

3R - 381

REPORTS

DATE:
FEB 2006

BLAGG ENGINEERING, INC.

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

320301

2006 FEB 16 PM 1 07

February 15, 2006

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

**Re: BP America Production Company (formerly BP Amoco)
Groundwater Monitoring Report
Gallegos Canyon Unit (GCU) # 170, Unit K, Sec. 35, T29N, R12W, NMPM
San Juan County, New Mexico**

Dear Mr. Von Gonten:

BP America Production Company (BP) has retained Blagg Engineering, Inc. (BEI) to conduct environmental monitoring of groundwater at the GCU # 170.

The last BEI correspondence concerning the above reference well site was a letter dated, March 7, 2001. Since then, BP has followed its NMOCD approved groundwater management plan and continues groundwater monitoring on an annual basis. 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 the address or phone number listed above. Thank you for your cooperation and assistance.

Respectfully submitted:
Blagg Engineering, Inc.



Nelson J. Velez
Staff Geologist

Attachment: Groundwater Report

cc: Mr. Denny Foust, Environmental Geologist, NMOCD District III Office, Aztec, NM
Mr. Don Brooks, Environmental Coordinator, BP, Farmington, NM (without lab reports)

320381

BP AMERICA PRODUCTION CO.

SUPPLEMENTAL GROUNDWATER REMEDIATION REPORT

2001-2005

GCU #170

**(K) SECTION 35, T29N, R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO**

PREPARED FOR:

MR. GLENN VON GONTEN

NEW MEXICO OIL CONSERVATION DIVISION

DECEMBER 2005

PREPARED BY:

BLAGG ENGINEERING, INC.

Consulting Petroleum / Reclamation Services

P.O. Box 87

Bloomfield, New Mexico 87413

**BP America Production Co.
GCU # 170 - Separator Pit
Ne/4 Sw/4 Sec. 35, T29N, R12W**

Monitor Well Sampling Dates:

06/26/01, 5/31/02, 5/29/03, 6/24/04, 6/27/05

Site Historic Summary:

A site separator pit was closed out beginning in March, 1995 by removing impacted soils by excavation. Documentation for this work and subsequent groundwater monitoring data for the site have previously been submitted for New Mexico Oil Conservation review. The reporting herein is for site monitoring from March, 2001 to the present.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells (*Figure 1*) following US EPA: SW-846 protocol. Samples were collected using new disposable bailers and placed into new laboratory supplied 40 ml glass vials with teflon septa caps. The samples were preserved cool and with either mercuric chloride or hydrochloric acid and express delivered to a qualified laboratory for testing. Analytical procedures included benzene, toluene, ethyl-benzene and total xylenes (BTEX) per US EPA Method 8020 or 8021. Additional samples were collected into laboratory supplied containers for general water chemistry testing. Waste generated during monitor well sampling and development was disposed of utilizing the separator tank pit located on the well site.

Water Quality and Gradient Information:

Based on the enclosed site monitor well information, groundwater flow has been determined to be in the northwest direction during all monitoring events since May, 2000. Groundwater gradient maps are displayed on *Figures 2 through Figure 6*. Presently only well MW #3R is reporting a contamination level in excess of New Mexico Water Quality Control Commission (NMWQCC) standards for closure, for the constituent benzene only. This well is down-gradient of the original pit contamination site and does not fully delineate the possible down-gradient extent of impacts. There are no known residual hydrocarbon impacts in excess of NMWQCC standards in other wells in the monitoring program.

Summary and/or Recommendations:

Continued site monitoring per the approved BP Ground Water Management Plan is recommended. Natural attenuation appears to be successfully reducing the remaining hydrocarbon impacts and additional remedial actions are not indicated. Further delineation of down-gradient impacts are indicated and one or more additional monitor wells are recommended to address this issue.

BP AMERICA GROUNDWATER MONITOR WELL LABORATORY RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU #170 - SEPARATOR PIT
UNIT K, SEC. 35, T29N, R12W

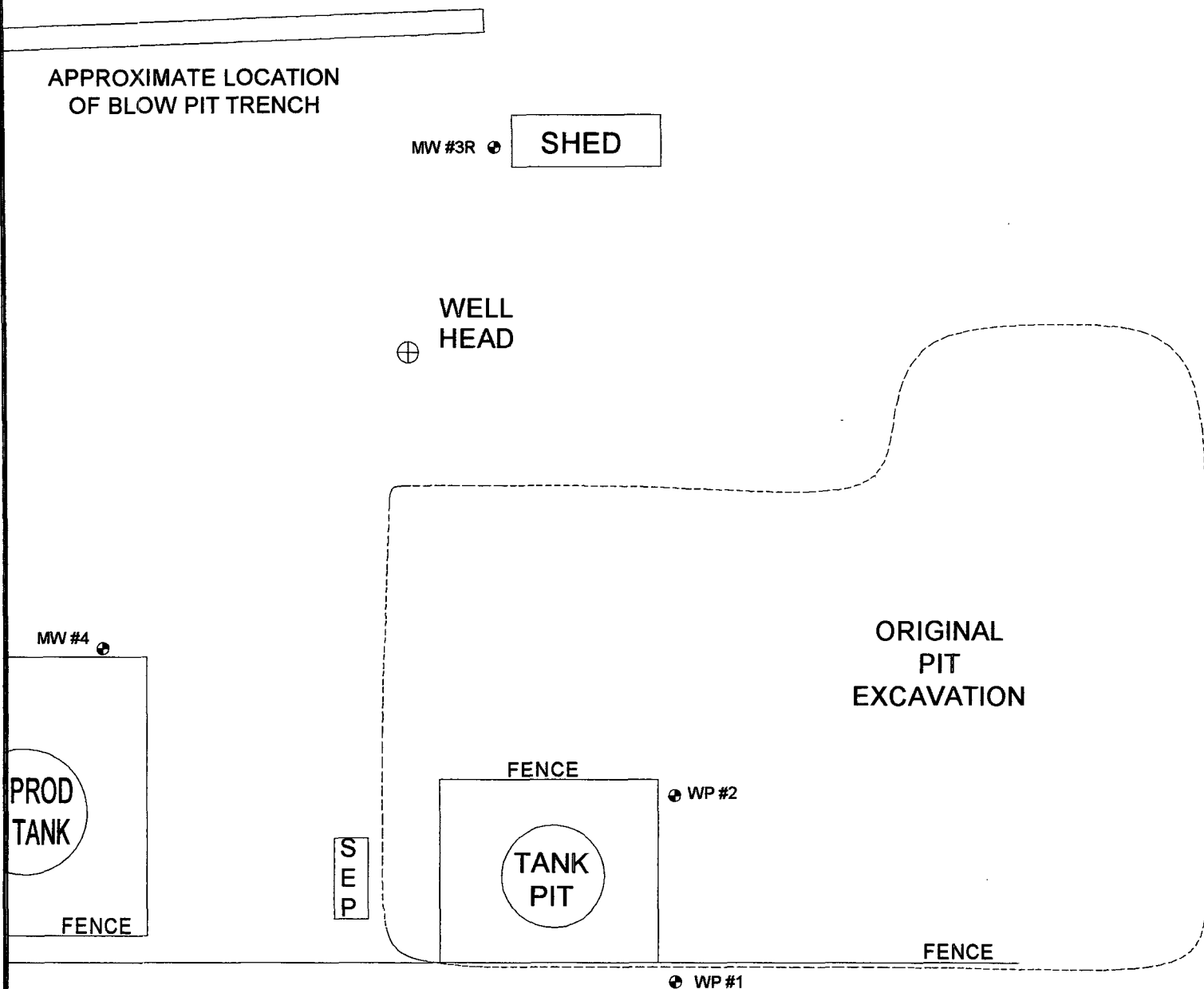
REVISED DATE: DECEMBER 5, 2005

FILENAME: (17-2Q-05.WK4) NJV

SAMPLE DATE	MONITOR WELL #	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. (umhos/cm)	pH	PRODUCT (ft)	BTEX EPA METHOD 8021B (ppb)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
28-Jun-95	MW #1	10.50	15.00		1,400	7.4		0.2	0.2	0.3	0.9
08-Sep-95		9.56			1,400	7.8		206	82.3	4.9	67.0
07-Dec-95		9.91			1,700	6.8		ND	0.37	ND	ND
08-Mar-96		10.93			1,200	6.6		ND	0.97	ND	ND
04-Jun-96		10.74			1,300	6.7		ND	ND	ND	ND
28-Jun-95	WP #2	10.45	15.00		1,600	7.4		1.9	38.3	0.2	0.8
08-Sep-95		9.35			1,300	7.4		47.1	19.8	1.2	17.6
07-Dec-95		9.45			1,600	7.2		ND	ND	ND	ND
08-Mar-96		10.24			1,700	7.0		ND	ND	ND	ND
04-Jun-96		10.00			2,100	6.9		ND	ND	ND	ND
28-Jun-95	MW #3	10.45	15.00		1,500	7.4		2115.7	4485.8	318	2704.4
08-Sep-95		9.60			1,700	7.8		1,200	815	131	661
07-Dec-95		9.80			1,800	7.0		4,830	7,680	294	2,760
08-Mar-96		10.74			1,500	6.6		5,020	6,410	105	2,603
04-Jun-96		10.57			1,600	6.6		5,140	5,560	116	2,631
24-Jun-97		10.72			1,700	6.9		1,115	542	88.2	850
08-Jun-98		10.69			1,600	7.3		921	1,020	16.1	279.4
28-May-99		10.29			1,700	7.0		69.3	78.1	3	88.7
24-May-00		10.70			1,700	7.1		1,100	770	19	410
26-Jun-01	MW #3R	10.45	19.50		2,200	7.21		160	540	76	590
31-May-02		10.45			2,600	7.18		32	17	2.3	29.6
29-May-03		10.34			1,800	6.95		75	30	4.8	38
24-Jun-04		10.30			2,300	6.92		71	26	6.4	36
27-Jun-05		10.15			2,000	7.00		80	47	6.6	53
NMWQCC GROUNDWATER STANDARDS								10	750	750	620

- NOTES: 1) RESULTS HIGHLIGHTED IN RED INDICATE EXCEEDING NMWQCC STANDARDS.
2) RESULTS HIGHLIGHTED IN BLUE INDICATE BELOW NMWQCC STANDARDS AFTER PROCEEDING RESULTS EXCEEDED.

FIGURE 1



1 INCH = 25 FT.

0 25 50 FT.

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

Top of Well Elevation	
WP #2	(100.80)
MW #3R	(99.59)
MW #4	(101.14)
Groundwater Elevation as of 6/26/01.	
MW #4 (90.00)	

BP AMERICA PRODUCTION COMPANY

GCU 170

NE/4 SW/4 SEC. 35, 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 SAMP.

DRAWN BY: NJV

FILENAME: 06-26-01-SM

REVISED: 8/27/02 NJV

**SITE
MAP**

06/01

FIGURE 2
(2nd 1/4, 2001)



APPROXIMATE LOCATION
OF BLOW PIT TRENCH

MW #3R
(89.14)

SHED

89.50

⊕ WELL
HEAD

90.00

APPARENT
GROUNDWATER
FLOW DIRECTION
~N21.5W

90.50

ORIGINAL
PIT
EXCAVATION

MW #4
(90.00)

PROD
TANK

FENCE

S
E
P

FENCE

TANK
PIT

WP #2
(90.93)

FENCE

WP #1

1 INCH = 25 FT.

0 25 50 FT.

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

Top of Well Elevation

WP #2	—————	(100.80)
MW #3R	—————	(89.59)
MW #4	—————	(101.14)

⊕ MW #4 (90.00)	Groundwater Elevation as of 5/26/01
--------------------	--

BP AMERICA PRODUCTION COMPANY

GCU 170

NE/4 SW/4 SEC. 35, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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PHONE: (505) 832-1188

PROJECT: MW SAMP.

DRAWN BY: NJV

FILENAME: 06-26-01-GW

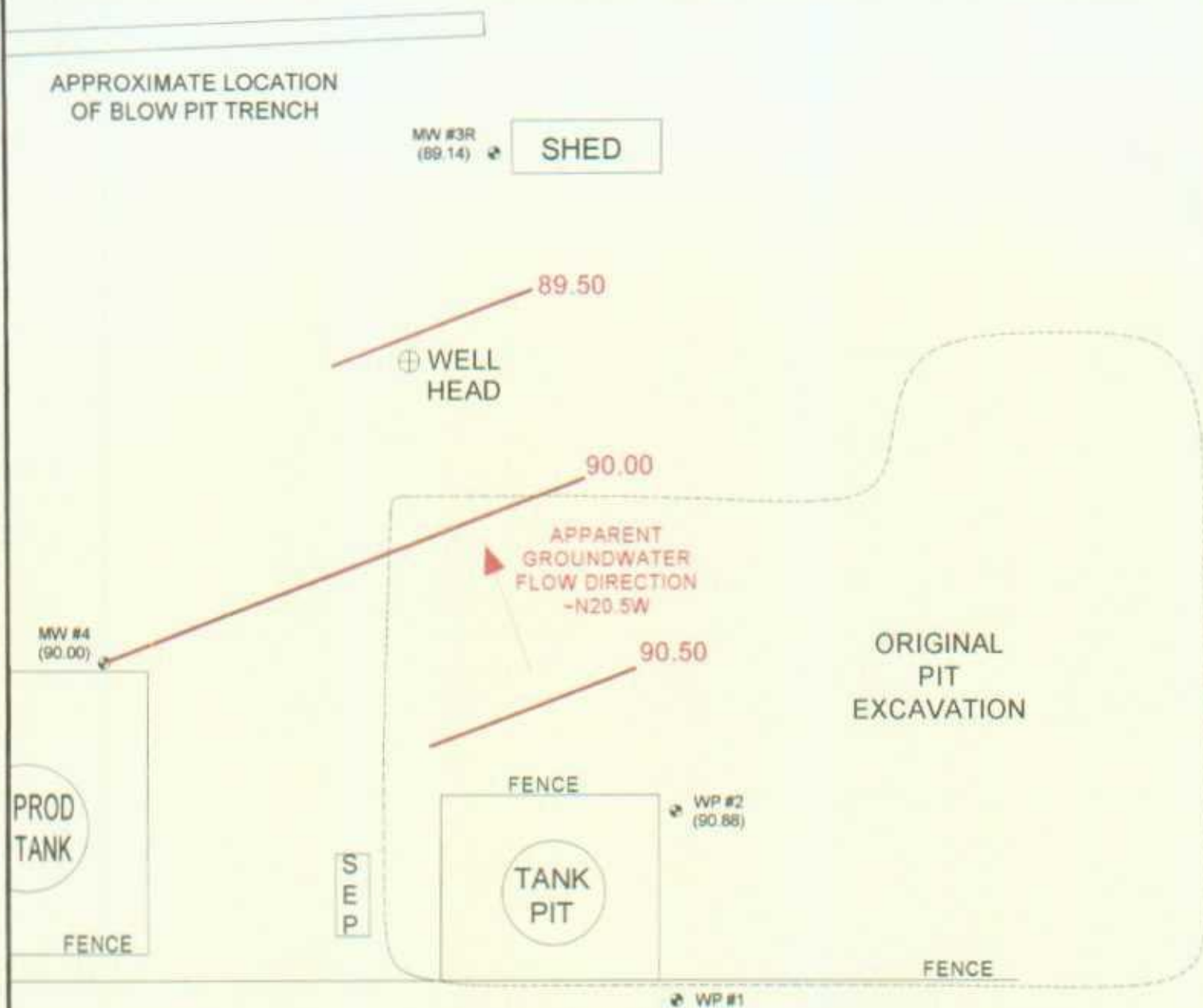
REVISED: 8/27/02 NJV

GROUNDWATER
CONTOUR

MAP

06/01

FIGURE 3
(2nd 1/4, 2002)



1 INCH = 25 FT.

0 25 50 FT.

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

Top of Well Elevation	
WP #2	(100.80)
MW #3R	(99.59)
MW #4	(101.14)
Groundwater Elevation as of 5/31/02	
MW #4 (90.00)	

BP AMERICA PRODUCTION COMPANY

GCU 170

NE/4 SW/4 SEC. 35, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

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PHONE: (505) 832-1195

PROJECT: MW SAMP.

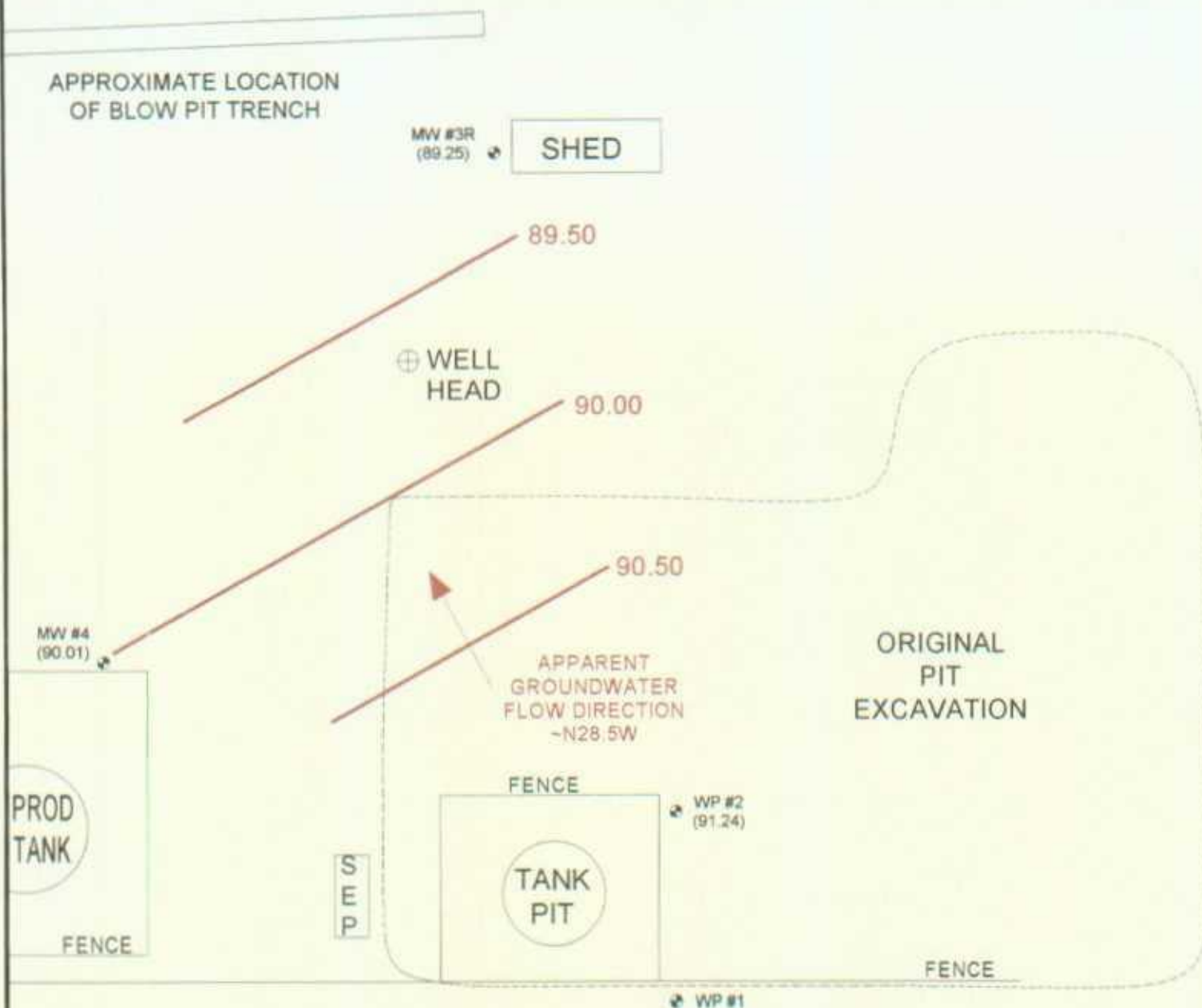
DRAWN BY: NJV

FILENAME: 05-31-02-GW

REVISED: 8/27/02 NJV

GROUNDWATER
CONTOUR
MAP
05/02

FIGURE 4
(2nd 1/4, 2003)



1 INCH = 25 FT.

0 25 50 FT.

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

Top of Well Elevation	
WP #2	(100.80)
MW #3R	(99.59)
MW #4	(101.14)
Groundwater Elevation as of 5/29/03.	
MW #4 (90.01)	

BP AMERICA PRODUCTION COMPANY

GCU 170

NE/4 SW/4 SEC. 35, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

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PHONE: (505) 835-1100

PROJECT: MW SAMP.

DRAWN BY: NJV

FILENAME: 05-29-03-GW.SKF

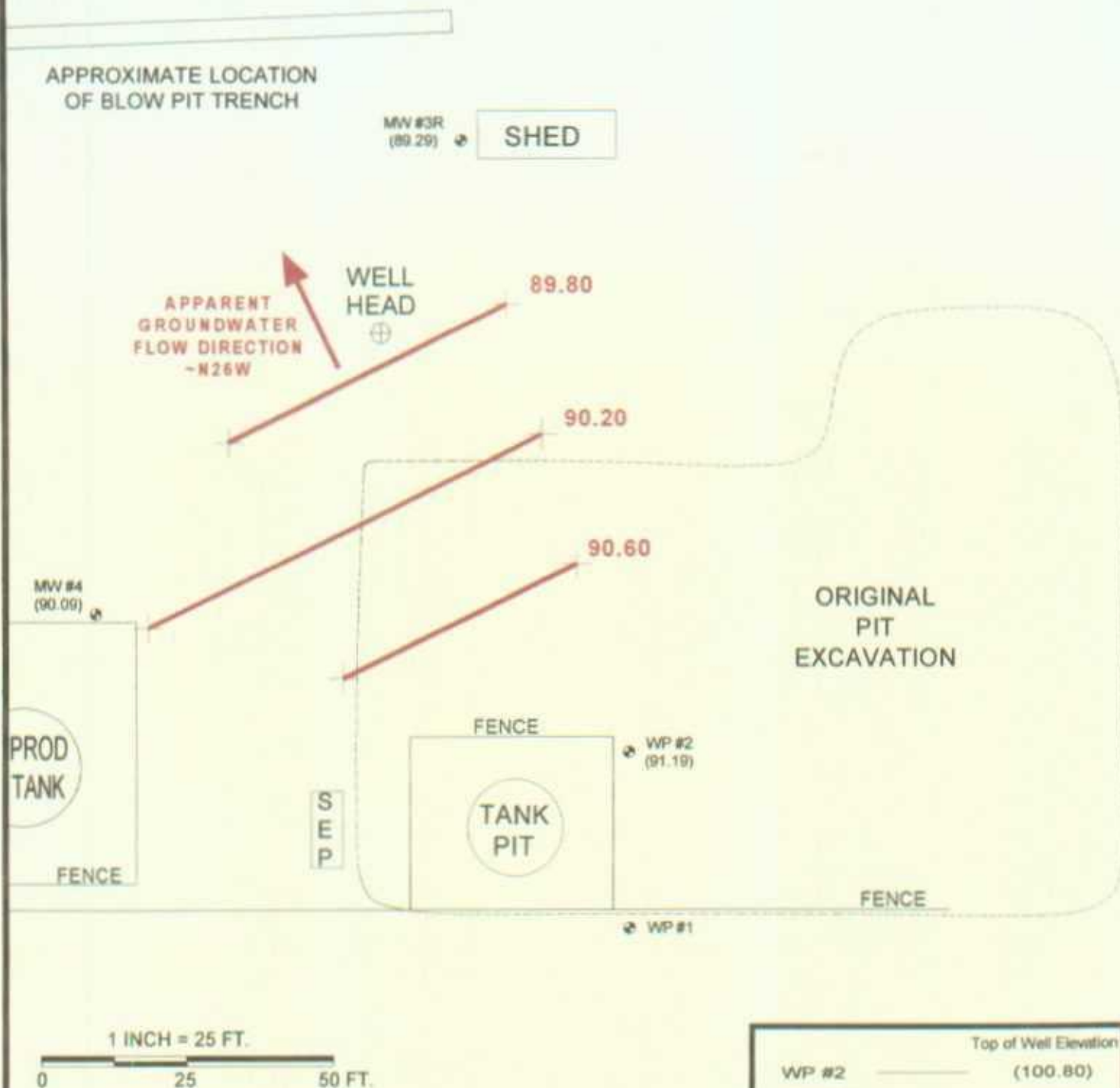
REVISED: 6/19/03 NJV

GROUNDWATER
CONTOUR

MAP

05/03

FIGURE 5
(2nd 1/4, 2004)



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

Top of Well Elevation	
WP #2	(100.80)
MW #3R	(99.59)
MW #4	(101.14)
MW #4 (90.09)	Groundwater Elevation as of 6/24/04.

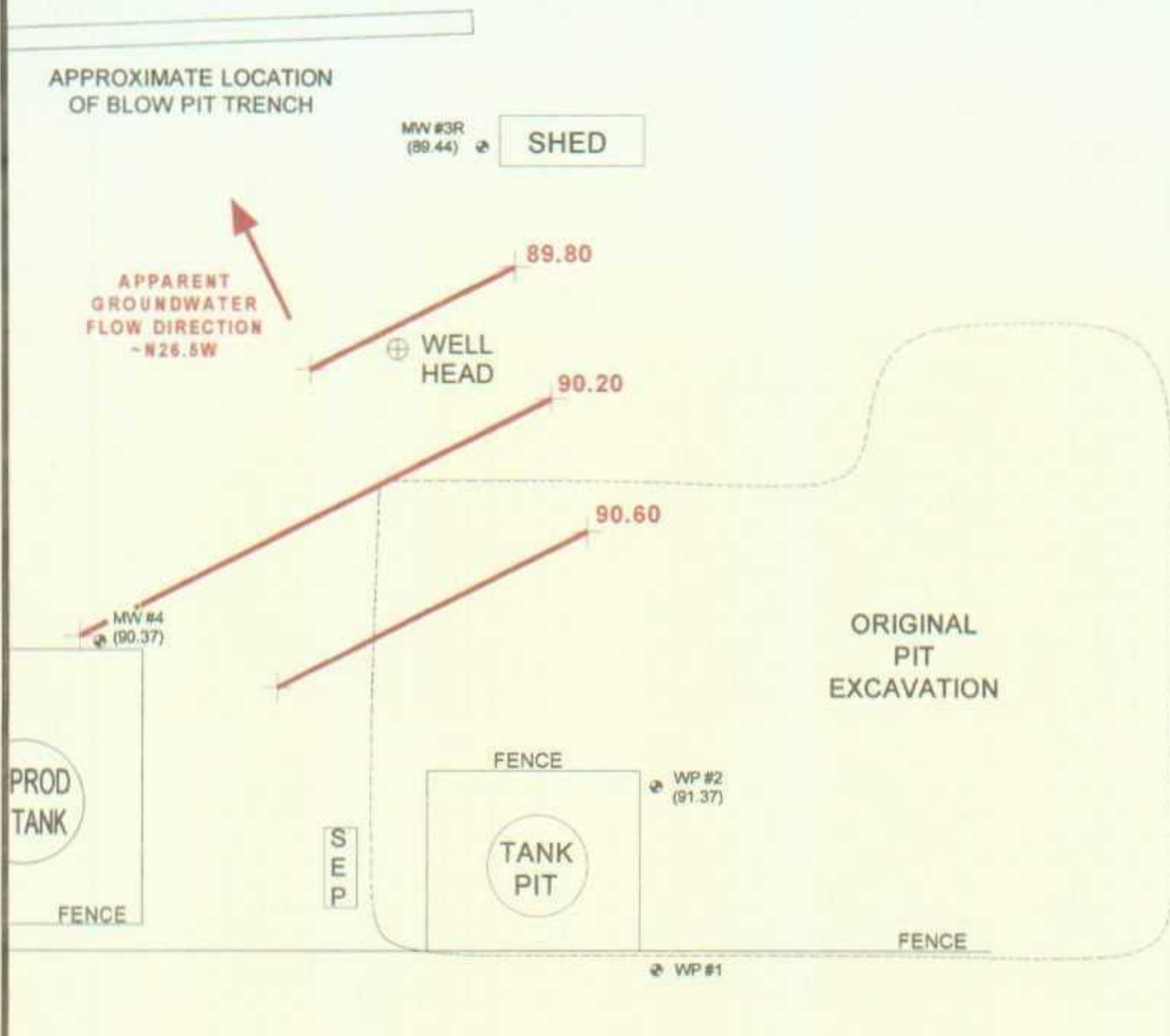
BP AMERICA PRODUCTION COMPANY
GCU 170
NE 1/4 SW 1/4 SEC. 35, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
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PHONE: (505) 833-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 06-24-04-GW.SKF
REVISED: 12/06/05 NJV

**GROUNDWATER
CONTOUR
MAP**
06/04

FIGURE 6
(2nd 1/4, 2005)



1 INCH = 25 FT.
0 25 50 FT.

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

Top of Well Elevation	
WP #2	(100.80)
MW #3R	(99.59)
MW #4	(101.14)
MW #4 (90.24)	Groundwater Elevation as of 5/27/05.

BP AMERICA PRODUCTION COMPANY
GCU 170
NE/4 SW/4 SEC. 35, T29N, R12W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 832-1188

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 06-27-05-GW SKF
REVISED: 12/06/05 NJV

**GROUNDWATER
CONTOUR
MAP**
06/05

BLAGG ENGINEERING, INC.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199

BORE / TEST HOLE REPORT

CLIENT:

BP AMERICA PRODUCTION COMPANY

LOCATION NAME:

GCU #170 - SEPARATOR PIT, UNIT K, SEC. 35, T29N, R12W

CONTRACTOR:

BLAGG ENGINEERING, INC.

EQUIPMENT USED:

MOBILE DRILL RIG (EARTHROBE 200)

BORING LOCATION:

35.5 FT., N23E FEET FROM WELL HEAD.

BORING #.....

BH - 5

MW #.....

3R

PAGE #.....

5

DATE STARTED

4/20/01

DATE FINISHED

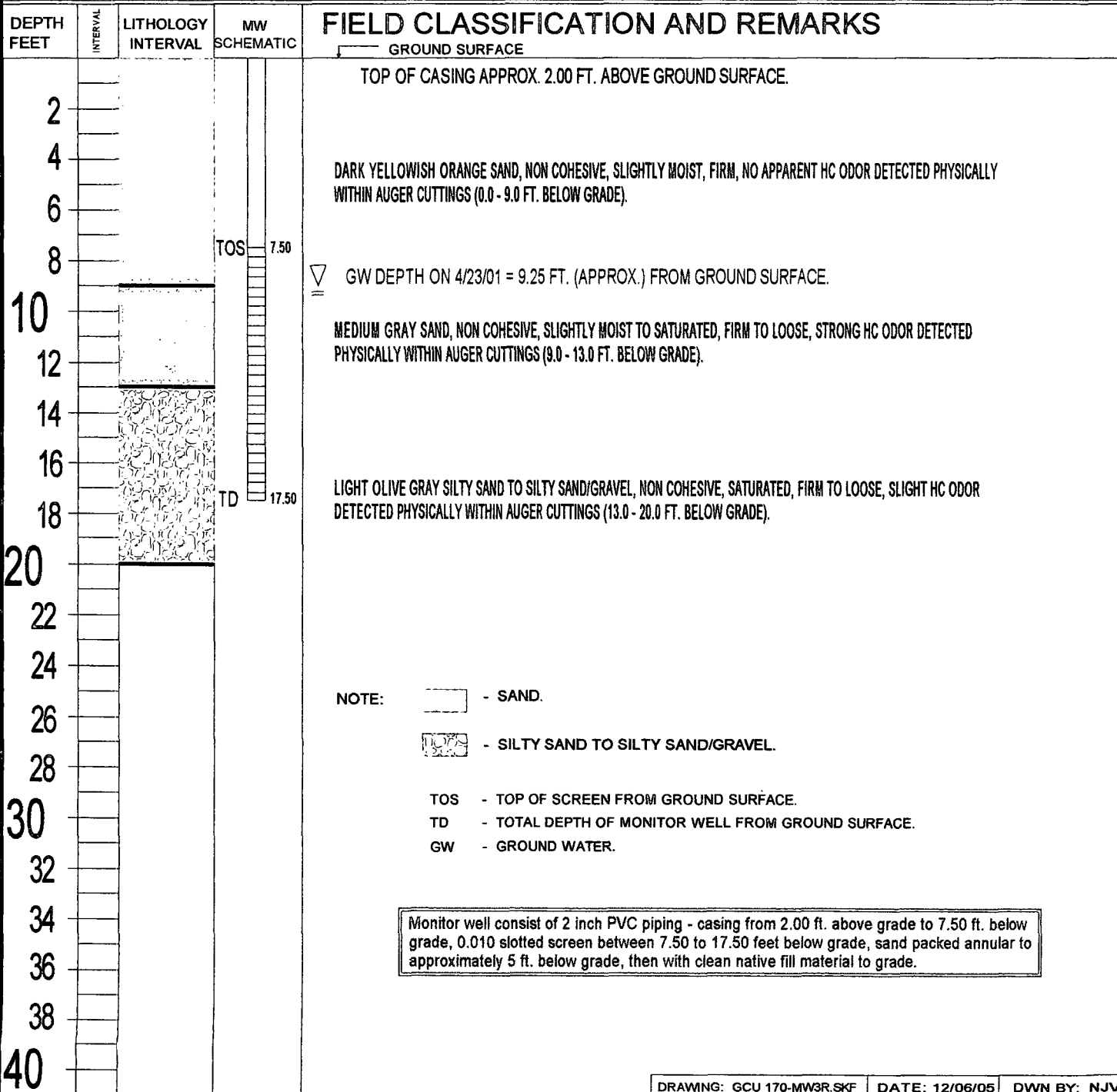
4/20/01

OPERATOR.....

JCB

PREPARED BY

NJV



DRAWING: GCU 170-MW3R.SKF

DATE: 12/06/05

DWN BY: NJV

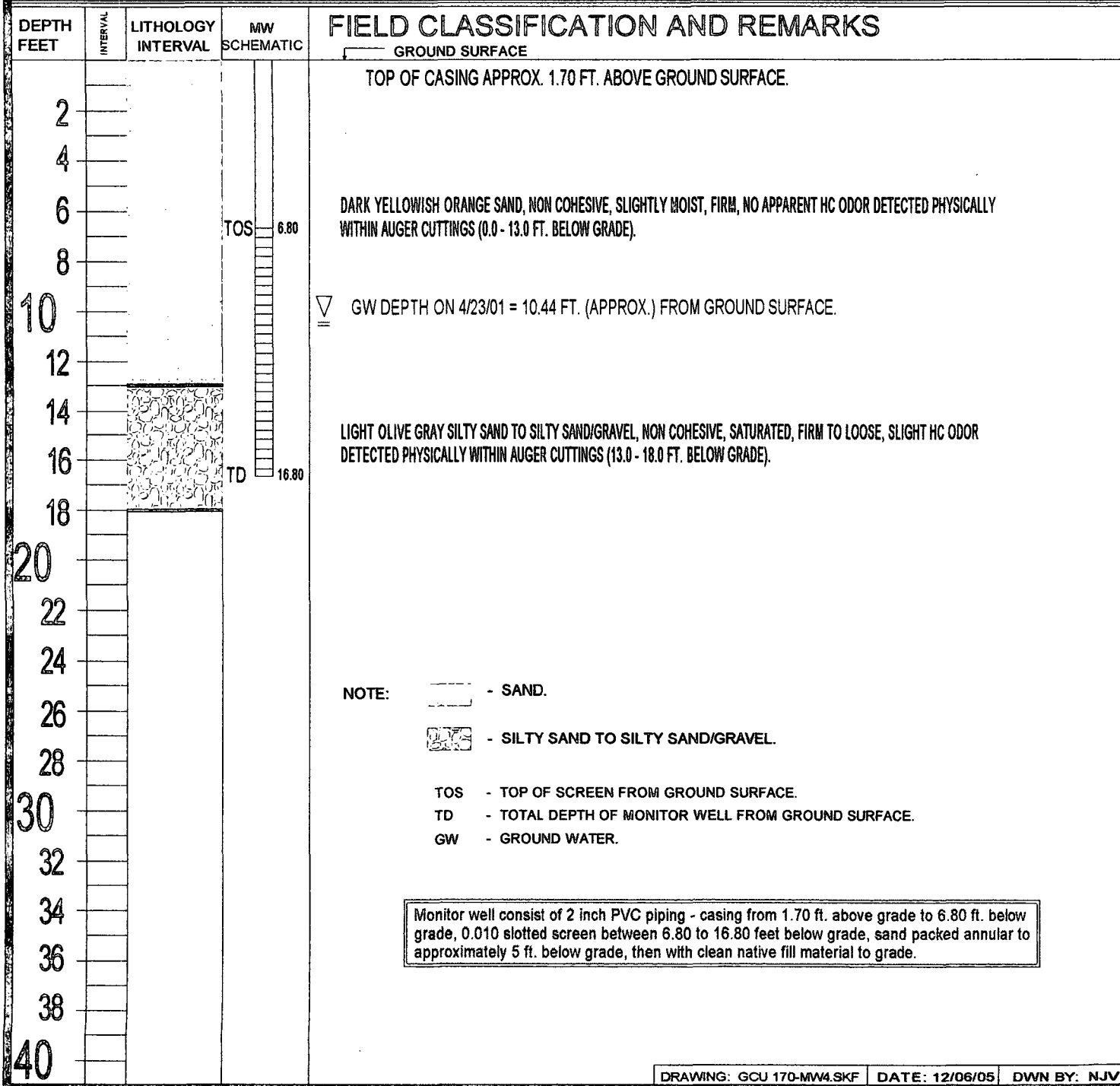
BLAGG ENGINEERING, INC.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMERICA PRODUCTION COMPANY
LOCATION NAME: GCU #170 - SEPARATOR PIT, UNIT K, SEC. 35, T29N, R12W
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (EARTHPROBE 200)
BORING LOCATION: 69 FT., S46W FEET FROM WELL HEAD.

BORING #..... BH - 4
MW #..... 4
PAGE #..... 4
DATE STARTED 4/20/01
DATE FINISHED 4/20/01
OPERATOR..... JCB
PREPARED BY NJV



BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT DATA

CLIENT : BP AMOCOCHAIN-OF-CUSTODY # : 11149

GCU # 170 - SEPARATOR PIT
UNIT K, SEC. 35, T29N, R12W

LABORATORY (S) USED : ON - SITE TECH.Date : June 26, 2001SAMPLER : N J VFilename : 06-26-01.WK4PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
WP-2	100.80	90.93	9.87	15.00	-	-	-	-	-
MW-3R	99.59	89.14	10.45	19.50	1110	7.21	2,200	4.50	-
MW-4	101.14	90.00	11.14	18.50	1030	7.41	800	3.75	-

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:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

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

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Installed MW # 3R & # 4 on 4 / 20 / 01 . Both consist of 2 inch PVC - 10 ft. 0.020 slotted screen
& 10 ft. casing . Excellent recovery in both MW 's . # 3R TOC = 2.00 ft. AGS ; # 4 TOC = 1.70 ft.
AGS . Collected BTEX from MW # 3R & 4 only .

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 10-Jul-01

Client:	Blagg Engineering	Client Sample Info:	GCU #170
Work Order:	0106043	Client Sample ID:	MW #3R
Lab ID:	0106043-01A	Matrix:	AQUEOUS
Project:	BP Amoco; GCU #170	Collection Date:	6/26/2001 11:10:00 AM
		COC Record:	11149

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Benzene	160	2.5		µg/L	5	7/3/2001
Toluene	540	2.5		µg/L	5	7/3/2001
Ethylbenzene	76	2.5		µg/L	5	7/3/2001
m,p-Xylene	480	5		µg/L	5	7/3/2001
o-Xylene	110	2.5		µg/L	5	7/3/2001

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 10-Jul-01

Client:	Blagg Engineering	Client Sample Info:	GCU #170
Work Order:	0106043	Client Sample ID:	MW #4
Lab ID:	0106043-02A	Matrix:	AQUEOUS
Project:	BP Amoco; GCU #170	Collection Date:	6/26/2001 10:30:00 AM
		COC Record:	11149

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	ND	0.5		µg/L	1	7/1/2001
Toluene	ND	0.5		µg/L	1	7/1/2001
Ethylbenzene	ND	0.5		µg/L	1	7/1/2001
m,p-Xylene	ND	1		µg/L	1	7/1/2001
o-Xylene	ND	0.5		µg/L	1	7/1/2001

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surrogate - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499
EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

ON SITE
TECHNOLOGIES, LTD.

CHAIN OF CUSTODY RECORD

Date: _____

Page: _____ of _____

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

On Site Technologies, LTD.

Date: 10-Jul-01

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_010701	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/1/2001	Prep Date:
Client ID:	0106043	Run ID: GC-1_010701A		SeqNo: 39332	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0976	0.5			J

Sample ID: MB1	Batch ID: GC-1_010702	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/2/2001	Prep Date:
Client ID:	0106043	Run ID: GC-1_010702A		SeqNo: 39305	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0671	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0772	0.5			J

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco; GCU #170

Sample ID: MB1	Batch ID: GC-1_010703	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/3/2001	Prep Date:
Client ID:	0106043	Run ID: GC-1_010703A		SeqNo: 39342	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0845	0.5			J

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Jul-01

CLIENT: Blagg Engineering
Work Order: 0106043
Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0106047-02AMS		Batch ID: GC-1_010701		Test Code: SW8021B		Units: µg/L		Analysis Date 7/1/2001		Prep Date:	
Client ID: 0106043		Run ID: GC-1_010701A						SeqNo: 39333			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2305	10	800	1500	100.7%	70	130				
Ethylbenzene	1199	10	800	390	101.1%	70	130				
m,p-Xylene	2318	20	1600	770	96.8%	70	130				
Methyl tert-Butyl Ether	992.4	20	800	170	102.8%	70	130				
o-Xylene	898.1	10	800	75	102.9%	70	130				
Toluene	937.3	10	800	110	103.4%	70	130				

Sample ID: 0106047-02AMS		Batch ID: GC-1_010701	Test Code: SW8021B	Units: µg/L	Analysis Date 7/1/2001		Prep Date:				
Client ID: 0106043		Run ID: GC-1_010701A			SeqNo: 39334						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2259	10	800	1500	94.8%	70	130	2305	2.0%	8	
Ethylbenzene	1177	10	800	390	98.3%	70	130	1199	1.9%	7	
m,p-Xylene	2278	20	1600	770	94.3%	70	130	2318	1.7%	7	
Methyl tert-Butyl Ether	990	20	800	170	102.5%	70	130	992.4	0.3%	6	
o-Xylene	884.5	10	800	75	101.2%	70	130	898.1	1.5%	6	
Toluene	917.6	10	800	110	101.0%	70	130	937.3	2.1%	6	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco, GCU #170

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0106043-01AMS		Batch ID: GC-1_010702		Test Code: SW8021B		Units: µg/L		Analysis Date 7/2/2001		Prep Date:	
Client ID: MW #3R		0106043		Run ID: GC-1_010702A				SeqNo: 39306			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	349.3	2.5	200	160.4	94.5%	70	130				
Ethylbenzene	248.7	2.5	200	76.15	86.3%	70	130				
m,p-Xylene	840.2	5	400	484.8	88.9%	70	130				
Methyl tert-Butyl Ether	207.8	5	200	6.308	100.7%	70	130				
o-Xylene	303.8	2.5	200	110.5	96.7%	70	130				
Toluene	726.7	2.5	200	538.6	94.0%	70	130				

Sample ID: 0106043-01AMSD		Batch ID: GC-1_010702	Test Code: SW8021B	Units: µg/L	Analysis Date 7/2/2001		Prep Date:				
Client ID: MW #3R		0106043	Run ID: GC-1_010702A		SeqNo: 39307						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	346.1	2.5	200	160.4	92.9%	70	130	349.3	0.9%	8	
Ethylbenzene	242	2.5	200	76.15	82.9%	70	130	248.7	2.8%	7	
m,p-Xylene	823.1	5	400	484.8	84.6%	70	130	840.2	2.0%	7	
Methyl tert-Butyl Ether	216	5	200	6.308	104.9%	70	130	207.8	3.9%	6	
o-Xylene	304	2.5	200	110.5	96.8%	70	130	303.8	0.1%	6	
Toluene	721.9	2.5	200	538.6	91.6%	70	130	726.7	0.7%	6	

Sample ID: 0106054-04AMS		Batch ID: GC-1_010703		Test Code: SW8021B		Units: µg/L		Analysis Date 7/3/2001		Prep Date:	
Client ID:		0106043		Run ID:		GC-1_010703A		SeqNo: 39343			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	7728	50	4000	3698	100.7%	70	130				
Ethylbenzene	4853	50	4000	687.4	104.2%	70	130				
m,p-Xylene	15180	100	8000	7196	99.9%	70	130				
Methyl tert-Butyl Ether	4116	100	4000	17.3	102.5%	70	130				
o-Xylene	5788	50	4000	1620	104.2%	70	130				
Toluene	14840	50	4000	10790	101.4%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

CLIENT: Blagg Engineering
 Work Order: 0106043
 Project: BP Amoco; GCU #170

Sample ID: 0106054-04AMSD		Batch ID: GC-1_010703	Test Code: SW8021B	Units: µg/L	Analysis Date 7/3/2001		Prep Date:			
Client ID: 0106043		Run ID: GC-1_010703A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 39344			
Analyte	Result									
Benzene	7617	50	4000	3698	98.0%	70	130	7728	1.4%	8
Ethylbenzene	4782	50	4000	687.4	102.4%	70	130	4853	1.5%	7
m,p-Xylene	14960	100	8000	7196	97.1%	70	130	15180	1.5%	7
Methyl tert-Butyl Ether	4146	100	4000	17.3	103.2%	70	130	4116	0.7%	6
o-Xylene	5722	50	4000	1620	102.6%	70	130	5788	1.1%	6
Toluene	14610	50	4000	10790	95.6%	70	130	14840	1.6%	6

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Jul-01

CLIENT: Blagg Engineering
Work Order: 0106043
Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_010701	Test Code: SW8021B	Units: µg/L	Analysis Date 7/1/2001	Prep Date:					
Client ID: 0106043		Run ID: GC-1_010701A	PQL	SPK value	SeqNo: 39331						
Analyte	Result			SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.63		0.5	40	0	101.6%	80	120			
Ethylbenzene	40.99		0.5	40	0	102.5%	80	120			
m,p-Xylene	80.18		1	80	0	100.2%	80	120			
Methyl tert-Butyl Ether	39.1		1	40	0	97.8%	80	120			
o-Xylene	41.18		0.5	40	0	102.9%	80	120			
Toluene	40.65		0.5	40	0.0976	101.4%	80	120			

Sample ID: LCS WATER		Batch ID: GC-1_010702	Test Code: SW8021B	Units: µg/L	Analysis Date 7/2/2001	Prep Date:					
Client ID: 0106043		Run ID:	GC-1_010702A		SeqNo: 39304						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.64	0.5	40	0.0671	103.9%	80	120				
Ethylbenzene	42.33	0.5	40	0	105.8%	80	120				
m,p-Xylene	82.72	1	80	0	103.4%	80	120				
Methyl tert-Butyl Ether	41.32	1	40	0	103.3%	80	120				
o-Xylene	42.39	0.5	40	0	106.0%	80	120				
Toluene	41.83	0.5	40	0.0772	104.4%	80	120				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_010703		Test Code: SW8021B		Units: µg/L		Analysis Date 7/3/2001		Prep Date:	
Client ID:		0106043		Run ID:		GC-1_010703A		SeqNo: 39341			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.39	0.5	40	0	103.5%	80	120				
Ethylbenzene	42.14	0.5	40	0	105.4%	80	120				
m,p-Xylene	82.55	1	80	0	103.2%	80	120				
Methyl tert-Butyl Ether	41.09	1	40	0	102.7%	80	120				
o-Xylene	42.21	0.5	40	0	105.5%	80	120				
Toluene	41.73	0.5	40	0.0845	104.1%	80	120				

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Jul-01

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010701	Test Code: SW8021B	Units: µg/L		Analysis Date 7/1/2001		Prep Date:	
Client ID: 0106043		Run ID: GC-1_010701A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 39328
Analyte	Result								
Benzene	21.23		0.5	20	0	106.2%	85	115	
Ethylbenzene	21.43		0.5	20	0	107.1%	85	115	
m,p-Xylene	42.24		1	40	0	105.6%	85	115	
Methyl tert-Butyl Ether	20.17		1	20	0	100.9%	85	115	
o-Xylene	21.46		0.5	20	0	107.3%	85	115	
Toluene	21.3		0.5	20	0	106.5%	85	115	
1,4-Difluorobenzene	113		0	120	0	94.2%	70	130	
4-Bromochlorobenzene	123.1		0	120	0	102.6%	70	130	
Fluorobenzene	111.8		0	120	0	93.1%	70	130	

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010701	Test Code: SW8021B	Units: µg/L		Analysis Date 7/1/2001		Prep Date:	
Client ID: 0106043		Run ID: GC-1_010701A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 39329
Analyte	Result								
Benzene	40.85		0.5	40	0	102.1%	85	115	
Ethylbenzene	41.12		0.5	40	0	102.8%	85	115	
m,p-Xylene	80.53		1	80	0	100.7%	85	115	
Methyl tert-Butyl Ether	40.07		1	40	0	100.2%	85	115	
o-Xylene	41.33		0.5	40	0	103.3%	85	115	
Toluene	41.12		0.5	40	0	102.8%	85	115	
1,4-Difluorobenzene	112.4		0	120	0	93.7%	70	130	
4-Bromochlorobenzene	120		0	120	0	100.0%	70	130	
Fluorobenzene	111.3		0	120	0	92.7%	70	130	

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0106043
Project: BP Amoco; GCU #170

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0105		Batch ID: GC-1_010701	Test Code: SW8021B	Units: µg/L	Analysis Date 7/1/2001		Prep Date:				
Client ID:		0106043	Run ID:	GC-1_010701A	SeqNo: 39330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.8	0.5	20	0	104.0%	85	115				
Ethylbenzene	20.67	0.5	20	0	103.4%	85	115				
m,p-Xylene	41.01	1	40	0	102.5%	85	115				
Methyl tert-Butyl Ether	20.64	1	20	0	103.2%	85	115				
o-Xylene	20.95	0.5	20	0	104.8%	85	115				
Toluene	20.74	0.5	20	0	103.7%	85	115				
1,4-Difluorobenzene	111.9	0	120	0	93.3%	70	130				
4-Bromochlorobenzene	117.5	0	120	0	97.9%	70	130				
Fluorobenzene	112.6	0	120	0	93.9%	70	130				

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010702		Test Code: SW8021B		Units: µg/L		Analysis Date 7/2/2001		Prep Date:	
Client ID:		0106043		Run ID:		GC-1_010702A		SeqNo: 39301			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.85	0.5	20	0	109.3%	85	115				
Ethylbenzene	22.33	0.5	20	0	111.6%	85	115				
m,p-Xylene	44.01	1	40	0	110.0%	85	115				
Methyl tert-Butyl Ether	21.24	1	20	0	106.2%	85	115				
o-Xylene	22.3	0.5	20	0	111.5%	85	115				
Toluene	22.06	0.5	20	0	110.3%	85	115				
1,4-Difluorobenzene	113.5	0	120	0	94.6%	70	130				
4-Bromochlorobenzene	122.9	0	120	0	102.4%	70	130				
Fluorobenzene	113.7	0	120	0	94.7%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010702	Test Code: SW8021B	Units: µg/L		Analysis Date 7/2/2001		Prep Date:			
Client ID: 0106043		Run ID: GC-1_010702A	SeqNo: 39302		Analysis Date 7/2/2001		Prep Date:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21	0.5	20	0	105.0%	85	115				
Ethylbenzene	21.32	0.5	20	0	106.6%	85	115				
m,p-Xylene	42.24	1	40	0	105.6%	85	115				
Methyl tert-Butyl Ether	21.53	1	20	0	107.6%	85	115				
o-Xylene	21.52	0.5	20	0	107.6%	85	115				
Toluene	21.19	0.5	20	0	105.9%	85	115				
1,4-Difluorobenzene	114	0	120	0	95.0%	70	130				
4-Bromochlorobenzene	120.8	0	120	0	100.6%	70	130				
Fluorobenzene	112.8	0	120	0	94.0%	70	130				

Sample ID: CCV3 BTEX_0105		Batch ID: GC-1_010702	Test Code: SW8021B	Units: µg/L		Analysis Date 7/2/2001		Prep Date:			
Client ID:		Run ID:	GC-1_010702A	SeqNo: 39303							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.04	0.5	40	0	102.6%	85	115				
Ethylbenzene	41.46	0.5	40	0	103.7%	85	115				
m,p-Xylene	81.21	1	80	0	101.5%	85	115				
Methyl tert-Butyl Ether	41.07	1	40	0	102.7%	85	115				
o-Xylene	41.79	0.5	40	0	104.5%	85	115				
Toluene	41.39	0.5	40	0	103.5%	85	115				
1,4-Difluorobenzene	112.7	0	120	0	93.9%	70	130				
4-Bromochlorobenzene	119	0	120	0	99.1%	70	130				
Fluorobenzene	112.4	0	120	0	93.7%	70	130				

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

CLIENT: Blagg Engineering

Work Order: 0106043

Project: BP Amoco; GCU #170

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0105	Batch ID: GC-1_010703	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/3/2001	Prep Date:
Client ID: 0106043	Run ID: GC-1_010703A	PQL	SPK value	SPK Ref Val	SeqNo: 39339
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	21.82	0.5	20	0	109.1%
Ethylbenzene	22.18	0.5	20	0	110.9%
m,p-Xylene	43.77	1	40	0	109.4%
Methyl tert-Butyl Ether	21.38	1	20	0	106.9%
o-Xylene	22.2	0.5	20	0	111.0%
Toluene	22.01	0.5	20	0	110.0%
1,4-Difluorobenzene	113.8	0	120	0	94.8%
4-Bromochlorobenzene	122.8	0	120	0	102.4%
Fluorobenzene	113.2	0	120	0	94.3%

Sample ID: CCV2 BTEX_0105	Batch ID: GC-1_010703	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/3/2001	Prep Date:
Client ID: 0106043	Run ID: GC-1_010703A	PQL	SPK value	SPK Ref Val	SeqNo: 39340
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	21.65	0.5	20	0	108.2%
Ethylbenzene	21.8	0.5	20	0	109.0%
m,p-Xylene	43.01	1	40	0	107.5%
Methyl tert-Butyl Ether	21.34	1	20	0	106.7%
o-Xylene	21.9	0.5	20	0	109.5%
Toluene	21.68	0.5	20	0	108.4%
1,4-Difluorobenzene	113.8	0	120	0	94.8%
4-Bromochlorobenzene	123.2	0	120	0	102.7%
Fluorobenzene	113.1	0	120	0	94.3%

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
 Work Order: 0106043
 Project: BP Amoco; GCU #170
 Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
0106038-01A	96	101	95.4					
0106040-07A	94.2	103	95.2					
0106040-08A	94.7	102	95.7					
0106040-09A	95.5	99.6	94.7					
0106040-10A	91.6	122	93.2					
0106040-11A	94.5	100	95.1					
0106040-12A	94.3	101	95.2					
0106040-13A	95.3	102	95.3					
0106040-14A	2.42 *	95.8	92.6					
0106040-15A	94.6	100	95.1					
0106040-16A	86.7	95.3	87.6					
0106042-01A	91.4	106	91.5					
0106042-02A	94.9	99.8	95					
0106043-01A	90.3	99.9	91.9					
0106043-01AMS	90.5	106	90.7					
0106043-01AMSD	90.6	104	92.3					
0106043-02A	95.4	99.8	94.9					
0106047-01A	94.8	100	95.2					
0106047-02A	92.4	98.8	91.9					
0106047-02AMS	91.2	98.8	91.9					
0106047-02AMSD	91.3	99.4	91.8					
0106047-03A	95.2	104	94.5					
0106048-01A	94.4	102	94					
0106048-02A	95.9	104	94.7					
0106048-03A	96.8	101	95					
0106054-01A	95.8	103	95					
0106054-02A	95.2	103	95.2					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

CLIENT: Blagg Engineering
Work Order: 0106043
Project: BP Amoco; GCU #170
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
0106054-03A	93.6	101	93.3					
0106054-04A	93.4	102	93.9					
0106054-04AMS	93.5	103	92.5					
0106054-04AMSD	93.3	104	92.8					
0106054-05A	95.7	94.9	95.3					
0106054-06A	94.9	101	94.8					
0106054-07A	93.5	99.4	93.6					
0106054-08A	91.8	100	92.8					
0106054-09A	91.4	102	92					
0106054-10A	95.1	103	94.8					
CCV1 BTEX_01052	94.8	102	94.3					
CCV2 BTEX_01052	94.8	103	94.3					
CCV3 BTEX_01052	93.9	99.1	93.7					
LCS WATER	93.6	103	93.8					
MBI	95.5	102	94.6					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT DATA

CLIENT : BP AMOCOCHAIN-OF-CUSTODY # : 11774

GCU #170 - SEPARATOR PIT
UNIT K, SEC. 35, T29N, R12W

LABORATORY (S) USED : ON - SITE TECH.Date : May 31, 2002SAMPLER : N J VFilename : 05-31-02.WK4PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
WP-2	100.80	90.88	9.92	15.00	-	-	-	-	-
MW-3R	99.59	89.14	10.45	19.50	1040	7.18	2,600	4.50	-
MW-4	101.14	90.00	11.14	18.50	-	-	-	-	-

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:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

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

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Installed MW #3R & #4 on 4/20/01. Both consist of 2 inch PVC - 10 ft. 0.020 slotted screen
& 10 ft. casing. Excellent recovery in MW #3R, TOC = 2.00 ft. AGS. Collected BTEX from
MW #3R only.

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 18-Jun-02

Client:	Blagg Engineering	Client Sample Info:	BP - GCU #170
Work Order:	0206002	Client Sample ID:	MW #3R
Lab ID:	0206002-01A	Matrix:	AQUEOUS
Project:	BP - GCU #170	Collection Date:	05/31/2002 10:40:00 AM
		COC Record:	11774

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Benzene	32	0.5		µg/L	1	06/12/2002
Toluene	17	0.5		µg/L	1	06/12/2002
Ethylbenzene	2.3	0.5		µg/L	1	06/12/2002
m,p-Xylene	24	1		µg/L	1	06/12/2002
o-Xylene	5.6	0.5		µg/L	1	06/12/2002

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted precision limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



Purchase Order No.:	Project No.	Name	Title
		O. Nelson	VELZ

Name	JEFF KAGG	
Company	DWAG ENGINEERING INC.	Dept.
Address		
City, State, Zip		

BP-662 #170

10/10/19

SAMPLE			
DATE	TIME	MATRIX	PRES.

2012/10/10	1040	1040	1040
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2^k	$\frac{1}{2^k}$	$\frac{1}{2^{k+1}}$	$\frac{1}{2^{k+2}}$	$\frac{1}{2^{k+3}}$	$\frac{1}{2^{k+4}}$	$\frac{1}{2^{k+5}}$	$\frac{1}{2^{k+6}}$	$\frac{1}{2^{k+7}}$	$\frac{1}{2^{k+8}}$	$\frac{1}{2^{k+9}}$	$\frac{1}{2^{k+10}}$	$\frac{1}{2^{k+11}}$	$\frac{1}{2^{k+12}}$	$\frac{1}{2^{k+13}}$	$\frac{1}{2^{k+14}}$	$\frac{1}{2^{k+15}}$	$\frac{1}{2^{k+16}}$	$\frac{1}{2^{k+17}}$	$\frac{1}{2^{k+18}}$	$\frac{1}{2^{k+19}}$	$\frac{1}{2^{k+20}}$	$\frac{1}{2^{k+21}}$	$\frac{1}{2^{k+22}}$	$\frac{1}{2^{k+23}}$	$\frac{1}{2^{k+24}}$	$\frac{1}{2^{k+25}}$	$\frac{1}{2^{k+26}}$	$\frac{1}{2^{k+27}}$	$\frac{1}{2^{k+28}}$	$\frac{1}{2^{k+29}}$	$\frac{1}{2^{k+30}}$	$\frac{1}{2^{k+31}}$	$\frac{1}{2^{k+32}}$	$\frac{1}{2^{k+33}}$	$\frac{1}{2^{k+34}}$	$\frac{1}{2^{k+35}}$	$\frac{1}{2^{k+36}}$	$\frac{1}{2^{k+37}}$	$\frac{1}{2^{k+38}}$	$\frac{1}{2^{k+39}}$	$\frac{1}{2^{k+40}}$	$\frac{1}{2^{k+41}}$	$\frac{1}{2^{k+42}}$	$\frac{1}{2^{k+43}}$	$\frac{1}{2^{k+44}}$	$\frac{1}{2^{k+45}}$	$\frac{1}{2^{k+46}}$	$\frac{1}{2^{k+47}}$	$\frac{1}{2^{k+48}}$	$\frac{1}{2^{k+49}}$	$\frac{1}{2^{k+50}}$	$\frac{1}{2^{k+51}}$	$\frac{1}{2^{k+52}}$	$\frac{1}{2^{k+53}}$	$\frac{1}{2^{k+54}}$	$\frac{1}{2^{k+55}}$	$\frac{1}{2^{k+56}}$	$\frac{1}{2^{k+57}}$	$\frac{1}{2^{k+58}}$	$\frac{1}{2^{k+59}}$	$\frac{1}{2^{k+60}}$	$\frac{1}{2^{k+61}}$	$\frac{1}{2^{k+62}}$	$\frac{1}{2^{k+63}}$	$\frac{1}{2^{k+64}}$	$\frac{1}{2^{k+65}}$	$\frac{1}{2^{k+66}}$	$\frac{1}{2^{k+67}}$	$\frac{1}{2^{k+68}}$	$\frac{1}{2^{k+69}}$	$\frac{1}{2^{k+70}}$	$\frac{1}{2^{k+71}}$	$\frac{1}{2^{k+72}}$	$\frac{1}{2^{k+73}}$	$\frac{1}{2^{k+74}}$	$\frac{1}{2^{k+75}}$	$\frac{1}{2^{k+76}}$	$\frac{1}{2^{k+77}}$	$\frac{1}{2^{k+78}}$	$\frac{1}{2^{k+79}}$	$\frac{1}{2^{k+80}}$	$\frac{1}{2^{k+81}}$	$\frac{1}{2^{k+82}}$	$\frac{1}{2^{k+83}}$	$\frac{1}{2^{k+84}}$	$\frac{1}{2^{k+85}}$	$\frac{1}{2^{k+86}}$	$\frac{1}{2^{k+87}}$	$\frac{1}{2^{k+88}}$	$\frac{1}{2^{k+89}}$	$\frac{1}{2^{k+90}}$	$\frac{1}{2^{k+91}}$	$\frac{1}{2^{k+92}}$	$\frac{1}{2^{k+93}}$	$\frac{1}{2^{k+94}}$	$\frac{1}{2^{k+95}}$	$\frac{1}{2^{k+96}}$	$\frac{1}{2^{k+97}}$	$\frac{1}{2^{k+98}}$	$\frac{1}{2^{k+99}}$	$\frac{1}{2^{k+100}}$
1	0.5	0.25	0.125	0.0625	0.03125	0.015625	0.0078125	0.00390625	0.001953125	0.0009765625	0.00048828125	0.000244140625	0.0001220703125	6.103515625e-05	3.0517578125e-05	1.52587890625e-05	7.62939453125e-06	3.814697265625e-06	1.9073486328125e-06	9.5367431640625e-07	4.76837158203125e-07	2.384185791015625e-07	1.1920928955078125e-07	5.9604644775390625e-08	2.9802322387695312e-08	1.4901161193847656e-08	7.450580596923828e-09	3.725290298461914e-09	1.862645149230957e-09	9.313225746154785e-10	4.656612873077392e-10	2.328306436538696e-10	1.164153218269348e-10	5.82076609134674e-11	2.91038304567337e-11	1.455191522836685e-11	7.275957614183425e-12	3.637978807091712e-12	1.818989403545856e-12	9.09494701772928e-13	4.54747350886464e-13	2.27373675443232e-13	1.13686837721616e-13	5.6843418860808e-14	2.8421709430404e-14	1.4210854715202e-14	7.105427357601e-15	3.5527136788005e-15	1.77635683940025e-15	8.88178419700125e-16	4.440892098500625e-16	2.2204460492503125e-16	1.1102230246251562e-16	5.551115123125781e-17	2.7755575615628906e-17	1.3877787807814453e-17	6.938893903907226e-18	3.469446951953613e-18	1.7347234759768065e-18	8.673617379884032e-19	4.336808689942016e-19	2.168404344971008e-19	1.084202172485504e-19	5.42101086242752e-20	2.71050543121376e-20	1.35525271560688e-20	6.7762635780344e-21	3.3881317890172e-21	1.6940658945086e-21	8.470329472543e-22	4.2351647362715e-22	2.11758236813575e-22	1.058791184067875e-22	5.293955920339375e-23	2.6469779601696875e-23	1.3234889800848437e-23	6.617444900424219e-24	3.3087224502121095e-24	1.6543612251060547e-24	8.271806125530273e-25	4.1359030627651365e-25	2.0679515313825682e-25	1.0339757656912841e-25																		

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[illegible]

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1	2	3	4
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Date/Time *2/2/00 10:00*

Date/Time	Lat	Long	Alt	Speed	Heading	Remarks
11/11/2017 10:00	10.10	124.00	1000	10	090	Start of survey
11/11/2017 10:05	10.15	124.05	1000	10	090	Survey point 1
11/11/2017 10:10	10.20	124.10	1000	10	090	Survey point 2
11/11/2017 10:15	10.25	124.15	1000	10	090	Survey point 3
11/11/2017 10:20	10.30	124.20	1000	10	090	Survey point 4
11/11/2017 10:25	10.35	124.25	1000	10	090	Survey point 5
11/11/2017 10:30	10.40	124.30	1000	10	090	Survey point 6
11/11/2017 10:35	10.45	124.35	1000	10	090	Survey point 7
11/11/2017 10:40	10.50	124.40	1000	10	090	Survey point 8
11/11/2017 10:45	10.55	124.45	1000	10	090	Survey point 9
11/11/2017 10:50	11.00	124.50	1000	10	090	Survey point 10
11/11/2017 10:55	11.05	124.55	1000	10	090	Survey point 11
11/11/2017 11:00	11.10	124.60	1000	10	090	Survey point 12
11/11/2017 11:05	11.15	124.65	1000	10	090	Survey point 13
11/11/2017 11:10	11.20	124.70	1000	10	090	Survey point 14
11/11/2017 11:15	11.25	124.75	1000	10	090	Survey point 15
11/11/2017 11:20	11.30	124.80	1000	10	090	Survey point 16
11/11/2017 11:25	11.35	124.85	1000	10	090	Survey point 17
11/11/2017 11:30	11.40	124.90	1000	10	090	Survey point 18
11/11/2017 11:35	11.45	124.95	1000	10	090	Survey point 19
11/11/2017 11:40	11.50	125.00	1000	10	090	Survey point 20
11/11/2017 11:45	11.55	125.05	1000	10	090	Survey point 21
11/11/2017 11:50	12.00	125.10	1000	10	090	Survey point 22
11/11/2017 11:55	12.05	125.15	1000	10	090	Survey point 23
11/11/2017 12:00	12.10	125.20	1000	10	090	Survey point 24
11/11/2017 12:05	12.15	125.25	1000	10	090	Survey point 25
11/11/2017 12:10	12.20	125.30	1000	10	090	Survey point 26
11/11/2017 12:15	12.25	125.35	1000	10	090	Survey point 27
11/11/2017 12:20	12.30	125.40	1000	10	090	Survey point 28
11/11/2017 12:25	12.35	125.45	1000	10	090	Survey point 29
11/11/2017 12:30	12.40	125.50	1000	10	090	Survey point 30
11/11/2017 12:35	12.45	125.55	1000	10	090	Survey point 31
11/11/2017 12:40	12.50	125.60	1000	10	090	Survey point 32
11/11/2017 12:45	12.55	125.65	1000	10	090	Survey point 33
11/11/2017 12:50	13.00	125.70	1000	10	090	Survey point 34
11/11/2017 12:55	13.05	125.75	1000	10	090	Survey point 35
11/11/2017 13:00	13.10	125.80	1000	10	090	Survey point 36
11/11/2017 13:05	13.15	125.85	1000	10	090	Survey point 37
11/11/2017 13:10	13.20	125.90	1000	10	090	Survey point 38
11/11/2017 13:15	13.25	125.95	1000	10	090	Survey point 39
11/11/2017 13:20	13.30	126.00	1000	10	090	Survey point 40
11/11/2017 13:25	13.35	126.05	1000	10	090	Survey point 41
11/11/2017 13:30	13.40	126.10	1000	10	090	Survey point 42
11/11/2017 13:35	13.45	126.15	1000	10	090	Survey point 43
11/11/2017 13:40	13.50	126.20	1000	10	090	

DateTime	
DateTime	

Date/Time	
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Date _____

(Client Signature Must Accompany Request)

Distribution: White - On Site	Yellow - LAB	Pink - Sampler	Goldenrod - Client
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To Re-order Call 325-9600 or Fax 325-9764 **alphagraphics®** FORM # 01

On Site Technologies, LTD.

Date: 18-Jun-02

CLIENT: Blagg Engineering
Work Order: 0206002
Project: BP - GCU #170

QC SUMMARY REPORT

Method Blank

Sample ID: MB_020611	Batch ID: GC-1_020610	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/11/2002	Prep Date: 06/11/2002
Client ID:	0206002	Run ID: GC-1_020610A		SeqNo: 51629	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	.1219	1			J
o-Xylene	.0438	0.5			J
Toluene	.1198	0.5			J

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 18-Jun-02

CLIENT: Blagg Engineering

Work Order: 0206002

Project: BP - GCU #170

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0206002-01AMS		Batch ID: GC-1_020610		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/11/2002		Prep Date: 06/11/2002	
Client ID: MW #3R		Run ID: 0206002		PQL		SPK value		SeqNo: 51630			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	224.3	2.5	200	32.2	96.1%	70	130				
Ethylbenzene	198.9	2.5	200	2.346	98.3%	70	130				
m,p-Xylene	413.5	5	400	24	97.4%	70	130				
o-Xylene	197.2	2.5	200	5.974	95.6%	70	130				
Toluene	209.4	2.5	200	18.41	95.5%	70	130				

Sample ID: 0206002-01AMSD		Batch ID: GC-1_020610		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/11/2002		Prep Date: 06/11/2002	
Client ID: MW #3R		Run ID: 0206002		PQL		SPK value		SeqNo: 51631			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	221.4	2.5	200	32.2	94.6%	70	130	224.3	1.3%	15	
Ethylbenzene	196	2.5	200	2.346	96.8%	70	130	198.9	1.5%	15	
m,p-Xylene	407.2	5	400	24	95.8%	70	130	413.5	1.5%	15	
o-Xylene	194.9	2.5	200	5.974	94.5%	70	130	197.2	1.2%	15	
Toluene	206.3	2.5	200	18.41	93.9%	70	130	209.4	1.5%	15	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 18-Jun-02

CLIENT: Blagg Engineering
Work Order: 0206002
Project: BP - GCU #170

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS_020611	Batch ID: GC-1_020610	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/11/2002	Prep Date: 06/11/2002
Client ID: 0206002	Run ID: GC-1_020610A	PQL	SPK value	SPK Ref Val	SeqNo: 51627
Analyte	Result				
Benzene	37.31	0.5	40	0	93.3%
Ethylbenzene	38.48	0.5	40	0	96.2%
m,p-Xylene	76.48	1	80	0.1219	95.4%
o-Xylene	37.39	0.5	40	0.0438	93.4%
Toluene	37.02	0.5	40	0.1198	92.2%

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

On Site Technologies, LTD.

Date: 18-Jun-02

CLIENT: Blagg Engineering

Work Order: 0206002

Project: BP - GCU #170

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020611		Batch ID: GC-1_020610		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/11/2002		Prep Date: 06/11/2002	
Client ID:		0206002		Run ID: GC-1_020610A				SeqNo: 51622			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.82	0.5	20	0	94.1%	85	115				
Ethylbenzene	19.6	0.5	20	0	98.0%	85	115				
m,p-Xylene	38.8	1	40	0	97.0%	85	115				
o-Xylene	18.88	0.5	20	0	94.4%	85	115				
Toluene	18.74	0.5	20	0	93.7%	85	115				
1,4-Difluorobenzene	106.6	0	110	0	96.9%	70	130				
4-Bromochlorobenzene	108.7	0	110	0	98.9%	70	130				
Fluorobenzene	108	0	110	0	98.2%	70	130				

Sample ID: CCV2_020611		Batch ID: GC-1_020610		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/11/2002		Prep Date: 06/11/2002	
Client ID:		0206002		Run ID: GC-1_020610A				SeqNo: 51623			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.1	0.5	20	0	95.5%	85	115				
Ethylbenzene	19.58	0.5	20	0	97.9%	85	115				
m,p-Xylene	39.22	1	40	0	98.1%	85	115				
o-Xylene	19.06	0.5	20	0	95.3%	85	115				
Toluene	18.9	0.5	20	0	94.5%	85	115				
1,4-Difluorobenzene	107.1	0	110	0	97.4%	70	130				
4-Bromochlorobenzene	122.2	0	110	0	111.1%	70	130				
Fluorobenzene	108.6	0	110	0	98.8%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0206002
Project: BP - GCU #170

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3_020611		Batch ID: GC-1_020610		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/11/2002		Prep Date: 06/11/2002	
Client ID:		0206002		Run ID:		GC-1_020610A		SeqNo: 51624			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.56	0.5	40	0	96.4%	85	115				
Ethylbenzene	39.34	0.5	40	0	98.3%	85	115				
m,p-Xylene	77.76	1	80	0	97.2%	85	115				
o-Xylene	38.17	0.5	40	0	95.4%	85	115				
Toluene	38.04	0.5	40	0	95.1%	85	115				
1,4-Difluorobenzene	106.2	0	110	0	96.6%	70	130				
4-Bromochlorobenzene	117.2	0	110	0	106.6%	70	130				
Fluorobenzene	107.8	0	110	0	98.0%	70	130				

Sample ID: CCV4_020611	Batch ID: GC-1_020610	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/12/2002		Prep Date: 06/12/2002					
Client ID: 0206002	Run ID: GC-1_020610A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result										
Benzene	18.76	0.5	20	0	93.8%	85	115				
Ethylbenzene	19.45	0.5	20	0	97.3%	85	115				
m,p-Xylene	38.91	1	40	0	97.3%	85	115				
o-Xylene	18.83	0.5	20	0	94.2%	85	115				
Toluene	18.61	0.5	20	0	93.0%	85	115				
1,4-Difluorobenzene	107.8	0	110	0	98.0%	70	130				
4-Bromochlorobenzene	108.9	0	110	0	99.0%	70	130				
Fluorobenzene	109.3	0	110	0	99.4%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering

Work Order: 0206002

Project: BP - GCU #170

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV5_020611		Batch ID: GC-1_020610		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/12/2002		Prep Date: 06/12/2002	
Client ID:		0206002		Run ID:		GC-1_020610A		SeqNo: 51626			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.63	0.5	20	0	93.2%	85	115				
Ethylbenzene	18.96	0.5	20	0	94.8%	85	115				
m,p-Xylene	37.88	1	40	0	94.7%	85	115				
o-Xylene	18.32	0.5	20	0	91.6%	85	115				
Toluene	18.22	0.5	20	0	91.1%	85	115				
1,4-Difluorobenzene	107.4	0	110	0	97.7%	70	130				
4-Bromochlorobenzene	119.1	0	110	0	108.3%	70	130				
Fluorobenzene	109.6	0	110	0	99.6%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0206002
Project: BP - GCU #170
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
0205047-01A	97.8	108	99.6					
0205047-02A	95.9	111	98					
0205047-03A	97.2	110	99					
0205049-01A	98	117	99.7					
0205049-02A	96.9	105	99.1					
0206001-01A	95.7	105	97.5					
0206002-01A	96.4	105	98.4					
0206002-01AMS	95.8	115	97.7					
0206002-01AMSD	95.9	112	97.4					
0206012-01A	96	103	98.4					
0206012-02A	97.8	102	99.7					
0206012-03A	97.8	107	100					
0206013-01A	97.8	106	99					
0206014-01A	96.7	106	98.6					
0206014-02A	97.1	106	99.9					
0206014-03A	98.2	107	101					
CCV1_020611	96.9	98.8	98.2					
CCV2_020611	97.4	111	98.8					
CCV3_020611	96.6	106	98					
CCV4_020611	98	99	99.4					
CCV5_020611	97.6	108	99.6					
LCS_020611	96.9	103	98.1					
MB_020611	98.4	105	99.5					

Acronym**Surrogate****QC Limits**

14FBZ

= 1,4-Difluorobenzene

70-130

4BCBZ

= 4-Bromochlorobenzene

70-130

FLBZ

= Fluorobenzene

70-130

* Surrogate recovery outside acceptance limits

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

CLIENT : BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY # : N / A

GCU # 170 - SEPARATOR PIT
UNIT K, SEC. 35, T29N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : May 29, 2003

SAMPLER : N J V

Filename : 05-29-03.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)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
WP-2	100.80	91.24	9.56	15.00	-	-	-	-	-
MW-3R	99.59	89.25	10.34	19.50	10:50	6.95	1,800	4.50	-
MW-4	101.14	90.01	11.13	18.50	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
05/29/03	06:55

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:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

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

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2".

Excellent recovery in MW #3R. Collected BTEX sample from MW #3R only.

Top of casing WP #2 ~ 2.00 ft., MW #3R ~ 2.00 ft., MW #4 ~ 1.95 ft. above grade.

Hall Environmental Analysis Laboratory

Date: 05-Jun-03

CLIENT: Blagg Engineering
Lab Order: 0305215
Project: GCU Lease
Lab ID: 0305215-05

Client Sample ID: GCU#170 MW#3R
Collection Date: 5/29/2003 10:50:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	75	0.50		µg/L	1	6/2/2003 11:05:01 PM
Toluene	30	0.50		µg/L	1	6/2/2003 11:05:01 PM
Ethylbenzene	4.8	0.50		µg/L	1	6/2/2003 11:05:01 PM
Xylenes, Total	38	0.50		µg/L	1	6/2/2003 11:05:01 PM
Surr: 4-Bromofluorobenzene	108	74-118		%REC	1	6/2/2003 11:05:01 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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

GCU LEASE

Project #:

BOOMFIELD NM 87413

Project Manager.

Jeff Legg

Sampler: Newton Velez

Samples Cold?: 73 ☒ Yes ☐ No

Preservative

HEAL No.

Number/Volume

Sample I.D. No.

Matrix

Date _____ Time _____

5/29/03	1050	WATER	GEN #170 MW #3R
---------	------	-------	-----------------

2-40m	✓
-------	---

Relinquished By: (Signature)	Time:	to:
<i>Leahon V. P.</i>	07:00	5/30/53
Relinquished By: (Signature)	Time:	to:

Relinquished By: (Signature) *John V. [illegible]*

Received By: (Signature)

Received By: (Signature) *[Signature]* 5303
Received By: (Signature) *[Signature]* 1643

ANALYSIS REQUEST

[illegible]

Remarks:

Hall Environmental Analysis Laboratory

Date: 05-Jun-03

CLIENT: Blagg Engineering

Work Order: 0305215

Project: GCU Lease

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R8430	Test Code: SW8021	Units: µg/L	Analysis Date	6/2/2003 9:34:55 AM	Prep Date				
Client ID:	Run ID:	PIDFID_030602A	SeqNo:	190827							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	21.07	0	20	0	105	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R8442	Test Code: SW8021	Units: µg/L	Analysis Date	6/3/2003 8:47:01 AM	Prep Date				
Client ID:			Run ID:	PIDFID_030603A	SeqNo:	191050					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.87	0	20	0	99.3	74	118	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: 05-Jun-03

CLIENT: Blagg Engineering

Work Order: 0305215

Project: GCU Lease

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX Std 100ng	Batch ID: R8430	Test Code: SW8021	Units: µg/L	Analysis Date	6/2/2003 8:54:19 PM	Prep Date				
Client ID:			Run ID: PIDFID_030602A		SeqNo:	190886					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.02	0.50	20	0	100	81.3	121	0			
Toluene	20.35	0.50	20	0	102	84.9	118	0			
Ethylbenzene	20.23	0.50	20	0	101	53.8	149	0			
Xylenes, Total	61.24	0.50	60	0	102	83.1	122	0			

Sample ID	BTEX Std 100ng	Batch ID: R8430	Test Code: SW8021	Units: µg/L	Analysis Date	6/2/2003 10:32:32 PM	Prep Date				
Client ID:			Run ID: P1DFID_030602A		SeqNo:	190887					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.44	0.50	20	0	107	81.3	121	20.02	6.82	27	
Toluene	21.21	0.50	20	0	106	84.9	118	20.35	4.14	19	
Ethylbenzene	21.34	0.50	20	0	107	53.8	149	20.23	5.33	10	
Xylenes, Total	63.89	0.50	60	0	106	83.1	122	61.24	4.22	13	

Sample ID	BTEX Std 87.5ng	Batch ID: R8442	Test Code: SW8021	Units: µg/L	Analysis Date	6/3/2003 9:51:05 AM	Prep Date				
Client ID:			Run ID: PIDFID_030603A		SeqNo:	191064					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.05	0.50	20	0	95.3	81.3	121	0			
Toluene	18.9	0.50	20	0	94.5	84.9	118	0			
Ethylbenzene	18.89	0.50	20	0	94.5	53.8	149	0			
Xylenes, Total	56.74	0.50	60	0	94.6	83.1	122	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name: BLAGG

Date and Time Receive

Work Order Number: 0305215

Received by: AMG

Checklist completed by

[Signature]
Signature

5/30/03
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 ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
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?	<u>23°</u>	<u>4° C ± 2 Acceptable</u>	

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 #170 - SEPARATOR PIT
UNIT K, SEC. 35, T29N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 24, 2004

SAMPLER : N J V

Filename : 06-24-04.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)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
WP-2	100.80	91.19	9.61	15.00	-	-	-	-	-
MW-3R	99.59	89.29	10.30	19.50	0820	6.92	2,300	4.50	-
MW-4	101.14	90.09	11.05	18.50	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	06/24/04	0810

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

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

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

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2".

Excellent recovery in MW #3R. Collected BTEX sample from MW #3R only.

Top of casing WP #2 ~ 2.00 ft., MW #3R ~ 2.00 ft., MW #4 ~ 1.95 ft. above grade.

Hall Environmental Analysis Laboratory

Date: 07-Jul-04

CLIENT: Blagg Engineering
Project: GCU Lease

Lab Order: 0406258

Lab ID: 0406258-01
Client Sample ID: MW#3R-GCU#170

Collection Date: 6/24/2004 8:20:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	71	0.50		µg/L	1	7/3/2004 1:45:59 AM
Toluene	26	0.50		µg/L	1	7/3/2004 1:45:59 AM
Ethylbenzene	6.4	0.50		µg/L	1	7/3/2004 1:45:59 AM
Xylenes, Total	36	0.50		µg/L	1	7/3/2004 1:45:59 AM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	1	7/3/2004 1:45:59 AM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 07-Jul-04

CLIENT: Blagg Engineering
Work Order: 0406258
Project: GCU Lease

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R12337	Test Code: SW8021	Units: µg/L	Analysis Date	7/2/2004 10:11:05 AM	Prep Date				
Client ID:			Run ID: PIDFID_040702A		SeqNo:	283891					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylénés, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.72	0	20	0	98.6	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R12361	Test Code: SW8021	Units: µg/L	Analysis Date	7/6/2004 8:15:07 AM	Prep Date				
Client ID:			Run ID: PIDFID_040706A		SeqNo:	284457					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.14	0	20	0	95.7	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 07-Jul-04

CLIENT: Blagg Engineering

Work Order: 0406258

Project: GCU Lease

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX std 100ng	Batch ID: R12337	Test Code: SW8021	Units: µg/L	Analysis Date	7/2/2004 11:11:40 AM	Prep Date				
Client ID:		Run ID:	PIDFID_040702A		SeqNo:	283917					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.22	0.5	20	0	101	81.3	121	0			
Toluene	19.3	0.5	20	0	96.5	84.9	118	0			
Ethylbenzene	18.75	0.5	20	0	93.8	53.8	149	0			
Xylenes, Total	55.59	0.5	60	0	92.7	83.1	122	0			

Sample ID	BTEX std 100ng	Batch ID: R12361	Test Code: SW8021	Units: µg/L	Analysis Date	7/6/2004 3:28:52 PM	Prep Date				
Client ID:		Run ID:	PIDFID_040706A		SeqNo:	284461					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.76	0.5	20	0	104	81.3	121	0			
Toluene	20.87	0.5	20	0	104	84.9	118	0			
Ethylbenzene	21.37	0.5	20	0	107	53.8	149	0			
Xylenes, Total	63.32	0.5	60	0	106	83.1	122	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

6/25/2004

Work Order Number **0406258**

Received by **AT**

Checklist completed by


Signature

6/25/04
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 # 170 - SEPARATOR PIT
UNIT K, SEC. 35, T29N, R12W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : June 27, 2005

SAMPLER : N J V

Filename : 06-27-05.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)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
WP-2	100.80	91.37	9.43	15.00	-	-	-	-	-
MW-3R	99.59	89.44	10.15	19.50	0830	7.00	2,000	4.50	-
MW-4	101.14	90.24	10.90	18.50	-	-	-	-	-

INSTRUMENT CALIBRATIONS =	7.00	2,800
DATE & TIME =	06/23/05	0630

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:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

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

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Excellent recovery in MW #3R. Collected BTEX sample from MW #3R only.

Top of casing WP #2 ~ 2.00 ft., MW #3R ~ 2.00 ft., MW #4 ~ 1.95 ft. above grade.

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

CLIENT: Blagg Engineering
Project: GCU LEASE

Lab Order: 0506255

Lab ID: 0506255-01
Client Sample ID: MW-3R GCU#170

Collection Date: 6/27/2005 7:05:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: KTM
Benzene	80	0.50		µg/L	1	6/29/2005 10:30:19 PM
Toluene	47	0.50		µg/L	1	6/29/2005 10:30:19 PM
Ethylbenzene	6.6	0.50		µg/L	1	6/29/2005 10:30:19 PM
Xylenes, Total	53	0.50		µg/L	1	6/29/2005 10:30:19 PM
Surr: 4-Bromofluorobenzene	104	83.3-121		%REC	1	6/29/2005 10:30:19 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Client: BLAGE EXPL. / BP AMERICA

Address: P.O. BOX 87

BLVD., NM 87413

Phone #: (505) 632-1199

Fax #: (505) 632-3903

Sampler: NV

Sample Temperature: 76

Number/Volume

Sample I.D. No.

Matrix

Time

Date

WATER

0705

6/2/05

2-40ml

MW #32 -
Gen #170

Preservative

HgCl₂

HNO₃

HEAL No.

0506255

-1

Relinquished By: (Signature)

Time:

Date:

Relinquished By: (Signature)

Time:

Date:

Received By: (Signature)

6/2/05

Natasha P. H.

18:05

Received By: (Signature)

6/2/05

Natasha P. H.

18:05

Remarks:

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

BTEX + MTBE + TPH (Gasoline Only)

(BTEX) + MTBE + TMB's (80218)

✓

91V

NV

26

2-40ml

0705

6/2/05

WATER

0705

6/2/05

2-40ml

0705

6/2/05

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, NO₂, NO₃, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

QC SUMMARY REPORT

Method Blank

CLIENT: Blagg Engineering

Work Order: 0506255

Project: GCU LEASE

Sample ID	Reagent Blank 5m	Batch ID: R15847	Test Code: SW8021	Units: µg/L	Analysis Date 6/29/2005 10:41:34 AM	Prep Date					
Client ID:			Run ID: PIDFID_050629A		SeqNo: 375749						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.31	0	20	0	91.6	83.3	121	0			

Sample ID	Reagent Blank 5m	Batch ID: R15863	Test Code: SW8021	Units: µg/L	Analysis Date 6/30/2005 10:30:22 AM	Prep Date					
Client ID:			Run ID: PIDFID_050630A		SeqNo: 376231						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	17.44	0	20	0	87.2	83.3	121	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: 05-Jul-05

CLIENT: Blagg Engineering

Work Order: 0506255

Project: GCU LEASE

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	BTEX LCS 100ng	Batch ID: R15847	Test Code: SW8021	Units: µg/L	Analysis Date	6/29/2005 1:30:53 PM	Prep Date				
Client ID:			Run ID: PIDFID_050629A		SeqNo: 375788						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.22	0.5	20	0	96.1	88.7	114	0			
Toluene	19.77	0.5	20	0	98.9	89.3	112	0			
Ethylbenzene	19.48	0.5	20	0	97.4	88.6	113	0			
Xylenes, Total	59.2	0.5	60	0	98.7	89.4	112	0			

Sample ID	BTEX LCS 100ng	Batch ID: R15863	Test Code: SW8021	Units: µg/L	Analysis Date	6/30/2005 12:03:37 PM	Prep Date				
Client ID:			Run ID: PIDFID_050630A		SeqNo: 376239						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.58	0.5	20	0	92.9	88.7	114	0			
Toluene	18.93	0.5	20	0	94.6	89.3	112	0			
Ethylbenzene	18.79	0.5	20	0	93.9	88.6	113	0			
Xylenes, Total	57.41	0.5	60	0	95.7	89.4	112	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

6/27/2005

Work Order Number 0506255

Received by

NMP

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?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____