

Pit Closure & Background:

Initial groundwater impacts at this site were discovered in May 2003 following work on an earthen production tank pit. Impacted soils were removed from the site and a single groundwater monitoring well (MW #2) was placed in the source area to test water depth and quality. Initial water test results indicated impacts were present, but at levels near or below New Mexico Water Quality Control Commission (NMWQCC) standards. Quarterly monitoring was maintained and in August 2006, MW #2 had achieved four (4) consecutive sampling events below NMWQCC standards. The groundwater report submitted in 2006 recommended further delineation to quantify gradient and impact extent with a minimum of two (2) additional monitoring wells. The recommendation was achieved in 2006 with the installation of MW #1 (up gradient/background) and MW #3 (presumed down gradient direction). Upon review of the benzene, toluene, ethylbenzene, and total xylenes (BTEX) levels in MW #3, BP added three (3) additional monitor wells in 2007 in order to determine the lateral areal extent of the groundwater impacts (MW #4, MW #5, and MW #6).

Groundwater Monitor Well Sampling Procedures:

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

Fluids generated during monitor well development and purging were managed by discarding into the separator tank pit located on the well site. The tank pit contents are then disposed through approved NMOCD operational procedures for removal of produced fluids.

Groundwater Quality & Flow Direction Information:

Sampling of the groundwater monitor wells has been ongoing since March 2003. A summary of laboratory analytical results is included within the tables on the following pages and field/laboratory reports are included. General water quality sampling in May 2007 indicated chloride levels in MW #4 and MW #5 exceeded NMWQCC groundwater standards. These levels were not consistent with reported values seen within the other site monitor wells previously analyzed. Verification of the chloride levels was suggested by field screening and split sampling. BP agreed, and the sampling event in June 2007 revealed more consistency in the chloride levels previous observed (see last attached summary).

Groundwater elevations have consistently been measured with a gradient towards the north-northeast or north-northwest direction (Figure 2 through Figure 9).

Summary and/or Recommendations:

Hydrocarbon impact from the apparent source area (production tank pit) appears to have been remediated via excavation with natural attenuation and is presently meeting closure according to BP's NMOCD approved groundwater management plan. On-site monitor wells MW #3, MW #4, and MW #5 are currently being monitored on a quarterly basis and appear to be following the same decreasing trend in BTEX as previously recorded from MW #2. Total xylenes is the only analyte with concentrations above the NMWQCC groundwater standards in the most recent sampling event in November 2007 (MW #3 & MW #5 only). It is recommended to continue quarterly sampling until all three (3) monitor wells have achieved four (4) consecutive sampling events below NMWQCC standards.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS
 SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 188 - SEPARATOR PIT
UNIT J, SEC. 30, T29N, R12W

REVISED DATE: November 30, 2007

FILENAME: (188-4Q07.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
03-Aug-06	MW #1	18.02	22.05	2,910	2,700	6.77		ND	ND	ND	ND
14-Mar-03	MW #2	13.93	17.50	2,310	2,300	7.47		23	8.0	220	830
29-May-03		13.78			2,300	6.93		10	18	23	180
18-Aug-03		13.88			3,000	6.86		15	ND	37	220
18-Nov-03		13.45			2,700	6.86		31	ND	74	470
29-Mar-04		13.59			2,600	6.86		11	ND	24	180
23-Jun-04		13.68			2,800	6.78		12	ND	27	170
22-Dec-04		12.87			N/A	N/A		18	ND	71	520
28-Mar-05		12.86			2,300	6.79		9.3	15	42	220
23-Jun-05		12.60			2,300	6.72		6.3	12	29	120
21-Sep-05		13.31			2,300	6.65		9.0	7.7	18	190
03-Aug-06		13.45			2,300	6.68		2.4	2.9	3.6	72
03-Aug-06	MW #3	15.81	21.90	2,300	2,400	6.84		16	22	220	1,400
30-Oct-06		15.60			2,500	6.87		13	ND	190	1,000
22-Feb-07		15.12			2,400	7.01		13	12	250	1,300
08-May-07		15.23			2,400	6.83		8.1	6.6	190	860
15-Aug-07		15.45			2,700	6.77		9.9	7.1	110	460
15-Nov-07		15.14			2,500	6.91		8.0	7.0	95	700
31-May-07	MW #4	13.65	21.85	2,230	2,200	6.91		ND	27	ND	1,300
15-Aug-07		14.08			2,200	6.78		ND	ND	260	1,100
15-Nov-07		13.82			2,500	6.80		ND	ND	30	160
31-May-07	MW #5	14.25	21.28	2,260	2,200	7.00		11	32	790	4,400
15-Aug-07		14.70			2,400	6.84		11	ND	510	930
15-Nov-07		14.43			2,300	7.20		5.7	ND	510	680
31-May-07	MW #6	14.37	21.90	1,930	1,400	6.93		ND	ND	ND	ND
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

- NOTES : 1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS .
 2) RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS EXCEEDED .
 3) ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10) .

GENERAL WATER QUALITY

BP AMERICA PRODUCTION COMPANY

GCU # 188

Sample Dates : 8/3/06 (#1, #2, #3) & 5/31/07 (#4, #5, #6)

PARAMETERS	MW # 1	MW # 2	MW # 3	MW # 4	MW # 5	MW # 6	Units
LAB pH	6.86	6.75	7.08	7.27	7.39	7.31	s. u.
LAB CONDUCTIVITY @ 25 C	3,360	2,710	2,850	2,910	2,820	2,580	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	2,910	2,310	2,300	2,230	2,260	1,930	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	2,870	2,320	2,310	2,030	2,120	1,920	mg / L
SODIUM ABSORPTION RATIO	4.5	2.8	3.9	32.6	25.1	19.2	ratio
TOTAL ALKALINITY AS CaCO3	440	720	550	432	271	381	mg / L
TOTAL HARDNESS AS CaCO3	1,400	1,300	1,180	80.2	138	170.0	mg / L
BICARBONATE as HCO3	440	720	550	432	271	381	mg / L
CARBONATE AS CO3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	0.04	0.06	0.07	0.29	0.47	0.34	mg / L
NITRITE NITROGEN	< 0.01	< 0.01	< 0.01	0.03	0.03	0.03	mg / L
CHLORIDE	30.8	10.4	29.1	368	409	217	mg / L
FLUORIDE	0.56	0.76	0.40	1.44	1.08	0.92	mg / L
PHOSPHATE	< 0.01	< 0.01	< 0.01	1.29	5.20	4.76	mg / L
SULFATE	1,760	1,150	1,290	667	795	805	mg / L
IRON	< 0.001	< 0.001	0.223	0.003	0.037	0.005	mg / L
CALCIUM	219	431	160	22.9	39.4	30.5	mg / L
MAGNESIUM	206	52.4	187.0	5.60	9.60	23.0	mg / L
POTASSIUM	3.76	1.84	1.20	26.0	22.6	30.9	mg / L
SODIUM	386.0	234	305	671	676	578	mg / L
CATION / ANION DIFFERENCE	0.03	0.09	0.12	0.04	0.06	0.06	%

NOTES : 1) s. u. INDICATES STANDARD UNIT.
2) umhos / cm INDICATES MICRO OHMS PER CENTIMETER.
3) mg / L INDICATES MILLIGRAMS PER LITER.

WATER CHLORIDE TESTING ANALYSIS

BP AMERICA PRODUCTION COMPANY

GCU #188

Sample Date : 6 / 25 / 07

PARAMETER	MW # 4	MW # 5	MW # 6	Units
CHLORIDE				
ENVIROTECH LAB	57.0	58.0	50.0	mg / L
HALL ENVIRONMENTAL LAB	17	17	13	mg / L
FIELD SCREENING	< 31	< 31	< 31	mg / L

NOTE : 1) mg / L INDICATES MILLIGRAMS PER LITER.

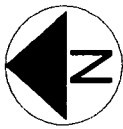


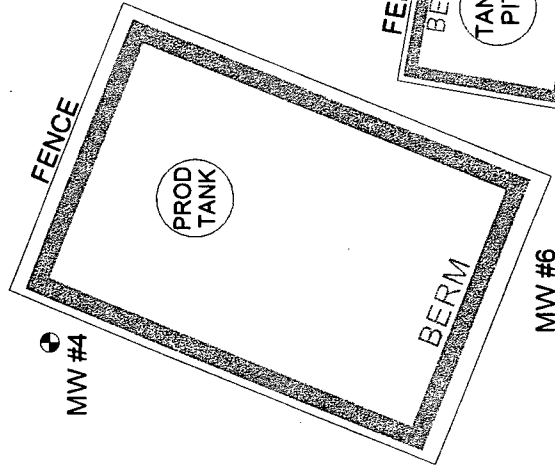
FIGURE 1

DIRECTION
TO SAN JUAN
RIVER

FENCE

MW #5

MW #4

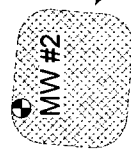


MW #3

MW #6



[SEP]



AREA
EXCAVATED
ON 6/26/02

MW #1

WELL
HEAD

1 INCH = 30 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.

BIP AMERICA PRODUCTION CO.

GCU #188

NW 1/4 SE 1/4 SEC. 30, 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: GCU188-SM3.SKF

REVISED: 05-24-07 NJV

SITE MAP

05/07



FIGURE 2
(3rd 1/4, 2006)

DIRECTION
TO SAN JUAN
RIVER

WELL
HEAD ⊕

APPARENT
GROUNDWATER
FLOW DIRECTION
~N22.5E

MW #3
(85.78)

85.85

85.90

85.95

86.00

MW #1
(86.06)

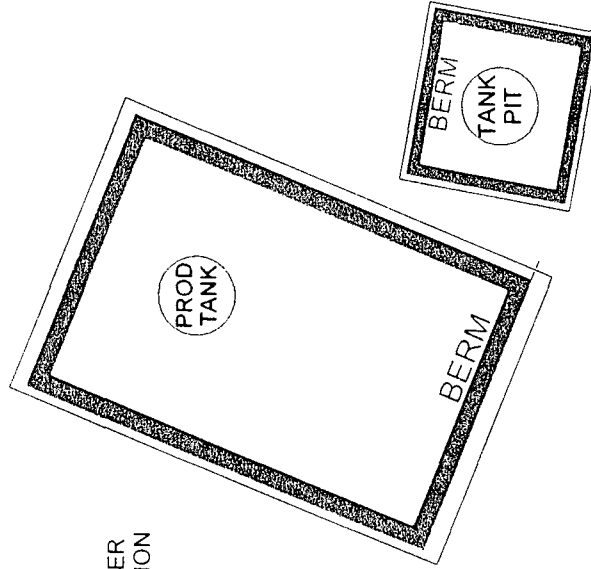
[SEP]

MW #2
(85.93)

AREA
EXCAVATED
ON 6/26/02

1 INCH = 30 FT.
0 30 60 FT.

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	Top of Well Elevation
MW #1	(104.08)
MW #2	(99.38)
MW #3	(101.59)
MW #1	Groundwater Elevation as of 8/3/06. (86.06)

BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, 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: 08-03-06-GW.SKF

REVISED: 08-04-06 NJV

GROUNDWATER
CONTOUR
MAP

08/06



FIGURE 3
(4th 1/4, 2006)

DIRECTION
TO SAN JUAN
RIVER

APPARENT
GROUNDWATER
FLOW DIRECTION
~N22.5E

WELL
HEAD ⊕

MW #3
(85.99)

86.05

86.10

86.15

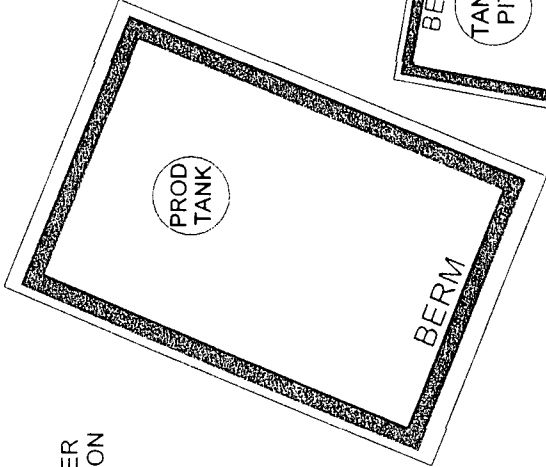
86.20

MW #1
(86.29)

MW #2
(86.15)

AREA
EXCAVATED
ON 6/26/02

SEP



Top of Well Elevation	
MW #1	(104.08)
MW #2	(99.38)
MW #3	(101.59)
MW #1	Groundwater Elevation as of 10/30/06.
⊕	(86.29)

1 INCH = 30 FT.



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BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 10-30-06-GW.SKF

REVISED: 10-30-06 NJV

GROUNDWATER

CONTOUR

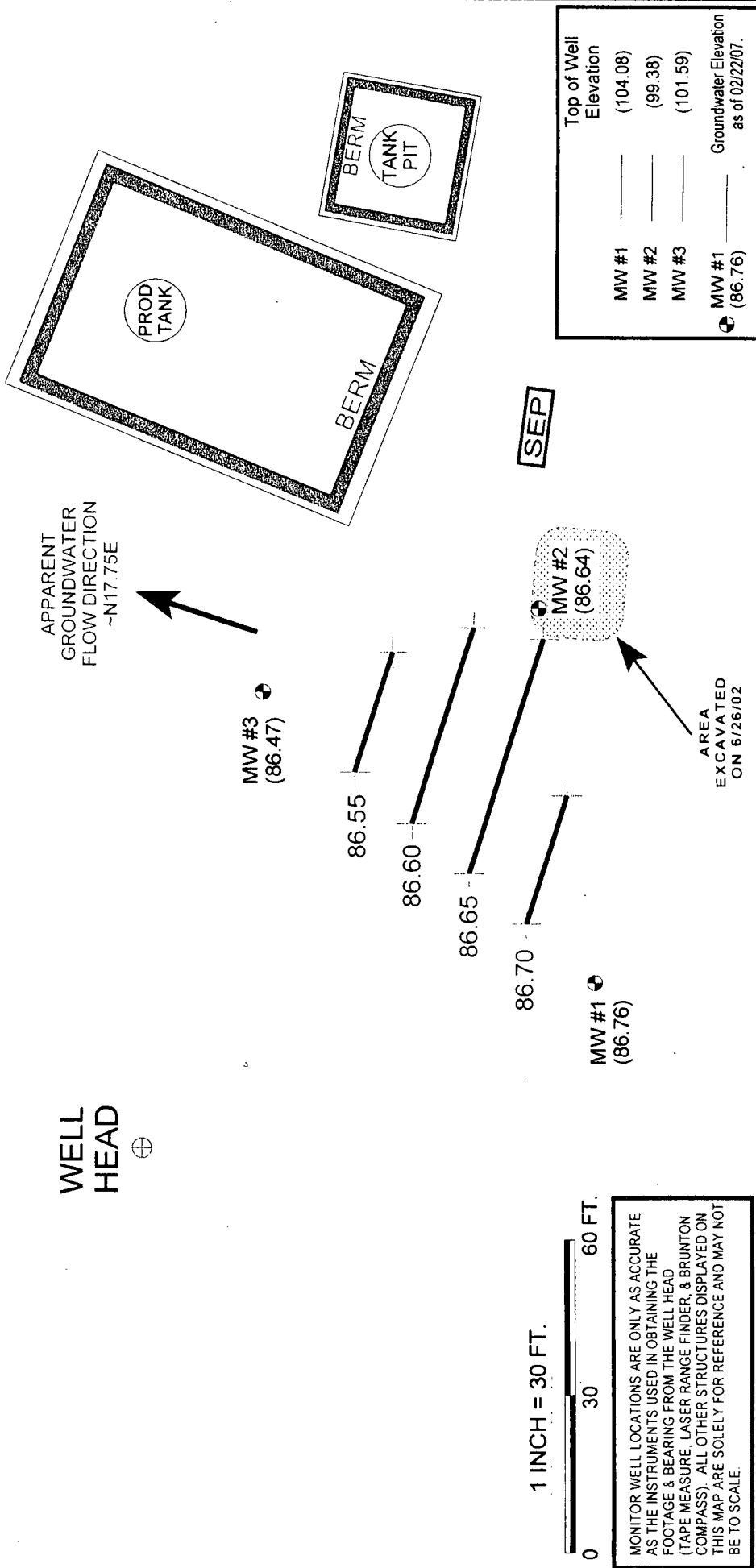
MAP

10/06



FIGURE 4
(1st 1/4, 2007)

DIRECTION
TO SAN JUAN
RIVER



BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 02-22-07-GW.SKF

REVISED: 02-22-07 NJV

**GROUNDWATER
CONTOUR
MAP**

02/07

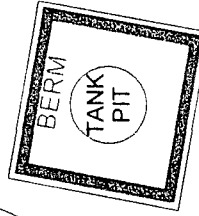
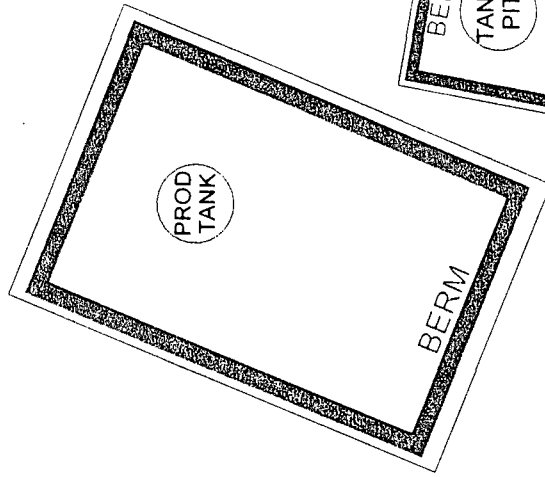


FIGURE 5
(2nd 1/4, 2007)

DIRECTION
TO SAN JUAN
RIVER

WELL
HEAD ⊕

APPARENT
GROUNDWATER
FLOW DIRECTION
~N16E



⊕
MW #3
(86.36)

86.45

86.50

86.55
⊕
MW #1
(86.59)

SEP

⊕
MW #2
(86.50)

AREA
EXCAVATED
ON 6/26/02

1 INCH = 30 FT.



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	Top of Well Elevation
MW #1	(104.08)
MW #2	(99.38)
MW #3	(101.59)
⊕ MW #1	Groundwater Elevation as of 5/8/07. (86.59)

BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 05-08-07-GW.SKF

REVISED: 05-08-07 NJV

**GROUNDWATER
CONTOUR
MAP**

05/07

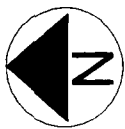


FIGURE 6
(2nd 1/4, 2007)

DIRECTION
TO SAN JUAN
RIVER

FENCE

APPARENT
GROUNDWATER
FLOW DIRECTION
~N12.5W

MW #5
(86.37)

MW #4
(86.43)

86.45

MW #3
(86.54)

86.55

~DUE
NORTH

86.65

MW #1
(86.73)

MW #2
(86.66)

[SEP]

MW #6
(86.64)

FENCE

BERM

PROD
TANK

BERM

TANK
PIT

WELL
HEAD



Top of Well
Elevation

MW #1

(104.08)

MW #2

(99.36)

MW #3

(101.59)

MW #4

(100.08)

MW #5

(100.62)

MW #6

(101.01)

MW #1
(86.73)

Groundwater Elevation
as of 5/31/07.

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1 INCH = 30 FT.



BP AMERICA PRODUCTION CO.

GCU #188

NW/4 SE/4 SEC. 30, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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CONSULTING PETROLEUM / RECLAMATION SERVICES

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BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

DRAWN BY: NJV

FILENAME: 05-31-07-GW.SKF

REVISED: 05-31-07 NJV

GROUNDWATER

CONTOUR

MAP

05/07



FIGURE 7
(2nd 1/4, 2007)

DIRECTION
TO SAN JUAN
RIVER

FENCE

APPARENT
GROUNDWATER
FLOW DIRECTION
~N19.25W

MW #4
(86.49)

MW #5
(86.42)

86.50

86.55

MW #3
(86.58)

86.60

~N13W

~N8.75W

~N5.5W

~N7.25W

86.70

MW #1
(86.75)

MW #1 _____ Top of Well
Elevation
(104.08)

MW #2 _____ Top of Well
Elevation
(99.36)

MW #3 _____ Top of Well
Elevation
(101.59)

MW #4 _____ Top of Well
Elevation
(100.08)

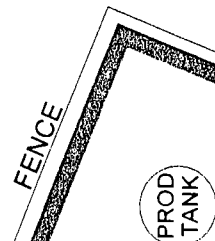
MW #5 _____ Top of Well
Elevation
(100.62)

MW #6 _____ Top of Well
Elevation
(101.01)

MW #1 _____ Groundwater Elevation
(86.75) as of 6/25/07.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE
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BE TO SCALE.

WELL
HEAD ⊕



PROD
TANK

FENCE
BERM
TANK
PIT

MW #6
(86.71)

SEP

MW #2
(86.70)

AREA
EXCAVATED
ON 6/26/02

1 INCH = 30 FT.

0 30 60 FT.

BP AMERICA PRODUCTION CO.
GCU #188
NW/4 SE/4 SEC. 30, 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: 06-25-07-GW-SKF
REVISED: 06-25-07 NJV

**GROUNDWATER
CONTOUR
MAP**
06/07

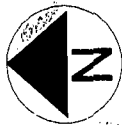
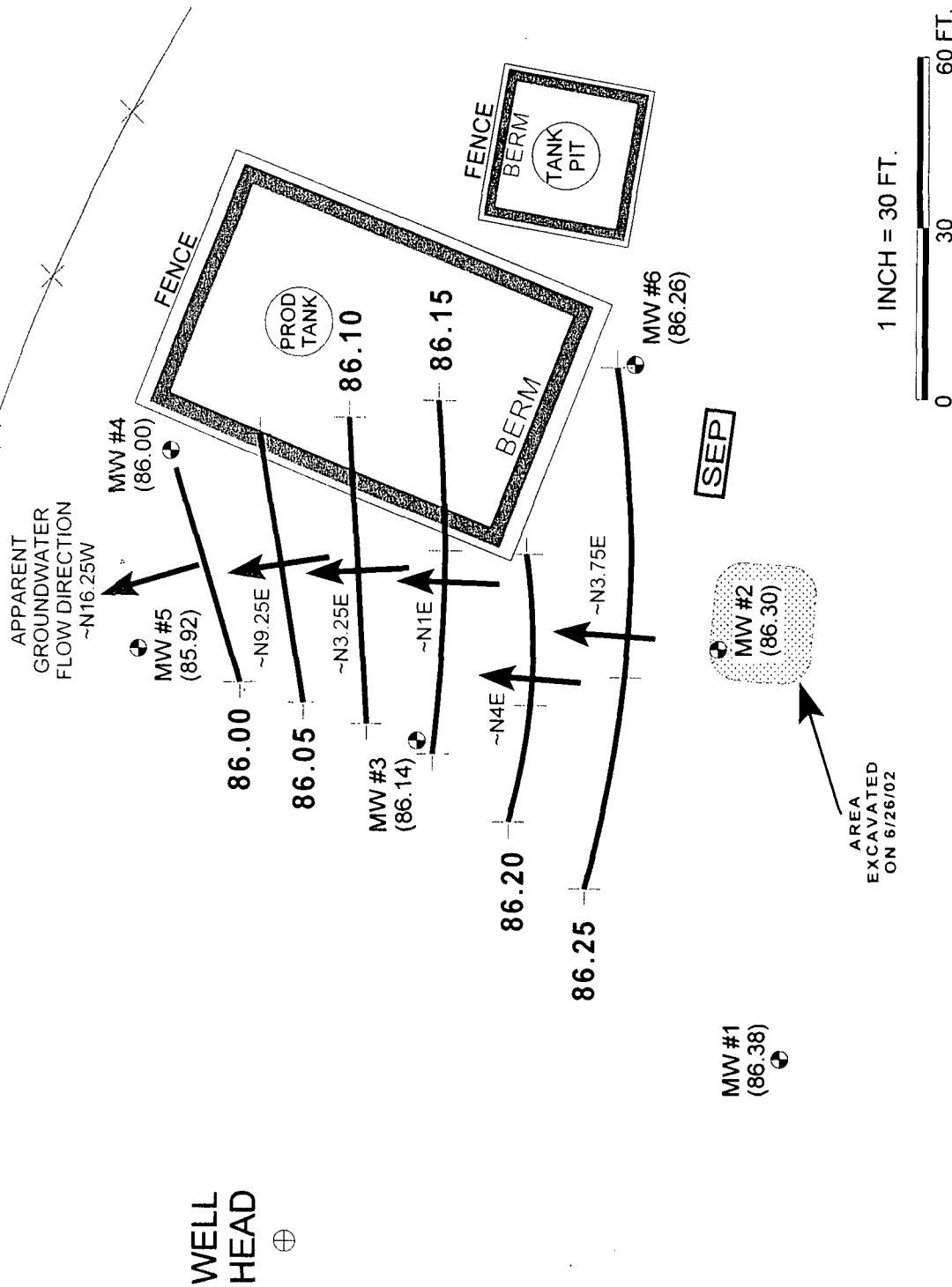


FIGURE 8
(3rd 1/4, 2007)



Top of Well Elevation	
MW #1	(104.08)
MW #2	(99.36)
MW #3	(101.59)
MW #4	(100.08)
MW #5	(100.62)
MW #6	(101.01)
MW #1	Groundwater Elevation as of 8/15/07.

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 #188

NW/4 SE/4 SEC 30, 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 GROUNDWATER

DRAWN BY: NJV

FILENAME: 08-15-07-GW.SKF

REVISED: 08-15-07 NJV

CONTOUR

MAP

08/07



FIGURE 9
(4th 1/4, 2007)

DIRECTION
TO SAN JUAN
RIVER

FENCE

APPARENT
GROUNDWATER
FLOW DIRECTION
~N5.5W

WELL
HEAD ⊕

MW #5
(86.19)

MW #4
(86.26)

86.30

86.40

MW #3
(86.45)

86.50

86.60

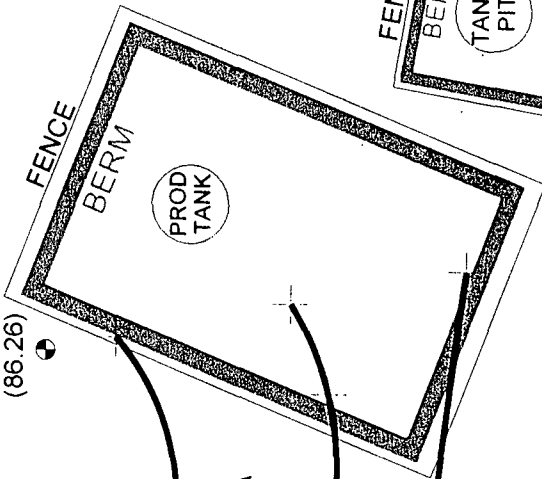
MW #1
(86.70)

MW #2
(86.67)

MW #6
(86.56)

[SEP]

AREA
EXCAVATED
ON 6/26/02



Top of Well
Elevation

MW #1	(104.08)
MW #2	(99.36)
MW #3	(101.59)
MW #4	(100.08)
MW #5	(100.62)
MW #6	(101.01)

Groundwater Elevation
as of 11/15/07.

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.

1 INCH = 30 FT.

0 30 60 FT.

BP AMERICA PRODUCTION CO

GCU #188

NW/4 SE/4 SEC. 30, 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: 11-15-07-GW.SKF

REVISED: 11-15-07 NJV

GROUNDWATER
CONTOUR
MAP

11/07

BLAGG ENGINEERING, Inc.

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

MW #1

BORE / TEST HOLE REPORT

BORING #..... BH - 2
MW #..... 1
PAGE #..... 2
DATE STARTED 7/13/06
DATE FINISHED 7/13/06
OPERATOR..... KP
PREPARED BY NJV

CLIENT: BP AMERICA PRODUCTION COMPANY
LOCATION NAME: GCU # 188 PROD. TANK PIT - UNIT J, SEC. 30, T29N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED: MOBILE DRILL RIG (CME 75)
BORING LOCATION: 129.5 FEET, S53.5E FROM WELL HEAD.

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
1				TOP OF CASING APROX. 1.90 FT. ABOVE GRADE.
2				
3				
4				
5				
6				
7				
8				
9				
10			TOS 10.15 ft.	DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 20.0 FT. BELOW GRADE).
11				
12				
13				
14				
15				
16				DEPTH TO WATER APPROX. 16.08 FT. BELOW GRADE, MEASURED 7/27/06.
17				
18				
19				
20			TD 20.15 ft.	
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

NOTES: ☐ - SAND.
TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 1.90 ft. above grade to 10.15 ft. below grade, 0.010 slotted screen between 10.15 to 20.15 feet below grade, sand packed annular to 8 ft. below grade, bentonite chips from 6 to 8 ft. below grade, clean fill to 3 ft. below grade, bentonite chips to surface. Cemented well protector around above grade casing and secured with padlock.

BLAGG ENGINEERING, Inc.

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

MW #2

BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**
LOCATION NAME: **GCU # 188 PROD. TANK PIT - UNIT J, SEC. 30, T29N, R12W**
CONTRACTOR: **BLAGG ENGINEERING, INC.**
EQUIPMENT USED: **MOBILE DRILL RIG (EARTHPROBE 200)**
BORING LOCATION: **129.5 FEET, S53.5E FROM WELL HEAD.**

BORING #..... **BH - 1**
MW #..... **2**
PAGE #..... **1**
DATE STARTED **3/11/03**
DATE FINISHED **3/11/03**
OPERATOR..... **JCB**
PREPARED BY **NJV**

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
1				GROUND SURFACE
2				TOP OF CASING APROX. AT GRADE.
3				
4				
5				BACKFILL MATERIAL - DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 10.0 FT. BELOW GRADE).
6				
7				
8				SAMPLE 1 @ 8 FT. - CONDUCTED DURING TEST HOLE ADVANCEMENT ON 6/26/02; TIME COLLECTED 1005. OVM = 780 ppm; TPH = 2,190 ppm; Benzene = ND ppb; Total BTEX = 785 ppb (see Pit Closure Field Report for additional information).
9				
10				
11				MEDIUM GRAY TO BLACK SAND, NON COHESIVE, MOIST TO SATURATED, STRONG HYDRO - CARBON ODOR DETECTED WITHIN CUTTINGS (10.0 - 18.5 FT. BELOW GRADE).
12				
13				DEPTH TO WATER APPROX. 13.41 FT. BELOW GRADE, MEASURED 7/27/06.
14				BH1 @ 14 FT. - CONDUCTED DURING DRILLING ON 3/11/03; TIME COLLECTED 1050. TPH = 497 ppm (Envirotech) TPH = 3,400 ppm (iina ba lab - formerly On-Site Technology) TPH = 3,390 ppm. (Hall Environmental).
15				
16				
17				
18				
19				BLACK SAND & GRAVEL, NON COHESIVE, SATURATED, STRONG HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS, (18.5 - 19.5 FT. BELOW GRADE).
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

NOTES: - SAND.

- SAND & GRAVEL.

OVM - organic vapor meter or PID (photoionization detector).
ppm - parts per million.
ppb - parts per billion.
TPH - total petroleum hydrocarbons (US Epa modified method 8015B).
BTEX - benzene, toluene, ethylbenzene, & total xylenes (US Epa method 8021B).
TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

OVM CALIBRATION:
129.7 ppm; RF = 0.52
(RF = response factor).
250 ppm calibration gas
- isobutylene.
Date - 6/26/02.
Time - 1024.

Monitor well consist of 2 inch PVC piping - casing from grade to 12.50 ft. below grade, 0.010 slotted screen between 12.50 to 17.50 feet below grade, sand packed annular to 1 ft. below grade. Slip cap at top of casing.

BLAGG ENGINEERING, Inc.

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

MW #3

BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**
LOCATION NAME: **GCU # 188 PROD. TANK PIT - UNIT J, SEC. 30, T29N, R12W**
CONTRACTOR: **BLAGG ENGINEERING, INC.**
EQUIPMENT USED: **MOBILE DRILL RIG (EARTHPROBE 200)**
BORING LOCATION: **91 FEET, S75E FROM WELL HEAD.**

BORING #..... **BH - 3**
MW #..... **3**
PAGE #..... **3**
DATE STARTED **7/13/06**
DATE FINISHED **7/13/06**
OPERATOR..... **KP**
PREPARED BY **NJV**

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
				TOP OF CASING APROX. 2.40 FT. ABOVE GRADE.
1				
2				
3				
4				
5				DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, LOOSE TO FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 12.0 FT. BELOW GRADE).
6				
7				
8				
9				
10			TOS 9.50 ft.	
11				DEPTH TO WATER APPROX. 11.37 FT. BELOW GRADE, MEASURED 7/27/06.
12				SAMPLE BH3 @ 12 FT. - TIME COLLECTED 1004, OVM = 314 ppm (collected from auger cuttings - depth of sample uncertain).
13				
14				
15				DARK YELLOWISH ORANGE/MEDIUM GRAY SAND MIX, PHASING INTO MEDIUM DARK GRAY SAND, NON COHESIVE, MOIST TO SATURATED, STRONG HYDROCARBON ODOR DETECTED WITHIN CUTTINGS (12.0 - 20.0 FT. BELOW GRADE).
16				
17				
18				
19				
20			TD 19.50 ft.	
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

NOTES: - SAND.

OVM - organic vapor meter or PID (photoionization detector).
ppm - parts per million.
TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.40 ft. above grade to 9.50 ft. below grade, 0.010 slotted screen between 9.50 to 19.50 feet below grade, sand packed annular to 7 ft. below grade, bentonite chips from 5 to 7 ft. below grade, clean fill to 3 ft. below grade, bentonite chips to surface. Cemented well protector around above grade casing and secured with padlock.

OVM CALIBRATION:
53.8 ppm; RF = 0.52
(RF = response factor).
100 ppm calibration gas
- isobutylene.
Date - 7/13/06.
Time - 1011.

BLAGG ENGINEERING, Inc.

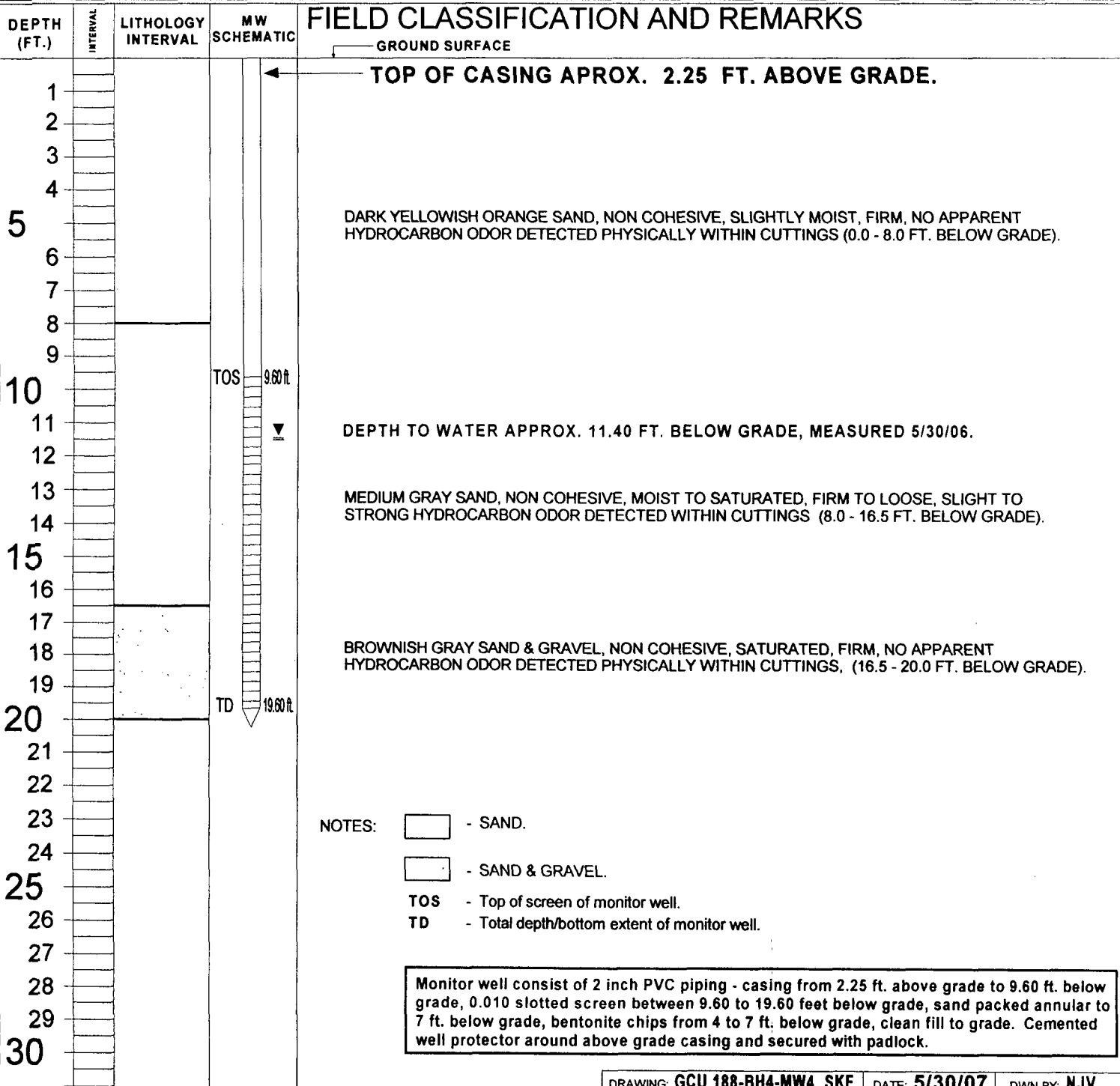
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #4

BORE / TEST HOLE REPORT

BORING #.....	BH - 4
MW #.....	4
PAGE #.....	4
DATE STARTED	5/23/07
DATE FINISHED	5/23/07
OPERATOR.....	DP
PREPARED BY	NJV

CLIENT:	BP AMERICA PRODUCTION COMPANY
LOCATION NAME:	GCU # 188 PROD. TANK PIT - UNIT J, SEC. 30, T29N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	140 FEET, N81.75E FROM WELL HEAD.



BLAGG ENGINEERING, Inc.

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

MW #5

BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**
LOCATION NAME: **GCU # 188 PROD. TANK PIT - UNIT J, SEC. 30, T29N, R12W**
CONTRACTOR: **BLAGG ENGINEERING, INC.**
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75)**
BORING LOCATION: **107 FEET, N76E FROM WELL HEAD.**

BORING #..... **BH - 5**
MW #..... **5**
PAGE #..... **5**
DATE STARTED **5/24/07**
DATE FINISHED **5/24/07**
OPERATOR..... **DP**
PREPARED BY **NJV**

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
				TOP OF CASING APROX. 2.40 FT. ABOVE GRADE.
1				
2				
3				
4				
5				
6				
7				DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 13.0 FT. BELOW GRADE).
8				
9			TOS 8.88 ft.	
10				
11				DEPTH TO WATER APPROX. 11.84 FT. BELOW GRADE, MEASURED 5/30/06.
12				
13				
14				MEDIUM TO MEDIUM DARK GRAY SAND, NON COHESIVE, SLIGHTLY MOIST TO WET, FIRM, STRONG APPARENT HYDROCARBON ODOR DETECTED WITHIN CUTTINGS (13.0 - 16.5 FT. BELOW GRADE).
15				
16				
17				
18				BROWNISH GRAY SAND & GRAVEL, NON COHESIVE, SATURATED, FIRM TO DENSE, SLIGHT APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (16.5 - 19.5 FT. BELOW GRADE).
19			TD 18.88 ft.	
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

NOTES:

☐ - SAND.

☐ - SAND & GRAVEL.

TOS - Top of screen of monitor well.

TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.40 ft. above grade to 8.88 ft. below grade, 0.010 slotted screen between 8.88 to 18.88 feet below grade, sand packed annular to 6 ft. below grade, bentonite chips from 3 to 6 ft. below grade, clean fill to grade. Cemented well protector around above grade casing and secured with padlock.

BLAGG ENGINEERING, Inc.

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

MW #6

BORE / TEST HOLE REPORT

CLIENT: **BP AMERICA PRODUCTION COMPANY**
LOCATION NAME: **GCU # 188 PROD. TANK PIT - UNIT J, SEC. 30, T29N, R12W**
CONTRACTOR: **BLAGG ENGINEERING, INC.**
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75)**
BORING LOCATION: **166 FEET, S68E FROM WELL HEAD.**

BORING #..... **BH - 6**
MW #..... **6**
PAGE #..... **6**
DATE STARTED **5/24/07**
DATE FINISHED **5/24/07**
OPERATOR..... **DP**
PREPARED BY **NJV**

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
				TOP OF CASING APROX. 2.30 FT. ABOVE GRADE.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10			TOS 9.60 ft.	
11				
12				DEPTH TO WATER APPROX. 12.06 FT. BELOW GRADE, MEASURED 5/30/06.
13				
14				
15				
16				
17				
18				
19				
20			TD 19.60 ft.	
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

NOTES: ☐ - SAND.
☐ - SAND & GRAVEL.
 TOS - Top of screen of monitor well.
 TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.30 ft. above grade to 9.60 ft. below grade, 0.010 slotted screen between 9.60 to 19.60 feet below grade, sand packed annular to 6 ft. below grade, bentonite chips from 3 to 6 ft. below grade, clean fill to grade. Cemented well protector around above grade casing and secured with padlock.

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date: August 3, 2006

SAMPLER: N J V

Filename: 08-03-06.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	104.08	86.06	18.02	22.05	0925	6.77	2,700	22.2	2.00
MW - 2	99.38	85.93	13.45	17.50	1000	6.68	2,300	24.1	2.00
MW - 3	101.59	85.78	15.81	21.90	1040	6.84	2,400	24.9	3.00

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

08/03/06 0755

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 . Collected BTEX and major Anions / Cations from all MW 's .

Top of casing MW # 1 ~ 1.90 ft. , MW # 2 ~ @ grade , MW # 3 ~ 2.40 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 11-Aug-06

CLIENT: Blagg Engineering
Project: GCU #188

Lab Order: 0608080

Lab ID: 0608080-01

Collection Date: 8/3/2006 9:25:00 AM

Client Sample ID: MW #1

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	ND	1.0		µg/L	1	8/7/2006 11:19:52 AM
Toluene	ND	1.0		µg/L	1	8/7/2006 11:19:52 AM
Ethylbenzene	ND	1.0		µg/L	1	8/7/2006 11:19:52 AM
Xylenes, Total	ND	3.0		µg/L	1	8/7/2006 11:19:52 AM
Surr: 4-Bromofluorobenzene	88.4	72.2-125		%REC	1	8/7/2006 11:19:52 AM

Lab ID: 0608080-02

Collection Date: 8/3/2006 10:00:00 AM

Client Sample ID: MW #2

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	2.4	1.0		µg/L	1	8/7/2006 11:49:51 AM
Toluene	2.9	1.0		µg/L	1	8/7/2006 11:49:51 AM
Ethylbenzene	3.6	1.0		µg/L	1	8/7/2006 11:49:51 AM
Xylenes, Total	72	3.0		µg/L	1	8/7/2006 11:49:51 AM
Surr: 4-Bromofluorobenzene	106	72.2-125		%REC	1	8/7/2006 11:49:51 AM

Lab ID: 0608080-03

Collection Date: 8/3/2006 10:40:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Benzene	16	10		µg/L	10	8/8/2006 10:02:38 AM
Toluene	22	10		µg/L	10	8/8/2006 10:02:38 AM
Ethylbenzene	220	10		µg/L	10	8/8/2006 10:02:38 AM
Xylenes, Total	1400	30		µg/L	10	8/8/2006 10:02:38 AM
Surr: 4-Bromofluorobenzene	101	72.2-125		%REC	10	8/8/2006 10:02:38 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

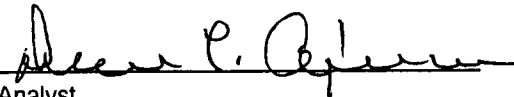
Client: Blagg / BP
Sample ID: MW #1
Laboratory Number: 38046
Chain of Custody: 14550
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

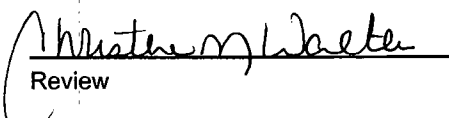
Project #: 94034-010
Date Reported: 08-04-06
Date Sampled: 08-03-06
Date Received: 08-03-06
Date Extracted: N/A
Date Analyzed: 08-04-06

Parameter	Analytical Result	Units		
pH	6.86	s.u.		
Conductivity @ 25° C	3,360	umhos/cm		
Total Dissolved Solids @ 180C	2,910	mg/L		
Total Dissolved Solids (Calc)	2,870	mg/L		
SAR	4.5	ratio		
Total Alkalinity as CaCO3	440	mg/L		
Total Hardness as CaCO3	1,400	mg/L		
Bicarbonate as HCO3	440	mg/L	7.21	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.04	mg/L	0.00	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	30.8	mg/L	0.87	meq/L
Fluoride	0.56	mg/L	0.03	meq/L
Phosphate	<0.01	mg/L	0.00	meq/L
Sulfate	1,760	mg/L	36.64	meq/L
Iron	<0.001	mg/L	0.00	meq/L
Calcium	219	mg/L	10.93	meq/L
Magnesium	206	mg/L	16.95	meq/L
Potassium	3.76	mg/L	0.10	meq/L
Sodium	386.0	mg/L	16.79	meq/L
Cations			44.77	meq/L
Anions			44.75	meq/L
Cation/Anion Difference			0.03%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: GCU #188 Grab Sample


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

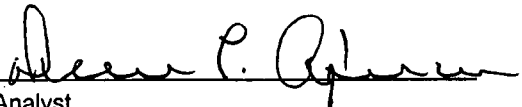
Client: Blagg / BP
Sample ID: MW #2
Laboratory Number: 38047
Chain of Custody: 14550
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

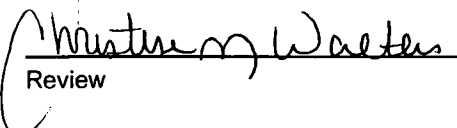
Project #: 94034-010
Date Reported: 08-04-06
Date Sampled: 08-03-06
Date Received: 08-03-06
Date Extracted: N/A
Date Analyzed: 08-04-06

Parameter	Analytical Result	Units		
pH	6.75	s.u.		
Conductivity @ 25° C	2,710	umhos/cm		
Total Dissolved Solids @ 180C	2,310	mg/L		
Total Dissolved Solids (Calc)	2,320	mg/L		
SAR	2.8	ratio		
Total Alkalinity as CaCO3	720	mg/L		
Total Hardness as CaCO3	1,300	mg/L		
Bicarbonate as HCO3	720	mg/L	11.80	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.06	mg/L	0.00	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	10.4	mg/L	0.29	meq/L
Fluoride	0.76	mg/L	0.04	meq/L
Phosphate	<0.01	mg/L	0.00	meq/L
Sulfate	1,150	mg/L	23.94	meq/L
Iron	<0.001	mg/L	0.00	meq/L
Calcium	431	mg/L	21.51	meq/L
Magnesium	52.4	mg/L	4.31	meq/L
Potassium	1.84	mg/L	0.05	meq/L
Sodium	234	mg/L	10.18	meq/L
Cations			36.04	meq/L
Anions			36.08	meq/L
Cation/Anion Difference			0.09%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: GCU #188 Grab Sample


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

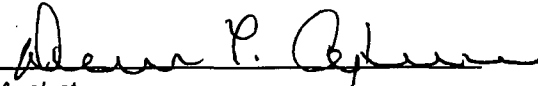
Client: Blagg / BP
Sample ID: MW #3
Laboratory Number: 38048
Chain of Custody: 14550
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

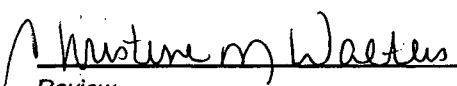
Project #: 94034-010
Date Reported: 08-04-06
Date Sampled: 08-03-06
Date Received: 08-03-06
Date Extracted: N/A
Date Analyzed: 08-04-06

Parameter	Analytical Result	Units		
pH	7.08	s.u.		
Conductivity @ 25° C	2,850	umhos/cm		
Total Dissolved Solids @ 180C	2,300	mg/L		
Total Dissolved Solids (Calc)	2,310	mg/L		
SAR	3.9	ratio		
Total Alkalinity as CaCO3	550	mg/L		
Total Hardness as CaCO3	1,180	mg/L		
Bicarbonate as HCO3	550	mg/L	9.01	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.07	mg/L	0.00	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	29.1	mg/L	0.82	meq/L
Fluoride	0.40	mg/L	0.02	meq/L
Phosphate	<0.01	mg/L	0.00	meq/L
Sulfate	1,290	mg/L	26.86	meq/L
Iron	0.223	mg/L	0.01	meq/L
Calcium	160	mg/L	7.98	meq/L
Magnesium	187	mg/L	15.39	meq/L
Potassium	1.20	mg/L	0.03	meq/L
Sodium	305	mg/L	13.27	meq/L
Cations			36.67	meq/L
Anions			36.72	meq/L
Cation/Anion Difference			0.12%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: GCU #188 Grab Sample


Analyst


Review

CHAIN OF CUSTODY RECORD

14550

Client / Project Name <i>BLAGE/BP</i>		Project Location <i>GCN #188</i>		ANALYSIS / PARAMETERS									
Sampler: <i>NV</i>		Client No. <i>94034-010</i>		Sample Matrix		No. of Containers		MAJOR IONS ANIONS CATIONS				Remarks <i>PREPARED COX GCAB SAMPLES</i>	
Sample No./ Identification	Sample Date	Sample Time	Lab Number										
<i>MW #1</i>	<i>8/3/06</i>	<i>0925</i>	<i>38046</i>				<i>1</i>	<i>✓</i>					
<i>MW #2</i>	<i>8/3/06</i>	<i>1000</i>	<i>38047</i>				<i>1</i>	<i>✓</i>					
<i>MW #3</i>	<i>8/3/06</i>	<i>1040</i>	<i>38048</i>				<i>1</i>	<i>✓</i>					
Relinquished by: (Signature) <i>[Signature]</i>		Date <i>8/3/06</i>		Time <i>1440</i>		Received by: (Signature) <i>[Signature]</i>		Date <i>8/3/06</i>		Time <i>1440</i>			
Relinquished by: (Signature)						Received by: (Signature)							
Relinquished by: (Signature)						Received by: (Signature)							

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

ENVIROTECH INC.

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0608080

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML RB		MBLK				Batch ID: R20190	Analysis Date: 8/7/2006 8:55:16 AM		
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 5ML RB		MBLK				Batch ID: R20214	Analysis Date: 8/8/2006 8:22:39 AM		
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS		LCS				Batch ID: R20190	Analysis Date: 8/7/2006 5:21:30 PM		
Benzene	22.37	µg/L	1.0	112	85	115			
Toluene	22.31	µg/L	1.0	112	85	118			
Ethylbenzene	22.12	µg/L	1.0	111	85	116			
Xylenes, Total	45.47	µg/L	3.0	112	85	119			
Sample ID: 100NG BTEX LCS		LCS				Batch ID: R20214	Analysis Date: 8/8/2006 10:32:48 AM		
Benzene	22.74	µg/L	1.0	114	85	115			
Toluene	22.72	µg/L	1.0	114	85	118			
Ethylbenzene	22.41	µg/L	1.0	112	85	116			
Xylenes, Total	46.40	µg/L	3.0	116	85	119			
Sample ID: 100NG BTEX LCSD		LCSD				Batch ID: R20190	Analysis Date: 8/7/2006 5:51:39 PM		
Benzene	22.11	µg/L	1.0	111	85	115	1.17	27	
Toluene	21.63	µg/L	1.0	108	85	118	3.09	19	
Ethylbenzene	21.93	µg/L	1.0	110	85	116	0.863	10	
Xylenes, Total	45.31	µg/L	3.0	111	85	119	0.361	13	

Qualifiers:

E	Value above quantitation range	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	Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

8/4/2006

Work Order Number 0608080

Received by GLS

Checklist completed by

Signature

Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

4°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date: October 30, 2006

SAMPLER: N J V

Filename: 10-30-06.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	104.08	86.29	17.79	22.05	-	-	-	-	-
MW - 2	99.38	86.15	13.23	17.50	-	-	-	-	-
MW - 3	101.59	85.99	15.60	21.90	1410	6.87	2,500	19.4	3.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
10/27/06	0845

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 # 3. Collected BTEX from MW # 3 only.

Top of casing MW # 1 ~ 1.90 ft., MW # 2 ~ @ grade, MW # 3 ~ 2.40 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 06-Nov-06

CLIENT: Blagg Engineering
Lab Order: 0611007
Project: GCU #188
Lab ID: 0611007-01

Client Sample ID: MW #3
Collection Date: 10/30/2006 2:10:00 PM
Date Received: 11/1/2006
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	13	10		µg/L	10	11/3/2006 2:32:16 PM
Toluene	ND	10		µg/L	10	11/3/2006 2:32:16 PM
Ethylbenzene	190	10		µg/L	10	11/3/2006 2:32:16 PM
Xylenes, Total	1000	30		µg/L	10	11/3/2006 2:32:16 PM
Surr: 4-Bromofluorobenzene	85.9	72.2-125		%REC	10	11/3/2006 2:32:16 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
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

CHAIN-OF-CUSTODY RECORD

Client: BRACER ENR. / BP AMERICA

Address: P.O. BOX 87

B.F.D., NM 87413

Phone #: 632-1199

Fax #:

Date

Time

Matrix

Sample I.D. No.

Number/Volume

Preservative

HgCl₂ HNO₃

HEAL No.

2-40ml

✓

06/11/07

-1

10/30/06

1410

WATER

MW #3

QA/QC Package:

Std ☐ Level 4 ☐

Other:

Project Name:

GC #188

Project #:

95

Project Manager:

NV

Sampler:

NV

Sample Temperature:

3°

Number/Volume

Preservative

HgCl₂ HNO₃

HEAL No.

06/11/07

-1

✓

2-40ml

✓

06/11/07

-1

✓

2-40ml

✓

06/11/07

-1

✓

2-40ml

✓

06/11/07

-1

✓

2-40ml

✓

06/11/07

-1

✓

2-40ml

✓

HALL ENVIRONMENTAL
ANALYSIS LABORATORY

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com

ANALYSIS REQUEST

BTX + MTBE + TPH (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F⁻, Cl⁻, NO₃⁻, NO₂⁻, PO₄³⁻, SO₄²⁻)

8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

Remarks:

Received By: (Signature)

11-02

10:10

Relinquished By: (Signature)

Date: 10/30/06

Time: 1700

Relinquished By: (Signature)

Date: 10/30/06

Time: 1700

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0611007

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

Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R21272 Analysis Date: 11/2/2006 8:24:59 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	3.0

Sample ID: 5ML REAGENT BLA

MBLK

Batch ID: R21286 Analysis Date: 11/3/2006 8:55:37 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	3.0

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R21272 Analysis Date: 11/2/2006 5:13:35 PM

Benzene	18.71	µg/L	1.0	93.6	85	115
Toluene	18.92	µg/L	1.0	94.6	85	118
Ethylbenzene	18.78	µg/L	1.0	91.3	85	116
Xylenes, Total	37.98	µg/L	3.0	91.3	85	119

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R21286 Analysis Date: 11/3/2006 7:10:49 PM

Benzene	19.89	µg/L	1.0	99.4	85	115
Toluene	20.41	µg/L	1.0	102	85	118
Ethylbenzene	20.50	µg/L	1.0	103	85	116
Xylenes, Total	61.61	µg/L	3.0	103	85	119

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R21272 Analysis Date: 11/2/2006 5:43:34 PM

Benzene	18.94	µg/L	1.0	94.7	85	115	1.18	27
Toluene	19.35	µg/L	1.0	96.7	85	118	2.23	19
Ethylbenzene	19.05	µg/L	1.0	92.6	85	116	1.45	10
Xylenes, Total	39.18	µg/L	3.0	94.3	85	119	3.11	13

Qualifiers:

E	Value above quantitation range	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 and Time Received:

11/1/2006

Work Order Number 0611007

Received by GLS

Checklist completed by

Signature

Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 188 - PROD. TANK PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date : February 22, 2007

SAMPLER : N J V

Filename : 02-22-07.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	104.08	86.76	17.32	22.05	-	-	-	-	-
MW - 2	99.38	86.64	12.74	17.50	-	-	-	-	-
MW - 3	101.59	86.47	15.12	21.90	0925	7.01	2,400	10.4	3.50

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

02/21/07 0845

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 #3. Collected BTEX from MW #3 only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 27-Feb-07

CLIENT: Blagg Engineering
Lab Order: 0702272
Project: GCU #188
Lab ID: 0702272-01

Client Sample ID: MW #3
Collection Date: 2/22/2007 9:25:00 AM
Date Received: 2/23/2007
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	13	1.0		µg/L	1	2/24/2007 12:14:54 AM
Toluene	12	1.0		µg/L	1	2/24/2007 12:14:54 AM
Ethylbenzene	250	10		µg/L	10	2/26/2007 2:12:27 PM
Xylenes, Total	1300	30		µg/L	10	2/26/2007 2:12:27 PM
Surr: 4-Bromofluorobenzene	90.3	70.2-105		%REC	1	2/24/2007 12:14:54 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

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

CHAIN-OF-CUSTODY RECORD									
QA/QC Package: Std ☐ Level 4 ☐ Other: _____									
Client: <u>BAGG ENTER. / BP AMERICA</u>		Project Name: <u>GCN # 188</u>							
Address: <u>P.O. BOX 87</u>		Project #: <u>NV</u>							
<u>BLFD. NM 87413</u>		Project Manager: <u>NV</u>							
Phone #: <u>632-1199</u>		Sampler: <u>NV</u>							
Fax #: _____		Sample Temperature: <u>20</u>							
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.		
					HgCl ₂	HNO ₃			
2/22/07	0925	WATER	NW # 3	2-40ml	✓		0702272		
							-1		
Date: <u>2/22/07</u>	Time: <u>0940</u>	Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>		Time: <u>2/23/07</u>			
Date: _____	Time: _____	Relinquished By: (Signature) _____		Received By: (Signature) _____		Time: _____			

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0702272

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

Method: SW8021

Sample ID: 5ML REAGENT BLA MBLK Batch ID: R22594 Analysis Date: 2/23/2007 8:08:20 AM

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

Sample ID: 5ML REAGENT BLA MBLK Batch ID: R22614 Analysis Date: 2/26/2007 8:16:58 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: R22594 Analysis Date: 2/23/2007 8:14:12 PM

Benzene 20.52 µg/L 1.0 103 85.9 113
Toluene 20.30 µg/L 1.0 102 86.4 113
Ethylbenzene 20.25 µg/L 1.0 101 83.5 118
Xylenes, Total 61.56 µg/L 2.0 103 83.4 122

Sample ID: 100NG BTEX LCS LCS Batch ID: R22614 Analysis Date: 2/26/2007 6:48:45 PM

Benzene 20.37 µg/L 1.0 102 85.9 113
Toluene 20.43 µg/L 1.0 102 86.4 113
Ethylbenzene 20.39 µg/L 1.0 102 83.5 118
Xylenes, Total 62.07 µg/L 2.0 103 83.4 122

Qualifiers:

E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S ^{50%} recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

2/23/2007

Work Order Number 0702272

Received by

TLS

Checklist completed by

Signature

Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU #188 - PROD. TANK PIT

LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date : May 8, 2007

SAMPLER : N J V

Filename : 05-08-07.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	104.08	86.59	17.49	22.05	-	-	-	-	-
MW - 2	99.38	86.50	12.88	17.50	-	-	-	-	-
MW - 3	101.59	86.36	15.23	21.90	1000	6.83	2,400	17.3	3.25

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
05/08/07	0740

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 #3. Collected sample for BTEX analysis from MW #3 only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 22-May-07

CLIENT: Blagg Engineering

Client Sample ID: MW #3

Lab Order: 0705144

Collection Date: 5/8/2007 10:00:00 AM

Project: GCU #188

Date Received: 5/10/2007

Lab ID: 0705144-01

Matrix: AQUEOUS

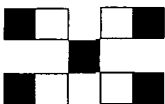
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	8.1	1.0		µg/L	1	5/11/2007 3:09:51 PM
Toluene	6.6	1.0		µg/L	1	5/11/2007 3:09:51 PM
Ethylbenzene	190	10		µg/L	10	5/11/2007 2:39:43 PM
Xylenes, Total	860	20		µg/L	10	5/11/2007 2:39:43 PM
Surr: 4-Bromofluorobenzene	94.4	70.2-105		%REC	1	5/11/2007 3:09:51 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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



ANALYSIS REQUEST

[illegible]

Remarks:

CHAIN-OF-CUSTODY RECORD						QA / QC Package: Std ☐ Level 4 ☒		
Client: BLASS ENGR./GP AMERICA						Other:		
Address: P.O. BOX 87						Project Name: GCM #188		
BLER., NM 87413						Project #: 412		
						Project Manager: NV		
Phone #: 632-1199						Sampler: NV		
Fax #:						Sample Temperature: 50		
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No.	
5/8/07	1000	WATER	MW # 3	2-40ml	✓		0705141	
Date: 5/9/07	Time: 1500	Relinquished By: (Signature) [Signature]		Received By: (Signature)		Date: 5/10/07		
Date:	Time:	Relinquished By: (Signature)		Received By: (Signature)		Date: 1412		

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0705144

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

Method: SW8021

Sample ID: 5ML REAGENT BLA

MBLK

Batch ID: R23571 Analysis Date: 5/11/2007 8:12:17 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

Qualifiers:

E	Value above quantitation range	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 and Time Received:

5/10/2007

Work Order Number 0705144

Received by TLS

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?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A & 2004

GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL
ENVIROTECH

Date : May 31, 2007

SAMPLER : N J V

Filename : 05-31-07.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	104.08	86.73	17.35	22.05	-	-	-	-	-
2	99.36	86.66	12.70	17.50	-	-	-	-	-
3	101.59	86.54	15.05	21.90	-	-	-	-	-
4	100.08	86.43	13.65	21.85	1105	6.91	2,200	22.6	4.00
5	100.62	86.37	14.25	21.28	1120	7.00	2,200	20.6	2.00
6	101.01	86.64	14.37	21.90	1020	6.93	1,400	20.5	3.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

05/31/07 0715

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 # 4 & # 6 , poor / fair in MW # 5 , all three murky brown in appearance .

Collected samples from MW # 4 , # 5 , & # 6 for BTEX and major anions / cations analyses .

Top of casing MW # 1 ~ 1.90 ft. , MW # 2 ~ @ grade , MW # 3 ~ 2.40 ft. , MW # 4 ~ 2.25 ft. , MW # 5 ~ 2.40 ft. , MW # 6 ~ 2.30 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 12-Jun-07

CLIENT: Blagg Engineering
Project: GCU #188**Lab Order:** 0706015**Lab ID:** 0706015-01**Collection Date:** 5/31/2007 11:05:00 AM**Client Sample ID:** MW #4**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	10		µg/L	10	6/8/2007 11:23:45 AM
Toluene	27	10		µg/L	10	6/8/2007 11:23:45 AM
Ethylbenzene	ND	10		µg/L	10	6/8/2007 11:23:45 AM
Xylenes, Total	1300	20		µg/L	10	6/8/2007 11:23:45 AM
Surr: 4-Bromofluorobenzene	92.1	70.2-105		%REC	10	6/8/2007 11:23:45 AM

Lab ID: 0706015-02**Collection Date:** 5/31/2007 11:20:00 AM**Client Sample ID:** MW #5**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	11	10		µg/L	10	6/8/2007 12:59:18 PM
Toluene	32	10		µg/L	10	6/8/2007 12:59:18 PM
Ethylbenzene	790	50		µg/L	50	6/8/2007 12:26:37 PM
Xylenes, Total	4400	100		µg/L	50	6/8/2007 12:26:37 PM
Surr: 4-Bromofluorobenzene	89.6	70.2-105		%REC	10	6/8/2007 12:59:18 PM

Lab ID: 0706015-03**Collection Date:** 5/31/2007 10:20:00 AM**Client Sample ID:** MW #6**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	6/8/2007 1:59:24 PM
Toluene	ND	1.0		µg/L	1	6/8/2007 1:59:24 PM
Ethylbenzene	ND	1.0		µg/L	1	6/8/2007 1:59:24 PM
Xylenes, Total	ND	2.0		µg/L	1	6/8/2007 1:59:24 PM
Surr: 4-Bromofluorobenzene	89.5	70.2-105		%REC	1	6/8/2007 1:59:24 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- 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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

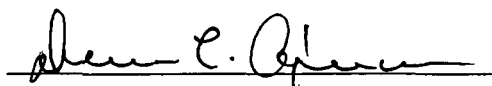
Client: Blagg / BP
Sample ID: MW #4
Laboratory Number: 41742
Chain of Custody: 2004
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 94034-010
Date Reported: 06-01-07
Date Sampled: 05-31-07
Date Received: 05-31-07
Date Extracted: N/A
Date Analyzed: 06-01-07

Parameter	Analytical Result	Units		
pH	7.27	s.u.		
Conductivity @ 25° C	2,910	umhos/cm		
Total Dissolved Solids @ 180C	2,230	mg/L		
Total Dissolved Solids (Calc)	2,030	mg/L		
SAR	32.6	ratio		
Total Alkalinity as CaCO3	432	mg/L		
Total Hardness as CaCO3	80.2	mg/L		
Bicarbonate as HCO3	432	mg/L	7.08	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.29	mg/L	0.00	meq/L
Nitrite Nitrogen	0.03	mg/L	0.00	meq/L
Chloride	368	mg/L	10.38	meq/L
Fluoride	1.44	mg/L	0.08	meq/L
Phosphate	1.29	mg/L	0.04	meq/L
Sulfate	667	mg/L	13.89	meq/L
Iron	0.003	mg/L	0.00	meq/L
Calcium	22.9	mg/L	1.14	meq/L
Magnesium	5.60	mg/L	0.46	meq/L
Potassium	26.0	mg/L	0.67	meq/L
Sodium	671	mg/L	29.19	meq/L
Cations			31.46	meq/L
Anions			31.47	meq/L
Cation/Anion Difference			0.04%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: GCU #188 Grab Sample


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

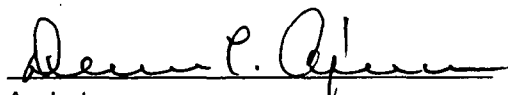
Client: Blagg / BP
Sample ID: MW #5
Laboratory Number: 41743
Chain of Custody: 2004
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

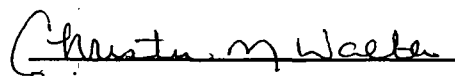
Project #: 94034-010
Date Reported: 06-01-07
Date Sampled: 05-31-07
Date Received: 05-31-07
Date Extracted: N/A
Date Analyzed: 06-01-07

Parameter	Analytical Result	Units		
pH	7.39	s.u.		
Conductivity @ 25° C	2,820	umhos/cm		
Total Dissolved Solids @ 180C	2,260	mg/L		
Total Dissolved Solids (Calc)	2,120	mg/L		
SAR	25.1	ratio		
Total Alkalinity as CaCO3	271	mg/L		
Total Hardness as CaCO3	138	mg/L		
Bicarbonate as HCO3	271	mg/L	4.44	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.47	mg/L	0.01	meq/L
Nitrite Nitrogen	0.03	mg/L	0.00	meq/L
Chloride	409	mg/L	11.54	meq/L
Fluoride	1.08	mg/L	0.06	meq/L
Phosphate	5.20	mg/L	0.16	meq/L
Sulfate	795	mg/L	16.55	meq/L
Iron	0.037	mg/L	0.00	meq/L
Calcium	39.4	mg/L	1.97	meq/L
Magnesium	9.60	mg/L	0.79	meq/L
Potassium	22.6	mg/L	0.58	meq/L
Sodium	676	mg/L	29.41	meq/L
Cations			32.74	meq/L
Anions			32.76	meq/L
Cation/Anion Difference			0.06%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: GCU #188 Grab Sample


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

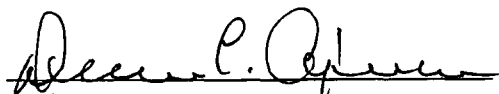
Client: Blagg / BP
Sample ID: MW #6
Laboratory Number: 41744
Chain of Custody: 2004
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

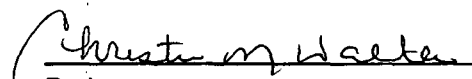
Project #: 94034-010
Date Reported: 06-01-07
Date Sampled: 05-31-07
Date Received: 05-31-07
Date Extracted: N/A
Date Analyzed: 06-01-07

Parameter	Analytical Result	Units		
pH	7.31	s.u.		
Conductivity @ 25° C	2,580	umhos/cm		
Total Dissolved Solids @ 180C	1,930	mg/L		
Total Dissolved Solids (Calc)	1,920	mg/L		
SAR	19.2	ratio		
Total Alkalinity as CaCO3	381	mg/L		
Total Hardness as CaCO3	170	mg/L		
Bicarbonate as HCO3	381	mg/L	6.24	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.34	mg/L	0.01	meq/L
Nitrite Nitrogen	0.03	mg/L	0.00	meq/L
Chloride	217	mg/L	6.12	meq/L
Fluoride	0.92	mg/L	0.05	meq/L
Phosphate	4.76	mg/L	0.15	meq/L
Sulfate	805	mg/L	16.76	meq/L
Iron	0.005	mg/L	0.00	meq/L
Calcium	30.5	mg/L	1.52	meq/L
Magnesium	23.0	mg/L	1.89	meq/L
Potassium	30.9	mg/L	0.79	meq/L
Sodium	578	mg/L	25.14	meq/L
Cations			29.35	meq/L
Anions			29.33	meq/L
Cation/Anion Difference			0.06%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: GCU #188 Grab Sample


Analyst


Review

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

CHAIN-OF-CUSTODY RECORD				QA/QC Package:			
				Std ☐ Level 4 ☐			
				Other: _____			
Client: <u>BLAGG ENGR./BP AMERICA</u>				Project Name: <u>GCU #188</u>			
Address: <u>P.O. BOX 87</u>				Project #: <u>745</u>			
<u>BLFO, NM 87413</u>				Project Manager: <u>NV</u>			
				Sampler: <u>NV</u>			
Phone #: <u>632-1199</u>				Sample Temperature: <u>6</u>			
Fax #: _____							
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No.
5/31/07	1105	WATER	MW # 4	2-40m/			0700005 1
5/31/07	1120	WATER	MW # 5	2-40m/			2
6/31/07	1020	WATER	MW # 6	2-40m/			3
Date: <u>5/31/07</u>	Time: <u>1315</u>	Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>		Date: <u>6/1/07</u>	
Date: _____	Time: _____	Relinquished By: (Signature) _____		Received By: (Signature) _____		Date: _____	

2004

san iuan reproduction 578-1000

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0706015

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

Method: SW8021

Sample ID: 5ML REAGENT BLA MBLK Batch ID: R23908 Analysis Date: 6/7/2007 8:27:29 AM

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

Sample ID: B MBLK Batch ID: R23924 Analysis Date: 6/8/2007 11:53:53 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: R23908 Analysis Date: 6/7/2007 7:20:20 PM

Benzene 19.60 µg/L 1.0 98.0 85.9 113
Toluene 19.63 µg/L 1.0 98.1 86.4 113
Ethylbenzene 19.83 µg/L 1.0 99.1 83.5 118
Xylenes, Total 59.43 µg/L 2.0 99.0 83.4 122

Sample ID: 100NG BTEX LCS LCS Batch ID: R23924 Analysis Date: 6/8/2007 7:00:05 PM

Benzene 18.97 µg/L 1.0 94.8 85.9 113
Toluene 19.23 µg/L 1.0 96.2 86.4 113
Ethylbenzene 19.10 µg/L 1.0 95.5 83.5 118
Xylenes, Total 56.39 µg/L 2.0 93.6 83.4 122

Qualifiers:

E Value above quantitation range 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 and Time Received:

6/1/2007

Work Order Number **0706015**

Received by **TLS**

Checklist completed by

Amya Shomi
Signature

June 1, 07
Date

Matrix

Carrier name **UPS**

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

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.**MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA**CLIENT : **BP AMERICA PROD. CO.**CHAIN-OF-CUSTODY # : **N / A & 2015****GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W**LABORATORY (S) USED : **HALL ENVIRONMENTAL
ENVIROTECH**Date : **June 25, 2007**SAMPLER : **N J V**Filename : **06-25-07.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	104.08	86.75	17.33	22.05	-	-	-	-	-
2	99.36	86.70	12.66	17.50	-	-	-	-	-
3	101.59	86.58	15.01	21.90	-	-	-	-	-
4	100.08	86.49	13.59	21.85	1210	6.62	2,200	23.4	4.00
5	100.62	86.42	14.20	21.28	1200	6.74	2,200	23.6	1.75
6	101.01	86.71	14.30	21.90	1110	6.69	1,800	23.6	3.75

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/25/07 0550

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 #4 & #6, poor / fair in MW #5, all three murky brown in appearance.

Collected samples from MW #4, #5, & #6 for chloride analysis only (sent blind samples to Envirotech & split samples to Hall Environmental). Conducted chloride field testing on those three MW's, with all three screened to less than 31 ppm according to conversion table on container.Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft., MW #4 ~ 2.25 ft., MW #5 ~ 2.40 ft., MW #6 ~ 2.30 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 09-Jul-07

CLIENT: Blagg Engineering
Project: GCU #188**Lab Order:** 0706379**Lab ID:** 0706379-01**Collection Date:** 6/25/2007 12:10:00 PM**Client Sample ID:** MW#4**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMS
Chloride	17	0.50		mg/L	5	7/4/2007 2:09:55 PM

Lab ID: 0706379-02**Collection Date:** 6/25/2007 12:00:00 PM**Client Sample ID:** MW#5**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMS
Chloride	17	0.50		mg/L	5	7/4/2007 2:27:19 PM

Lab ID: 0706379-03**Collection Date:** 6/25/2007 11:10:00 AM**Client Sample ID:** MW#6**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: CMS
Chloride	13	0.50		mg/L	5	7/4/2007 2:44:44 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- 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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Chloride

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW # 1X	Date Reported:	06-26-07
Lab ID#:	42147	Date Sampled:	06-25-07
Sample Matrix:	Water	Date Received:	06-25-07
Preservative:	Cool	Date Analyzed:	06-25-07
Condition:	Cool and Intact	Chain of Custody:	2015

Parameter

Concentration (mg/L)

Total Chloride

57.0

Reference: Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: G - BP #1X Grab Sample

Christopher M. Walter
Analyst

Debra C. Green
Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Chloride

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW # 2X	Date Reported:	06-26-07
Lab ID#:	42148	Date Sampled:	06-25-07
Sample Matrix:	Water	Date Received:	06-25-07
Preservative:	Cool	Date Analyzed:	06-25-07
Condition:	Cool and Intact	Chain of Custody:	2015

Parameter

Concentration (mg/L)

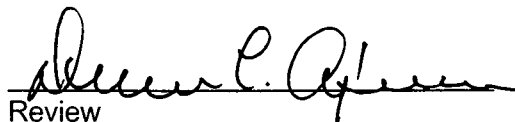
Total Chloride

58.0

Reference: Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: G - BP #1X Grab Sample


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Chloride

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW # 3X	Date Reported:	06-26-07
Lab ID#:	42149	Date Sampled:	06-25-07
Sample Matrix:	Water	Date Received:	06-25-07
Preservative:	Cool	Date Analyzed:	06-25-07
Condition:	Cool and Intact	Chain of Custody:	2015

Parameter

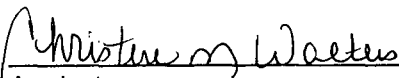
Concentration (mg/L)

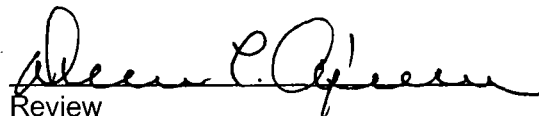
Total Chloride

50.0

Reference: Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: G - BP #1X Grab Sample


Analyst


Review

Chloride Field Testing Results (FLUID)

Well name: GCU # 188 Date: 6/25/07

Legals: J-30-29-12 Time: 1215

Media Type: PRODUCED WATER

ID: MW # 4

Chloride Test Strip Reading:

0.8

Match reading above to Conversion value and record:

< 31 ppm

(If above value is < 1,000 ppm, waste should be acceptable to disposal facility)

Print Name: NELSON VELEZ Job title: STAFF GEOLOGIST

Signature: Nelson Velez Company: BLAGG ENGR.

Chloride Field Testing Results (FLUID)

Well name: GCU #188 Date: 6/25/07

Legals: J-30-29-12 Time: 1205

Media Type: PRODUCED WATER

ID: MW #5

Chloride Test Strip Reading:

0.8

Match reading above to Conversion value and record:

< 31 ppm

(If above value is < 1,000 ppm, waste should be acceptable to disposal facility)

Print Name: NELSON VELEZ Job title: STAFF GEOLOGIST

Signature: Nelson Velez Company: BLAGG ENGR.

Chloride Field Testing Results (FLUID)

Well name: GCN #188 Date: 6/25/07

Legals: J-30-29-12 Time: 1115

Media Type: PRODUCED WATER

ID: MW #6

Chloride Test Strip Reading:

0.8

Match reading above to Conversion value and record:

< 31 ppm

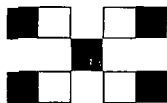
(If above value is < 1,000 ppm, waste should be acceptable to disposal facility)

Print Name: NELSON VELEZ Job title: STAFF GEOLOGIST

Signature: Nelson Velez Company: BLAGG ENGR.

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

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



BTEx + MTBE + TMB's (8021)
BTEx + MTBE + TPH (Gasoline Or
TPH Method 8015B (Gas/Diesel)
TPH (Method 418.1)
EDB (Method 504.1)
EDC (Method 8021)
8310 (PNA or PAH)
RCRA 8 Metals
Anions (F, Cl, NO₃, PO₄, SO₄)
8081 Pesticides / PCB's (8082)
8260B (VOA)
8270 (Semi-VOA)
CHLORIDE
Air Bubbles or Headspace (Y or N)

CHAIN-OF-CUSTODY RECORD									
Client: <u>BLAKE ENER./BP AMERICA</u>									
Address: <u>P.O. BOX 87</u> <u>B.F.D., NM 87413</u>									
Phone #: <u>632-1199</u> Fax #: _____									
Project Name: <u>GCN #188</u>									
Project #: _____									
Project Manager: <u>NV</u>									
Sampler: <u>NV</u>									
Sample Temperature: <u>8</u>									
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative			HEAL No.	
					HgCl ₂	HNO ₃	COOL		
6/25/07	1210	WATER	MW # 4	1-125 ml		✓		0706379	
6/25/07	1200	WATER	MW # 5	1-125 ml		✓		2	
6/25/07	1110	WATER	MW # 6	1-125 ml		✓		3	
Date: <u>6/23/07</u>	Time: <u>1515</u>	Relinquished By: (Signature) <u>William Vel</u>			Received By: (Signature) <u>WJG</u>			Time: <u>13:55</u>	
Date: _____	Time: _____	Relinquished By: (Signature) _____			Received By: (Signature) _____			Time: _____	

2015

san juan reproduction 578-129

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0706379

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: E300

Sample ID: MB

MBLK

Batch ID: R24261 Analysis Date: 7/4/2007 12:42:53 PM

Chloride ND mg/L 0.10

Sample ID: LCS ST300-07026

LCS

Batch ID: R24261 Analysis Date: 7/4/2007 1:00:18 PM

Chloride 4.882 mg/L 0.10 97.6 90 110

Qualifiers:

E	Value above quantitation range	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 and Time Received:

6/26/2007

Work Order Number **0706379**

Received by **ARS**

Checklist completed by

Signature

Date

6/26/07

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?

8°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT
UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: August 15, 2007

SAMPLER: N J V

Filename: 08-15-07.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	104.08	86.38	17.70	22.05	-	-	-	-	-
2	99.36	86.30	13.06	17.50	-	-	-	-	-
3	101.59	86.14	15.45	21.90	1000	6.77	2,700	21.8	3.25
4	100.08	86.00	14.08	21.85	0950	6.78	2,200	22.9	3.75
5	100.62	85.92	14.70	21.28	1010	6.84	2,400	22.2	1.50
6	101.01	86.26	14.75	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

08/15/07 0900

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 #3 & #4, poor / fair in MW #5, all three murky brown / black in appearance.
Collected samples from MW #3, #4, & #5 for BTEX analyses only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft., MW #4 ~ 2.25 ft., MW #5 ~ 2.40 ft., MW #6 ~ 2.30 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 27-Aug-07

CLIENT: Blagg Engineering
Project: GCU #188

Lab Order: 0708249

Lab ID: 0708249-01 Collection Date: 8/15/2007 10:00:00 AM
Client Sample ID: MW #3 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: SMP
Benzene	9.9	1.0		µg/L	1	8/24/2007 2:26:15 AM
Toluene	7.1	1.0		µg/L	1	8/24/2007 2:26:15 AM
Ethylbenzene	110	10		µg/L	10	8/24/2007 1:56:13 AM
Xylenes, Total	460	20		µg/L	10	8/24/2007 1:56:13 AM
Surr: 4-Bromofluorobenzene	90.8	70.2-105		%REC	10	8/24/2007 1:56:13 AM

Lab ID: 0708249-02 Collection Date: 8/15/2007 9:50:00 AM
Client Sample ID: MW #4 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: SMP
Benzene	ND	5.0		µg/L	5	8/24/2007 4:31:25 AM
Toluene	ND	5.0		µg/L	5	8/24/2007 4:31:25 AM
Ethylbenzene	260	5.0		µg/L	5	8/24/2007 4:31:25 AM
Xylenes, Total	1100	10		µg/L	5	8/24/2007 4:31:25 AM
Surr: 4-Bromofluorobenzene	99.7	70.2-105		%REC	5	8/24/2007 4:31:25 AM

Lab ID: 0708249-03 Collection Date: 8/15/2007 10:10:00 AM
Client Sample ID: MW #5 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: SMP
Benzene	11	5.0		µg/L	5	8/24/2007 2:06:55 PM
Toluene	ND	5.0		µg/L	5	8/24/2007 2:06:55 PM
Ethylbenzene	510	10		µg/L	10	8/24/2007 6:09:07 AM
Xylenes, Total	930	20		µg/L	10	8/24/2007 6:09:07 AM
Surr: 4-Bromofluorobenzene	103	70.2-105		%REC	5	8/24/2007 2:06:55 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenviromental.com

QA/QC Package: ☐ Level 4 ☐

HEAL No.Remarks:

ANALYSIS REQUEST

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0708249

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: SW8021

Sample ID: 5ML RB

MBLK

Batch ID: R24885 Analysis Date: 8/23/2007 9:10:07 AM

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Xylenes, Total ND µg/L 2.0

Sample ID: 5ML RB

MBLK

Batch ID: R24905 Analysis Date: 8/24/2007 10:01:20 AM

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Xylenes, Total ND µg/L 2.0

Sample ID: B

MBLK

Batch ID: R24905 Analysis Date: 8/24/2007 6:25:38 PM

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Xylenes, Total ND µg/L 2.0

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R24885 Analysis Date: 8/23/2007 2:37:33 PM

Benzene 17.77 µg/L 1.0 88.9 85.9 113

Toluene 17.37 µg/L 1.0 86.9 86.4 113

Ethylbenzene 18.05 µg/L 1.0 90.2 83.5 118

Xylenes, Total 54.72 µg/L 2.0 90.9 83.4 122

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R24905 Analysis Date: 8/24/2007 11:31:32 AM

Benzene 17.89 µg/L 1.0 89.4 85.9 113

Toluene 17.92 µg/L 1.0 89.6 86.4 113

Ethylbenzene 18.15 µg/L 1.0 90.3 83.5 118

Xylenes, Total 54.67 µg/L 2.0 90.5 83.4 122

Sample ID: 100NG BTEX LCS B

LCS

Batch ID: R24905 Analysis Date: 8/25/2007 11:02:46 PM

Benzene 18.86 µg/L 1.0 94.3 85.9 113

Toluene 19.72 µg/L 1.0 98.6 86.4 113

Ethylbenzene 20.17 µg/L 1.0 100 83.5 118

Xylenes, Total 62.26 µg/L 2.0 102 83.4 122

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R24885 Analysis Date: 8/23/2007 3:07:41 PM

Benzene 18.32 µg/L 1.0 91.6 85.9 113 3.04 27

Toluene 18.12 µg/L 1.0 90.6 86.4 113 4.23 19

Ethylbenzene 18.75 µg/L 1.0 93.7 83.5 118 3.81 10

Xylenes, Total 56.41 µg/L 2.0 93.7 83.4 122 3.04 13

Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

8/17/2007

Work Order Number 0708249

Received by

TLS

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?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

GCU # 188 - PROD. TANK PIT

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT J, SEC. 30, T29N, R12W

Date: November 15, 2007

SAMPLER: NJV

Filename: 11-15-07.WK4

PROJECT MANAGER: NJV

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	104.08	86.70	17.38	22.05	-	-	-	-	-
2	99.36	86.67	12.69	17.50	-	-	-	-	-
3	101.59	86.45	15.14	21.90	0930	6.91	2,500	15.4	3.25
4	100.08	86.26	13.82	21.85	1000	6.80	2,500	15.8	4.00
5	100.62	86.19	14.43	21.28	1030	7.20	2,300	15.4	1.50
6	101.01	86.56	14.45	21.90	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

11/14/07 1000

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 #3 & #4, poor / fair in MW #5, all three murky brown / black in appearance.
Collected samples from MW #3, #4, & #5 for BTEX analysis only.

Top of casing MW #1 ~ 1.90 ft., MW #2 ~ @ grade, MW #3 ~ 2.40 ft., MW #4 ~ 2.25 ft., MW #5 ~ 2.40 ft., MW #6 ~ 2.30 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: 26-Nov-07

CLIENT: Blagg Engineering
Project: GCU #188

Lab Order: 0711288

Lab ID: 0711288-01

Collection Date: 11/15/2007 9:30:00 AM

Client Sample ID: MW #3

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	8.0	1.0		µg/L	1	11/21/2007 7:24:47 PM
Toluene	7.0	1.0		µg/L	1	11/21/2007 7:24:47 PM
Ethylbenzene	95	1.0		µg/L	1	11/21/2007 7:24:47 PM
Xylenes, Total	700	20		µg/L	10	11/21/2007 6:54:45 PM
Surr: 4-Bromofluorobenzene	99.6	70.2-105		%REC	10	11/21/2007 6:54:45 PM

Lab ID: 0711288-02

Collection Date: 11/15/2007 10:00:00 AM

Client Sample ID: MW #4

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/21/2007 8:57:38 PM
Toluene	ND	1.0		µg/L	1	11/21/2007 8:57:38 PM
Ethylbenzene	30	1.0		µg/L	1	11/21/2007 8:57:38 PM
Xylenes, Total	160	2.0		µg/L	1	11/21/2007 8:57:38 PM
Surr: 4-Bromofluorobenzene	105	70.2-105	S	%REC	1	11/21/2007 8:57:38 PM

Lab ID: 0711288-03

Collection Date: 11/15/2007 10:30:00 AM

Client Sample ID: MW #5

Matrix: AQUEOUS

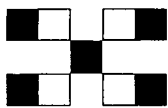
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	5.7	1.0		µg/L	1	11/21/2007 10:30:24 PM
Toluene	ND	1.0		µg/L	1	11/21/2007 10:30:24 PM
Ethylbenzene	510	10		µg/L	10	11/21/2007 10:00:33 PM
Xylenes, Total	680	20		µg/L	10	11/21/2007 10:00:33 PM
Surr: 4-Bromofluorobenzene	102	70.2-105		%REC	10	11/21/2007 10:00:33 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
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

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BTEX + MTBE + TPH (Gasoline Oil
TPH Method 8015B (Gas/Diesel)
TPH (Method 418.1)
EDB (Method 504.1)
EDC (Method 8021)
8310 (PNA or PAH)
RCRA 8 Metals
Anions (F, Cl, NO ₃ , PO ₄ , SO ₄)
8081 Pesticides / PCB's (8082)
8260B (VOA)
8270 (Semi-VOA)
Air Bubbles or Headspace (Y or N)

Remarks:

CHAIN-OF-CUSTODY RECORD									
QA / QC Package: ☐ Std ☐ Level 4 ☐ Other: _____									
Client: <u>BLAGG ENGR. / BP AMERICA</u>		Project Name: <u>GCU # 188</u>							
Address: <u>P.O. BOX 87</u>		Project #: _____							
<u>BLFD. NM 87413</u>		Project Manager: <u>NV</u>							
Phone #: <u>632-1199</u>		Sampler: <u>NV</u>							
Fax #: _____		Sample Temperature: <u>1°</u>							
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl ₂ HNO ₃		HEAL No. <u>0711288</u>		
<u>11/15/07</u>	<u>0930</u>	<u>WATER</u>	<u>MW # 3</u>	<u>2-40 ml</u>	☒	☐	<u>1</u>		
<u>11/15/07</u>	<u>1000</u>	<u>WATER</u>	<u>MW # 4</u>	<u>2-40 ml</u>	☒	☐	<u>2</u>		
<u>11/15/07</u>	<u>1030</u>	<u>WATER</u>	<u>MW # 5</u>	<u>2-40 ml</u>	☒	☐	<u>3</u>		
Date: <u>11/15/07</u>	Time: <u>1415</u>	Relinquished By: (Signature) <u>[Signature]</u>		Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>		Date: <u>11/19/07</u> Time: <u>8:21</u>	
Date: <u>11/15/07</u>	Time: <u>1415</u>	Relinquished By: (Signature) <u>[Signature]</u>		Relinquished By: (Signature) <u>[Signature]</u>		Received By: (Signature) <u>[Signature]</u>		Date: <u>11/19/07</u> Time: <u>8:21</u>	

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: GCU #188

Work Order: 0711288

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8021B: Volatiles

Sample ID: 5ML RB

MBLK

Batch ID: R26192 Analysis Date: 11/21/2007 9:29:58 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: R26192 Analysis Date: 11/21/2007 5:22:13 PM

Benzene	20.11	µg/L	1.0	101	85.9	113
Toluene	20.53	µg/L	1.0	103	86.4	113
Ethylbenzene	20.99	µg/L	1.0	105	83.5	118
Xylenes, Total	67.69	µg/L	2.0	113	83.4	122

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R26192 Analysis Date: 11/21/2007 5:52:17 PM

Benzene	20.18	µg/L	1.0	101	85.9	113	0.387	27
Toluene	20.09	µg/L	1.0	100	86.4	113	2.21	19
Ethylbenzene	20.67	µg/L	1.0	103	83.5	118	1.55	10
Xylenes, Total	64.06	µg/L	2.0	107	83.4	122	5.52	13

Qualifiers:

E	Value above quantitation range	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:

11/19/2007

Work Order Number 0711288

Received by: ARS

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?

1°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action