3R - <u>396</u>

# REPORTS

DATE: 2002-2005

#### BLAGG ENGINEERING, INC.

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

## 3R0396

RECEIVED February 10, 2006

Mr. G	Glenn Von Gonten, Hydrologist		
	Mexico Oil Conservation Division-NMOCI	P FEB 1 4 2006	
		Oil Conservation Division	
Environmental Bureau 1220 St. Francis Drive Santa Fe, New Mexico 87505  Re: BP America Production Company			
Santa	Fe, New Mexico 8/505	Environmental Bureau	2006
Re:	BP America Production Company		
	Groundwater Monitoring Report		FEB
	Gallegos Canyon Unit (GCU) # 188, U	nit J, Sec. 30, T29N, R12W, NMPM	I 🖵
	San Juan County, New Mexico		
			PM
Dear :	Mr. Von Gonten:		L

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

Formal correspondence to NMOCD was conducted with letter dated, May 15, 2003 (included within this report). Groundwater monitoring commenced in March, 2003. Since then, BP has followed its NMOCD approved groundwater management plan and continues to monitor the site. No permanent closure is requested at this time.

If you have any questions concerning the enclosed documentation, please contact either myself or Jeffrey C. Blagg at 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)

# BP AMERICA PRODUCTION CO. RECEIVED

FEB 1 4 2006

Oil Conservation Division Environmental Bureau

#### **GROUNDWATER REMEDIATION REPORT**

2002-2005

GCU #188 (J) SECTION 30, 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 # 188 - Production Tank Pit Nw/4 Se/4 Sec. 30, T29N, R12W

Pit Closure Date: 6/26/02 (Documentation Included)

Monitor Well Installation Date: 3/11/03 (MW #2)

Monitor Well Sampling Dates: 3/14/03, 5/29/03, 8/18/03, 11/18/03, 3/29/04, 6/23/04,

12/22/04, 3/28/05, 6/23/05, 9/21/05

#### **Site History:**

Initial groundwater impacts at this site were discovered in May, 2003 following work on an earthen production tank pit. Impacted soils were removed from the site and a single groundwater monitoring well was placed in the source area to test water depth and quality. Initial water test results indicated impacts were present, but at levels near or below New Mexico Water Quality Control Commission (NMWQCC) standards. Quarterly monitoring has been maintained.

#### **Groundwater Monitor Well Sampling Procedures:**

Groundwater samples were collected from the site monitor well (*Figure 1*) following US EPA: SW-846 protocol. Samples were collected using new disposable bailers and placed in new laboratory supplied 40 ml glass vials with teflon septa caps. Analytical testing has included benzene, toluene, ethylbenzene, and total xylenes (**BTEX**) per US EPA Method 8020 or 8021. Samples were preserved cool and with either mercuric chloride or hydrochloric acid and express delivered to a qualified laboratory for 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:

Quarterly monitoring of the source area well has found groundwater impacts with the constituent benzene ranging from just above to slightly below the NMWQCC standard of 10 ug/L. Toluene, ethyl-benzene and xylenes have consistently tested at values well below standards. The regional gradient is believed to be towards the north-west in the GCU #188 area.

#### **Summary and/or Recommendations:**

Water quality at this site indicates that impacts are near or below NMWQCC standards. Further delineation to quantify gradient and impact extent is indicated. A minimum of two (2) additional monitoring wells will be required to complete this task. The source area well has tested three (3) consecutive quarters with BTEX values below standards, and additional monitoring of this well is necessary to verify closure.

### BP AMERICA PROD. CO. GROUNDWATER LAB RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

GCU # 188 - SEPARATOR PIT UNIT J, SEC. 30, T29N, R12W REVISED DATE: December 9, 2005

FILENAME: (188-3Q05.WK4) NJV

				TDS (mg/L)	COND.	рН	PRODUCT	BTEX	EPA METH	IOD 8021B (	ppb)
SAMPLE DATE	WELL NAME or No.	D.T.W. (ft)	T.D. (ft)					Benzene	Toluene	Ethyl Benzene	Total Xylene
14-Mar-03	MW #2	13.93	17.50		2,300	7.47		23	8.0	220	830
29-May-03		13.78			2,300	6.93		10	18	23	180
18-Aug-03		13.88			3,000	6.86		15	ND	37	220
18-Nov-03		13.45			2,700	6.86		31	ND	74	470
29-Mar-04		13.59			2,600	6.86		11	ND	24	180
23-Jun-04		13.68			2,800	6.78		12	ND	27	170
22-Dec-04		12.87			N/A	N/A		18	ND	71	520
28-Mar-05		12.86			2,300	6.79		9.3	15	42	220
23-Jun-05		12.60			2,300	6.72		6.3	12	29	120
21-Sep-05								9.0	7.7	18	190
		NMW	QCC GI	ROUND	VATER S	TAND	ARDS	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.

#### BLAGG ENGINEERING, INC . - (BEI)

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

May 15, 2003

Mr. William C. Olson Hydrologist State of New Mexico Oil Conservation Division (**NMOCD**) 2040 So. Pacheco Santa Fe, New Mexico 87505

RE: Groundwater Impact

BP America Production Company (BP): GCU 188 Well site - Production Tank Pit Legal Description: Unit J, Sec. 30, T29N, R12W, San Juan County, New Mexico

Dear Mr. Olson:

Initial groundwater sample analytical results at the above referenced well site during pit closure activity indicated contamination to be above the State of New Mexico Water Quality Control Commission's regulatory standards for benzene and total Xylenes. Sampling of the Production Tank pit was conducted March 14, 2003. Depth to water was estimated at fourteen (14) feet below grade. Listed below is the summary analytical results for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) from the groundwater sample collected within the pit:

Parameter	Separator Pit (II) (parts per billion)
Benzene	23
Toluene	8.0
Ethylbenzene	220
Total Xylenes	890

Telecommunication notification was submitted to Mr. William Olson's voice recorder on May 15, 2003 at approximately 2:00 pm. BP will implement its Groundwater Management Plan to address the findings related to this situation.

If you have any questions concerning this information, please do not hesitate to contact us at (505) 632-1199. Thank you for your cooperation.

Respectfully submitted,

Blagg Engineering, Inc.

Nelson Velez

Staff Geologist

cc: Denny Foust, Environmental Geologist, NMOCD, Aztec, NM

Brittany Benko, Environmental Coordinator, BP America Production Company, Farmington, NM

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 March 12, 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 belo	ow-grade tank Closure of a pit or below-gr	rade tank 🖾		
Operator: BP AMERICA PROD. CO.	Telephone: (505) 326-920	0		
Address: 200 Energy Court, Farmington,	NM 87410			
Facility or well name: GCU #188	API #:30-045-07840 U/L or Qtr	/Qt J Sec 30 T 29N R 12W		
County: San Juan Latitude 36.69613 Longitude 108.	13667 NAD: 1927 ☐ 1983 ⊠ Surface 0	Owner Federal ⊠ State ☐ Private ☐ Indian ☐		
Pit  Type: Drilling Production Disposal PRODUCTION TANK  Workover Emergency  Lined Unlined Liner type: Synthetic Thickness mil Clay Volume bbl	Below-grade tank  Volume:bbl Type of fluid:  Construction no grial  Double-walled with leak detection? Tes	If not, explain why not.		
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)		
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) ()		
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)		
	Ranking Score (Total Points)	30		
this is a pit closure: (1) attach a diagram of the facility showing the pit's relative of fisite □ offsite □ offsite, name of facility □ CROUCH MESA FACILITY and date. (4) Groundwater encountered: No □ Yes □ If yes, show depth below diagram of sample locations and excavations.  I hereby certify that the information above is true and complete to the best of no bas been/will be constructed or closed according to NMOCD guidelines □ Date: □ 05/15/03  Printed Name/Title □ Jeff Blagg − P.E. # 11607  Your certification and NMOCD approval of this application/closure does not not otherwise endanger public health or the environment. Nor does it relieve the or regulations.	in (3) Attach a general description of remedial a low ground surface 14 ft. and attach my knowledge and belief. I further certify that a general permit , or an (attached) alter Signature clieve the operator of liability should the contents.	the above-described pit or below-grade tank native OCD-approved plan		
Approval:				
Date:	Signature			
Printed Name/Title	Signature			

LAB SAMPLES SWIPLE ANALYSIS TIME CONTPH SIEN 1005  D. = PIT DEPRESSION; B.G. = BELOW GRADE	- 1	V	UL :	300450	7840	3	6.696	613/1	08-1	366
DOCATION: NAME: GCO  WELL #: 188 TYPE: SEP  QUAD/UNIT: J SEC: 30 TWP 29N RNG: 12W PM. NACNTY: SJ ST. MM  DIR/FODIAGE: JUST S 1885 AND SECONTRACTOR: FLAT  ENGINEERING JUST S 1885 AND SECONTRACTOR: FLAT  SECO	CLIENT: E	3P	BLA	AGG ENG 87, BLC	INEERING OMFIELD	, INC. NM 874	113	CATION N	NO: BU	00 5
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		SSION; B.G. = $\sim$ = APPRO	= BELOW GRADE DX.; B = BELOW							

#### BLAGG ENGINEERING, Inc.

P.O. BOX 87 BLOOMFIELD, NM 87413

(505) 632-1199

## BORE / TEST HOLE REPORT

CLIENT:

27

28

29

30

LOCATION NAME:

CONTRACTOR:

EQUIPMENT USED:

#### BP AMERICA PRODUCTION COMPANY

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

BLAGG ENGINEERING, INC.

MOBILE DRILL RIG (EARTHPROBE 200)

BORING #..... BH - 1 MW #.... PAGE #..... DATE STARTED 3/11/03 3/11/03 DATE FINISHED OPERATOR..... JCB VLV

	-00	LIMITIAL	OLD.			- 1-				/					OF	LIVATOR	***	000
E	BORI	NG LOCA	TION:	138 FEET	S52	2E	FF	ROM V	VELL H	HEAD.					PR	EPARED BY	1	NJV
DEPTH (FT.)	INTERVAL	LITHOLOGY	MW SCHEMATIC	FIELD	CLA ROUND S				ATI	ON	AND	R	EMAI	RKS				
	-		4	— т	OP OF	FC	AS	SING	API	ROX.	AT C	GRA	DE.					
1-																		
2-																		
3-																		
- 4-																GHTLY MOIS	Τ.	
5					0.0 FT. E	77777				C ODO	N DETE	.0120		ALL: VVI	Tilly C	01111403		
6-																		
7-																		
8-				SAMPI	E1@8	FT.	- 00	VM =	780	ppm; TP	H = 2.	.190	ppm; Ben	zene = N	D pp	2; TIME COLL bb; Total BTEX	ECTE	ED 1005,
9-								785	ppb (s	ee Pit C	losure F	ield Re	port for ac	Iditional inf	formation	n).		
10																		
11 -																		
12 -			TOS 12.51		JM GRAY										D, STR	RONG HC OD	OR	
13																		
14 -				BH1@	14 FT					(Enviro		ON 3/1	1/03; TIM	E COLLE	CTED	1050,		
15			1   1			TPH	H =	3.40	O ppm	(iina bi (Hall E	a lab - fo	ormerly	On-Site	Technolo	gy)			
16								0,00	О ррии	(rian c	a ten Orni	rei nai).						
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21 -				NOTES.	E0202													
22 -					00000				RAVEL									
23 -					OVM		-	anic va is per n		ter or Pl	ID (phot	toioniza	ition dete	ctor).	OVN	CALIBRATI	ON:	
24 -					ppb	-	part	ts per b	oillion.							129.7 ppr (RF = resp		
25					TPH			l petro hod 80		ydrocarb	ons (US	S Epa r	nodified			250 ppm o	alibr	
26 -					BTEX	-	ben	zene,	toluene	e, ethylbe	enzene,	& total	xylenes	(US Epa		- isobutyle		

Date - 6/26/02. Time - 1024.

- Total depth/bottom extent of monitor well.

- Top of screen of monitor well.

method 8021B).

TOS

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

DRAWING: GCU 188-BH1-MW2, SKF DATE: 5/13/03 DWN BY: NJV

# **ENVIROTECH LABS**

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

#### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Olianti	DI ( DD	D:	04004 040
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	Separator C @ 8'	Date Reported:	07-01-02
Laboratory Number:	23182	Date Sampled:	06-26-02
Chain of Custody No:	10035	Date Received:	06-26-02
Sample Matrix:	Soil	Date Extracted:	06-28-02
Preservative:	Cool	Date Analyzed:	07-01-02
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1,140	0.2
Diesel Range (C10 - C28)	1,050	0.1
Total Petroleum Hydrocarbons	2,190	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 188.

Analyst C. Openin

/ Mister of Walters
Review

# **IENVIROTECH LABS**

#### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	94034-010
Sample ID:	Separator C @ 8'	Date Reported:	07-01-02
Laboratory Number:	23182	Date Sampled:	06-26-02
Chain of Custody:	10035	Date Received:	06-26-02
Sample Matrix:	Soil	Date Analyzed:	07-01-02
Preservative:	Cool	Date Extracted:	06-28-02
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	98.7	1.7
Ethylbenzene	159	1.5
p,m-Xylene	265	2.2
o-Xylene	262	1.0
Total BTEX	785	

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 188.

Analyst C. Cefure

Anister m Walters
Review

## **CHAIN OF CUSTODY RECORD**

10035

01:			T								100	<u> </u>		
Client / Project Name	$\sim$		Project Location	ANALYSIS / PARAMETERS									ĺ	
BLAGE/B			GCU 1	ECU 188								····		
BLAGE/B Sampler:	,		Client No.		<u>စ</u>						Re	emarks		
J-C. &	699		94034-010			TY S	4 7							
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	F3	BR							
SEPAKATUK C@B"	6/26/52	1005	23182	SOIL	1	X	X							
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·				(505) 632						Cool - Ic	e/Blue Ice	1		

# PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

# EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

#### **Quality Assurance Report**

Client:	QA/QC	Project #:	N/A
Sample ID:	07-01-TPH QA/QC	Date Reported:	07-01-02
Laboratory Number:	23181	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-01-02
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	04-25-02	2.7355E-002	2.7328E-002	0.10%	0 - 15%
Diesel Range C10 - C28	04-25-02	2.4557E-002	2.4508E-002	0.20%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	771	768	0.4%	0 - 30%
Diesel Range C10 - C28	202	202	0.0%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	771	250	1,020	99.9%	75 - 125%
Diesel Range C10 - C28	202	250	451	99.8%	75 - 125%

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:

QA/QC for samples 23181 - 23183, 23186, 23203 - 23206, 23145.

Analyst

Review

# **IENVIROTECH LABS**

#### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	· N/A
Sample ID:	07-01-BTEX QA/QC	Date Reported:	07-01-02
Laboratory Number:	23181	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-01-02
Condition:	N/A	Analysis:	BTEX

Calibration and	J-Cal RF:	C-Cal RF;		Blank Conc	Detect. Limit	Scientific Co.
Benzene	2.6914E-002	2.6995E-002	0.3%	ND	0.2	
Toluene	3.3709E-002	3.3777E-002	0.2%	ND	0.2	
Ethylbenzene	5.8262E-002	5.8438E-002	0.3%	ND	0.2	
p,m-Xylene	7.1891E-002	7.2107E-002	0.3%	ND	0.2	
o-Xylene	5.4522E-002	5.4631E-002	0.2%	ND	0.1	

Duplicate Conc. (ug/Kg)	Sample D	uplicate	%Diff.	Accept Range	Detect. Limit
Benzene	20.4	20.5	0.5%	0 - 30%	1.8
Toluene	106	106	0.0%	0 - 30%	1.7
Ethylbenzene	116	117	0.5%	0 - 30%	1.5
p,m-Xylene	558	562	0.6%	0 - 30%	2.2
o-Xylene	109	110	1.1%	0 - 30%	1.0

Spike Conc. (ug/Kg)	Sample Amo	ount Spiked Spil	ked Sample	% Recovery	Accept Range
Benzene	20.4	50.0	70.3	99.9%	39 - 150
Toluene	106	50.0	156	100.0%	46 - 148
Ethylbenzene	116	50.0	166	100.0%	32 - 160
p,m-Xylene	558	100	658	100.0%	46 - 148
o-Xylene	109	50.0	159	100.0%	46 - 148

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using

Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments:

QA/QC for samples 23181 - 23183, 23186, 23203.

Analyst

Review

# **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:	BH 1 @ 14'	Date Reported:	03-18-03
Laboratory Number:	25038	Date Sampled:	03-11-03
Chain of Custody No:	10684	Date Received:	03-12-03
Sample Matrix:	Soil	Date Extracted:	03-13-03
Preservative:	Cool	Date Analyzed:	03-14-03
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	217	0.2
Diesel Range (C10 - C28)	280	0.1
Total Petroleum Hydrocarbons	497	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 #188 Production Tank Pit Grab Sample.

Ahriotini My Walters

Review P. Quin

612 E. Murray Drive Farmington, NM 87401

Off: (505) 327-1072

# iiná bá

P.O. Box 2606 Farmington, NM 87499

Fax: (505) 327-1496

#### ANALYTICAL REPORT

**CLIENT:** 

Blagg Engineering

Work Order:

0303006

Project:

BP - GCU #188 Production Tank Pit

Lab ID:

0303006-001A

**Date:** 26-Mar-03

Client Sample Info: BP - GCU #188 Production Tank

Client Sample ID: BH1 @ 14ft.

**Collection Date:** 3/11/2003 10:50:00 AM

Matrix: SOIL

Parameter	Result	PQL Qu	ıal Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015	В		Analyst: <b>JEM</b>
T/R Hydrocarbons: C10-C28	2230	25.0	mg/Kg	1	3/25/2003
GASOLINE RANGE ORGANICS		SW8015	В		Analyst: HNR
T/R Hydrocarbons: C6-C10	1170	180	mg/Kg	1000	3/22/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 1

**CLIENT:** 

Blagg Engineering

Lab Order:

0303077

**Project:** 

GCU Lease

Lab ID:

0303077-01

Date: 20-Mar-03

Client Sample ID: #188 BH1@14' Prod. T. Pit

**Collection Date:** 3/11/2003 10:50:00 AM

Matrix: SOIL

Analyses	Result	Limit Qu	ıal Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E				Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	1700	50	mg/Kg	10	3/18/2003 9:36:27 PM
Motor Oil Range Organics (MRO)	690	500	mg/Kg	10	3/18/2003 9:36:27 PM
Surr: DNOP	107	60-124	%REC	1	3/17/2003 8:58:27 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NB
Gasoline Range Organics (GRO)	1000	250	mg/Kg	50	3/17/2003 10:54:50 AM
Surr: BFB	112	74-118	%REC	50	3/17/2003 10:54:50 AM

R - RPD outside accepted recovery limits

## **CHAIN OF CUSTODY RECORD**

10684

Client / Project Name			Project Location		1									
BLAGG /B	3P		бен	#188				AN	ALYSIS / PA	ARAMETERS				
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ハン			9403	4-010	No. of	TPH (80158)				Pazz	يداح	Λ <i>(</i>	~ ~	
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	Cont	(8015B)				PRES GRA PRODU	B 5	Am	PE	
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Dale	Time	Matrix	Sample I.D. No.	Number/Volume	Pre	eserva	tive	HEAL No.	BIEX) MTBE + TMB's (80218	BTEX + MTBE + TPH (Gasoline	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	Volatiles Full List (8021)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, CI, NO <sub>3</sub> , NO <sub>2</sub> ,	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)			Air Bubbles or Headspace (Y or N)
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HALL ENVIRONMENTAL ANALYSIS LABORATORY



## **CHAIN OF CUSTODY RECORD**

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

urchase Order		Project No.	•			ူင္	Name	NG	Lison	i V	ELF 7	į.		Title				
Name	Pany BLACE ENGR.					REPORT ESULTS I	Comp	any	"5A1	ME								
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#### EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

#### **Quality Assurance Report**

Client: Sample ID: Laboratory Number: Sample Matrix: Preservative: Condition:	QA/QC 03-14-TPH QA 25037 Methylene Chlor N/A N/A	VQC ide	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Analysis Reque		N/A 03-18-03 N/A N/A 03-14-03 TPH
Gasoline Range C5 - C10 Diesel Range C10 - C28	I-Cal Date 04-25-02 04-25-02	I-Cal RF; 2.7355E-002 2.4557E-002	C-Cal RF: 2.7328E-002 2.4508E-002	% Difference 0.10% 0.20%	Accept. Range 0 - 15% 0 - 15%
Blank Conc. (mg/L - mg/Kg) Gasoline Range C5 - C10 Diesel Range C10 - C28 Total Petroleum Hydrocarbons		Concentration ND ND ND		Detection Limit 0.2 0.1 0.2	
Duplicate Conc. (mg/Kg) Gasoline Range C5 - C10 Diesel Range C10 - C28	Sample ND ND	Duplicate ND ND	% Difference 0.0% 0.0%	Accept. Range 0 - 30% 0 - 30%	
Spike Conc. (mg/Kg) Gasoline Range C5 - C10 Diesel Range C10 - C28	Sample ND ND	Spike Added 250 250	Spike Result 250 250	% Recovery 100% 100%	Accept. Range 75 - 125% 75 - 125%

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:

QA/QC for samples 25037 - 25039, 25043 - 25047.

Analyst Mister of Walters

Review

Date: 20-Mar-03

**CLIENT:** 

Blagg Engineering

Project:

GCU Lease

Lab Order:

0303077

**CASE NARRATIVE** 

Analytical Comments for METHOD 8015GRO\_S, SAMPLE 0303077-02a: High surrogate due to matrix interference.

CLIENT:

Blagg Engineering

Work Order:

0303077

Project:

GCU Lease

Date: 20-Mar-03

**QC SUMMARY REPORT** 

Method Blank

Sample ID MB-3265	Batch ID: 3265	Test Code:	SW8015	Units: mg/Kg		Analysis	Date 3/17	/2003 4:01:20 PM	Prep Da	ate 3/14/200	3
Client ID:		Run ID:	FID(17A)_03	0317 <b>A</b>		SeqNo:	1742	34			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Quai
Diesel Range Organics (DRO)	ND	5.0									
Motor Oil Range Organics (MRO	) ND	50									
Surr: DNOP	10.52	0	10	0	105	60	124	0			
Sample ID MB-3259	Batch ID: 3259	Test Code:	SW8015	Units: mg/Kg		Analysis	Date <b>3/14</b>	/2003 7:48:09 PM	Prep Da	ate 3/13/200	3
Client ID:		Run ID:	PIDFID_0303	14A		SeqNo:	1739	99			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO	) 1.59	5.0									J
Surr: BFB	906.5	0	1000	0	90.6	74	118	0			
Sample ID MB-3259	Batch ID: 3259	Test Code:	SW8021	Units: mg/Kg		Analysis	Date 3/14	/2003 7:48:09 PM	Prep Da	ate 3/13/200	3
Client ID:		Run ID:	PIDFID_0303	314A		SeqNo:	1740	21			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.025	0	0	0	0	0	0			
Toluene	ND	0.025	0	0	0	0	0	0			
Ethylbenzene	ND	0.025	0	0	0	0	0	0			
Xylenes, Total	ND	0.025	0	0	0	0	0	0			
Surr: 4-Bromofluorobenzene	0.9143	0	1	0	91.4	74	118	0			

CLIENT:

Blagg Engineering

Work Order: Project: 0303077

GCU Lease

Date: 20-Mar-03

#### **QC SUMMARY REPORT**

Laboratory Control Spike - generic

Sample ID LCS-3265	Batch ID: 3265	Test Code:	SW8015	Units: mg/Kg		Analysi	s Date <b>3/17</b>	//2003 4:30:54 PM	Prep D	ate 3/14/200	)3
Client ID:		Run ID:	FID(17A)_03	0317A		SeqNo:	1742	35			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighL <b>im</b> it	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54.06	5.0	50	0	108	67.4	117	0			
Sample ID LCSD-3265	Batch ID: 3265	Test Code:	SW8015	Units: mg/Kg		Analysi	s Date 3/17	//2003 5:00:29 PM	Prep D	ate 3/14/200	)3
Client ID:		Run ID:	FID(17A)_03	0317A		SeqNo:	1742	37			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58.41	5.0	50	0	117	67.4	117	54.06	7.72	17.4	
Sample ID GRO Std 2.5ug	Batch ID: 3259	Test Code:	SW8015	Units: mg/Kg	· · · · · ·	Analysi	s Date 3/14	/2003 9:02:22 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0303	314A		SeqNo:	1740	11			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25.04	5.0	25	0	100	85.8	111	0			
Sample ID GRO Std 2.5ug	Batch ID: 3259	Test Code:	SW8015	Units: mg/Kg	<del>*                                    </del>	Analysis	s Date 3/14	/2003 11:24:17 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0303	314A		SeqNo:	1740	20			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25.53	5.0	25	0	102	85.8	111	25.04	1.94	11.6	
Sample ID GRO Std 2.5ug	Batch ID: 3259	Test Code:	SW8015	Units: mg/Kg		Analysis	s Date 3/17	/2003 9:48:53 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0303	317A		SeqNo:	1742	70			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25.2	5.0	25	0.0288	101	85.8	111	0			***

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:

0303077

Project:

GCU Lease

#### **QC SUMMARY REPORT**

Laboratory Control Spike Duplicate

Sample ID GRO Std 2.5ug	Batch ID: 3259	Test Code:	SW8015	Units: mg/Kg		Analysis	Date 3/17	/2003 3:48:41 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0303	317A		SeqNo:	1742	75			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Gasoline Range Organics (GRO	) 25	5.0	25	0.0288	99.9	85.8	111	25.2	0.797	11.6	
Sample ID BTEX Std 100ng	Batch ID: 3259	Test Code:	SW8021	Units: mg/Kg		Analysis	Date <b>3/14</b>	/2003 6:46:09 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0303	314A		SeqNo:	1740	32			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	1.062	0.025	1	0	106	77	122	0			
Toluene	1.03	0.025	1	0	103	81	115	0			
Ethylbenzene	1.08	0.025	1	0	108	84	117	0			
Xylenes, Total	3.192	0.025	. 3	0	106	84	116	0			
Sample ID BTEX Std 100ng	Batch ID: 3259	Test Code:	SW8021	Units: mg/Kg		Analysis	Date 3/14	/2003 11:55:10 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0303	314A		SeqNo:	1740	43			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	1.043	0.025	1	0	104	77	122	1.062	1.83	27	
Toluene	1.012	0.025	1	0	101	81	115	1.03	1.76	19	
Ethylbenzene	1.05	0.025	1	0	105	84	117	1.08	2.76	10	
Xylenes, Total	3.133	0.025	3	0	104	84	116	3.192	1.88	13	
Sample ID BTEX Std 100ng	Batch ID: 3259	Test Code:	SW8021	Units: mg/Kg		Analysis	Date 3/17	/2003 2:46:34 PM	Prep Da	ate	
Client ID:		Run ID;	PIDFID_0303	17A		SeqNo:	1742	45			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	1.045	0.025	1	0	105	77	122	0			
Toluene	1.013	0.025	1	0	101	81	115	0			
Ethylbenzene	1.05	0.025	1	0	105	84	117	0			
Xylenes, Total	3.102	0.025	3	0	103	84	116	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Blagg Engineering

Work Order:

0303077

Project:

GCU Lease

#### QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID BTEX Std 100ng	Batch ID: 3259	Test Code	Test Code: SW8021 Units: mg/Kg			Analysis	Date 3/17	/2003 3:17:33 PM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0303	317A		SeqNo:	1742	55			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.075	0.025	1	0	108	77	122	1.045	2.82	27	
Toluene	1.051	0.025	1	0	105	81	115	1.013	3.76	19	
Ethylbenzene	1.092	0.025	1	0	109	84	117	1.05	3.91	10	
Xylenes, Total	3.227	0.025	3	0	108	84	116	3.102	3.94	13	

#### Sample Receipt Checklist

Client Name BLAGG				Date and Tim	e Receive	3/12/03
Work Order Number 0303077	$\sim$			Received by	AT	
Checklist completed by Signature	) for	4_	Date 3	/12/03	_	
Matrix:	Carrier name:	Grey	hound			
Shipping container/cooler in good condition?		Yes	$\checkmark$	No 🗆	Not Present	
Custody seals intact on shippping container/coole	r?	Yes		No 🗌	Not Present	
Custody seals intact on sample bottles?		Yes		No 🗆	Not Present	$ \checkmark $
Chain of custody present?		Yes	<b>✓</b>	No 🗌		
Chain of custody signed when relinquished and re	eceived?	Yes	<b>✓</b>	No 🗌		
Chain of custody agrees with sample labels?		Yes	<b>Y</b>	No 🗌		
Samples in proper container/bottle?		Yes	<b>✓</b>	No 🗌		
Sample containers intact?		Yes	$\checkmark$	No 🗆		
Sufficient sample volume for indicated test?		Yes	$\checkmark$	No 🗆		
All samples received within holding time?		Yes	$\checkmark$	No 🗌		
Water - VOA vials have zero headspace?	No VOA vials subr	nitted	$\checkmark$	Yes 🗌	No 🗆	
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹	•
Container/Temp Blank temperature?		1	0°	4° C ± 2 Accepta	ble	
COMMENTS:						
	======					========
Client contacted	Date contacted:			Pers	on contacted	
Contacted by:	Regarding:	·				
Comments:						
				<u> </u>		
Corrective Action						

#### BLAGG ENGINEERING, INC.

MONITOR WHELL DEVELOPMENT & / OR SAMPLING DATA

CLIEN.	T :	BF	AWEK.	PKUU,	Cold.
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CHAIN-OF-CUSTODY #: 12162

GCU #188 - PROD. TANK PIT

UNIT J, SEC. 30, T29N, R12W

LABORATORY (S) USED: iina ba

Date: March 14, 2003

Filename: 03-14-03.WK4

SAMPLER:

NJV

PROJECT MANAGER:

NJV

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	VOLUME	FREE
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	PURGED	PRODUCT
	(ft)	(ft)	(ft)	(ft)				(gal.)	(ft)
MW - 2	_	-	13.93	17.50	1545	7.47	2,300	3.50	_

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:

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, wisp of sheen observed within disposal bucket during purging, collected BTEX

Top of casing MW #2 ~ @ grade.

612 E. Murray Drive Farmington, NM 87401

Off: (505) 327-1072

iiná bá

P.O. Box 2606 Farmington, NM 87499

Fax: (505) 327-1496

#### ANALYTICAL REPORT

CLIENT:

Blagg Engineering

Work Order:

0303014

Project:

BP - GCU #188

Lab ID:

0303014-001A

**Date:** 26-Mar-03

Client Sample Info: BP - GCU #188

Client Sample ID: MW #2

Collection Date: 3/14/2003 3:45:00 PM

Matrix: AQUEOUS

Parameter	Result	PQL Q	ual Units	ÐF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021	IB		Analyst: <b>JEM</b>
Benzene	23	2.5	µg/L	5	3/21/2003
Ethylbenzene	220	2.5	μg/L	5	3/21/2003
m,p-Xylene	610	5.0	μg/L	5	3/21/2003
o-Xylene	280	2.5	μg/L	5	3/21/2003
Toluene	8.0	2.5	μg/L	5	3/21/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 1

ON	SITE
TECHNOLOGIES, LT	rD.

### **CHAIN OF CUSTODY RECORD**

Date: 3/14/03

Page: \_\_\_\_\_\_ of \_\_\_\_\_

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

Purchase (	Order No.:		0	Name	NE	650,	$V_{i}$	: :4:7		j	Title							
ш	Order No.:  Name JEFF BLAGG  Company BLAGG ENGG-  Address  City, State, Zip					RT S T	Company SAME						·	-				٦
	Company BLAGG ENGE.		Dept.			PO	Mailing Address									]		
SE	Address					RESI	Name NECSON VELCZ Title  Company SAME  Mailing Address  City, State, Zip  Telephone No. (33) 33433								7			
	City, State, Zip					<u></u>	Telep	Telephone No. 632-1/99 Telefax No. 632							632-39	103	7	
PROJECT	SP - GCU #188	3				of ers			···-					QUES	STED			
SAMPLEF	SAMPLE IDENTIFICATION	,				Number of Containers	1	/316/ 324/	}/ }	/	//	//	//	//	//	1 4 4 X	7-03	
S	SAMPLE IDENTIFICATION	DATE	SAN TIME	MATRIX	PRES.					////						LABID		
	MW # 2	3/14/03	1545		11210	P.	1									M303014-6	901 A	
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Relinquish	ned by:				0827					N.::Y		·			Da	ate/Time	<u> </u>	7
Relinquish	ned by:	Time		Recei	ved by								Da	ate/Time		7		
Method of Shipment:						Rush		24-48 Hou		$\Box$	10 Wc	rking [	Days		By Dat	.e		7
Authorize	ed by:(Client Signature Must Accompany Rec		)			Speci	al Instr	uctions	Rem	arks:								
			Distribution: V	Vhite - On S	ite Yellow -	AR Pir	k - Samol	er Golde	enrod - Cli	ent								_

#### iiná bá, Ltd.

CLIENT:

Blagg Engineering

Work Order:

0303014

Project:

BP - GCU #188

#### ANALYTICAL QC SUMMARY REPORT

Date: 26-Mar-03

TestCode: BTEX W

Sample ID MB_030321	SampType: MBLK	TestCode: BTEX_W	Units: µg/L		Prep Date	: 3/21/20	03	Run ID: GC	-1_030321A	
Client ID: ZZZZZ	Batch ID: R4310	TestNo: SW8021E	3		Analysis Date	: 3/21/20	03	SeqNo: 628	899	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50								
Ethylbenzene	ND	0.50								
m,p-Xylene	ND	1.0								
o-Xylene	ND	0.50								
Toluene	0.1007	0.50			_					J
Sample ID LCS_030321	SampType: LCS	TestCode: BTEX_W	Units: µg/L		Prep Date	: 3/21/20	03	Run ID: GC	-1_030321A	
Client ID: ZZZZZ	Batch ID: R4310	TestNo: SW8021E	3		Analysis Date	: 3/21/20	03	SeqNo: 628	398	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	36.76	0.50 40	0	91.9	88	110	0	0		
Ethylbenzene	36.81	0.50 40	0	92	90	110	0	0		
m,p-Xylene	75.35	1.0 80	0	94.2	86	110	0	0		
o-Xylene	38.11	0.50 40	0	95.3	89	110	0	0		
Toluene	37.29	0.50 40	0.1007	93	87	110	0	0		
Sample ID 0303010-009AMS	SampType: MS	TestCode: BTEX_W	Units: µg/L		Prep Date	: 3/21/20	03	Run ID: GC	-1_030321A	
Client ID: ZZZZZ	Batch ID: R4310	TestNo: SW80218	3		Analysis Date	: 3/21/20	03	SeqNo: <b>62</b> 9	900	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	779.1	10 800	5.968	96.6	84	106	0	0		
Ethylbenzene	866.5	10 800	94.07	96.6	84	111	0	0		
m,p-Xylene	1583	20 1600	7.744	98.5	80	118	0	0		
o-Xylene	794.7	10 800	2.008	99.1	83	108	0	0		
Toluene	787.5	10 800	4.582	97.9	86	105	0	0		

R - RPD outside accepted recovery limits

CLIENT:

Blagg Engineering

Work Order:

0303014

Project:

BP - GCU #188

#### ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX W

t PQL 3 10 3 10 6 20 1 10	800 1600		%REC 92.4	Analysis Date  LowLimit  80	HighLimit	03 RPD Ref Val	SeqNo: <b>62</b> 9 %RPD		
3 10 3 10 5 20 1 10	800 800 1600	5.968 94.07	92.4	<del> </del>		RPD Ref Val	%RPD	DDD1: ::	
3 10 5 20 1 10 1 10	800 1600	94.07		80				RPDLimit	Qual
6 20 I 10 I 10	1600			00	106	779.1	4.50	5	
10		7 744	91.9	82	108	866.5	4.38	5	
10	800	1.177	94.3	80	113	1583	4.33	5	
		2.008	95.3	82	105	794.7	3.93	4	
TestC	800	4.582	93.7	83	105	787.5	4.34	5	
. 5510	ode: BTEX_W	Units: µg/L		Prep Date	e: <b>3/21/20</b>	03	Run ID: GC	C-1_030321A	
Tes	stNo: SW8021B	3		Analysis Date	e: <b>3/21/20</b>	03	SeqNo: <b>62893</b>		
t PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
0.50	20	0	94.6	85	115	0	0		-
0.50	20	0	94.8	85	115	0	0		
1.0	40	0	95.8	85	115	0	0		
2 0.50	20	0	97.6	85	115	0	0		
6 0.50	20	0	95.3	85	115	0	0		
TestC	ode: BTEX_W	Units: µg/L		Prep Date	e: <b>3/21/20</b>	03	Run ID: GC-1_030321A		
Tes	stNo: SW8021B	3		Analysis Date	e: <b>3/21/20</b>	03	SeqNo: 628	394	
t PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2 0.50	40	0	95.5	85	115	0	0		
0.50	40	0	94.8	85	115	0	0		
1.0	80	0	96.5	85	115	0	0		
0.50	40	0	97.3	85	115	0	0		
0.50	40	0	96.1	85	115	0	0		
TestC	ode: BTEX_W	Units: µg/L		Prep Date	e: 3/21/20	03	Run ID: GC	-1_030321A	
. 5510	stNo: SW8021B	3		Analysis Date	e: 3/21/20	03	SeqNo: 628	395	
	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tes		^	00.7	0.5	445	0	n		
0	lt PQL	· · · · · · · · · · · · · · · · · · ·							

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

Page 2 of 3

CLIENT:

Blagg Engineering

Work Order:

0303014

Project:

BP - GCU #188

#### ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX\_W

									<del></del>			
Sample ID CCV3_030321	SampType: CCV	TestCode: BTEX_W Units: μg/L		Units: µg/L		Prep Da	te: 3/21/20	Run ID: GC-1_030321A				
Client ID: ZZZZZ	Batch ID: R4310	Testi	No: SW8021B	i e		Analysis Da	te: 3/21/20	SeqNo: <b>62895</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Ethylbenzene	18.26	0.50	20	0	91.3	85	115	0	0			
m,p-Xylene	36.67	1.0	40	0	91.7	85	115	0	0			
o-Xylene	18.66	0.50	20	0	93.3	85	115	0	0			
Toluene	18.17	0.50	20	0	90.9	85	115	0	0			
Sample ID CCV4_030321	SampType: CCV	TestCo	TestCode: BTEX_W Units: μg/L			Prep Da	te: 3/21/20	Run ID: GC-1_030321A				
Client ID: ZZZZZ	Batch ID: R4310	Test	TestNo: SW8021B			Analysis Date: 3/21/2003				SeqNo: <b>62896</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	19.6	0.50	20	0	98	85	115	0	0	· · · · · · · · · · · · · · · · · · ·		
Ethylbenzene	19.9	0.50	20	0	99.5	85	115	0	0			
m,p-Xylene	40.6	1.0	40	0	102	85	115	0	0			
o-Xylene	20.42	0.50	20	0	102	85	115	0	0			
Toluene	19.83	0.50	20	0	99.1	85	115	0	0			
Sample ID	SampType: CCV	TestCo	de: BTEX_W	Units: µg/L		Prep Da	te: 3/21/20	003	Run ID: GC	C-1_030321A		
Client ID: ZZZZZ	Batch ID: R4310	Test	lo: <b>SW8021B</b>			Analysis Da	te: 3/21/20	003	SeqNo: 62	897		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	19.19	0.50	20	0	96	85	115	0	0			
Ethylbenzene	19.86	0.50	20	0	99.3	85	115	0	0			
m,p-Xylene	39.42	1.0	40	0	98.5	85	115	0	0			
o-Xylene	19.78	0.50	20	0	98.9	85	115	0	0			
Toluene	19.29	0.50	20	0	96.5	85	115	0	0			

R - RPD outside accepted recovery limits

iiná bá, Ltd.

**Date:** 26-Mar-03

CLIENT:

Blagg Engineering

Work Order:

0303014

Project:

BP - GCU #188

Test No:

SW8021B

Matrix: W

QC SUMMARY REPORT SURROGATE RECOVERIES

20012101	0212	1.20001 121	•	
Sample ID	14FBZ	4BCBZ	FLBZ	
0303010-009AMS	104	108	105	
0303010-009AMSD	105	112	103	· · · · · · · · · · · · · · · · · · ·
0303014-001A	99.1	108	102	
CCV1_030321	106	105	103	
CCV2_030321	104	107	104	
CCV3_030321	105	116	104	· · · · · · · · · · · · · · · · · · ·
CCV4_030321	106	105	105	<u></u>
CCV5_030321	106	103	103	
LCS_030321	106	105	103	
MB_030321	105	103	104	
				The contract of the contract o

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

#### iiná bá, Ltd.

Date: 26-Mar-03

CLIENT:

Blagg Engineering

Work Order:

0303006

Project:

BP - GCU #188 Production Tank Pit

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DR2 S

				···									
Sample ID	MBLK_030325	SampType:	MBLK	TestCod	le: 8015DR2_	S Units: mg/Kg		Prep Date:	3/17/200	3	Run ID: GC	-2_030325A	
Client ID:	ZZZZZ	Batch ID:	R4321	TestN	lo: <b>SW8015B</b>			Analysis Date:	3/25/200	3	SeqNo: 63	003	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrod	carbons: C10-C28		ND	25.0									
Sample ID	LCS_030325	SampType:	LCS	TestCod	le: <b>8015DR2</b> _	S Units: mg/Kg		Prep Date:	3/17/200	3	Run ID: GC	-2_030325A	
Client ID:	ZZZZZ	Batch ID:	R4321	TestN	lo: <b>SW8015B</b>			Analysis Date:	3/25/200	3	SeqNo: 63	004	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	dighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrod	carbons: C10-C28		433.3	25.0	501	0	86.5	70	123	0	0		
Sample ID Client ID:	0303007-001AMS ZZZZZ	SampType: Batch ID:			le: 8015DR2_ lo: SW8015B			Prep Date: Analysis Date:		_	Run ID: GC SeqNo: 630	C-2_030325A	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	lighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydroc	carbons: C10-C28		887.3	25.0	501	305.2	116	63	135	0	0		
Sample ID Client ID:	0303006-001AD BH1 @ 14ft.	SampType: Batch ID:			le: 8015DR2_ lo: SW8015B			Prep Date: Analysis Date:		_	Run ID: GC SeqNo: 630	:-2_030325A 006	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit i	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydroc	carbons: C10-C28		2162	25.0	0	0	0	0	0	2227	2.98	32	
Sample ID Client ID:	CCV1_030325 ZZZZZ	SampType: Batch ID:			e: 8015DR2_ o: SW8015B			Prep Date: Analysis Date:			Run ID: GC SeqNo: 630	:-2_030325A 009	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	lighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydroc	carbons: C10-C28		470.5	25.0	501	. 0	93.9	85	115	0	0		

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

CLIENT:

Blagg Engineering

Work Order:

0303006

Project:

BP - GCU #188 Production Tank Pit

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DR2 S

Sample ID CCV2_030325	SampType: CCV	TestCod	de: <b>8015DR2</b> _	S Units: mg/Kg		Prep Da	te: <b>3/17/20</b>	03	Run ID: GC	-2_030325A	
Client ID: ZZZZZ	Batch ID: R4321	TestN	lo: <b>SW8015B</b>			Analysis Da	te: 3/25/20	03	SeqNo: 63	010	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	441.4	25.0	501	0	88.1	85	115	0	0		

CLIENT:

Blagg Engineering

Work Order:

0303006

Project:

BP - GCU #188 Production Tank Pit

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GRO S

Sample ID MB_030322	SampType: MBLK	TestCode: 8015GRO_S Units: mg/Kg	Prep Date: 3/22/2003	Run ID: GC-1B_030322A
Client ID: ZZZZZ	Batch ID: R4308	TestNo: SW8015B	Analysis Date: 3/22/2003	SeqNo: <b>62809</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
T/R Hydrocarbons: C6-C10	2.482	4.50		J
Sample ID LCS_030322	SampType: LCS	TestCode: 8015GRO_S Units: mg/Kg	Prep Date: 3/22/2003	Run ID: GC-1B_030322A
Client ID: ZZZZZ	Batch ID: R4308	TestNo: SW8015B	Analysis Date: 3/22/2003	SeqNo: <b>62811</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
T/R Hydrocarbons: C6-C10	48.61	4.50 45 2.482	103 68 123 0	0
Sample ID 0303007-001AMS	SampType: MS	TestCode: 8015GRO_S Units: mg/Kg	Prep Date: 3/22/2003	Run ID: GC-1B_030322A
Client ID: ZZZZZ	Batch ID: R4308	TestNo: SW8015B	Analysis Date: 3/22/2003	SeqNo: <b>62814</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
T/R Hydrocarbons: C6-C10	3383	180 1800 1617	98.1 74 111 0	0
Sample ID 0303007-001AMSD	SampType: MSD	TestCode: 8015GRO_S Units: mg/Kg	Prep Date: 3/22/2003	Run ID: GC-1B_030322A
Client ID: ZZZZZ	Batch ID: R4308	TestNo: SW8015B	Analysis Date: 3/22/2003	SeqNo: <b>62815</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
T/R Hydrocarbons: C6-C10	3421	180 1800 1617	100 70 112 3383	1.13 12
Sample ID CCV1_030322	SampType: CCV	TestCode: 8015GRO_S Units: mg/Kg	Prep Date: 3/22/2003	Run ID: GC-1B_030322A
Client ID: ZZZZZ	Batch ID: R4308	TestNo: SW8015B	Analysis Date: 3/22/2003	SeqNo: <b>62810</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
T/R Hydrocarbons: C6-C10	1.977	0.180 1.8 0	110 85 115 0	0
Sample ID CCV2_030322	SampType: CCV	TestCode: 8015GRO_S Units: mg/Kg	Prep Date: 3/22/2003	Run ID: GC-1B_030322A
Client ID: ZZZZZ	Batch ID: R4308	TestNo: SW8015B	Analysis Date: 3/22/2003	SeqNo: <b>62816</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual

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

Page 3 of 4

CLIENT:

Blagg Engineering

Work Order:

0303006

Project:

BP - GCU #188 Production Tank Pit

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GRO\_S

Sample ID CCV2_030322	SampType: CCV	TestCo	de: <b>8015GRO</b>	_S Units: mg/Kg		Prep Da	te: 3/22/20	03	Run ID: GC	-1B_030322	A
Client ID: ZZZZZ	Batch ID: R4308	Test	No: <b>SW8015B</b>	i		Analysis Da	te: 3/22/20	03	SeqNo: 628	316	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C6-C10	1.945	0.180	1.8	0	108	85	115	0	0		

iiná bá, Ltd.

**Date:** 26-Mar-03

CLIENT:

Blagg Engineering

Work Order:

0303006

Project:

BP - GCU #188 Production Tank Pi

QC SUMMARY REPORT SURROGATE RECOVERIES

Test No:	SW8015B		Matrix: S	
Sample ID		ОТ	TFT	
0303006-001A		116	109	
0303006-001AD		112		
0303007-001AMS		85.8	103	
0303007-001AMSI	)	•	103	The second secon
CCV1_030322			95.2	
CCV1_030325		102		
CCV2_030322			93.7	· -
CCV2_030325		101	· · · ·	•
LCS_030322			96.9	
LCS_030325		75.7	· · · · · · · · · · · · · · · · · · ·	
MB_030322			94.6	
MBLK_030325		43.0		

Acronym	Surrogate	QC Limits
OT	= o-Terphenyl	25-165
TFT	= Trifluorotoluene	73-133

#### Sample Receipt Checklist

Client Name: BLA1002			Date and Time	Received:	3/12/2003
Work Order Number: 0303006			Received by:	JEM	
Checklist completed by: Herough	: P2 31	12/03 Date	Reviewed by:	Jinitials	_3/13/1/3
Matrix:	Carrier nar	ne: <u>Courier</u>			
Shipping container/cooler in good con	dition?	Yes 🗸	No f	Not Present	
Custody seals intact on shippping con	tainer/cooler?	Yes	No 1	Not Present 🗸	
Custody seals intact on sample bottle	6?	Yes	No 1	Not Present 🗸	
Chain of custody present?		Yes 🗸	No		
Chain of custody signed when relinqui	shed and received?	Yes 🗸	No		
Chain of custody agrees with sample	abels?	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 tin	ne?	Yes 💆	No		
Container/Temp Blank temperature in	compliance?	Yes 💆	No		
Water - VOA vials have zero headspa	ce? No VOA vials	submitted 💆	Yes	No .	
Water - pH acceptable upon receipt?		Yes 💆	No		
	Adjusted?		Checked by:		
Any No and/or NA (not applicable) res	ponse must be detailed in t	he comments sect	ion below.		
Client contacted:	Date contacted:		Persor	n contacted:	
Contacted by:	Regarding:				
Comments:					·· · · · · · · · · · · · · · · · ·
					_ ,
			- ·· — ·		· ·· · · <del></del>
Corrective Action:				<del></del>	

#### Sample Receipt Checklist

Client Name: BLA1002				Date and Tim	e Received:	3/17/2003
Work Order Number: 0303014				Received by:	JEM	
Checklist completed by: Departure	3/12 Dafe	10:	3	Reviewed by:	Initials	3 17 103 Date
Matrix:	Carrier name:	Nelsc	on Velez			
Shipping container/cooler in good condition?		Yes	~	No	Not Present	
Custody seals intact on shippping container/co	ooler?	Yes		No _	Not Present	<b>v</b>
Custody seals intact on sample bottles?		Yes	- -	No	Not Present	✓.
Chain of custody present?		Yes	<u>~</u>	No -		
Chain of custody signed when relinquished and	d received?	Yes	Ž.	No .		
Chain of custody agrees with sample labels?		Yes	<b></b>	No _		
Samples in proper container/bottle?		Yes	Ÿ	No -		
Sample containers intact?		Yes	¥.	No		
Sufficient sample volume for indicated test?		Yes	<u>Ž</u>	No		
All samples received within holding time?		Yes	Ź	No .		
Container/Temp Blank temperature in complia	nce?	Yes	<u>v</u>	No		
Water - VOA vials have zero headspace?	No VOA vials sub	mitted		Yes 🔽	No	
Water - pH acceptable upon receipt?		Yes	<u>~</u>	No		
	Adjusted?		Chec	cked by:		_
Any No and/or NA (not applicable) response m	nust be detailed in the	commer	nts section t	below.		
·						
Client contacted:	Date contacted:			Perso	on contacted:	
Contacted by:	Regarding:					
Comments:	· · · · · · · · · · · · · · · · · · ·					
			- <del></del>			
Corrective Action:						
		· · · · · · · · · · · · · · · · · · ·	<b>-</b>			

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

	<u> </u>		ROD. CO	•	CHA	AIIN-OF-C	:USTODY # :	N	
	8 - PROD. EC. 30, T29				LABO	RATORY	'(S) USED :	HALL ENV	IRONMENTAL
Date .	May 29,	2003					SAMPLER:	N	JV
name :	05-29-03.\	NK4			PR	OJECT	MANAGER:	N	JV
/ELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
N - 2	_	_	13.78	17.50	0935	6.93	2,300	1.75	_
	J		·	ENT CALIB	RATIONS =	7.00	2,800		<u> </u>
					& TIME =	05/29/03	06:55		
	Ideally a m		three (3) we diameter =	0.19 gallor	ns per foot o				
	ldeally a m		diameter =	0.19 gallor 2 bails pei	ns per foot o	ll teflon	bailer.		
	ldeally a m	1.25 " well	diameter =	0.19 gallor 2 bails pei 3 bails pei	ns per foot of foot - sma foot - 3/4	II teflon " teflon	bailer.		
	Ideally a m	1.25 " well 2.00 " well	diameter =	0.19 gallor 2 bails per 3 bails per 0.49 gallor	ns per foot of foot - sma foot - 3/4 ns per foot o	II teflon " teflon of water.	bailer.		

**Date:** 05-Jun-03

**CLIENT:** 

Blagg Engineering

Lab Order:

0305215

Project:

GCU Lease

Lab ID:

0305215-04

Client Sample ID: GCU#188 MW#2

**Collection Date:** 5/29/2003 9:35:00 AM

Matrix: AQUEOUS

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	10	2.5	μg/L	5	6/3/2003 11:22:43 AM
Toluene	18	2.5	μg/L	5	6/3/2003 11:22:43 AM
Ethylbenzene	23	2.5	μg/L	5	6/3/2003 11:22:43 AM
Xylenes, Total	180	2.5	μg/L	5	6/3/2003 11:22:43 AM
Surr: 4-Bromofluorobenzene	103	74-118	%REC	5	6/3/2003 11:22:43 AM

R - RPD outside accepted recovery limits

			DY RECORD	<u> </u>											uero	ļue,	New		rico	8710				
Client:	RLAGE	ENER	. BP AMERICA	Project Name:											:05.3 .hall					5.345 om	.410	7		
			-	GCU	1 2	LEA	S€																	
Address:	1.0.	Box .	87	Project #:										A	NAI	.YS	IS R	EQI	UES	T				
	Beson	FIELD	Nm 87413	1						Ę	sel)								-					
		<del></del>		Project Manager	г.			עוד	(L)	ie O	as/Die								4, 80,	(2)				or N
				JEFF	Be	A66	5		(802	sasoli	9) 00		(						2, PO,	808				
Phone #:	50	5-63	22-1199	Jeff Sampler: New	.Jon	1 Vz	ie c		Ş	E E	5B M(	3.1)	(8021	(-1	( <del>)</del>	£		a, Mg)	3, NO.	PG BG				adsb
Fax #:			2-3903	Samples Cold?;				□ No	F	E + 1	d 801	od 418	II List	705 pc	708 pc	or PA	tals	Α, Ω	NO,	ides /		-V0A		불
					<del></del>	eserva		LUCAL NA	重	BTEX + MTBE + TPH (Gasoline Only)	Vetho	TPH (Method 418.1)	Volatiles Full List (8021)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, CI, NO3, NO2, PO4, SO4)	8081 Pesticides / PCB's (8082)	(VOA)	8270 (Semi-VOA)		Air Bubbles or Headspace (Y or N)
Date	Time	Matrix	Sample I.D. No.	Number/Volume	HgCl <sub>2</sub>	HCI		HEAL NO. 1305215	BTEX) MTBE + TIMB'S (8021)	BTEX	TPH Method 8015B MOD (Gas/Diesel)	ТРН (	Volati	EDB (	EDC (	8310	RCRA	Cation	Anion	808	8260 (VOA)	8270		Air Bu
	800) 2000 - 1000 1000 - 1000	5.7	a	ar ·	,	,	x										<u> </u>							
			Harrison				2		,								-							1
	Ever.	5.0 ×5.5 , 1 *	<u> </u>							Н													_	+
	(中 a	C 69	\$40 ·	Approximately and the second	7.	7													_					
						-																	_	
7967	0925	1.1611-0	Gen#188 MW #2	- 42 -1	1		-	14	1														_	
2,03	0733	WHIER	JUL 100 1/W #2	2-10 MI	<u> </u>	<del> </del>			Ļ								-							-
	l 				<del>                                     </del>	<del>                                     </del>																		+
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							<b></b> -		<del> </del>															
Date:	Time:	Relinauish	red By: (Signature)	Recentles	18 <b>v</b> : 19	Signalu	l ire)		Rem	narks:												1		
20/2	0700	/l-c	yen Vy		XXI	121	V 1/	0 5 3 2 0 3																
Date:	Time:	Relinquish	ed By: (Signature)	Received	J By: (9	Signatu	itė)	11/42																

Date: 05-Jun-03

CLIENT: Work Order:

Project:

Blagg Engineering

0305215 GCU Lease **QC SUMMARY REPORT** 

Method Blank

Sample ID Reagent Blank 5m	Batch ID: R8430	Test Code:	SW8021	Units: µg/L		Analysis	Date <b>6/2/2</b>	2003 9:34:55 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0306	02A		SeqNo:	1908	27			
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: <b>R8442</b>	Test Code:	SW8021	Units: µg/L		Analysis	Date 6/3/2	2003 8:47:01 AM	Prep D	ate	
Sample ID Reagent Blank 5m Client ID:	Batch ID: R8442	Test Code: Run ID:	SW8021 PIDFID_0306			Analysis SeqNo:			Prep D	ate	
	Batch ID: <b>R8442</b> Result		PIDFID_0306		%REC	SeqNo:	1910		Prep D	ate RPDLimit	Qual
Client ID:		Run ID:	PIDFID_0306	03A	%REC	SeqNo:	1910	50	·		Qual
Client ID: Analyte	Result	Run ID: PQL	PIDFID_0306	03A	%REC	SeqNo:	1910	50	·		Qual
Client ID: Analyte Benzene	Result ND	Run ID: PQL 0.50	PIDFID_0306	03A	%REC	SeqNo:	1910	50	·		Qual
Client ID: Analyte Benzene Toluene	Result ND ND	Run ID: PQL 0.50 0.50	PIDFID_0306	03A	%REC	SeqNo:	1910	50	·		Qual

CLIENT:

Blagg Engineering

Work Order: Project: 0305215

GCU Lease

Date: 05-Jun-03

#### **OC SUMMARY REPORT**

Laboratory Control Spike - generic

Sample ID BTEX Std 100ng	Batch ID: R8430	Test Code:	SW8021	Units: µg/L		Analysis	Date 6/2/2	2003 8:54:19 PM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0306	502A		SeqNo:	1908	86			
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 6/2/2	2003 10:32:32 PM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0306	602A		SeqNo:	1908	87			
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 6/3/2	2003 9:51:05 AM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0306	603A		SeqNo:	1910	64			
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			

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

#### Sample Receipt Checklist

Client Name BLAGG		Date and Tin	ne Receive		
Work Order Number 0305215		Received by	AMG		
Checklist completed by Signature	530 Date	3			
Matrix: Carri	er name: <u>Greyhound</u>				
Shipping container/cooler in good condition?	Yes 🗹	No 🗆	Not Present		
Custody seals intact on shippping container/cooler?	Yes	No 🗆	Not Present	$\checkmark$	
Custody seals intact on sample bottles?	Yes	No 🗆	Not Present	$\checkmark$	
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?	<b>23°</b> 4	° C ± 2 Accepta	able		
COMMENTS:					
		====			=====
Client contacted Date conta	acted:	Pers	on contacted		
Contacted by: Regarding	:				
Comments:					
Corrective Action	•				
	****				

# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	RICA PI	ROD. CO	·	С	HAIN-OF-C	CUSTODY # :	N	/ <b>A</b>
GCU #18	8 - PROD.	TANK PIT			LAE	BORATORY	(S) USED:	HALL ENVI	RONMENTAL
UNIT J, S	EC. 30, T29	ELL WATER DEPTH TO TO EV. ELEV. WATER DEPTH TO D							
Date .	August 1	8, 2003					SAMPLER:	N	J V
Filename .	08-18-03.W	IK4			1	PROJECT	MANAGER:	N	JV
WELL #	WELL ELEV. (ft)	ELEV.	WATER	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW - 2	_	-	13.88	17.50	1020	6.86	3,000	21.1	1.75
NOTES:	(i.e. 2" MW Ideally a m	r = (1/12) ft inimum of t	d from well . h = 1 ft.) hree (3) well	DATE prior to sa (i.e. 4" MW bore volum	mpling: V = p r = (2/12) ft. es:	oi X r2 X h X h = 1 ft.)	2,800 0815 X 7.48 gal./ft3	) X 3 (wellbo	res).
	Excellent re	or note wel	L diameter if	not standa	ard 2".		during purgir	ng , collecte	d BTEX

Date: 28-Aug-03

CLIENT:

Blagg Engineering

Project:

GCU Lease

Lab Order: 03

0308148

Lab ID: Client Sample ID:	0308148-03 #188 - MW #2			•		ate: 8/18/20 rix: AQUE	003 10:20:00 AM COUS
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021	IB: VOLATILES						Analyst: NSB
Benzene		15	2.5		µg/L	5	8/25/2003 3:07:23 PM
Toluene		ND	2.5		µg/L	5	8/25/2003 3:07:23 PM
Ethylbenzene		37	2.5		μg/L	. 5	8/25/2003 3:07:23 PM
Xylenes, Total		220	2.5		µg/L	5	8/25/2003 3:07:23 PM
Surr: 4-Bromofluo	robenzene	139	74-118	S	%REC	5	8/25/2003 3:07:23 PM

R - RPD outside accepted recovery limits

E - Value above quantitation range

СНА	IN-OF	-custo	DY RECORD										] •	901	Hav	vkin	NE.	, Sui	ite A			8 LA	BOR	ATORY
Client:	Recies	ENGR.	BP FROD ME	Project Name:	۷ŧ	AS E	-						ן [	el. f	05.3	345.		Fau	x 50	5.34		07		
Addres	s: P. O.	BOX	87	Project #:				· · · · · · · · · · · · · · · · · · ·						A	NA	LYS	IS F	REQ	UES	îT				
	82001	NFIELL	0, Nm 87413	1						<u>Ş</u>	Sel)													
				Project Manager	r. مرا	VEL	€Z	À	BTEX) MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)		£					_	2, PO4, SO4)	s (8082)				Air Bubbles or Headspace (Y or N)
Phone	(505)	) 632	-1199	Sampler: NE	L50	JV	Eu	EZ	TMB's	) HAT	58 M	8.1)	(802	4.1)	33)	£		a, Mg	3. 8	/ PCB				adsb
Fax #:	1505	) 632	-3903	Samples Cold?:		` <b>⊡</b> 'Ye	S	0 No 60°	# # #	TBE +	od 801	10d 41	ull List	og por	08 po	or PA	etals	a, K, C	Ci, N	cides		II-VOA		S Or IX
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Pro HgCl <sub>2</sub>	eserval HCI	-	HEAL No.	M (XIII	ITEX + M	PH Meth	TPH (Method 418.1)	Volatiles Full List (8021)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, CI, NO3, NO2, PO4,	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)		Ir Bubble
						<u> </u>			9		1	<b> </b>		ш	<u> </u>		Œ.	0	4	80	80	80		
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		<u> </u>			Ė																			
(18/03	1020	WATER	#188-MW #A	2-40m/	1			-3	1															_
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Dale:	Time: 0935	Relinquish	led By: (Signature)	Received	1 By: (:	Signatu	reV	8/2/03	Ren	narks:	<b></b>	l			l,	L		L	1		1			
Date:	Time:	Relinquish	ed By: (Signature)	Received	i By: (	Signatu	( <del>e)</del>																	

Date: 28-Aug-03

CLIENT:

Project:

Blagg Engineering

QC SUMMARY REPORT

Work Order:

0308148 GCU Lease

Method Blank

Sample ID Reagent Blank 5m	Batch ID: R9343	Test Code:	SW8021	Units: µg/L		Analysis	Date <b>8/25</b>	/2003 9:16:56 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0308	325 <b>A</b>		SeqNo:	2107	19			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	21.19	0	20	0	106	74	118	0			
Sample ID Reagent Blank 5m	Batch ID: R9362	Test Code:	SW8021	Units: µg/L		Analysis	Date <b>8/26</b>	/2003 9:30:49 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0308	26A		SeqNo:	21109	96			
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									
7131011001 1 0											

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

Date: 28-Aug-03

CLIENT:

Blagg Engineering

Work Order:

0308148

Project:

GCU Lease

# **QC SUMMARY REPORT**

Laboratory Control Spike - generic

Sample ID BTEX Std 100ng	Batch ID: R9343	Test Code	SW8021	Units: µg/L		Analysis	Date 8/25	/2003 6:45:46 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0308	325A		SeqNo:	2107	71			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.11	0.50	20	0	101	81.3	121	0			
Toluene	19.96	0.50	20	0	99.8	84.9	118	0			
Ethylbenzene	19.3	0.50	20	0	96.5	53.8	149	0			
Xylenes, Total	59.57	0.50	60	0	99.3	83.1	122	0			
Sample ID BTEX Std 100ng	Batch ID: R9343	Test Code:	SW8021	Units: µg/L		Analysis	Date 8/26	/2003 1:53:40 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0308	325A		SeqNo:	2107	73			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.82	0.50	20	0	104	81.3	. 121	20.11	3.47	27	
Toluene	20.92	0.50	20	0	105	84.9	118	19.96	4.70	19	
Ethylbenzene	20.17	0.50	20	0	101	53.8	149	19.3	4.38	10	
Xylenes, Total	61.91	0.50	60	0	103	83.1	122	59.57	3.85	13	
Sample ID BTEX Std 100ng	Batch ID: R9362	Test Code:	SW8021	Units: µg/L		Analysis	Date 8/26	/2003 7:19:17 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0308	326A		SeqNo:	2111	40			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.6	0.50	20	0	103	81.3	121	0			
Toluene	20.95	0.50	20	0	105	84.9	118	0			
Ethylbenzene	19.98	0.50	20	0	99.9	53.8	149	0			
Xylenes, Total	61.52	0.50	60	0	103	83.1	122	0			

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:

0308148

Project:

GCU Lease

### **QC SUMMARY REPORT**

Laboratory Control Spike Duplicate

Sample ID BTEX Std 100ng	Batch ID: R9362	Test Code	SW8021	Units: µg/L		Analysis	s Date 8/27	/2003 3:35:46 AM	Prep D	ate	*
Client ID:		Run ID:	PIDFID_0308	326A		SeqNo:	2111	41			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.6	0.50	20	0	108	81.3	121	20.6	4.74	27	
Toluene	21.2	0.50	20	0	106	84.9	118	20.95	1.15	19	
Ethylbenzene	20.39	0.50	20	0	102	53.8	149	19.98	2.02	10	
Xylenes, Total	61.32	0.50	60	0	102	83.1	122	61.52	0.332	13	

#### Sample Receipt Checklist

Client Name BLAGG				Date and Tim	ne Receive	8/20/03
Work Order Number 0308148				Received by	AT	
Checklist completed by Signature	my		Date			
Matrix:	Carrier name:	Grey	hound			
Shipping container/cooler in good condition?		Yes	<b>Y</b>	No 🗆	Not Present	
Custody seals intact on shippping container/cooler	r?	Yes		No 🗆	Not Present	$\checkmark$
Custody seals intact on sample bottles?		Yes		No 🗆	Not Present	$\checkmark$
Chain of custody present?		Yes	$\checkmark$	No 🗆		
Chain of custody signed when relinquished and re	ceived?	Yes	$\checkmark$	No 🗆		
Chain of custody agrees with sample labels?		Yes	$\checkmark$	No 🗆		
Samples in proper container/bottle?		Yes	V	No 🗆		
Sample containers intact?		Yes	$\checkmark$	No 🗌		
Sufficient sample volume for indicated test?		Yes	$\checkmark$	No 🗆		
All samples received within holding time?		Yes	$\checkmark$	No 🗌		
Water - VOA vials have zero headspace?	No VOA vials subm	nitted		Yes 🔽	No 🗆	
Water - pH acceptable upon receipt?		Yes		No 🗆	N/A 🗹	
Container/Temp Blank temperature?			6°	4° C ± 2 Accepta	able	
COMMENTS:						
==========						
Client contacted E	Date contacted:			Pers	son contacted	
Contacted by:	Regarding:					
Comments:						
Corrective Action						
	······································					

Date: 28-Aug-03

CLIENT:

Blagg Engineering

Project:

GCU Lease

Lab Order:

0308148

**CASE NARRATIVE** 

Analytical Comments for METHOD 8021BTEX\_W, SAMPLE 0308148-02a: Elevated surrogate due to matrix interference. Analytical Comments for METHOD 8021BTEX\_W, SAMPLE 0308148-03a: Elevated surrogate due to matrix interference.

# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	RICA PI	ROD. CO	m	c	HAIN-OF-C	CUSTODY#:	N	/ A
GCU # 188	ELEV. ELEV. WATER DEPTH TIME (umhos) (celcius) PURGED (ft) (ft) (ft) (gal.)								
UNIT J, S	EC. 30, T29	N, R12W	الــــــــــــــــــــــــــــــــــــ						
Date :	November	18, 2003					SAMPLER:	N	J V
Filename :	11-18-03.W	IK4				PROJECT	MANAGER :	N	JV
WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
MW - 2	-	-	13.45	17.50	1350	6.86	2,700	15.3	2.00
			INSTRUM	ENT CALIB	RATIONS =	7.00	2,800		
				DATE	& TIME =	11/18/03	1340		
					ı				
NOTES:							( 7.48 gal./ft3	) X 3 (wellbo	res).
	Ideally a mi	inimum of t	hree (3) well	bore volum	es:				
		2.00 " well	diameter =	0.49 gallon	s per foot o	f water.			
	Comments	or note well	<u>diameter it</u>	not standa	<u>ra_2 ".</u>				
	Excellent re	covery, wis	sp of sheen	observed v	within dispos	sal bucket	during purgir	ng, collecte	d BTEX
	only.				1				<del></del>
	Top of cas	ing MW #2	~ @ grade.						

Date: 01-Dec-03

CLIENT:

Blagg Engineering

Project:

GCU Lease

Lab Order:

0311145

Lab ID:

0311145-03

Collection Date: 11/18/2003 1:50:00 PM

Client Sample ID: GCU#188 MW#2				Ma	itrix: A	QUE	OUS
Analyses	Result	Limit (	Qual	Units		DF	Date Analyzed
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	31	5.0		μg/L		10	11/30/2003 6:32:44 PM
Toluene	ND	5.0		µg/L		10	11/30/2003 6:32:44 PM
Ethylbenzene	74	5.0		μg/L	•	10	11/30/2003 6:32:44 PM
Xylenes, Total	470	5.0		μg/L		10	11/30/2003 6:32:44 PM
Surr: 4-Bromofluorobenzene	128	74-118	S	%REC		10	11/30/2003 6:32:44 PM

B - Analyte detected in the associated Method Blank

<sup>\* -</sup> Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

			DDY RECORD	Other:	ielac (	ditation	USACI							4	NA 901	<b>LY</b> Haw	NV SIS /kins ue, N	NE.	<b>S</b> uit	o <b>r</b> a :e D	CO	RY		
Client:	LACE E	ENGR./	BP AMERICA	Project Name:										Τe	el. 50	5.3		975	i F	ax 50	05.3	45.4 <sup>^</sup>	107	
A.11.				GC	и	LEF	?5E	•			. —			ΑR	9.41	Vei	S I	ı El	ME	ST				
Address:	P.O. B	8 <u>X</u> 0	7 NM 87413	Project #:										7	7.1									
	Room	FIEW,	NM 87413					210		Inly	iesel)													
				Project Manager	NJ	V			* (8021 <b>8</b>	Gasoline C	0D (Gas/D							PO, SO,)	's (8082)					ice (Y or N
Phone #:	(505	) 632	- 1199	Sampler:	NJ	V			TIMB	TPH (	58 M	8.1	4.1	21)	<b>E</b>		a, Mg)	S.	/ PCB					adsba
Fax #:	(505	5) 632	2-3903	Sample Temperat		3	C		1 <u>0E</u> 7	TBE +	nd 801	od 41	od 50	09 po	or PA	tals	3, K, C	NO.	icides,	2	-ir			or He
Date	Time	Matrix	Sample I.D. No.	Number/Volume	<u> </u>	eservat		HEAL NO.	BIEX > MIBE = TMB' (80218)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO,, NO,, PO,, SO,)	8081 Pesticides / PCB's (8082)	8260 (VDA)	8270 (Semi-VOA)			Air Bubbles or Headspace (Y or N)
																							$\prod$	
·																								_
118/03	1350	WATER	MW # 2	2-40ml	1			3	✓				_						_				_	_
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Date: / //9/03 Date:	11me: 0930 Time:	Relinquishe	d-By: (Signature) Mon // d By: (Signature)	. Hemarks:	201	VZA.	ll	1782	Rem	arks:														

Date: 01-Dec-03

CLIENT:

Blagg Engineering

Work Order:

0311145

Project:

GCU Lease

**QC SUMMARY REPORT** 

Method Blank

Sample ID Reagent Blank 5m	Batch ID: R10208	Test Code	: SW8021	Units: µg/L		Analysis	Date 11/3	0/2003 1:57:24 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0311	30A		SeqNo:	2291	68			
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	19.59	0	20	0	97.9	74	118	0			

Date: 01-Dec-03

CLIENT:

Blagg Engineering

Work Order:

0311145

Project:

GCU Lease

### **QC SUMMARY REPORT**

Laboratory Control Spike - generic

Sample ID BTEX Std 100ng	Batch ID: R10208	Test Code:	SW8021	Units: µg/L		Analysis	Date 11/3	0/2003 2:58:49 PM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0311	30A		SeqNo:	2291	86			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.23	0.50	20	0	111	81.3	121	0			
Toluene	21.34	0.50	20	0	107	84.9	118	0			
Ethylbenzene	20.48	0.50	20	0	102	53.8	149	0			
Xylenes, Total	62.37	0.50	60	0	104	83.1	122	0			
Sample ID BTEX Std 100ng	Batch ID: R10208	Test Code:	SW8021	Units: µg/L		Analysis	Date 12/1	/2003 1:09:48 AM	Prep Da	ate	
				Office. Pg/L		Allalysis	Duto ILI	2000 1.00.4071111	i iop o		
Client ID:		Run ID:	PIDFID_0311	• •		SeqNo:	2291		1100 01		
Client ID: Analyte	Result		PIDFID_0311	• •	%REC	•	2291		%RPD	RPDLimit	Qual
	Result	Run ID:	PIDFID_0311	30A	%REC	SeqNo:	2291	89	·		Qual
Analyte		Run ID:	PIDFID_0311 SPK value	30A SPK Ref Val		SeqNo:	22918 HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte Benzene	21.38	Run ID: PQL 0.50	PIDFID_0311 SPK value	30A SPK Ref Val	107	SeqNo: LowLimit 81.3	22918 HighLimit 121	RPD Ref Val 22.23	%RPD 3.91	RPDLimit	Qual

B - Analyte detected in the associated Method Blank

### Sample Receipt Checklist

Client Name BLAGG			Date and Time	Received:		
Vork Order Number 0311145			Received by	AMG		
Checklist completed by Signature	als 11/1	19/02 De	ete			
.∕ ∕atrix	Carrier name	Greyhoun	<u>d</u>			
Shipping container/cooler in good condition?		Yes 🗹	No 🗆	Not Present		<b>.</b>
Custody seals intact on shipping container/coole	er?	Yes 🗌	No 🗆	Not Present 🗵	Not Shipped	& of
Custody seals intact on sample bottles?		Yes 🗌	No 🗆	N/A <b>✓</b>		
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 sub	mitted 🗹	Yes 🗌	No 🗆		
Water - pH acceptable upon receipt?		Yes 🗆	No 🗆	N/A 🗹		
Container/Temp Blank temperature?		3°	4° C ± 2 Accepta			
COMMENTS:						
			=====:			
Client contacted	Date contacted:		Pers	son contacted		
Contacted by:	Regarding					
Comments:						
Warrange and the second and the seco						<b></b>
						<del></del>

**Date:** 01-Dec-03

CLIENT:

Blagg Engineering

Project:

GCU Lease

Lab Order:

0311145

**CASE NARRATIVE** 

Analytical Comments for METHOD 8021BTEX\_W, SAMPLE 0311145-03a: High surrogate due to matrix interference.

# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	RICA PI	ROD, CO	Ē.	C	HAIN-OF-C	CUSTODY#:	N	/ A
	8 - PROD.				LA	BORATOR	(S) USED:	HALL ENVI	RONMENTAL
UNIT J, S	EC. 30, T29	9N, R12W							
Date .	March 29	, 2004					SAMPLER:	N	J V
Filename .	03-29-04.W	/K4			ĺ	PROJECT	MANAGER:	N	J V
WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME	_	(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
MW - 2	-	_	13.59	17.50	1340	6.86	2,600	21.5	2.00
			INSTRUMI	ENT CALIB	RATIONS =	7.00	2,800		
				DATE	& TIME =	03/27/04	0800		
					<u> </u>		<del>' :</del>		
NOTES ·	Volume of	water purge	d from well	prior to sa	mplina: V = r	oiXr2Xh	X 7.48 gal./ft3)	X 3 (wellbo	res).
110120.			. h = 1 ft.)				3 1 1 1 2 3 min 1 2 2 1	71 9 (11 9 III 9	<u>1994</u>
	Ideally a m	inimum of tl	hree (3) well	bore volum	es:				
		2.00 " well	diameter =	0.49 gallon	s per foot o	f water.			
	Comments	or note wel	diameter if	not standa	<u>rd 2".</u>				
	Excellent re	ecovery, wis	sp of sheen	observed v	within dispos	al bucket	during purgin	g, collecte	d BTEX
	only .								
				····	· · · · · · · · · · · · · · · · · · ·				<del></del>
	Top of cas	ing MW #2	~ @ grade.						
			<u> </u>						

Date: 05-Apr-04

**CLIENT:** Project:

Blagg Engineering

GCU Lease

Lab Order:

0403245

Lab ID:

0403245-01

Collection Date: 3/29/2004 1:40:00 PM

Client Sample ID: MW #2 GCU#188

Matrix: AQUEOUS

Cache bumpio 251 1111 112 CCC11100					
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	11	1.0	µg/L	2	4/1/2004 10:17:23 AM
Toluene	ND	1.0	µg/L	2	4/1/2004 10:17:23 AM
Ethylbenzene	24	1.0	μg/L	2	4/1/2004 10:17:23 AM
Xylenes, Total	180	1.0	μg/L	2	4/1/2004 10:17:23 AM
Surr: 4-Bromofluorobenzene	100	74-118	%REC	· 2	4/1/2004 10:17:23 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

Page 1 of 1

Client:	BLAGG	LNGR.	ODY RECORD    BP AMERICA	Other: Project Name:	IELAC (	ditation Ap  US	ACE 🗆					*	4! Al Te W	901  buqi  b. 50  ww.h	Haw Jerqi 05.3 neller	<b>SIS</b> kins ue, N	NE, lew N 975 nmer	Suite Jexic Fa ntal. C	e D co 87 ex 50 com	NTA TOF 7109 05.34	RΥ	07	· · · · · · · · · · · · · · · · · · ·
	Beson	·	0, NM 87413	Project Manager	\\Q_{\}	V	<i>ግ</i> ለ	3' <del>e</del> (8021B)	(Gasoline Only)	Gas/Diesel)													איי אי אי
Phone #	505 505	-632 -632 Matrix	- //99 - <b>&amp;</b> 3903 Sample I.D. No.	Sampler: Sample Temperat Number/Volume	Pr	reservative		(BTEX)+ MTBE + TMB's (80218)	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, NO3, NO2, PO4, SO2)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)				Air Rithhles or Handsnace IV or NI
3/29/04	1340	WATER	PCN#188	2-40m/	4		04/03245-1																
Date: / Date:	Time:	20	d By: (Signature)  Mon  J  d By: (Signature)	Received Received	in	Mu	3/31/04 ~ 0859	Ren	narks:		-	i								1			

CLIENT:

Project:

Blagg Engineering

Work Order:

0403245 GCU Lease

**QC SUMMARY REPORT** 

Method Blank

Sample ID Reagent Blank 5m	Batch ID: R11468	Test Code:	SW8021	Units: µg/L		Analysis	Date 3/31	/2004 9:11:45 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0403	31A		SeqNo:	2628	58			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50						the statement when the property of the statement of the s			•
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.99	0	20	0	100	74	118	0			
Sample ID Reagent Blank 5m	Batch ID: R11486	Test Code:	SW8021	Units: µg/L		Analysis	Date 4/1/2	2004 8:07:11 AM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0404	01A		SeqNo:	2632	33			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
· silany to	Resuit										
Benzene	ND	0.50							. •		
The second of th	at at a large to the second bases and analysis and an area of the second bases and a second base of the second bases are second bases and a second base of the second bases are second bases and a second base of the second bases are second bases										
Benzene	ND	0.50				Antoninining deptember (men en en en	na a designa de la compa y esta por				
Benzene Toluene	ND ND	0.50 0.50					en a la maria de la composition della compositio				

S - Spike Recovery outside accepted recovery limits

CLIENT: Work Order: Blagg Engineering

0403245

Project:

GCU Lease

**QC SUMMARY REPORT** 

Sample Matrix Spike

Sample ID 0403245-02aMS	Batch ID: R11468	Test Code:	SW8021	Units: µg/L		Analysis	Date <b>3/31</b>	/2004 3:49:15 PM	Prep D	ate	
Client ID: MW #3 GCU #93		Run ID:	PIDFID_0403	331A		SegNo:	2628	82			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.65	0.50	20	4.406	101	77	122	0			
Toluene	21.48	0.50	20	0.8648	103	81	115	0			
Ethylbenzene	28.14	0.50	20	8.107	100	84	117	0			
Xylenes, Total	65.74	0.50	60	2.973	105	84	116	0			
				The second secon	Name and Address of the Owner, where the Party of the Owner, where the Party of the Owner, where the Owner, which the Owner, where the Owner, which the Owner,	فيواكبك الزاران المالان المالات	March Cold Printers	والمرابات المراب المراب والمراب المرابع			وعينه والمحبوات
Sample ID 0403245-02aMSD	Batch ID: R11468	Test Code:	SW8021	Units: µg/L		Analysis	Date 3/31	/2004 4:19:44 PM	Prep D	ate	
Sample ID 0403245-02aMSD Client ID: MW #3 GCU #93	Batch ID: R11468	Test Code: Run ID:	SW8021 PIDFID_0403			Analysis SeqNo:			Prep D	ate	
•	Batch ID: R11468  Result			331A	%REC	•	2628		Prep D	ate RPDLimit	Qual
Client ID: MW #3 GCU #93		Run ID:	PIDFID_0403	331A	%REC	SeqNo:	2628	90	•		Qual
Client ID: MW #3 GCU #93 Analyte	Result	Run ID: PQL	PIDFID_0403 SPK value	31A SPK Ref Val		SeqNo:	2628 HighLimit	90 RPD Ref Val	%RPD	RPDLimit	Qual
Client ID: MW #3 GCU #93  Analyte  Benzene	Result 24.82	Run ID: PQL 0.50	PIDFID_0403 SPK value	331A SPK Ref Val 4.406	102	SeqNo: LowLimit	2628 HighLimit	90 RPD Ref Val 24.65	%RPD 0.685	RPDLimit	Qual

Date: 05-Apr-04

CLIENT:

Project:

Blagg Engineering

Work Order:

0403245

GCU Lease

**QC SUMMARY REPORT** 

Laboratory Control Spike - generic

Sample ID BTEX STD 100ng	Batch ID: R11468	Test Code:	SW8021	Units: µg/L		Analysis	Date 3/31	/2004 5:50:52 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0403	31A		SeqNo:	2629	02			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.26	0.50	20	0	106	81.3	121	0			. ,
Toluene	21.15	0.50	20	`O	106	84.9	118	0			
Ethylbenzene	20.82	0.50	20	0	104	53.8	149	0			
Xylenes, Total	64.37	0.50	60	0	107	83.1	122	0			
Sample ID BTEX STD 100ng	Batch ID: <b>R11486</b>	Test Code:	SW8021	Units: µg/L	alling you expelled the	Analysis	Date 4/1/2	2004 8:02:09 PM	Prep D	ate	
Sample ID BTEX STD 100ng Client ID:	Batch ID: R11486	Test Code: Run ID:	\$W8021 PIDFID_0404		antiferration and a second state of the	Analysis SeqNo:			Prep D	ate	
,	Batch ID: R11486 Result			01A	%REC	•	2632		Prep Di	ate RPDLimit	Qual
Client ID:		Run ID:	PIDFID_0404	01A	%REC	SeqNo:	2632	46	·		Qual
Client ID: Analyte	Result	Run ID: PQL	PIDFID_0404 SPK value	01A SPK Ref Val		SeqNo:	2632 HighLimit	46 RPD Ref Val	·		Qual
Client ID: Analyte Benzene	Result 20.13	Run ID: PQL 0.50	PIDFID_0404 SPK value	SPK Ref Val	101	SeqNo: LowLimit 81.3	2632 HighLimit 121	RPD Ref Val	·		Qual

#### Sample Receipt Checklist

Client Name BLAGG				Date and Time	Received:	3/31	/2004
Work Order Number 0403245				Received by	AT		
Checklist completed by Signature	/ry	;	3/3 Date	y 104			
Matrix	Carrier name	Grey	rhound				
Shipping container/cooler in good condition?		Yes	$\checkmark$	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	$\checkmark$	
Chain of custody present?		Yes	$\checkmark$	No 🗆			
Chain of custody signed when relinquished and r	eceived?	Yes	$\checkmark$	No 🗆			
Chain of custody agrees with sample labels?		Yes	$\checkmark$	No 🗆			
Samples in proper container/bottle?		Yes	$\checkmark$	No 🗆			
Sample containers intact?		Yes	$\checkmark$	No 🗆			
Sufficient sample volume for indicated test?		Yes	$\checkmark$	No 🗆			
All samples received within holding time?		Yes	$\checkmark$	No 🗆			
Water - VOA vials have zero headspace?	No VOA vials subn	nitted		Yes 🗹	No 🗆		
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹		
Container/Temp Blank temperature?			2°	4° C ± 2 Accepta If given sufficient			
COMMENTS:							
					<del></del>		
Client contacted	Date contacted:			Pers	on contacted		
Contented by	Decarding						
Contacted by:	Regarding						<del></del>
Comments:							
Corrective Action							
						· · · · · · · · · · · · · · · · · · ·	

# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	N	/ <b>A</b>									
GCU # 188	B - PROD.	TANK PIT			LAE	BORATORY	(S) USED:	HALL ENVI	RONMENTAL		
UNIT J, S	EC. 30, T29	N, R12W									
Date :	June 23,	2004					SAMPLER:	N	J V		
Filename :	MANAGER :	N	J V								
WELL	WELL WELL WATER DEPTH TO TOTAL SAMPLING PH CONDUCT										
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED		
	(ft)	(ft)	(ft)	(ft)					(gal.)		
MW - 2	-	-	13.68	17.50	0910	6.78	2,800	19.3	2.00		
			INSTRUMI	ENT CALIB	RATIONS =	7.00	2,800				
			•	DATE	& TIME =	06/23/04	0900				
					Ľ						
NOTES:	Volume of	water purge	d from well	prior to sa	mpling; V = p	oiXr2Xh)	( 7.48 gal./ft3)	X 3 (wellbo	res).		
	(i.e. 2" MW	r = (1/12) ft	. h = 1 ft.)	(i.e. 4" MW	r = (2/12) ft.	h = 1  ft.					
	ldeally a mi	inimum of t	hree (3) well	bore volum	es:						
		2.00 " well	diameter =	0.49 gallon	s per foot o	f water.					
	Comments	or note wel	<u>diameter</u> if	not standa	<u>ra 2".</u>						
	<del></del>	covery, wis	sp of sheen	observed y	within dispos	sal bucket	during purgir	ig, collecte	d BTEX		
	only.										
	Top of casi	ing MW #2	~ @ grade .								
						-					

Date: 07-Jul-04

CLIENT:

Blagg Engineering

Project:

GCU Lease

Lab Order:

0406245

Lab ID:

0406245-01

Collection Date: 6/23/2004 9:10:00 AM

Client Sample ID: MW#2-GCU#188

Matrix: AOUEOUS

Cuent Gample 1D. WW#2-GCO#100			IVIA	III. AQUL	.003
Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	12	2.5	μg/L	5	7/2/2004 11:15:00 PM
Toluene	ND	2.5	µg/L	5	7/2/2004 11:15:00 PM
Ethylbenzene	27	2.5	μg/L	5	7/2/2004 11:15:00 PM
Xylenes, Total	170	2.5	µg/L	5	7/2/2004 11:15:00 PM
Surr: 4-Bromofluorobenzene	96.5	74-118	%REC	5	7/2/2004 11:15:00 PM

\* - Value exceeds Maximum Contaminant Level

E - Value above quantitation range

R - RPD outside accepted recovery limits

CHA		<del></del>	ODY RECORD  P AMERICA	Accreditation Applied:  NELAC USACE USACE USACE Project Name:  Project Name:  Project #:								4 A Te	INA 901 Ibuqu	LY: Haw Jerqu 15.34	<b>SIS</b> kins Je, N 45. 3	NE, lew 1 975	Suit Mexic Fa	0FA e D co 87 ex 50	7109 05.34	RY	<b>0</b> 7		
Address:	PO	80×	ראַ	Project #:									Al	VAL	YS	5	Œ	UE	ST				Š.
B	UFD.	NM	87413	Project Manager		<b>ブ</b> レ	910	₹ (8021 <b>B</b> )	BTEX + MTBE + TPH (Gasoline Only)	as/Diesel)						PO, SO,)	s (8082)						no (V an Nì
Phone #:	303		z - //99 3903	Sampler: Sample Temperati		7		当当	BE + TPH (	TPH Method 8015B (Gas/Diesel)	od 418.1)	od 504.1)	od 8021)	or PAH3	tals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / PCB's (8082)	S.	i-voa)				Air Rubbles or Headsnare IV or M
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Pr	eservative	HEAL No.	(BTEX)+-MTBE + TMB's (8021)	BTEX + MI	TPH Metho	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, C	8081 Pesti	8260B (VOA)	8270 (Semi-VOA)				<b>Dir Ruhhlae</b>
123/04	0910	Naten	mw #2-	2-40ml	1		04062451	1															
			GCV #188																				
Date: /24/04 Date:	Time:		ed By: (Signature)  and By: (Signature)	Received	By: (Si	gnatyra) gnature)	6/24/04 1705	Rem	l narks:	1													

Date: 07-Jul-04

CLIENT:

Blagg Engineering

Work Order:

0406245

Project:

GCU Lease

QC SUMMARY REPORT

Sample ID Reagent Blank 5m	Batch ID: R12337	Test Code	: SW8021	Units: µg/L		Analysis	s Date 7/2/2	2004 10:11:05 AM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0407	'02A		SeqNo:	2838	91			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5							and a supplementary of the second		
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.72	0	20	0	98.6	74	118	0			

Date: 07-Jul-04

CLIENT:

Blagg Engineering

Work Order:

0406245

Project:

GCU Lease

**QC SUMMARY REPORT** 

Sample ID BTEX std 100ng	Batch ID: <b>R12337</b>	Test Code:	SW8021	Units: µg/L		Analysis	Date 7/2/2	2004 11:11:40 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0407	'02A		SeqNo:	2839 <sup>-</sup>	17			
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 Receipt Checklist

Client Name BLAGG		Date and Tin	ne Received:	6/24/2004
Nork Order Number 0406245		Received t	by AT	
Checklist completed by Signature	Date	6/24/	o Y	
	rrier name <u>Greyhound</u>			
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 - VQA vials have zero headspace? No VO	A vials submitted	Yes 🗹	No 🗌	
Water - pH acceptable upon receipt?	Yes 🗌	No 🗆	N/A 🗹	•
Container/Temp Blank temperature?	<b>2°</b>	4° C ± 2 Accep	etable ent time to cool.	
COMMENTS:				
			=====	
Client contacted Date cor	ntacted:	Pe	erson contacted	
Contacted by: Regarding	ng			
Comments:				
		<del></del>		
Corrective Action		····		
2525470 / 104011				

# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	KICA PI	ROD. CO		С	HAIN-OF-C	CUSTODY # :	N	/ A
GCU # 188	B - PROD.	TANK PIT			LAE	BORATORY	(S) USED:	HALL ENV	RONMENTAL
UNIT J, S	EC. 30, T29	9N, R12W							
Date :	December	22, 2004					SAMPLER:	N	JV
Filename :	12-22-04.W	IK4			i	PROJECT	MANAGER:	N	J V
WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW - 2	-	_	12.87	17.50	0915	N/A	N/A	N/A	2.25
			INSTRUM	ENT CALIB	RATIONS =				
				DATE	E & TIME =				
NOTES:					mpling; V = p r = (2/12) ft.		K 7.48 gal./ft3)	X 3 (wellbo	res).
	ldeally a mi	inimum of tl	hree (3) well	bore volum	ies:				
		2.00 " well	diameter =	0.49 gallon	s per foot of	water.			
	Comments of	or note well	diameter if	not standa	nrd 2".				
	Excellent re	ecovery, wis	sp of sheen	observed	within dispos	al bucket	during purgir	ng , collecte	d BTEX
	Top of casi	ing MW #2	~ @ grade .						

Date: 03-Jan-05

CLIENT: Project:

Blagg Engineering

GCU Lease

Lab Order:

0412231

Lab ID:

0412231-01

Collection Date: 12/22/2004 9:15:00 AM

Client Sample ID: MW #2-GCU #1	88		Mat	rix: AQUE	OUS
Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SH	ORT LIST				Analyst: KTM
Benzene	18	1.0	µg/L	1	12/28/2004
Toluene	ND	1.0	µg/L	1	12/28/2004
Ethylbenzene	71	1.0	µg/L	1	12/28/2004
Xylenes, Total	520	5.0	µg/L	5	12/29/2004
Surr: 4-Bromofluorobenzene	105	76.2-122	%REC	1	12/28/2004

- \* Value exceeds Maximum Contaminant Level
- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range

				ODY RECORD  (.   BP ANERICA	Other: Project Name:	NELAC I		USACE	=					]	4 A Te	301 301 Ibuq el. 50	ALY Hav uerq 05.3	SIS vkins ue, N	NE. Ne. Jew 1975	Suit Mexi Fi	DRA ce 0 ico 87 ax 50	NTA XTO 7109 05.34	RY }	107	
7	Address:	P.O.	£0×		Project #:			-			1				A	VAL	YS	S		IJ=	ST	1 3 3 1			
		BUFI	2 Nr	87 n 87413							(ylr														
-					Project Manager		ノフV			-TMB's (8021 <b>\$</b> )	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)						PO, SO,	8081 Pesticides / PCB's (8082)						Air Bubbles or Headspace (Y or N)
Ē	Phone #	: 50	5-63	2-1199	Sampler:	Л	グレ				- TPH	158 (G	8.1)	14.1)	121)	돭		SN.	/ PGB		2				eadsbe
F	ax #:	50	r5 – 63	z - 3903	Sample Temperat	ure:	4	Z - 3			ITBE +	.08 po	hod 41	hod 5(	hod 80	A or P,	etals	CI, NO	ticides	8	mi-V0/				S or H
	Date	Time	Matrix	Sample I.D. No.	Number/Volume		reservat	<del></del>	HEAL No.	(BTEX)+-MTBE	BTEX + N	TPH Meth	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2, PO4,	8081 Pes	8260B (VOA)	8270 (Semi-VOA)				Air Bubble
12/	22/04	0915	WATER	mw#2-GCU#188	2-40ml	<b>V</b>			0412231-1	/															
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<u>_</u>		Tona	Dolinguist	d D. (Cianabana)					12/22/04								]							$\perp$	
	ate: / / / / / / / / / / / / / / / / / / /	0030		d By; (Signature)  Non	Received	12.4	$Q_{\mathbf{L}}$	Ц,	12/23/04	Rema	nrks:														
Da	ate:	Time:		d By: (Signatuce)	Received	By: (Sig	gnature	) <sup>*</sup> [	16.30																

CLIENT:

Project:

Blagg Engineering

QC SUMMARY REPORT

Work Order:

0412231 GCU Lease

Sample ID 5mL rb	Batch ID: R14158	Test Code	: SW8260B	Units: µg/L		Analysi	s Date 12/2	8/2004	Prep Date	
Client ID:		Run ID:	THOR_0412	28A		SeqNo:	3292	16		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Benzene	ND	1								ŕ
Toluene	ND	1								
Ethylbenzene	ND	1								
Xylenes, Total	ND	1								
Surr: 4-Bromofluorobenzene	9.466	0	10	0	94.7	76.2	122	0		
Sample ID 5mL rb	Batch ID: R14177	Test Code:	SW8260B	Units: µg/L		Analysis	Date 12/2	9/2004	Prep Date	
Client ID:		Run ID:	THOR_0412	29A		SeqNo:	32966	60		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Benzene	ND	1							and the second of the second o	
Toluene	ND	1								
Ethylbenzene	ND	1								
Xylenes, Total	ND	1								
Surr: 4-Bromofluorobenzene	9.58	0	10	0	95.8	76.2	122	0		

Date: 03-Jan-05

CLIENT:

Blagg Engineering

Work Order:

0412231

Project:

GCU Lease

**OC SUMMARY REPORT** 

Batch ID: R14158	· <del>·</del>				Analysis	Date <b>12/2</b>	8/2004	Prep Date					
	Run ID:	THOR_04122	28A		SeqNo:	3292	19						
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			
23.06	1	20	0	115	76.6	123	0						
21.54	1	20	0	108	77	121	0						
Batch ID: R14177	Test Code:	SW8260B	Units: µg/L		Analysis	Date 12/2	9/2004	Prep Da	ite				
	Run ID:	THOR_04122	29A		SeqNo:	32966	54						
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			
		00		444	76.6	123	0						
22.19	1	20	0	111	70.0	123	U						
	Result 23.06 21.54 Batch ID: R14177	Run ID:  Result PQL  23.06 1 21.54 1  Batch ID: R14177 Test Code: Run ID:	Result         PQL         SPK value           23.06         1         20           21.54         1         20           Batch ID: R14177         Test Code: SW8260B           Run ID: THOR_04122         Result         PQL         SPK value	Result         PQL         SPK value         SPK Ref Val           23.06         1         20         0           21.54         1         20         0           Batch ID: R14177         Test Code: SW8260B         Units: μg/L           Run ID:         THOR_041229A           Result         PQL         SPK value         SPK Ref Val	Run ID:         THOR_041228A           Result         PQL         SPK value         SPK Ref Val         %REC           23.06         1         20         0         115           21.54         1         20         0         108           Batch ID: R14177         Test Code: SW8260B         Units: μg/L           Run ID:         THOR_041229A           Result         PQL         SPK value         SPK Ref Val         %REC	Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit           23.06         1         20         0         115         76.6           21.54         1         20         0         108         77           Batch ID: R14177         Test Code: SW8260B         Units: μg/L         Analysis           Run ID:         THOR_041229A         SeqNo:           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit	Run ID:         THOR_041228A         SeqNo:         3292           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit           23.06         1         20         0         115         76.6         123           21.54         1         20         0         108         77         121           Batch ID: R14177         Test Code:         SW8260B         Units:         μg/L         Analysis Date         12/2:           Run ID:         THOR_041229A         SeqNo:         32966           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit	Run ID: THOR_041228A         SeqNo: 329219           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         RPD Ref Val           23.06         1         20         0         115         76.6         123         0           21.54         1         20         0         108         77         121         0           Batch ID: R14177         Test Code: SW8260B         Units: μg/L         Analysis Date 12/29/2004           Run ID: THOR_041229A         SeqNo: 329664         SeqNo: 329664           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         RPD Ref Val	Run ID:         THOR_041228A         SeqNo:         329219           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         RPD Ref Val         %RPD           23.06         1         20         0         115         76.6         123         0           21.54         1         20         0         108         77         121         0           Batch ID: R14177         Test Code: Sw8260B         Units: μg/L         Analysis Date         12/29/2004         Prep Date           Run ID:         THOR_041229A         SeqNo:         329664           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         RPD Ref Val         %RPD	Run ID:         THOR_041228A         SeqNo:         329219           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         RPD Ref Val         %RPD         RPDLimit           23.06         1         20         0         115         76.6         123         0         0         123         0         123         0         0         123         0         0         123         0         2         0         0         123			

Client Name BLAGG

#### Sample Receipt Checklist

Date and Time Received:

12/23/2004

Vork Order Number 0412231			Received by	AT		
Checklist completed by Signature	U_	Date	12/23	3/04		
Matrix	Carrier name	Greyhound				
Shipping container/cooler in good condition?		Yes 🗹	№ □	Not Present		
Sustody seals intact on shipping container/cod	oler?	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 an	d 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 sul	omitted	Yes 🗹	No 🗆		
Water - pH acceptable upon receipt?		Yes 🗌	No 🗌	N/A 🗹		
Container/Temp Blank temperature?		<b>4°</b>	4° C ± 2 Accepta			
COMMENTS:						
			· — — — — —		=====	
Client contacted	Date contacted:		Per	son contacted		
Contacted by:	Regarding				· · · · · · · · · · · · · · · · · · ·	
Comments:				****		
						<del></del>
Corrective Action				110 - 1		
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# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	RICA PI	ROD. CO	n	c	HAIN-OF-C	CUSTODY#:	N	/ A				
GCU # 18	# ELEV. (ft) (ft) (ft) (ft) TIME (umhos) (celcius) PURGE (gal.)  W - 2 12.86 17.50 1600 6.79 2,300 17.0 2.25  INSTRUMENT CALIBRATIONS = 7.00 2,800  DATE & TIME = 03/28/05 1255		RONMENTAL										
UNIT J, S	EC. 30, T29	N, R12W											
Date :	March 28	, 2005					SAMPLER:	N	JV				
Filename :	03-28-05.W	IK4				PROJECT	MANAGER :	N	JV				
WELL #	ELEV.	ELEV.	WATER	DEPTH		рН	1 1		VOLUME PURGED (gal.)				
MW - 2	-	-	12.86	17.50	1600	6.79	2,300	17.0	2.25				
			INSTRUME	ENT CALIB	RATIONS =	7.00	2,800						
				DATE	E & TIME =	03/28/05	1255						
NOTES:	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:												
	Top of casi	ELL WATER DEPTH TO TOTAL SAMPLING PH CONDUCT (umhos) (celcius) PURGED (gal.)  - 12.86 17.50 1600 6.79 2,300 17.0 2.25  INSTRUMENT CALIBRATIONS = 03/28/05 1255  e of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).  MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)  a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gallons per foot of water.  ents or note well diameter if not standard 2".  ent recovery, wisp of sheen observed within disposal bucket during purging, collected BTEX											

Date: 04-Apr-05

CLIENT: Project:	Blagg Engineering GCU Lease				Lab Order	r: 0 <i>5</i> 03265
Lab ID:	0503265-01			Collection I	Date: 3/28/20	005 4:00:00 PM
Client Sampl	e ID: MW#2 GCU #188			Mn	trix: AQUE	ous
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHO	0 8021B: VOLATILES					Analyst: NSB
Benzene		9.3	2.5	μg/L	5	4/1/2005 11:11:41 AM
Toluene		15	2.5	μg/L	5	4/1/2005 11:11:41 AM
Ethyibenzene	•	42	2.5	h8/L	5	4/1/2005 11:11:41 AM
Xylenes, Tota	ıt	220	2.5	hg/r	5	4/1/2005 11:11:41 AM
Surr. 4-Bro	mofluorobenzene	103	83.3-121	%REC	5	4/1/2005 11:11:41 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

CHA	IN-OF	-CUST	ODY RECORD	Other:	Accred	litation 1 (	Applie JSACE			ļ				<b>A</b>	<b>NA</b> 901 I	LY!	31 <b>8</b> kins	LA NE,	. <b>BO</b> Suite	RA.	ITAL TOR 109			
Client: B	LAGG (	506R-/	BY AMERICA	Project Name:		£Α	5E							Tel	l. 50	5.34	15.3	975	Fa ntal.c	x 50	5.345	5.410	7	
Address:	P.O.	BOX E	37	Project #:										Añ	AL	YSI	s:	EQ	ÜES	5 <b>T</b> .				
	BIF D	- NM	1 87413	Project Manager	: 1	はん	· · · · ·	72.V	(80218) + 1485 + 1485 + 180218	BTEX + MTBE + TPH (Gasoline Only)	s/Diesel)						PO, SO,)	3 (8082)						Se (Y or N)
Phone #	505-	-632.	_ 1/99	Sempler: Sample Temperat		JV			- TAMB	) HT + :	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8021)	· PAH)	<u>u</u>	Anions (F, Cl, NO,, NO,, PO,, SO,)	8081 Pesticides / PCB's (8082)		/0A)				Air Bubbles or Headspace (Y or N)
Т ЦК Ж -	505-	632-	- 3903	Continue to the same	т —	eservati			1	+ MTB	Nethod &	Vethod	Method	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	1 (F, C), 1	Pestick	8260B (VOA)	8270 (Semi-VOA)				bbles or
Date	Time	Matrix	Sample I.D. No.	Number/Volume	HgCl <sub>2</sub>	HNO <sub>3</sub>		HEAL No.	<b>(E)</b>	BIEX	TPH N	표	1980	000	8310	HCRA	Anion	8081	8260	8270				Air Bu
र्धा खळ	1600	WATER	MW#3-	a-40ml	1			05032651	1														-	+
					·																		1	
<del></del>					<u> </u>			_						_									-	+
																							1	
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																					$\perp$		1	
, Date: 7.9/05 Date:	Time:	2/	d By: (Signatupe) Logn d By: (Signatupe)	Received	Luc	$\supseteq \iota$	2 -	129/05	Rem	arks:													1_	

Date: 04-Apr-05

CLIENT:

Blagg Engineering

Work Order:

0503265

Project:

GCU Lease

n	C	SIII	MM.	ARY	REP	ORT
~	${f -}$	$\cup$	. 47 . 47			~~~

Sample ID Reagent Blank 5m	Batch ID: R14984	Test Code	: SW8021	Units: µg/L		Analysis	Dale 4/1/2	2005 9:03:48 AM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0504	01A		SeqNo:	3485	95			
Analyle	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									
Sum: 4-Bromofluorobenzene	19.49	۵	20	۵	97.5	83.3	121	0			

Date: 04-Apr-05

CLIENT:

Blagg Engineering

Work Order:

0503265

Project:

GCU Lease

**QC SUMMARY REPORT** 

Sample Matrix Spike

Sample ID 0503265-02a ms	Batch ID: R14984	Test Code	SW8021	Units: µg/L		Analysis	Date 4/1/2	2005 5:45:26 PM	Prep Da	ale	
Cilent ID: MW#2 GCU #194		Run ID:	PIDFID_0504	101A		SeqNo:	3486	25			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLImit	Qual
Benzene	21.18	0.5	20	0.4414	104	88.7	114	0			
Toluene	20,37	0.5	20	0.2268	101	89.3	112	0			
Ethylbenzene	23.46	0.5	20	1.487	110	88.6	113	0			
Xylenes, Total	64,53	0.5	60	2.118	104	89.4	112	0			
Surr: 4-Bromofluorobenzene	24.97	0	24	D	104	83.3	121	0			
Sample ID 0503265-02a msd	Batch ID: R14984	Test Code	SW8021	Units: pg/L		Analysis	Date 4/1/2	2005 8:15:44 PM	Prep D	ate	
Client ID: MW#2 GCU #194		Run ID:	PIDFID_0504	101A		SeqNo:	3486	31			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.65	0.5	20	0.4414	101	88.7	114	21.18	2.56	27	
Toluene	20,75	0.5	20	0.2268	103	89.3	112	20.37	1.84	19	
	23,19	0.5	20	1,487	109	88.6	113	23,46	1.17	10	
Ethylbenzene	20,13										
Ethylbenzene Xylenes, Total	61.73	0.5	60	2.118	99.3	89.4	112	64.53	4.44	13	

S - Spike Recovery outside accepted recovery limits

CLIENT:

Blagg Engineering

Work Order:

0503265

Project:

GCU Lease

Date: 04-Apr-05

**QC SUMMARY REPORT** 

Sample ID BTEX ics 100ng	Batch ID: R14984	Test Code:	SW8021	Units: µg/L		Analysi	Date 4/1/2	2005 5:15:08 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0504	101A		SeqNo:	3486	44			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.81	0.5	20	0	0.68	88.7	114	0			
Toluene	20.39	0.5	20	0	102	89.3	112	0			
Ethylbenzene	20.77	0.5	20	0	104	88.6	113	0			
Xylenes, Total	59.76	0.5	60	0	99.6	89.4	112	O			

#### Sample Receipt Checklist

Client Name BLAGG			Date and Time	Received:	3/29/2005
Work Order Number 0503285			Received by	AT	
Checklist completed by	Sha	· Onte	3/29/	05	
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 🗆		
Chaîn of custody signed when relinquished and rec	ceived?	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 viais have zero headspace?	No VOA vials subm	ltted 🔲	Yes 🗹	No 🗆	
Water - pH acceptable upon receipt?		Yes 🗌	No 🗆	N/A 🗹	
Container/Temp Blank temperature?		5°	4° C ± 2 Accepta		
COMMENTS:					
				<del></del>	
Client contacted . D	Date contacted:		Pers	on contacted	
Contacted by:	legarding				
Comments:				<del> </del>	
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Corrective Action					
		· · · · · · · · · · · · · · · · · · ·		·	

# BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	RICA PI	ROD. CO	, 6	c	HAIN-OF-C	CUSTODY#:	N	/ A
GCU # 188	B - PROD.	TANK PIT			LAE	BORATORY	(S) USED:	HALL ENVI	RONMENTAL
UNIT J, S	EC. 30, T29	N, R12W							
Date :	June 23,	2005					SAMPLER:	N	J V
Filename :	06-23-05.W	IK4			1	PROJECT	MANAGER :	N	J V
WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW - 2	-	-	12.60	17.50	1440	6.72	2,300	24.3	2.50
			INSTRUM	ENT CALIB	RATIONS =	7.00	2,800		
				DATE	& TIME =	06/23/05	0630		
	(i.e. 2" MW Ideally a mi	r = (1/12) ft inimum of the	d from well . h = 1 ft.) hree (3) well diameter =	(i.e. 4" MW bore volum	r = (2/12) ft. es:	h = 1 ft.)	X 7.48 gal./ft3	) X 3 (wellbo	res).
	Comments	or note well	diameter if	not standa	rd 2 ".				
	Excellent re	ecovery , wis	sp of sheen	observed v	within dispos	sal bucket	during purgir	ng , collecte	d BTEX
	Top of case	ing MW #2	~ @ grade .						

Date: 28-Jun-05

CLIENT:

Blagg Engineering

Project:

GCU Lease

Lab Order:

0506242

Lab ID:

0506242-02

Collection Date: 6/23/2005 2:40:00 PM

Client Sample ID: GCU #188-MW#2

Matrix: AQUEOUS

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: KTM
Benzene	6.3	2.5	μg/L	5	6/28/2005 1:03:40 AM
Toluene	12	2.5	μg/L	5	6/28/2005 1:03:40 AM
Ethylbenzene	29	2.5	μg/L	5	6/28/2005 1:03:40 AM
Xylenes, Total	120	2.5	μg/L	5	6/28/2005 1:03:40 AM
Surr: 4-Bromofluorobenzene	104	83.3-121	%REC	5	6/28/2005 1:03:40 AM

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

			ODYRECORD	Other:	NELAC		n Applie USAC							4	<b>30</b> 4	<b>LY</b> Haw	SIS /kins	NE.	Suit	DAA .e D	<b>VTAL</b> <b>TOR</b> 7109			
Client: 8	CAEG	EVER.	BP AMERICA	Project Name:	u	L6	95E					iş	] jight	Te	el. 50	05.3		975	Fa	ax 50		5.410	7	_
Address:	P.O.	BOX	87	Project #:						7				A	VAL	YS	5	1=(-	UE	ST				Ţ
	BLFD	. NM	87413					ทบ		<u></u>														
<del>-</del>				Project Manager		ΝV			TMB's (80218	+ TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)						Anions (F, Cl, NO3, NO2, PO4, SO2)	8081 Pesticides / PCB's (8082)						Air Dukhlan an Understan
Phone #:	6	32 -	1199	Sampler:		NV			] 🖁	HH	158 (G	8.1)	14.1)	121)	£		3. NO.	/PCB		2		ļ		l ado
Fax #:	63	2-3	903	Sample Temperat	ure:		(	0.0			od 80	<b>TPH (Method 418.1)</b>	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	etals	CI, NO	ticides	(A0	8270 (Semi-VOA)				H 10
Date	Time	Matrix	Sample I.D. No.	Number/Volume	P	reserva	tive	HEAL No.	BTEX ATER	BTEX + MTBE	Meth	(Met	(Met	(Met	0 (PN	RCRA 8 Metals	ons (F,	31 Pes	8260B (VOA)	10 (Ser				ol, hhlo
			-		HgCl	HNO <sub>3</sub>		BD122	6	<u> </u>	产	효		EDC	831	<u>8</u>	Anic	80	826	827	$\dashv$	+	-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
					<del> </del>	├-			-	-		_									-	+	+-	$\vdash$
23/05	1440	WATER	MW #2	2-40ml	1		<u></u>	-2	✓										_		1			-
					-	-			-			$\dashv$		_							+	+	-	-
									_	_		_							_	$\dashv$	+	_		-
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																		-			$\prod$			
											$\dashv$	-	-	$\dashv$	$\dashv$	+	-	-	-	-		-		<u> </u>
Date: ,	Time: 0835	Relinquished	(By: (Signatuce)		$\mathcal{O}$	gnatern M	10	6/24/05	Rem	anks:	L	l_		L		l_			l	L				
Date:	Time:		l By: (Signature)	Received I	By: (Sig	ghature	:}	1650																

Date: 28-Jun-05

CLIENT:

Blagg Engineering

Work Order:

0506242

Project:

GCU Lease

**QC SUMMARY REPORT** 

Sample ID Reagent Blank 5m	Batch ID: R15814	Test Code	: SW8021	Units: µg/L		Analysis	s Date 6/27	/2005 10:15:08 AM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0506	527A		SeqNo:	3747	60			
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	20.22	0	20	0	101	83.3	121	0			

Date: 28-Jun-05

CLIENT:

Blagg Engineering

Work Order:

0506242

Project:

GCU Lease

**OC SUMMARY REPORT** 

Sample Matrix Spike

Sample ID 0506242-01a ms	Batch ID: R15814	Test Code:	SW8021	Units: µg/L		Analysis	Date 6/28	/2005 1:34:27 AM	Prep D	ate	
Client ID: GCU #214-MW#2R		Run ID:	PIDFID_0506	527A		SeqNo:	3747	89			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	47.23	0.5	20	25.65	108	88.7	114	0			
Toluene	20.1	0.5	20	1.041	95.3	89.3	112	0			
Ethylbenzene	21.9	0.5	20	1.897	100	88.6	113	0			
Xylenes, Total	62.75	0.5	60	3.276	99.1	89.4	112	0			
Surr: 4-Bromofluorobenzene	25.09	0	24	0	105	83.3	121	0			
Sample ID 0506242-01a msd	Batch ID: R15814	Test Code:	SW8021	Units: µg/L		Analysis	Date 6/28	/2005 2:05:14 AM	Prep D	ate	
Client ID: GCU #214-MW#2R		Run ID:	PIDFID_0506	27A		SeqNo:	37479	90			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	45.69	0.5	20	25.65	100	88.7	114	47.23	3.33	27	
Toluene	19.63	0.5	20	1.041	93.0	89.3	112	20.1	2.34	19	
Ethylbenzene	21.23	0.5	20	1.897	96.7	88.6	113	21.9	3.09	10	
Xylenes, Total	61.06	0.5	60	3.276	96.3	89.4	112	62.75	2.73	13	

Date: 28-Jun-05

CLIENT:

Blagg Engineering

Work Order:

0506242

Project:

GCU Lease

**QC SUMMARY REPORT** 

Sample ID BTEX LCS 2.5ug	Batch ID: R15814	Test Code	SW8021	Units: µg/L		Analysis	Date 6/27	/2005 1:55:44 PM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0506	527A		SeqNo:	3747	88			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.24	0.5	20	0	101	88.7	114	0			
Toluene	20.39	0.5	20	0	102	89.3	112	0			
Ethylbenzene	20.51	0.5	20	0	103	88.6	113	0			
Xylenes, Total	61.44	0.5	60	0	102	89.4	112	0			

#### Sample Receipt Checklist

Client Name BLAGG			(	Date and Time	Received:			
Work Order Number 0506242				Received by	AMG			
Checklist completed by Signature	else 6	124	pate					
Matrix:	Carrier name:	Greyho	und					
Shipping container/cooler in good condition?		Yes 🗹	3	No 🗆	Not Present			
Custody seals intact on shipping container/cooler	?	Yes [	]	No 🗆	Not Present	V	Not Shipped	
Custody seals intact on sample bottles?		Yes [	)	No 🗆	N/A	V		
Chain of custody present?		Yes 🛂	0	No 🗆				
Chain of custody signed when relinquished and r	eceived?	Yes 🔽	2	No 🗌				
Chain of custody agrees with sample labels?		Yes 🛂	2	No 🗆				
Samples in proper container/bottle?		Yes 🖳	2	No 🗆				
Sample containers intact?		Yes 🔄	Z	No 🗆				
Sufficient sample volume for indicated test?		Yes 🛚	Z	No 🗆				
All samples received within holding time?		Yes 🛚	2	No 🗆				
Water - VOA vials have zero headspace?	No VOA vials subr	nitted [		Yes 🗹	No 🗆	j		
Water - pH acceptable upon receipt?		Yes [	ב	No 🗆	N/A 🗹	)		
Container/Temp Blank temperature?		2'		° C ± 2 Accepta given sufficient				
COMMENTS:								
		<del>-</del>		====	:			
Client contacted	Date contacted:			Pers	son contacted			
Contacted by:	Regarding:							
Comments:						<del></del>		<del></del>
			<del> </del>	and the second s				
Corrective Action				<u>.</u>				
		··						

# BLAGG ENGINEERING, INC.

#### MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP_AME	RICA PI	ROD, CO	v.	C	N/A						
	8 - PROD. EC. 30, T29				LABORATORY (S) USED : HALL EN							
	Sept. 21,					N	JV					
Filename :	09-21-05.W	IK4			1	PROJECT	MANAGER :	N	JV			
WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)			
MW - 2	-	_	13.31	17.50	0905	6.65	2,300	19.2	2.00			
	INSTRUMENT CALIBRATIONS = 7.00 2,800  DATE & TIME = 09/20/05 0845											
NOTES:	(i.e. 2" MW Ideally a mi	r = (1/12) ft inimum of to 2.00 " well	. h = 1 ft.) hree (3) well diameter =	(i.e. 4" MW bore volum 0.49 gallon	r = (2/12) ft. es: s per foot o	h = 1 ft.)	K 7.48 gal./ft3	) X 3 (wellbo	res).			
Comments or note well diameter if not standard 2".  Excellent recovery, wisp of sheen observed within disposal bucket during purging, collected BTEX												
	only.											
	Top of casi	ing MW #2	~ @ grade.									

Date: 28-Sep-05

**CLIENT:** 

Blagg Engineering

Client Sample ID: MW#2

Lab Order:

0509223

Project:

GCU #188

Collection Date: 9/21/2005 9:05:00 AM

Lab ID:

0509223-01

Matrix: AQUEOUS

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	13	µg/L	5	9/23/2005 6:00:30 PM
Benzene	9.0	2.5	μg/L	5	9/23/2005 6:00:30 PM
Toluene	7.7	2.5	µg/L	5	9/23/2005 6:00:30 PM
Ethylbenzene	18	2.5	μg/L	5	9/23/2005 6:00:30 PM
1,2,4-Trimethylbenzene	35	2.5	μg/L	5	9/23/2005 6:00:30 PM
1,3,5-Trimethylbenzene	8.6	2.5	μg/L	5	9/23/2005 6:00:30 PM
Xylenes, Total	190	2.5	µg/L	5	9/23/2005 6:00:30 PM
Surr: 4-Bromofluorobenzene	103	82.2-119	%REC	5	9/23/2005 6:00:30 PM

R - RPD outside accepted recovery limits

E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD  Client: BLACK ENGR. BP AMERICA			Other:										<b>4</b> 9	901   buqu	Haw Jerqi	SIS kins ue, N	NE, lew N	<b>BO</b> Suite	PA e D co 87	<b>NTA</b> <b>TO</b>	RY	.07		
			GC GC													45.3 nviro				J5.34	15.41	iu/		
Addres	s: P.O.	BOX	87 87413	Project #:										Ar	VAL	YS	S	]EC	UE	ST				
	BLFO.	NM	87413	Project Manager		N		w	BTEX + MTBE + TMB's (8021 <b>B</b> )	BTEX + MTBE + TPH (Gasoline Only)	s/Diesel)						PO4, SO4)	(8082)						Air Bubbles or Headspace (Y or N)
Phone	Phone #: 505 - 632 - 1199			Sampler:	Sampler: NV					1PH (	15B (Ge	8.1)	14.1	21)	3		, NO <sub>2</sub> , I	/PGB's		9				sadsbac
Fax #:				Sample Temperature:			TBE +	od 80	hod 41	hod 5C	hod 80	A or P/	letals	CI, NO	ticides	(OA)	mi-V0/				s or He			
Date	Time	Matrix	Sample I.D. No.	Number/Volume		eserva HNO <sub>3</sub>	1	HEAL No. 0509223	BTEX + N	BTEX + N	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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)				Air Bubble
9/21/03	; 0905	WATER	MW #2	2-40ml	<b>/</b>				1															
		1							_													$\dashv$	$\dashv$	
					-																		$\dashv$	
<del></del>																							+	
					<u> </u>																	$\dashv$	_	
									_												$\vdash$	$\dashv$	$\dashv$	
									_													$\dashv$	+	
Date:   9/21/05	Time: 0905	5/1	d By: (Signature)	Received	By: (Si	igdatur W.C.	e) OEL	· 421/05	Rem	narks:														
Date:	Time:	Relinquishe	d By: (Signatu <b>k</b> e)	Received	By: (Si	ignatur	<b>e</b> )/	1700																

Date: 28-Sep-05

CLIENT:

Blagg Engineering

Work Order:

0509223

Project:

GCU #188

**QC SUMMARY REPORT** 

Sample ID Reagent Blank 5m	Batch ID: R16759	Test Code:	SW8021	Units: µg/L		Analysis	Date 9/23	/2005 9:37:19 AM	Prep Da	ate	
Client ID:		Run ID:	PIDFID_0509	23A		SeqNo:	4033	97			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5		***							
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
1,2,4-Trimethylbenzene	ND	0.5									
1,3,5-Trimethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.66	0	20	0	93.3	82.2	119	0			

Date: 28-Sep-05

CLIENT:

Blagg Engineering

Work Order:

0509223

Project:

GCU #188

QC SUMMARY REPORT

Sample ID BTEX Ics 100ng	Batch ID: R16759	Test Code:	SW8021	Units: µg/L		Analysis	Date <b>9/23</b>	/2005 10:09:01 PM	Prep D	ate	
Client ID:		Run ID:	PIDFID_0509	23A		SeqNo:	4034	02			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23.97	2.5	20	0	120	64.5	133	0			
Benzene	18.83	0.5	20	0	94.1	88.5	114	0			
Toluene	19.17	0.5	20	0	95.9	87.2	114	0			
Ethylbenzene	19.35	0.5	20	0	96.7	88.6	113	0			
1,2,4-Trimethylbenzene	19.13	0.5	20	0	95.7	83.8	114	0			
1,3,5-Trimethylbenzene	18.83	0.5	20	0	94.1	82.8	114	0			
Xylenes, Total	39.79	0.5	40	0	99.5	83.3	114	0			

S - Spike Recovery outside accepted recovery limits

#### Sample Receipt Checklist

Client Name BLAGG				Date and Time	Received:	9/21/2005
Work Order Number 0509223				Received by	GLS	
Checklist completed by Signature	A COLOR	W	Date	9/21/0	5	
Matrix	Carrier name	Grey	hound			
Shipping container/cooler in good condition?		Yes	$\checkmark$	No 🗌	Not Present	)
Custody seals intact on shipping container/cooler?	>	Yes	V	No 🗌	Not Present	Not Shipped
Custody seals intact on sample bottles?		Yes	$\checkmark$	No 🗆	N/A	
Chain of custody present?		Yes	$\checkmark$	No 🗆		
Chain of custody signed when relinquished and re	ceived?	Yes	$\checkmark$	No 🗌		
Chain of custody agrees with sample labels?		Yes	<b>✓</b>	No 🗌		
Samples in proper container/bottle?		Yes	$\checkmark$	No 🗌		
· Sample containers intact?		Yes	$\checkmark$	No 🗆		
Sufficient sample volume for indicated test?		Yes	$\checkmark$	No 🗆		
All samples received within holding time?		Yes	$\checkmark$	No $\square$		
Water - VOA vials have zero headspace?	No VOA vials subn	nitted		Yes 🗹	No 🗆	
Water - pH acceptable upon receipt?		Yes		No 🗆	N/A 🔽	
Container/Temp Blank temperature?			3°	4° C ± 2 Accepta		
COMMENTS:				n given samaene	time to cook	
	- Name					
I — — — — — — — — — — — — — — — — — — —				<u></u>		
Client contacted	Date contacted:			Pers	on contacted	
Contacted by:	Regarding					
Comments:						
Corrective Action						