3R - 421

ANNUAL MONITORING REPORT

4/10/2007

3R421

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

SENT VIA USPS CERTIFIED

April 10, 2007

Mr. Glenn von Gonten, Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: BP America Production Company
Transmittal of Abatement Plan
GCU 229E: (I) Sec. 21 - T28N – R12W, San Juan County, NM

Dear Mr. vonGonten:

On behalf of BP America Production Company, Blagg Engineering, Inc. (BEI) is submitting the attached Abatement Plan for the GCU 229E, (I) Sec. 21 – T28N – R12W, San Juan County, New Mexico pursuant to our correspondence dated March 2, 2007. The plan has been prepared to meet the requirements stipulated in NMOCD Rule 116D.

We welcome your feedback on this plan. If you have questions or need additional information, please contact either myself at (505)632-1199 or Mr. Larry Schlotterback of BP at (505)326-9200.

Respectfully:
Blagg Engineering, Inc.

Jeffrey C. Blagg, P.E.
President

cc: Bill Freeman – NNEPA Shiprock
Brandon Powell - NMOCD Aztec
Larry Schlotterback – BP SJ Op. Ctr.

File: GCU229E.gwplan.xmt

1RP-82

BP America Production Company

ABATEMENT PLAN

GCU 229E
(I) Sec. 21 – T28N – R12W
San Juan County, New Mexico

I. Introduction

A release of hydrocarbons affecting groundwater was discovered at the GCU 229E during investigation of the vertical extent of soil impacts at an abandon historical waste pit site. During this investigation groundwater was encountered at a depth of approximately 29 feet below ground surface. A monitor well was set and sampling on November 14, 2006 identified groundwater impacts exceeding New Mexico Water Quality Control Commission (NMWQCC) standards for volatile hydrocarbons.

The location is in a remote area with no immediate residents, down-gradient surface waters or water wells within a 1-mile radius that could be influenced.

BP intends to investigate the extent of soil and groundwater impacts in order to develop the best available techonolgy for site remediation. Outlined below is an abatement plan designed to meet the requirements of the New Mexico Oil Conservation Division (NMOCD) Rule 116D.

II. Site Investigation/Abatement

A site investigation is proposed to delineate the extent and magnitude of soil and groundwater impacts. A mobile drill rig will be used to collect soil samples and set groundwater monitor wells in and around the known source area. During this work, soil type, groundwater depth and the extent of impacts will be investigated.

The investigation will include testing water quality, gradient and other hydrologic parameters as appropriate. Groundwater monitor wells will be installed to insure that adequate monitoring points are placed up-gradient, in the original source area and down-gradient from the source area.

Initial well testing will be for volatile organics (BTEX) by an appropriate laboratory analytical procedure (U.S. EPA 8021 or 8260) and for cation/anion analysis. If a product sheen is identified during the initial sample event, polynuclear aromatic hydrocarbons (PAH's) will be included in the laboratory testing.

Quality assurance/quality control (QA/QC) will include following standard SW 846 procedures for well development, sample collection, storage and delivery to the laboratory. Chain-of-custody documentation will be included with each sample. Only qualified laboratories with adequate QA/QC processes that follow U.S. EPA protocol will be selected for sample analysis.

Water wells within a 1-mile radius of the site will be identified. Any wells that may be impacted by the release will be sampled and tested for impacts, pending well owner authorization.

Following investigative activities, a report on the investigation will be prepared and include a reclamation plan to complete remediation of impacts. The initial report will summarize site activities. Included with this report will be:

a. The results of the initial investigation including identification of the water well inventory, a description of the applicable surface and groundwater hydrology and water flow relationships.
b. Geologic/lithologic logs and well construction diagrams.
c. Geologic cross sections, as appropriate
d. Water table contour maps, including the location pertinent site features, depicting the magnitude and direction of the hydraulic gradient
e. Isopleth maps, as appropriate
f. Summary tables of water quality testing, including laboratory test reports with QA/QC.
g. Waste disposition.
h. Recommendations for future actions, including a proposed reclamation plan, a schedule for future monitor well sampling and a reporting schedule.

III. Summary

BP intents to initiate investigations at the GCU 229E on a proactive basis to determine the extent and magnitude of impacts. Reclamation of these impacts may be instituted prior to completion of the initial investigation, but will not be started without prior authorization from the NMOCD.

BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 229E - BLOW PIT
UNIT I, SEC. 21, T28N, R12W

REVISED DATE: FEBRUARY 7, 2007

FILENAME: (29E-1Q07.WK4) NJV

								BTEX EPA METHOD 8021B (ppb)			
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)	TDS (mg/L)	COND. umhos	pH	PRODUCT (ft)	Benzene	Toluene	Ethyl Benzene	Total Xylene
30-Jan-07	MW #1	34.11	42.00	730	1,200	7.13		ND	ND	ND	ND
14-Nov-06	MW #2	31.60	42.00	866	1,300	7.05		ND	25	110	**1,800**
30-Jan-07		31.63			1,200	6.96		ND	ND	7.9	**200**
30-Jan-07	MW #3	33.20	42.00	762	1,200	7.18		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 .

GENERAL WATER QUALITY

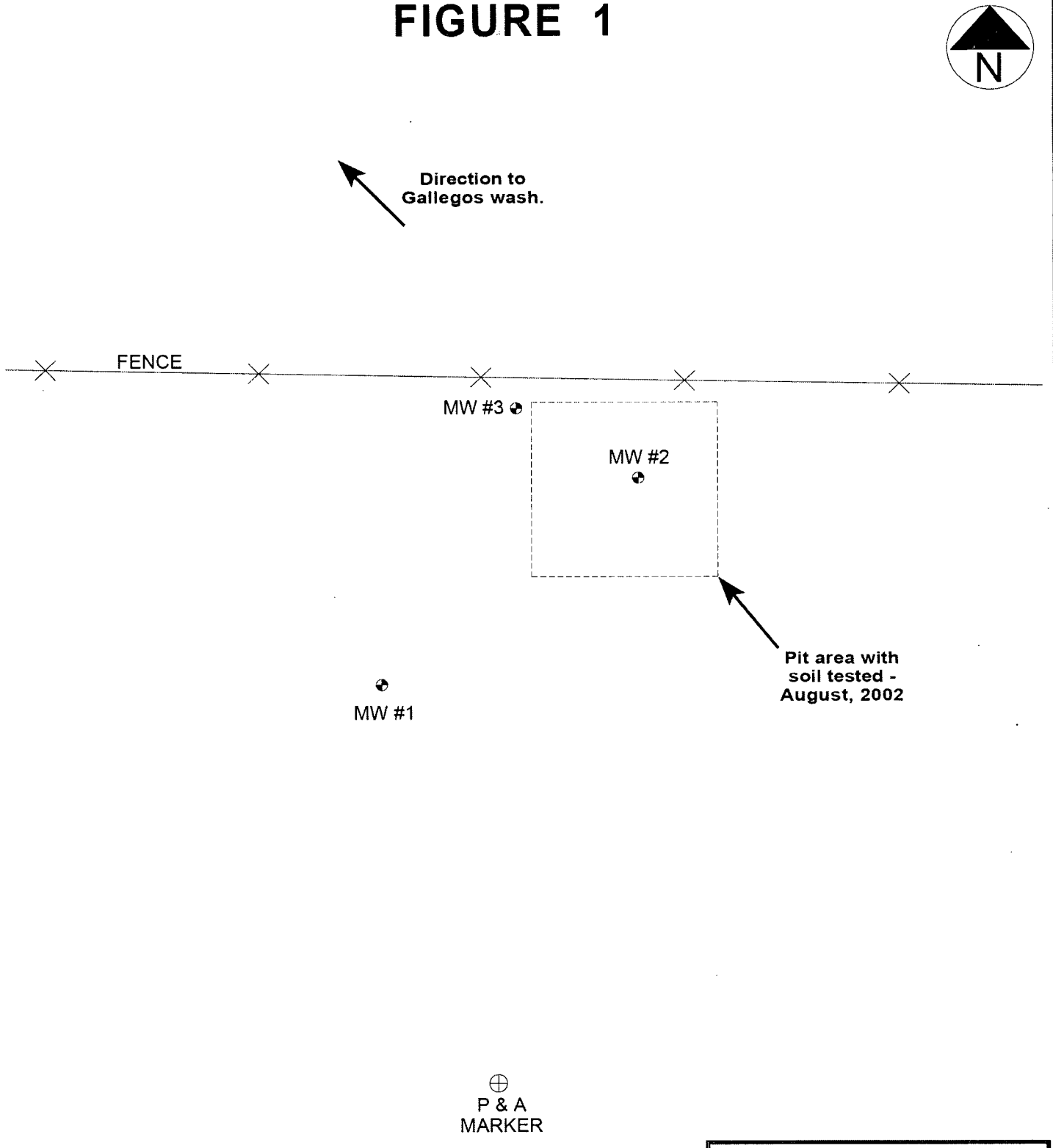
BP AMERICA PRODUCTION COMPANY

GCU # 229E

Sample Dates : Nov. 14 , 2006 & Jan. 30 , 2007

PARAMETERS	MW # 1 01/30/07	MW # 2 11/14/06	MW # 3 01/30/07	Units
LAB pH	7.34	7.36	7.51	s. u.
LAB CONDUCTIVITY @ 25 C	1,320	1,230	1,250	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	730	866	762	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	717	840	747	mg / L
SODIUM ABSORPTION RATIO	2.3	2.9	3.3	ratio
TOTAL ALKALINITY AS CaCO3	256	288	300	mg / L
TOTAL HARDNESS AS CaCO3	356	637	304	mg / L
BICARBONATE as HCO3	256	288	300	mg / L
CARBONATE AS CO3	< 0.1	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	7.6	15.5	9.5	mg / L
NITRITE NITROGEN	< 0.001	0.65	< 0.001	mg / L
CHLORIDE	39.9	64.0	43.7	mg / L
FLUORIDE	0.37	0.70	0.68	mg / L
PHOSPHATE	0.7	0.2	0.4	mg / L
SULFATE	283	312	264	mg / L
IRON	< 0.001	< 0.01	< 0.001	mg / L
CALCIUM	114	118	102	mg / L
MAGNESIUM	17.1	21.1	12.2	mg / L
POTASSIUM	0.10	0.60	< 0.01	mg / L
SODIUM	98.3	132	132	mg / L
CATION / ANION DIFFERENCE	0.03	0.40	0.07	

FIGURE 1



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.

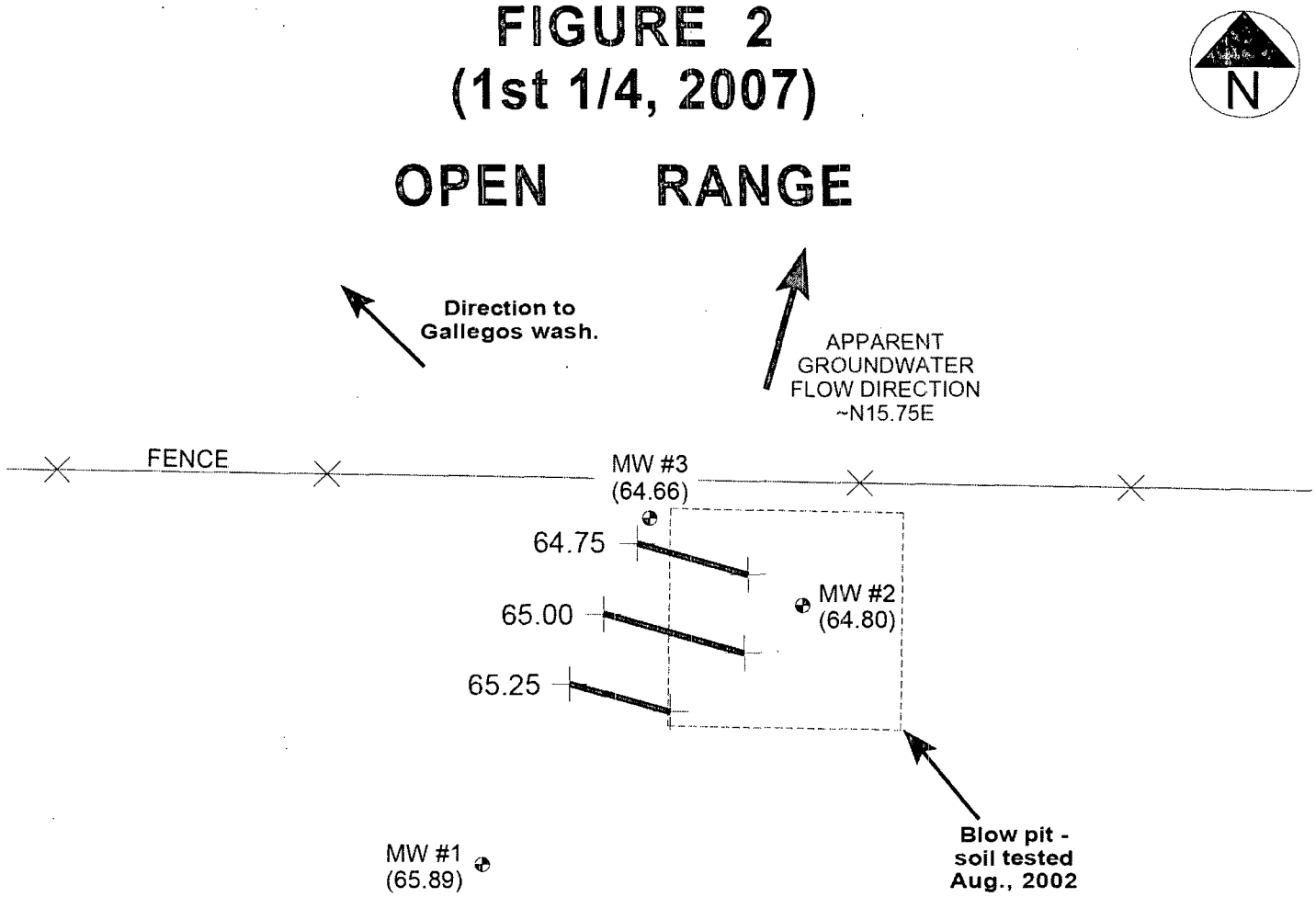
BP AMERICA PRODUCTION CO.
GCU #229E
NE/4 SE/4 SEC. 21, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW INSTALL.
DRAWN BY: NJV
FILENAME: GCU 229E-SM.SKF
DRAFTED: 01-30-07 NJV

SITE MAP
01/07

FIGURE 2
(1st 1/4, 2007)



1 INCH = 30 FT.

0 30 60 FT.

	Top of Well Elevation
MW #1	(97.86)
MW #2	(96.43)
MW #3	(102.47)
MW #1 (65.89)	Groundwater Elevation as of 1/30/07.

P & A MARKER

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 #229E
NE/4 SE/4 SEC. 21, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

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

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 01-30-07-GW.SKF
DRAFTED: 01-31-07 NJV

GROUNDWATER CONTOUR MAP
01/07

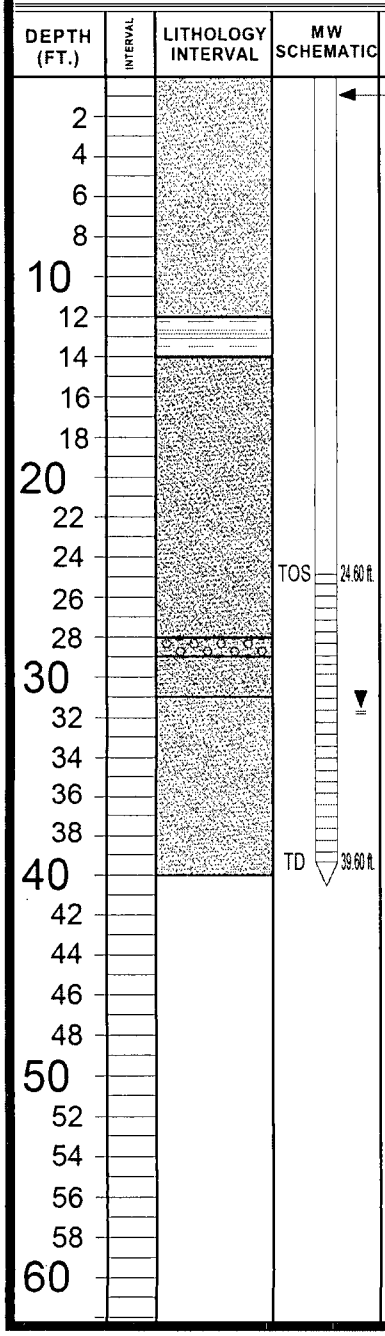
BLAGG ENGINEERING, Inc.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #1

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR:	**BLAGG ENGINEERING, INC. / ENVIROTECH, INC.**
EQUIPMENT USED:	**MOBILE DRILL RIG (CME 75)**
BORING LOCATION:	88 FEET, N16W FROM PLUGGED & ABANDONED MARKER.

BORING #.....	BH - 1
MW #.....	1
PAGE #.....	1
DATE STARTED	01/18/07
DATE FINISHED	01/18/07
OPERATOR.....	DP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.40 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 12.0 FT. BELOW GRADE).

PALE BROWN CALICHE, NON TO SLIGHTLY COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (12.0 - 14.0 FT. BELOW GRADE).

MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (14.0 - 28.0 FT. BELOW GRADE).

SAME AS ABOVE EXCEPT WITH MINOR AMOUNT OF GRAVEL (28.0 - 29.0 FT. BELOW GRADE).
SAME AS 14.0 - 28.0 FT. INTERVAL (29.0 - 31.0 FT. BELOW GRADE).
DEPTH TO WATER APPROX. 31.81 FT. FROM GROUND SURFACE MEASURED ON 1/19/07.

PALE BROWN SAND, NON COHESIVE, WET TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (31.0 - 40.0 FT. BELOW GRADE).

NOTES:
- SAND.
- CALICHE.
- SAND AND GRAVEL.

TOS - Top of screen of monitor well.
TD - Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.40 ft. above grade to 24.60 ft. below grade, 0.010 slotted screen between 24.60 to 39.60 ft. below grade, sand packed annular to 22.0 ft. below grade, bentonite grout between 19.0 to 22.00 ft. below grade, fill dirt between 0.0 to 19.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

DRAWING: GCU 229E MW1-BH1. SKF | DATE: 01/19/07 | DWN BY: NJV

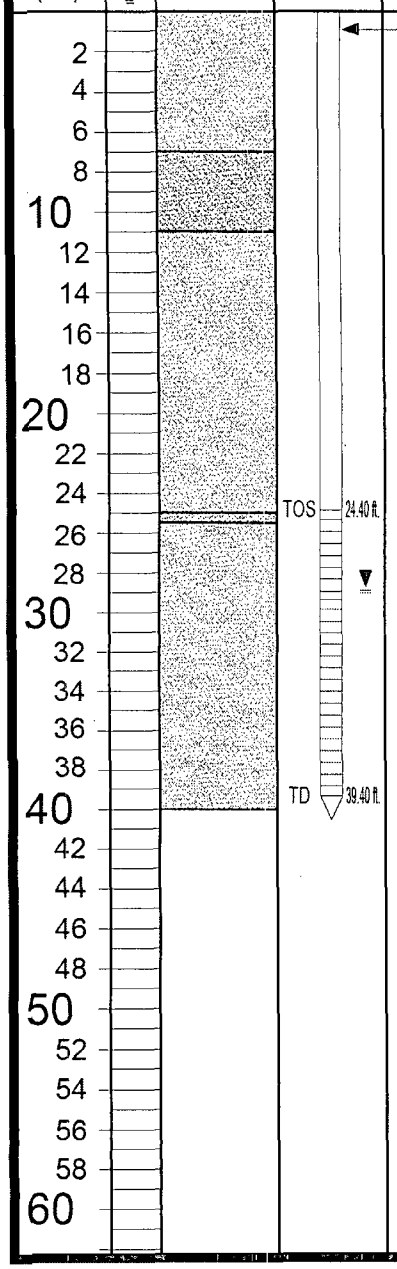
BLAGG ENGINEERING, Inc.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #2

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	132 FEET, N13E FROM PLUGGED & ABANDONED MARKER.

BORING #.....	BH - 2
MW #.....	2
PAGE #.....	2
DATE STARTED	11/1/06
DATE FINISHED	11/1/06
OPERATOR.....	DP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.60 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 7.0 FT. BELOW GRADE).

DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, SLIGHT APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (7.0 - 11.0 FT. BELOW GRADE).

MEDIUM GRAY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, STRONG HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (11.0 - 25.0 FT. BELOW GRADE).

BH2 @ 25-26 FT. - CONDUCTED DURING BORE HOLE ADVANCEMENT ON 11/1/06; TIME COLLECTED 1110, OVM = **262** ppm; TPH = **2,694** ppm; Benzene = **ND** ppb; Total BTEX = **33.5** ppb; Chloride = **6.1** mg/l; Blow count = **50** .

MEDIUM GRAY TO BLACK SAND, NON COHESIVE, SLIGHTLY MOIST TO DRY, DENSE, STRONG HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (25.0 - 25.5 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 29.00 FT. FROM GROUND SURFACE MEASURED ON 11/14/06.

MEDIUM GRAY SAND, NON COHESIVE, MOIST TO WET, FIRM, STRONG HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (25.5 - 40.0 FT. BELOW GRADE).

NOTES:
- SAND.
- SAND (IMPACTED).

TOS	- Top of screen of monitor well.
TD	- Total depth/bottom extent of monitor well.
ppm	- Parts per million (unit value).
mg/l	- milligrams per liter (unit value).
OVM	- Organic Vapor Meter or Photo-ionization Detector (PID).
TPH	- Total Petroleum Hydrocarbons EPA Method 8015B.
BTEX	- Benzene, Toluene, Ethylbenzene, & total Xylenes.

OVM CALIBRATION:
52.3 ppm; RF = 0.52
(RF = response factor).
100 ppm calibration gas
- isobutylene.
Date - 11/1/06.
Time - 1117.

Monitor well consist of 2 inch PVC piping - casing from 2.60 ft. above grade to 24.40 ft. below grade, 0.010 slotted screen between 24.40 to 39.40 ft. below grade, sand packed annular to 20.0 ft. below grade, bentonite grout between 17.0 to 20.00 ft. below grade, fill dirt between 3.0 to 17.0 ft. below grade, bentonite grout between 0.0 to 3.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

DRAWING: GCU 229E MW2-BH2. SKF DATE: 01/17/07 DWN BY: NJV

Hall Environmental Analysis Laboratory, Inc.

Date: *14-Nov-06*

CLIENT:	Blagg Engineering	**Client Sample ID:**	BH2 @ 25'-26'-Blow Pit
Lab Order:	0611044	**Collection Date:**	11/1/2006 11:10:00 AM
Project:	GCU #316 (#229E)	**Date Received:**	11/3/2006
Lab ID:	0611044-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	2600	100		mg/Kg	10	11/11/2006 11:22:42 AM
Surr: DNOP	171	61.7-135	S	%REC	10	11/11/2006 11:22:42 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	94	5.0		mg/Kg	1	11/6/2006 6:01:48 PM
Surr: BFB	413	84.5-129	S	%REC	1	11/6/2006 6:01:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	11/6/2006 6:01:48 PM
Toluene	ND	0.50		mg/Kg	10	11/6/2006 6:01:48 PM
Ethylbenzene	2.5	0.50		mg/Kg	10	11/6/2006 6:01:48 PM
Xylenes, Total	31	1.5		mg/Kg	10	11/6/2006 6:01:48 PM
Surr: 4-Bromofluorobenzene	101	76.8-115		%REC	10	11/6/2006 6:01:48 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	6.1	1.5		mg/Kg	5	11/9/2006 3:57:55 PM

Qualifiers:

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

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: BLAGG ENER./BP AMERICA
Address: P.O. BOX 87
BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: GCU #316 (#229E)
Project #: 96
Project Manager: NV
Sampler: NV
Sample Temperature: 5°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative cool	HEAL No.
11/1/06	1110	SOIL	BH2 @ 25'-26' BLOW PIT	1-4oz.			✓	0611044 -1

ANALYSIS REQUEST

BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles or Headspace (Y or N)
✓		✓										✓				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
11/2/06	0700	[signature]	[signature]	11-3-06 0945
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: TPH - GAS & DIESEL RANGE ONLY. (BOR) (DOR)

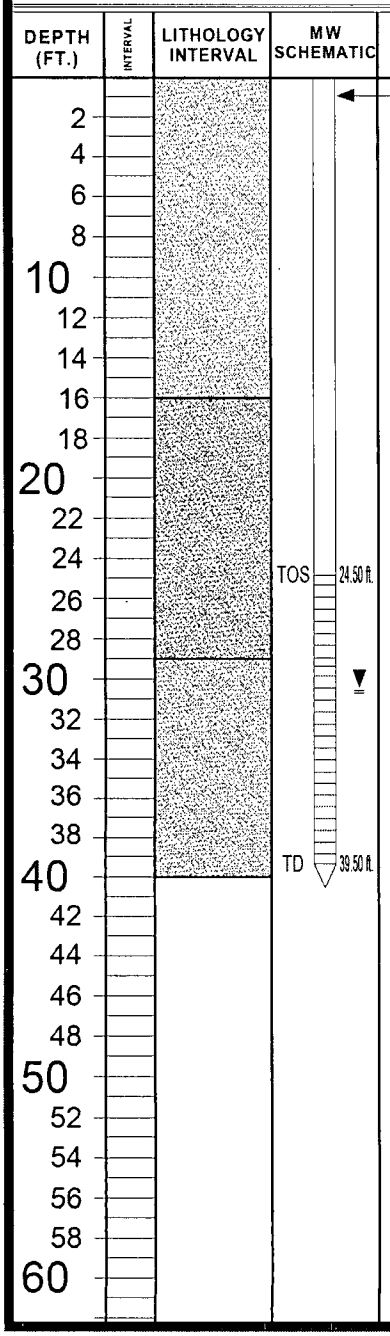
BLAGG ENGINEERING, Inc.
P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

MW #3

BORE / TEST HOLE REPORT

CLIENT:	BP AMERICA PRODUCTION CO.
LOCATION NAME:	GCU #229E UNIT I, SEC. 21, T28N, R12W
CONTRACTOR:	BLAGG ENGINEERING, INC. / ENVIROTECH, INC.
EQUIPMENT USED:	MOBILE DRILL RIG (CME 75)
BORING LOCATION:	143.5 FEET, N1.5E FROM PLUGGED & ABANDONED MARKER.

BORING #.....	BH - 3
MW #.....	3
PAGE #.....	3
DATE STARTED	01/18/07
DATE FINISHED	01/18/07
OPERATOR.....	DP
PREPARED BY	NJV



FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 2.50 FEET ABOVE GRADE.

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 16.0 FT. BELOW GRADE).

MODERATE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (16.0 - 29.0 FT. BELOW GRADE).

DEPTH TO WATER APPROX. 30.70 FT. FROM GROUND SURFACE MEASURED ON 1/19/07.

PALE BROWN SAND, NON COHESIVE, WET, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (29.0 - 40.0 FT. BELOW GRADE).

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 2.50 ft. above grade to 24.50 ft. below grade, 0.010 slotted screen between 24.50 to 39.50 ft. below grade, sand packed annular to 23.0 ft. below grade, bentonite grout between 20.0 to 23.00 ft. below grade, fill dirt between 0.0 to 20.0 ft. below grade. Well protector encompassing above grade casing and secured with padlock.

DRAWING: GCU 229E MW3-BH3. SKF | DATE: 01/19/07 | DWN BY: NJV

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A & 14715

GCU # 229E - BLOW PIT
UNIT I, SEC. 21, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL
ENVIROTECH

Date : November 14, 2006

SAMPLER : N J V

Filename : 11-14-06.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 - 2	-	-	31.60	42.00	1200	7.05	1,300	11.6	6.00
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	11/14/06	0945		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:
2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Excellent recovery . Blackish in appearance , hydrocarbon odor detected physically . Collected samples for BTEX and major anions / cations analyses .

Top of casing MW # 2 ~ 2.60 ft. above grade .

Hall Environmental Analysis Laboratory, Inc.

Date: *21-Nov-06*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW-2
Lab Order:	0611183	**Collection Date:**	11/14/2006 12:00:00 PM
Project:	GCU #229E (#316)	**Date Received:**	11/15/2006
Lab ID:	0611183-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	10		µg/L	10	11/20/2006 4:56:53 PM
Toluene	25	10		µg/L	10	11/20/2006 4:56:53 PM
Ethylbenzene	110	10		µg/L	10	11/20/2006 4:56:53 PM
Xylenes, Total	1800	30		µg/L	10	11/20/2006 4:56:53 PM
Surr: 4-Bromofluorobenzene	100	70.2-105		%REC	10	11/20/2006 4:56:53 PM

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #2	Date Reported:	11-17-06
Laboratory Number:	39151	Date Sampled:	11-14-06
Chain of Custody:	14715	Date Received:	11-14-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	11-15-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.36**	s.u.		
Conductivity @ 25° C	**1,230**	umhos/cm		
Total Dissolved Solids @ 180C	**866**	mg/L		
Total Dissolved Solids (Calc)	**840**	mg/L		
SAR	**2.9**	ratio		
Total Alkalinity as CaCO3	**288**	mg/L		
Total Hardness as CaCO3	**637**	mg/L		
Bicarbonate as HCO3	**288**	mg/L	4.72	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	**15.5**	mg/L	0.25	meq/L
Nitrite Nitrogen	**0.65**	mg/L	0.01	meq/L
Chloride	**64.0**	mg/L	1.81	meq/L
Fluoride	**0.70**	mg/L	0.04	meq/L
Phosphate	**0.2**	mg/L	0.01	meq/L
Sulfate	**312**	mg/L	6.50	meq/L
Iron	**<0.01**	mg/L	0.00	meq/L
Calcium	**118**	mg/L	5.89	meq/L
Magnesium	**21.1**	mg/L	1.74	meq/L
Potassium	**0.60**	mg/L	0.02	meq/L
Sodium	**132**	mg/L	5.74	meq/L
Cations			13.38	meq/L
Anions			13.33	meq/L
Cation/Anion Difference			**0.40%**	

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 #229E (#316) Grab Sample.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

CHAIN-OF-CUSTODY RECORD

QA/QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: BLAGG ENER./BP AMERICA

Project Name: GCU # 229E (#316)

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

Project #: NV

Project Manager: NV

Phone #: 632-1199

Sampler: NV

Fax #:

Sample Temperature: 10

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
								061183
11/14/06	1200	WATER	MW # 2	2-40ml	✓			1

ANALYSIS REQUEST

(BTEX) + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
11/14/06	1700			11/15/06 931
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

14715

CHAIN OF CUSTODY RECORD

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BLAGG / BP	GCU # 229E (#316)	
Sampler: NV	Client No. 94034-010	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	MAJOR ANIONS/ CATIONS	Remarks
MW #2	11/14/06	1200	39151	WATER	1	✓	PRESERVED COOL GRAB SAMPLE

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Allison Vaf	11/14/06	1445	[signature]	11/14/06	1445
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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

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

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A & 14692

GCU # 229E - BLOW PIT
UNIT I, SEC. 21, T28N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL
ENVIROTECH

Date : January 30, 2007

SAMPLER : N J V

Filename : 01-30-07.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	100.00	65.89	34.11	42.00	1225	7.13	1,200	14.3	4.00
MW - 2	96.43	64.80	31.63	42.00	1335	6.96	1,200	13.7	5.25
MW - 3	97.86	64.66	33.20	42.00	1300	7.18	1,200	14.8	4.25
					INSTRUMENT CALIBRATIONS =	7.00	2,800		
					DATE & TIME =	01/30/07	0830		

NOTES : Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).
(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)
Ideally a minimum of three (3) wellbore volumes:
2.00 " well diameter = 0.49 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Excellent recovery all MW's. All contained olive gray appearance. Strong hydrocarbon odor detected physically within purged water from MW # 2. Collected BTEX from all MW's & major anions / cations from MW # 1 & # 3.

Top of casing MW # 1 ~ 2.40 ft., MW # 2 ~ 2.60 ft., MW # 3 ~ 2.50 ft. above grade.

Hall Environmental Analysis Laboratory, Inc.

Date: *05-Feb-07*

CLIENT: Blagg Engineering
Project: GCU #229E (#316)
Lab Order: 0702007

Lab ID: 0702007-01 **Collection Date:** 1/30/2007 12:25:00 PM
Client Sample ID: MW #1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: LMM
Benzene	ND	1.0		µg/L	1	2/2/2007 8:29:56 PM
Toluene	ND	1.0		µg/L	1	2/2/2007 8:29:56 PM
Ethylbenzene	ND	1.0		µg/L	1	2/2/2007 8:29:56 PM
Xylenes, Total	ND	3.0		µg/L	1	2/2/2007 8:29:56 PM
Surr: 4-Bromofluorobenzene	87.0	70.2-105		%REC	1	2/2/2007 8:29:56 PM

Lab ID: 0702007-02 **Collection Date:** 1/30/2007 1:35:00 PM
Client Sample ID: MW #2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: LMM
Benzene	ND	5.0		µg/L	5	2/2/2007 9:02:36 PM
Toluene	ND	5.0		µg/L	5	2/2/2007 9:02:36 PM
Ethylbenzene	7.9	5.0		µg/L	5	2/2/2007 9:02:36 PM
Xylenes, Total	200	15		µg/L	5	2/2/2007 9:02:36 PM
Surr: 4-Bromofluorobenzene	89.1	70.2-105		%REC	5	2/2/2007 9:02:36 PM

Lab ID: 0702007-03 **Collection Date:** 1/30/2007 1:00:00 PM
Client Sample ID: MW #3 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: LMM
Benzene	ND	1.0		µg/L	1	2/2/2007 2:49:42 AM
Toluene	ND	1.0		µg/L	1	2/2/2007 2:49:42 AM
Ethylbenzene	ND	1.0		µg/L	1	2/2/2007 2:49:42 AM
Xylenes, Total	ND	3.0		µg/L	1	2/2/2007 2:49:42 AM
Surr: 4-Bromofluorobenzene	85.8	70.2-105		%REC	1	2/2/2007 2:49:42 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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #1	Date Reported:	01-31-07
Laboratory Number:	39878	Date Sampled:	01-30-07
Chain of Custody:	14692	Date Received:	01-30-07
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-31-07
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.34**	s.u.		
Conductivity @ 25° C	**1,320**	umhos/cm		
Total Dissolved Solids @ 180C	**730**	mg/L		
Total Dissolved Solids (Calc)	**717**	mg/L		
SAR	**2.3**	ratio		
Total Alkalinity as CaCO3	**256**	mg/L		
Total Hardness as CaCO3	**356**	mg/L		
Bicarbonate as HCO3	**256**	mg/L	4.20	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	**7.6**	mg/L	0.12	meq/L
Nitrite Nitrogen	**<0.001**	mg/L	0.00	meq/L
Chloride	**39.9**	mg/L	1.13	meq/L
Fluoride	**0.37**	mg/L	0.02	meq/L
Phosphate	**0.7**	mg/L	0.02	meq/L
Sulfate	**283**	mg/L	5.89	meq/L
Iron	**<0.001**	mg/L	0.00	meq/L
Calcium	**114**	mg/L	5.69	meq/L
Magnesium	**17.1**	mg/L	1.41	meq/L
Potassium	**0.10**	mg/L	0.00	meq/L
Sodium	**98.3**	mg/L	4.28	meq/L
Cations			11.37	meq/L
Anions			11.38	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 #229E (#316)**

Christine M Walters
Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	MW #3	Date Reported:	01-31-07
Laboratory Number:	39879	Date Sampled:	01-30-07
Chain of Custody:	14692	Date Received:	01-30-07
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-31-07
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.51**	s.u.		
Conductivity @ 25° C	**1,250**	umhos/cm		
Total Dissolved Solids @ 180C	**762**	mg/L		
Total Dissolved Solids (Calc)	**747**	mg/L		
SAR	**3.3**	ratio		
Total Alkalinity as CaCO3	**300**	mg/L		
Total Hardness as CaCO3	**304**	mg/L		
Bicarbonate as HCO3	**300**	mg/L	4.92	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	**9.5**	mg/L	0.15	meq/L
Nitrite Nitrogen	**<0.001**	mg/L	0.00	meq/L
Chloride	**43.7**	mg/L	1.23	meq/L
Fluoride	**0.68**	mg/L	0.04	meq/L
Phosphate	**0.4**	mg/L	0.01	meq/L
Sulfate	**264**	mg/L	5.50	meq/L
Iron	**<0.001**	mg/L	0.00	meq/L
Calcium	**102**	mg/L	5.09	meq/L
Magnesium	**12.2**	mg/L	1.00	meq/L
Potassium	**<0.01**	mg/L	0.00	meq/L
Sodium	**132**	mg/L	5.75	meq/L
Cations			11.84	meq/L
Anions			11.85	meq/L
Cation/Anion Difference			**0.07%**	

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 #229E (#316)**

Analyst

Review

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CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: BLAGG ENER. / BP AMERICA
Address: P.O. BOX 87
BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: GCU # 229E (#316)
Project #: NV
Project Manager: NV
Sampler: NV
Sample Temperature: 3°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
1/30/07	1225	WATER	MW #1	2-40ml	✓			0702007 1
1/30/07	1335	WATER	MW #2	2-40ml	✓			2
1/30/07	1300	WATER	MW #3	2-40ml	✓			3

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																
✓																
✓																

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
1/31/07	0630			2/1/07 935
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

14692

CHAIN OF CUSTODY RECORD

Client / Project Name: BLAGG / BP

Project Location: GCU #229E (#316)

Sampler: NV

Client No.: 94034-010

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	MAJOR ANIONS/CATIONS						Remarks
												PRESERVED COOL
												GRAB SAMPLES
MW #1	1/30/07	1225	39878	WATER	1	✓						
MW #3	1/30/07	1300	39879	WATER	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	1/30/07	1447	[signature]	1/30/07	1447
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

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

Sample Receipt

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: BP AMERICA PROD. CO. Telephone: (505)-326-9200 e-mail address:
Address: 200 ENERGY COURT. FARMINGTON. NM 87410
Facility or well name: GCU #229E API #: 30-045- 23900 U/L or Qtr/Qtr I Sec 21 T 28N R 12W
County: SAN JUAN Latitude 36.64548 Longitude 108.11172 NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☐ State ☐ Private ☐ Indian ☒

Pit	**Below-grade tank**
Type: Drilling ☐ Production ☒ Disposal ☐ BLOW Workover ☐ Emergency ☐ Lined ☐ Unlined ☒ Liner type: Synthetic ☐ Thickness mil Clay ☐ Pit Volume bbl	Volume: bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes ☐ If not, explain why not. N/A

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points)	20
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points)	0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)	0
	Ranking Score (Total Points)		20

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite ☒ offsite ☐ If offsite, name of facility. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☒ If yes, show depth below ground surface 29 ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: PIT LOCATED APPROXIMATELY 129 FT. N12E FROM WELL HEAD.
PIT EXCAVATION: WIDTH NA ft., LENGTH NA ft., DEPTH NA ft. .
PIT REMEDIATION: CLOSE AS IS: ☐, LANDFARM: ☐, COMPOST: ☐, STOCKPILE: ☐, OTHER ☒ (explain) MONITORING
Cubic yards: NA
ESTABLISH VERTICAL EXTENT. GROUNDWATER IMPACTED.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an alternative OCD-approved plan ☒.**

Date: 12/01/06

PrintedName/Title Jeff Blagg – P.E. # 11607 Signature

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:
Printed Name/Title Signature Date:

VLL 3004523900

CLIENT: BP

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

LOCATION NO: B1029
C.O.C. NO: 10079

FIELD REPORT: PIT CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: ECU WELL #: 229E TYPE: BLOW
QUAD/UNIT: I SEC: 21 TWP: 29N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: 1820'S/1085'E NE/SE CONTRACTOR: L&L (SCOTT)

DATE STARTED: 8/2/02
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. _____ FT. x _____ FT. x _____ FT. DEEP. CUBIC YARDAGE: _____
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: _____
LAND USE: RANGE - NAPI LEASE: NM 078391 A FORMATION: DK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 129 FT. N12E FROM WELLHEAD.
DEPTH TO GROUNDWATER: <50' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
NMOCD RANKING SCORE: 20 NMOCD TPH CLOSURE STD: 100 PPM

OVM CALIB. READ. 53.4 ppm
OVM CALIB. GAS = 100 ppm RF = 0.53
TIME: 11:00 (AM)/PM DATE: 7/30/02

SOIL AND EXCAVATION DESCRIPTION:

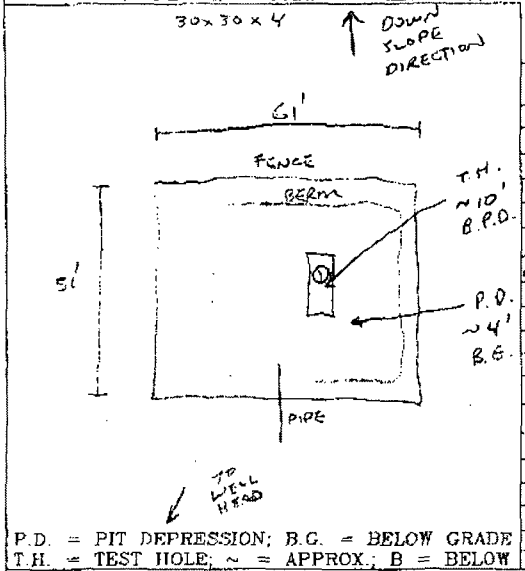
SOIL TYPE: (SAND) / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER _____
SOIL COLOR: PALE YELL. BROWN TO OLIVE-MED GRAY
COHESION (ALL OTHERS): (NON COHESIVE) / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
CONSISTENCY (NON COHESIVE SOILS): (LOOSE) / (FIRM) / DENSE / VERY DENSE
~~PLASTICITY (CLAYS)~~: NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
~~DENSITY (COHESIVE CLAYS & SILTS)~~: SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: DRY / (SLIGHTLY MOIST) / MOIST / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: (YES) / NO EXPLANATION - BETWEEN PIT SURFACE TO 12-14' BELOW GRADE
HC ODOR DETECTED: (YES) / NO EXPLANATION - TEST HOLE & OVM SAMPLE
SAMPLE TYPE: (GRAB) / COMPOSITE - # OF PTS. -
ADDITIONAL COMMENTS: VERTICAL EXTENT NEEDS TO BE ESTABLISHED.

FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE
0 FT

PIT PERIMETER



P.D. = PIT DEPRESSION; B.G. = BELOW GRADE
T.H. = TEST HOLE; ~ = APPROX.; B = BELOW

OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)	TIME
1 @ 14	875	
2 @		
3 @		
4 @		
5 @		
BH1 @ 18-19'	383	0833
BH1 @ 25-26'	805	0905

5/2/03
OVM CALIB. 53.1 0840

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
(1) @ 14'	TPH (8015B)	0849
"	BTEX (8021B)	"
	TPH - FAILED	
	BTEX - PASSED	

PIT PROFILE

TRAVEL NOTES: CALLOUT: 8/1/02 - AFTER. ONSITE: 8/2/02 - MORN.

revised: 02/27/02 bel1005C.skd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	1 @ 14'	Date Reported:	08-05-02
Laboratory Number:	23454	Date Sampled:	08-02-02
Chain of Custody No:	10079	Date Received:	08-02-02
Sample Matrix:	Soil	Date Extracted:	08-05-02
Preservative:	Cool	Date Analyzed:	08-05-02
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	366	0.2
Diesel Range (C10 - C28)	779	0.1
Total Petroleum Hydrocarbons	1,150	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **GCU #229E Blow Pit Grab Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	1 @ 14'	Date Reported:	08-05-02
Laboratory Number:	23454	Date Sampled:	08-02-02
Chain of Custody:	10079	Date Received:	08-02-02
Sample Matrix:	Soil	Date Analyzed:	08-05-02
Preservative:	Cool	Date Extracted:	08-05-02
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	77.7	1.8
Toluene	867	1.7
Ethylbenzene	948	1.5
p,m-Xylene	1,490	2.2
o-Xylene	1,590	1.0
Total BTEX	4,970	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**99 %**
	1,4-difluorobenzene	**99 %**
	Bromochlorobenzene	**99 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **GCU #229E Blow Pit Grab Sample.**

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