

BP AMERICA PRODUCTION CO

LEEPER GAS COM #001

API# 30-045-11142

C-141

Part 2 of 3



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2608 • Farmington, NM 87499
LAB (505) 325-5667 • FAX: (505) 327-1496

Date: _____

Page: _____ of _____

Purchase Order No.:		Project No		REPORT RESULTS TO	Name		Title		
SEND INVOICE TO	Name				Company				
	Company		Dept.		Mailing Address				
	Address				City, State, Zip				
	City, State, Zip				Telephone No.		Telefax No.		
PROJECT LOCATION:				Number of Containers	ANALYSIS REQUESTED				
SAMPLER'S SIGNATURE:					LAB ID				
SAMPLE IDENTIFICATION		SAMPLE							
DATE	TIME	MATRIX	PRES						
Relinquished by:		Date/Time		Received by:		Date/Time			
Relinquished by:		Date/Time		Received by:		Date/Time			
Relinquished by:		Date/Time		Received by:		Date/Time			
Method of Shipment:				Rush	24-48 Hours	10 Working Days	By Date		
Authorized by: _____ Date _____ (Client Signature <u>Must</u> Accompany Request)				Special Instructions / Remarks:					

iiná bá, Ltd.

Date: 30-Aug-02

CLIENT: Blagg Engineering
Work Order: 0208016
Project: BP - Leeper GC #1

QC SUMMARY REPORT

Method Blank

Sample ID: MB_020828		Batch ID: GC-1_020828		Test Code: SW8021B		Units: µg/L		Analysis Date: 08/28/2002			Prep Date: 08/28/2002	
Client ID:		0208016		Run ID: GC-1_020828A				SeqNo: 57449				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	.1393	0.5									J	
Ethylbenzene	ND	0.5										
m,p-Xylene	.1102	1									J	
Methyl tert-Butyl Ether	ND	1										
o-Xylene	ND	0.5										
Toluene	.2127	0.5									J	

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

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

B - Analyte detected in the associated Method Blank

iiná bá, Ltd.

Date: 30-Aug-02

CLIENT: Blagg Engineering
Work Order: 0208016
Project: BP - Leeper GC #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0208021-01AMS		Batch ID: GC-1_020828		Test Code: SW8021B		Units: µg/L		Analysis Date: 08/28/2002			Prep Date: 08/28/2002	
Client ID: 0208016		Run ID: GC-1_020828A		SeqNo: 57450								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	171.6	2.5	200	0.5	85.5%	70	130					
Ethylbenzene	195.5	2.5	200	15	90.2%	70	130					
m,p-Xylene	722.5	5	400	420	75.6%	70	130					
Methyl tert-Butyl Ether	177.3	5	200	0	88.7%	70	130					
o-Xylene	180.3	2.5	200	0	90.2%	70	130					
Toluene	192.7	2.5	200	0	96.4%	70	130					

Sample ID: 0208021-01AMSD		Batch ID: GC-1_020828		Test Code: SW8021B		Units: µg/L		Analysis Date: 08/28/2002			Prep Date: 08/28/2002	
Client ID:		0208016		Run ID:		GC-1_020828A		SeqNo:		57451		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	174.5	2.5	200	0.5	87.0%	70	130	171.6	1.7%	15		
Ethylbenzene	195.1	2.5	200	15	90.1%	70	130	195.5	0.2%	15		
m,p-Xylene	717.6	5	400	420	74.4%	70	130	722.5	0.7%	15		
Methyl tert-Butyl Ether	176	5	200	0	88.0%	70	130	177.3	0.8%	15		
o-Xylene	175.3	2.5	200	0	87.6%	70	130	180.3	2.8%	15		
Toluene	196.9	2.5	200	0	98.5%	70	130	192.7	2.2%	15		

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

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iiná bá, Ltd.

Date: 30-Aug-02

CLIENT: Blogg Engineering
Work Order: 0208016
Project: BP - Leeper GC #1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS_020828	Batch ID: GC-1_020828	Test Code: SW8021B	Units: µg/L		Analysis Date: 08/28/2002				Prep Date: 08/28/2002		
Client ID:	0208016	Run ID:	GC-1_020828A		SeqNo:		57448				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.56	0.5	40	0.1393	98.6%	80	120				
Ethylbenzene	38.77	0.5	40	0	96.9%	80	120				
m,p-Xylene	77.39	1	80	0.1102	96.6%	80	120				
Methyl tert-Butyl Ether	37.04	1	40	0	92.6%	80	120				
o-Xylene	37.02	0.5	40	0	92.5%	80	120				
Toluene	37.18	0.5	40	0.2127	92.4%	80	120				

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank

iiná bá, Ltd.

Date: 30-Aug-02

CLIENT: Blagg Engineering
Work Order: 0208016
Project: BP - Leeper GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020828	Batch ID: GC-1_020828	Test Code: SW8021B	Units: µg/L	Analysis Date: 08/28/2002	Prep Date: 08/28/2002						
Client ID: 0208016	Run ID: GC-1_020828A	SeqNo: 57444									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.75	0.5	40	0	96.9%	85	115				
Ethylbenzene	38.46	0.5	40	0	96.1%	85	115				
m,p-Xylene	76.89	1	80	0	96.1%	85	115				
Methyl tert-Butyl Ether	38.29	1	40	0	95.7%	85	115				
o-Xylene	36.62	0.5	40	0	91.6%	85	115				
Toluene	36.86	0.5	40	0	92.1%	85	115				
1,4-Difluorobenzene	107.9	0	110	0	98.1%	70	130				
4-Bromochlorobenzene	126	0	110	0	114.6%	70	130				
Fluorobenzene	105.7	0	110	0	96.1%	70	130				

Sample ID: CCV2_020828	Batch ID: GC-1_020828	Test Code: SW8021B	Units: µg/L	Analysis Date: 08/28/2002	Prep Date: 08/28/2002						
Client ID: 0208016	Run ID: GC-1_020828A	SeqNo: 57445									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.06	0.5	40	0	92.6%	85	115				
Ethylbenzene	37.84	0.5	40	0	94.6%	85	115				
m,p-Xylene	76.89	1	80	0	96.1%	85	115				
Methyl tert-Butyl Ether	37.71	1	40	0	94.3%	85	115				
o-Xylene	36.64	0.5	40	0	91.6%	85	115				
Toluene	36.28	0.5	40	0	90.7%	85	115				
1,4-Difluorobenzene	106.3	0	110	0	96.6%	70	130				
4-Bromochlorobenzene	124.8	0	110	0	113.5%	70	130				
Fluorobenzene	103.8	0	110	0	94.3%	70	130				

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

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

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 0208016
Project: BP - Leeper GC #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3_020828	Batch ID: GC-1_020828	Test Code: SW8021B	Units: µg/L	Analysis Date: 08/28/2002				Prep Date: 08/28/2002			
Client ID:	0208016	Run ID:	GC-1_020828A	SeqNo: 57446							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.35	0.5	40	0	93.4%	85	115				
Ethylbenzene	39.34	0.5	40	0	98.3%	85	115				
m,p-Xylene	78.68	1	80	0	98.3%	85	115				
Methyl tert-Butyl Ether	36.67	1	40	0	91.7%	85	115				
o-Xylene	37.64	0.5	40	0	94.1%	85	115				
Toluene	37.48	0.5	40	0	93.7%	85	115				
1,4-Difluorobenzene	104.8	0	110	0	95.3%	70	130				
4-Bromochlorobenzene	125.6	0	110	0	114.1%	70	130				
Fluorobenzene	102.5	0	110	0	93.2%	70	130				

Sample ID: CCV4_020828	Batch ID: GC-1_020828	Test Code: SW8021B	Units: µg/L	Analysis Date: 08/28/2002				Prep Date: 08/28/2002			
Client ID:	0208016	Run ID:	GC-1_020828A	SeqNo: 57447							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	35.72	0.5	40	0	89.3%	85	115				
Ethylbenzene	37.14	0.5	40	0	92.8%	85	115				
m,p-Xylene	74.08	1	80	0	92.6%	85	115				
Methyl tert-Butyl Ether	37.36	1	40	0	93.4%	85	115				
o-Xylene	35.72	0.5	40	0	89.3%	85	115				
Toluene	35.44	0.5	40	0	88.6%	85	115				
1,4-Difluorobenzene	105.3	0	110	0	95.7%	70	130				
4-Bromochlorobenzene	130.9	0	110	0	119.0%	70	130				
Fluorobenzene	101.8	0	110	0	92.5%	70	130				

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

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

B - Analyte detected in the associated Method Blank

iina ba, Ltd.

Date: 30-Aug-02

CLIENT: Blagg Engineering
Work Order: 0208016
Project: BP - Leeper GC #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0208015-01A	96.2	113	93.4
0208016-01A	96.7	119	95.9
0208016-02A	96.4	112	94.3
0208016-03A	96.8	115	95.4
0208018-01A	93	113	91
0208018-02A	96.4	117	98.2
0208020-01A	96.5	115	95.2
0208021-01A	95.4	116	94.4
0208021-01AMS	89.2	112	87.6
0208021-01AMSD	89.1	107	86.9
0208022-01A	97	116	95.2
CCV1_020828	98.1	114	96.1
CCV2_020828	96.6	113	94.3
CCV3_020828	95.3	114	93.2
CCV4_020828	95.7	119	92.5
LCS_020828	95.5	114	96.7
MB_020828	97.4	114	96

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

* Surrogate recovery outside acceptance limits

/

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

CLIENT : **BP AMER. PROD. CO.**

CHAIN-OF-CUSTODY # : **12148**

LEEPER GC #1

UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED : **ON - SITE TECH.**

Date : **November 27, 2002**

SAMPLER : **N J V**

Filename : **11-27-02.WK4**

PROJECT MANAGER : **J C B**

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
10	103.50	92.26	11.24	19.90	1215	7.30	700	4.25	-
11	102.44	92.10	10.34	20.40	1245	7.32	700	5.00	-
12	101.68	91.19	10.49	19.70	-	-	-	-	-
13	100.31	91.07	9.24	20.40	1145	7.40	700	5.50	-

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

(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2".

Excellent recovery in all MW's sampled. Collected BTEX from all MW's listed above except MW # 1;

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P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 05-Dec-02

CLIENT: Blagg Engineering
Work Order: 0212002
Project: BP - Leeper GC #1
Lab ID: 0212002-001A

Client Sample Info: BP - Leeper GC #1
Client Sample ID: MW #10
Collection Date: 11/27/2002 12:15:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	ND	0.5		µg/L	1	12/4/2002
Ethylbenzene	ND	0.5		µg/L	1	12/4/2002
m,p-Xylene	ND	1.0		µg/L	1	12/4/2002
o-Xylene	ND	0.5		µg/L	1	12/4/2002
Toluene	ND	0.5		µg/L	1	12/4/2002

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 3

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
Farmington, NM 87401

Off: (505) 327-1072

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P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 05-Dec-02

CLIENT: Blagg Engineering
Work Order: 0212002
Project: BP - Leeper GC #1
Lab ID: 0212002-002A

Client Sample Info: BP - Leeper GC #1
Client Sample ID: MW #11
Collection Date: 11/27/2002 12:45:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	0.6	0.5		µg/L	1	12/4/2002
Ethylbenzene	ND	0.5		µg/L	1	12/4/2002
m,p-Xylene	ND	1.0		µg/L	1	12/4/2002
o-Xylene	ND	0.5		µg/L	1	12/4/2002
Toluene	ND	0.5		µg/L	1	12/4/2002

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 2 of 3

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
Farmington, NM 87401

Off: (505) 327-1072

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P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 05-Dec-02

CLIENT: Blagg Engineering
Work Order: 0212002
Project: BP - Leeper GC #1
Lab ID: 0212002-003A

Client Sample Info: BP - Leeper GC #1
Client Sample ID: MW #13
Collection Date: 11/27/2002 11:45:00 AM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	ND	0.5		µg/L	1	12/4/2002
Ethylbenzene	ND	0.5		µg/L	1	12/4/2002
m,p-Xylene	ND	1.0		µg/L	1	12/4/2002
o-Xylene	ND	0.5		µg/L	1	12/4/2002
Toluene	ND	0.5		µg/L	1	12/4/2002

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

I - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

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Page 3 of 3

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

iina ba, Ltd.

Date: 05-Dec-02

CLIENT: Blagg Engineering
Work Order: 0212002
Project: BP - Leeper GC #1

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	MB_021204	SampType	MBLK	TestCode	BTEX_W	Units	µg/L	Prep Date:		Run ID:	GC-1_021204A
Client ID:	ZZZZZ	Batch ID:	R4123	TestNo:	SW8021B			Analysis Date:	12/4/2002	SeqNo:	60581
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	0.0903	1.0									J
o-Xylene	ND	0.50									
Toluene	0.1618	0.50									J

Sample ID	LCS_021204	SampType:	LCS	TestCode:	BTEX_W	Units:	µg/L	Prep Date:		Run ID:	GC-1_021204A		
Client ID:	ZZZZ	Batch ID:	R4123	TestNo:	SW8021B			Analysis Date:	12/4/2002	SeqNo:	60580		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	39.64	0.50	40	0	99.1	88	105	0	0		
Ethylbenzene	38.23	0.50	40	0	95.6	91	107	0	0		
m,p-Xylene	75.88	1.0	80	0.0903	94.7	86	110	0	0		
o-Xylene	37.87	0.50	40	0	94.7	89	105	0	0		
Toluene	39.4	0.50	40	0.1618	98.1	87	105	0	0		

Sample ID	0212001-001AMS	SampType:	MS	TestCode:	BTEX_W	Units:	µg/L	Prep Date:		Run ID:	GC-1_021204A		
Client ID:	ZZZZ	Batch ID:	R4123	TestNo:	SW8021B			Analysis Date:	12/4/2002	SeqNo:	60582		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	214.4	2.5	200	19.44	97.5	84	106	0	0		
Ethylbenzene	243	2.5	200	48.92	97	84	111	0	0		
m,p-Xylene	962.4	5.0	400	607.6	88.7	80	118	0	0		
o-Xylene	287.5	2.5	200	96.54	95.5	83	108	0	0		
Toluene	248.8	2.5	200	58.79	95	86	105	0	0		

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

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

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
 Work Order: 0212002
 Project: BP - Leeper GC #1

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID 0212001-001AMSD	SampType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date:	Run ID: GC-1_021204A						
Client ID: ZZZZ	Batch ID: R4123	TestNo: SW8021B		Analysis Date: 12/4/2002	SeqNo: 60583						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	210.5	2.5	200	19.44	95.5	80	106	214.4	1.83	5	
Ethylbenzene	235.5	2.5	200	48.92	93.3	82	108	243	3.14	5	
m,p-Xylene	941	5.0	400	607.6	83.4	80	113	962.4	2.24	5	
o-Xylene	283.1	2.5	200	96.54	93.3	82	105	287.5	1.57	4	
Toluene	244.5	2.5	200	58.79	92.9	83	105	248.8	1.75	5	

Sample ID	CCV1_021204	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:		Run ID:	GC-1_021204A
Client ID:	ZZZZ	Batch ID:	R4123	TestNo:	SW8021B			Analysis Date:	12/4/2002	SeqNo:	60578
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.93	0.50	20	0	99.6	85	115	0	0		
Ethylbenzene	19.81	0.50	20	0	99.1	85	115	0	0		
m,p-Xylene	39.19	1.0	40	0	98	85	115	0	0		
o-Xylene	19.73	0.50	20	0	98.6	85	115	0	0		
Toluene	19.53	0.50	20	0	97.7	85	115	0	0		

Sample ID	CCV2_021204	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:		Run ID:	GC-1_021204A
Client ID:	ZZZZ	Batch ID:	R4123	TestNo:	SW8021B			Analysis Date:	12/4/2002	SeqNo:	60579
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.58	0.50	20	0	97.9	85	115	0	0		
Ethylbenzene	19.49	0.50	20	0	97.5	85	115	0	0		
m,p-Xylene	38.67	1.0	40	0	96.7	85	115	0	0		
o-Xylene	19.47	0.50	20	0	97.3	85	115	0	0		
Toluene	19.23	0.50	20	0	96.1	85	115	0	0		

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

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

B - Analyte detected in the associated Method Blank

iina ba, Ltd.

Date: 05-Dec-02

CLIENT: Blagg Engineering

Work Order: 0212002

Project: BP - Leeper GC #1

Test No: SW8021B

Matrix: W

QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ
0212001-001AMS	92.0	103	89.5
0212001-001AMSD	91.8	102	89.4
0212002-001A	92.6	105	91.3
0212002-002A	92.5	105	91.0
0212002-003A	93.0	105	90.8
CCV1_021204	91.8	103	90.1
CCV2_021204	92.6	105	90.1
LCS_021204	92.5	99.1	90.2
MB_021204	92.0	102	90.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	82-114
4BCBZ	= 4-Bromochlorobenzene	90-125
FLBZ	= Fluorobenzene	89-112

* Surrogate recovery outside acceptance limits

iina ba, Ltd.

Sample Receipt Checklist

Client Name: BLA1002

Date and Time Received:

12/2/2002

Work Order Number: 0212002

Received by: JEM

Checklist completed by:

J. M. ...
Signature

12/02/02
Date

Reviewed by:

JEM
Initials

12/2/02
Date

Matrix:

Carrier name: Courier

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

Adjusted?

Checked by:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted:

Date contacted:

Person contacted:

Contacted by:

Regarding:

Comments:

Corrective Action:

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

CLIENT : **BP AMER. PROD. CO.**

CHAIN-OF-CUSTODY # : **12156**

LEEPER GC #1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED : **ON - SITE TECH.**

Date : **February 24, 2003**

SAMPLER : **N J V**

Filename : **02-24-03.WK4**

PROJECT MANAGER : **J C B**

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
10	103.50	91.66	11.84	19.90	0910	7.46	600	4.00	-
11	102.44	91.52	10.92	20.40	0935	7.48	600	4.75	-
12	101.68	90.73	10.95	19.70	-	-	-	-	-
13	100.31	-	-	20.40	-	-	-	-	-

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

(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$)

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2".

Excellent recovery in all MW 's sampled . Collected BTEX from MW 's #10 & #11 only .

612 E. Murray Drive
Farmington, NM 87401

Off: (505) 327-1072

iiná bá

P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 28-Feb-03

CLIENT: Blagg Engineering
Work Order: 0302024
Project: BP - Leeper GC #1
Lab ID: 0302024-001A

Client Sample Info: BP-Leeper GC #1
Client Sample ID: MW #10
Collection Date: 2/24/2003 9:10:00 AM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	ND	0.5		µg/L	1	2/27/2003
Ethylbenzene	ND	0.5		µg/L	1	2/27/2003
m,p-Xylene	ND	1.0		µg/L	1	2/27/2003
o-Xylene	ND	0.5		µg/L	1	2/27/2003
Toluene	ND	0.5		µg/L	1	2/27/2003

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 2

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
Farmington, NM 87401

Off: (505) 327-1072

iiná bá

P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 28-Feb-03

CLIENT: Blagg Engineering
Work Order: 0302024
Project: BP - Leeper GC #1
Lab ID: 0302024-002A

Client Sample Info: BP-Leeper GC#1
Client Sample ID: MW #11
Collection Date: 2/24/2003 9:35:00 AM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst JEM		
Benzene	ND	0.5		µg/L	1	2/27/2003
Ethylbenzene	ND	0.5		µg/L	1	2/27/2003
m,p-Xylene	ND	1.0		µg/L	1	2/27/2003
o-Xylene	ND	0.5		µg/L	1	2/27/2003
Toluene	ND	0.5		µg/L	1	2/27/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

L - 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 2 of 2

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

iina ba, Ltd.

Date: 28-Feb-03

CLIENT: Blagg Engineering
Work Order: 0302024
Project: BP - Leeper GC #1

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID MB_030227	SampType: MBLK	TestCode: BTEX_W	Units: µg/L	Prep Date: 2/27/2003	Run ID: GC-1_030227A
Client ID: ZZZZZ	Batch ID: R4258	TestNo: SW8021B		Analysis Date: 2/27/2003	SeqNo: 62131

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	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	0.1025	0.50									J
Surr: 1,4-Difluorobenzene	103.4	0	100	0	103	70	130	0	0		
Surr: 4-Bromochlorobenzene	107.7	0	100	0	108	70	130	0	0		
Surr: Fluorobenzene	101.6	0	100	0	102	70	130	0	0		

Sample ID LCS_030227	SampType: LCS	TestCode: BTEX_W	Units: µg/L	Prep Date: 2/27/2003	Run ID: GC-1_030227A
Client ID: ZZZZZ	Batch ID: R4258	TestNo: SW8021B		Analysis Date: 2/27/2003	SeqNo: 62130

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.07	0.50	40	0	100	88	110	0	0		
Ethylbenzene	39.86	0.50	40	0	99.6	90	110	0	0		
m,p-Xylene	79.46	1.0	80	0	99.3	86	110	0	0		
o-Xylene	39.02	0.50	40	0	97.5	89	110	0	0		
Toluene	39.26	0.50	40	0.1025	97.9	87	110	0	0		
Surr: 1,4-Difluorobenzene	101.9	0	100	0	102	70	130	0	0		
Surr: 4-Bromochlorobenzene	108.8	0	100	0	109	70	130	0	0		
Surr: Fluorobenzene	101.9	0	100	0	102	70	130	0	0		

Sample ID 0302024-001AMS	SampType: MS	TestCode: BTEX_W	Units: µg/L	Prep Date: 2/27/2003	Run ID: GC-1_030227A
Client ID: MW #10	Batch ID: R4258	TestNo: SW8021B		Analysis Date: 2/27/2003	SeqNo: 62132

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	197.7	2.5	200	0	98.8	84	106	0	0		
Ethylbenzene	196.6	2.5	200	1.324	97.6	84	111	0	0		
m,p-Xylene	391.5	5.0	400	2.582	97.2	80	118	0	0		

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

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

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
 Work Order: 0302024
 Project: BP - Leeper GC #1

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	0302024-001AMS	SampType:	MS	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	2/27/2003	Run ID:	GC-1_030227A			
Client ID:	MW #10	Batch ID:	R4258	TestNo:	SW8021B			Analysis Date:	2/27/2003	SeqNo:	62132			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

o-Xylene	192.2	2.5	200	1.134	95.5	83	108	0	0		
Toluene	193.7	2.5	200	1.454	96.1	86	105	0	0		
Surr: 1,4-Difluorobenzene	516.1	0	500	0	103	70	130	0	0		
Surr: 4-Bromochlorobenzene	553.3	0	500	0	111	70	130	0	0		
Surr: Fluorobenzene	508.2	0	500	0	102	70	130	0	0		

Sample ID	0302024-001AMSD	SampType:	MSD	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	2/27/2003	Run ID:	GC-1_030227A			
Client ID:	MW #10	Batch ID:	R4258	TestNo:	SW8021B			Analysis Date:	2/27/2003	SeqNo:	62133			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	191.8	2.5	200	0	95.9	80	106	197.7	3.05	5	
Ethylbenzene	190.3	2.5	200	1.324	94.5	82	108	196.6	3.23	5	
m,p-Xylene	379.2	5.0	400	2.582	94.2	80	113	391.5	3.20	5	
o-Xylene	187.2	2.5	200	1.134	93	82	105	192.2	2.65	4	
Toluene	188	2.5	200	1.454	93.3	83	105	193.7	2.95	5	
Surr: 1,4-Difluorobenzene	509.5	0	500	0	102	70	130	0	0	0	
Surr: 4-Bromochlorobenzene	561.6	0	500	0	112	70	130	0	0	0	
Surr: Fluorobenzene	508.1	0	500	0	102	70	130	0	0	0	

Sample ID	CCV1_030227	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	2/27/2003	Run ID:	GC-1_030227A			
Client ID:	ZZZZ	Batch ID:	R4258	TestNo:	SW8021B			Analysis Date:	2/27/2003	SeqNo:	62127			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	19.98	0.50	20	0	99.9	85	115	0	0		
Ethylbenzene	19.81	0.50	20	0	99.1	85	115	0	0		
m,p-Xylene	39.17	1.0	40	0	97.9	85	115	0	0		
o-Xylene	19.37	0.50	20	0	96.8	85	115	0	0		
Toluene	19.44	0.50	20	0	97.2	85	115	0	0		
Surr: 1,4-Difluorobenzene	104.1	0	100	0	104	70	130	0	0		
Surr: 4-Bromochlorobenzene	108.2	0	100	0	108	70	130	0	0		
Surr: Fluorobenzene	100.8	0	100	0	101	70	130	0	0		

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

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

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
 Work Order: 0302024
 Project: BP - Leeper GC #1

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	CCV2_030227	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	2/27/2003	Run ID:	GC-1_030227A
Client ID:	ZZZZZ	Batch ID:	R4258	TestNo:	SW8021B			Analysis Date:	2/27/2003	SeqNo:	62128
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.41	0.50	20	0	97	85	115	0	0		
Ethylbenzene	19.19	0.50	20	0	96	85	115	0	0		
m,p-Xylene	37.99	1.0	40	0	95	85	115	0	0		
o-Xylene	18.96	0.50	20	0	94.8	85	115	0	0		
Toluene	18.92	0.50	20	0	94.6	85	115	0	0		
Surr: 1,4-Difluorobenzene	102.4	0	100	0	102	70	130	0	0		
Surr: 4-Bromochlorobenzene	110.1	0	100	0	110	70	130	0	0		
Surr: Fluorobenzene	101.7	0	100	0	102	70	130	0	0		

Sample ID	CCV3_030227	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	2/27/2003	Run ID:	GC-1_030227A
Client ID:	ZZZZZ	Batch ID:	R4258	TestNo:	SW8021B			Analysis Date:	2/27/2003	SeqNo:	62129
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.73	0.50	40	0	96.8	85	115	0	0		
Ethylbenzene	38.6	0.50	40	0	96.5	85	115	0	0		
m,p-Xylene	77.08	1.0	80	0	96.4	85	115	0	0		
o-Xylene	38.12	0.50	40	0	95.3	85	115	0	0		
Toluene	38.11	0.50	40	0	95.3	85	115	0	0		
Surr: 1,4-Difluorobenzene	103.6	0	100	0	104	70	130	0	0		
Surr: 4-Bromochlorobenzene	107.6	0	100	0	108	70	130	0	0		
Surr: Fluorobenzene	100.9	0	100	0	101	70	130	0	0		

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

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

B - Analyte detected in the associated Method Blank

ina ba, Ltd.

Date: 28-Feb-03

CLIENT: Blagg Engineering
Work Order: 0302024
Project: BP - Leeper GC #1
Test No: SW8021B

Matrix: W

QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ
0302024-001A	103	111	102
0302024-001A	102	112	102
0302024-001A	103	110	103
0302024-001AMS	103	111	102
0302024-001AMSD	102	112	102
0302024-002A	103	111	103
CCV1_030227	104	108	101
CCV2_030227	102	110	102
CCV3_030227	104	108	101
LCS_030227	102	109	102
MB_030227	103	108	102

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

* Surrogate recovery outside acceptance limits

iina ba, Ltd.

Sample Receipt Checklist

Client Name: BLA1002

Date and Time Received:

2/25/2003

Work Order Number: 0302024

Received by: JEM

Checklist completed by: *J Moore*
Signature

2/25/03
Date

Reviewed by: *OR*
Initials

2/25/03
Date

Matrix:

Carrier name: Courier

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

Adjusted?

Checked by:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted:

Date contacted:

Person contacted:

Contacted by:

Regarding:

Comments:

Corrective Action:

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

CLIENT: **BP AMER. PROD. CO.**

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

LEEPER GC #1

UNIT L, SEC. 34, T32N, R10W

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

Date: **May 27, 2003**

SAMPLER: **N J V**

Filename: **05-27-03.WK4**

PROJECT MANAGER: **N J V**

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
10	103.50	95.92	7.58	19.90	0915	7.07	500	6.00	-
11	102.44	95.59	6.85	20.40	-	-	-	-	-
12	101.68	93.88	7.80	19.70	-	-	-	-	-
13	100.31	93.94	6.37	20.40	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

7.00 2,700

DATE & TIME =

05/27/03 09:07

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

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2"

Excellent recovery in MW #10. Collected BTEX from MW #10 only.

Hall Environmental Analysis Laboratory

Date: 05-Jun-03

CLIENT: Blagg Engineering
Lab Order: 0305216
Project: Leeper GC #1
Lab ID: 0305216-01

Client Sample ID: MW#10
Collection Date: 5/27/2003 9:15:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	6/2/2003 11:37:25 PM
Toluene	ND	0.50		µg/L	1	6/2/2003 11:37:25 PM
Ethylbenzene	ND	0.50		µg/L	1	6/2/2003 11:37:25 PM
Xylenes, Total	ND	0.50		µg/L	1	6/2/2003 11:37:25 PM
Sum: 4-Bromofluorobenzene	98.7	74-118		%REC	1	6/2/2003 11:37:25 PM

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4801 Hawthorn Rd., Suite A
Albuquerque, New Mexico 87109
Tel. 808.345.3878 Fax 808.345.4107
www.hallenvironmental.com

Air Bubbles or Headspace (Y or N)

Hall Environmental Analysis Laboratory

Date: 05-Jun-03

CLIENT: Blagg Engineering

Work Order: 0305216

Project: Leeper GC #1

QC SUMMARY REPORT

Method Blank

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

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

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

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: 05-Jun-03

CLIENT: Blagg Engineering

Work Order: 0305216

Project: Leeper GC #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

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

Sample ID	BTEX Std 100ng	Batch ID: R8430	Test Code: SW8021	Units: µg/L	Analysis Date	6/2/2003 10:32:32 PM	Prep Date				
Client ID:			Run ID: PIDFID_030602A		SeqNo:	190887					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.44	0.50	20	0	107	81.3	121	20.02	6.82	27	
Toluene	21.21	0.50	20	0	106	84.9	118	20.35	4.14	19	
Ethylbenzene	21.34	0.50	20	0	107	53.8	149	20.23	5.33	10	
Xylenes, Total	63.89	0.50	60	0	106	83.1	122	61.24	4.22	13	

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Receive

Work Order Number **0305218**

Received by **AMG**

Checklist completed by

Bongalo 5/30/03
Signature Date

Matrix:

Carrier name: Grayhound

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
Container/Temp Blank temperature?	23°	4° C ± 2 Acceptable	

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

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

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #: N / A

LEEPER GC #1

LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT L, SEC. 34, T32N, R10W

Date: June 10, 2003

SAMPLER: N J V

Filename: 06-10-03.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.80	97.95	6.85	15.21	0745	7.03	500	-	4.25
3	101.28	94.63	6.65	11.30	0825	7.15	600	-	1.00

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/10/03	0714

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

Ideally a minimum of three (3) wellbore volumes:

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

Comments or note well diameter if not standard 2".

Excellent recovery in MW #2, poor recovery in MW #3. Black mud accumulation @ bottom of MW #3. Collected BTEX samples from MW #2 & #3 only. DTW = 8.38 ft. In MW #3 immediately before collecting sample.

Hall Environmental Analysis Laboratory

Date: 18-Jun-03

CLIENT: Blagg Engineering**Client Sample ID:** MW#2**Lab Order:** 0306074**Collection Date:** 6/10/2003 7:45:00 AM**Project:** Leeper GC#1**Lab ID:** 0306074-01**Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	32	2.5		µg/L	5	6/11/2003 3:48:22 PM
Toluene	ND	2.5		µg/L	5	6/11/2003 3:48:22 PM
Ethylbenzene	3.5	2.5		µg/L	5	6/11/2003 3:48:22 PM
Xylenes, Total	130	2.5		µg/L	5	6/11/2003 3:48:22 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	5	6/11/2003 3:48:22 PM

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

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

Hall Environmental Analysis Laboratory

Date: 18-Jun-03

CLIENT: Blagg Engineering

Client Sample ID: MW#3

Lab Order: 0306074

Collection Date: 6/10/2003 8:25:00 AM

Project: Leeper GC#1

Lab ID: 0306074-02

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1.3	1.0		µg/L	2	6/12/2003 12:00:39 PM
Toluene	ND	1.0		µg/L	2	6/12/2003 12:00:39 PM
Ethylbenzene	ND	1.0		µg/L	2	6/12/2003 12:00:39 PM
Xylenes, Total	210	1.0		µg/L	2	6/12/2003 12:00:39 PM
Surf: 4-Bromofluorobenzene	102	74-118		%REC	2	6/12/2003 12:00:39 PM

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

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

Client: BLAGG ENER. / BP AMERICA

Client: BLAGG ENER. / BP AMERICA

Project Name:

LEEPER GC #1

Address: P.O. Box 87

BLOOMFIELD, NM 87413

Project #:

Project Manager.

JEFF BLAGG

Phone #: 505-632-1199

Fax #: 505-632-3903

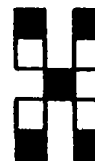
Sampler: NELSON VELEZ

Samples Cold?: ☒ Yes ☐ No 11°C

ANALYSIS REQUEST												
✓												BTX ^o MTBE + TMB ^o (8021B)
												BTX + MTBE + TPH (Gasoline Only)
												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, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
												8081 Pesticides / PCB's (8082)
												8260 (VOA)
												8270 (Semi-VOA)
												Air Bubbles or Headspace (Y or N)

Date: 6/10/03	Time: 0925	Relinquished By: (Signature) <i>[Signature]</i>
Date:	Time:	Relinquished By: (Signature)

Received By: (Signature) *[Signature]* 6/10/02
Received By: (Signature) *[Signature]* 1/6/02

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite A
Albuquerque, New Mexico 87109
Tel. 505.345.3875 Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: 18-Jun-03

CLIENT: Blagg Engineering

Work Order: 0306074

Project: Leeper GC#1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R8539	Test Code: SW8021	Units: µg/L	Analysis Date 6/12/2003 12:32:00 PM				Prep Date		
Client ID:			Run ID: PIDHALL_030612A		SeqNo: 193176						
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	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,2-Dichloroethane	ND	0.20									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	19.93	0	20	0	99.6	74	118	0			
Surr: Bromochloromethane	18.7	0	20	0	83.5	75.2	130	0			

Sample ID	Reagent Blank 5m	Batch ID: R8528	Test Code: SW8021	Units: µg/L	Analysis Date 6/11/2003 8:11:57 AM				Prep Date		
Client ID:			Run ID: PIDHALL_030611A		SeqNo: 192960						
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	20.49	0	20	0	102	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 18-Jun-03

CLIENT: Blagg Engineering
Work Order: 0306074
Project: Leeper GC#1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	BTEX Std 100ng	Batch ID: R8528	Test Code: SW8021	Units: µg/L	Analysis Date	6/11/2003 4:52:49 PM	Prep Date				
Client ID:		Run ID:	PIDHALL_030611A		SeqNo:	192970					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.79	0.50	20	0	99.0	81.3	121	0			
Toluene	19.9	0.50	20	0	99.5	84.9	118	0			
Ethylbenzene	19.48	0.50	20	0	97.3	53.8	149	0			
Xylenes, Total	59.31	0.50	60	0	98.9	83.1	122	0			

Sample ID	BTEX Std 100ng	Batch ID: R8539	Test Code: SW8021	Units: µg/L	Analysis Date	6/12/2003 5:49:16 PM	Prep Date				
Client ID:		Run ID:	PIDHALL_030612A		SeqNo:	193175					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.58	0.50	20	0	97.9	81.3	121	0			
Toluene	20.08	0.50	20	0	100	84.9	118	0			
Ethylbenzene	19.87	0.50	20	0	99.4	53.8	149	0			
Xylenes, Total	58.56	0.50	60	0	97.6	83.1	122	0			

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Receive

Work Order Number **0306074**

Received by **AMG**

Checklist completed by

Signature

Date

Matrix:

Carrier name: Greyhound

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

Container/Temp Blank temperature?

11° **4° C ± 2 Acceptable**

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

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

CLIENT: BP AMER. PROD. CO.

CHAIN-OF-CUSTODY #: N/A

LEEPER GC #1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: August 20, 2003

SAMPLER: NJV

Filename: 08-20-03.WK4

PROJECT MANAGER: NJV

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.80	97.68	7.12	15.21	1025	6.88	700	25.2	4.00

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

08/19/03 1554

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

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2 "

Excellent recovery in MW #2. Collected BTEX from MW #2 only.

Hall Environmental Analysis Laboratory

Date: 28-Aug-03

CLIENT: Blagg Engineering
Lab Order: 0308170
Project: Leeper GC#1
Lab ID: 0308170-01

Client Sample ID: MW #2
Collection Date: 8/20/2003 10:25:00 AM

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	17	2.5		µg/L	5	8/25/2003 10:50:38 PM
Toluene	ND	2.5		µg/L	5	8/25/2003 10:50:38 PM
Ethylbenzene	14	2.5		µg/L	5	8/25/2003 10:50:38 PM
Xylenes, Total	21	2.5		µg/L	5	8/25/2003 10:50:38 PM
Surr: 4-Bromofluorobenzene	112	74-118		%REC	5	8/25/2003 10:50:38 PM

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

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

Hall Environmental Analysis Laboratory

Date: 28-Aug-03

CLIENT: Blagg Engineering

Work Order: 0308170

Project: Leeper GC#1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R9343	Test Code: SW8021	Units: µg/L	Analysis Date 8/25/2003 9:16:56 AM				Prep Date		
Client ID:			Run ID: PIDFID_030825A			SeqNo: 210719					
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	21.19	0	20	0	106	74	118	0			

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 28-Aug-03

CLIENT: Blagg Engineering
Work Order: 0308170
Project: Leeper GC#1

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 6:45:48 PM	Prep Date				
Client ID:			Run ID: PIDFID_030825A		SeqNo:	210771					
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	98.5	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 Date				
Client ID:			Run ID: PIDFID_030825A		SeqNo:	210773					
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	

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Receive

8/21/03

Work Order Number **0308170**

Received by **AT**

Checklist completed by

[Signature]
Signature

8/21/03
Date

Matrix:

Carrier name: Greyhound

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

Container/Temp Blank temperature?

8° 4° C ± 2 Acceptable

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

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

CLIENT: BP AMER. PROD. CO.

CHAIN-OF-CUSTODY #: N / A

LEEPER GC # 1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: November 11, 2003

SAMPLER: N J V

Filename: 11-11-03.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.80	94.39	10.41	15.21	1135	6.91	1,000	17.9	2.50

INSTRUMENT CALIBRATIONS =

7.00	2,800
11/11/03	0730

DATE & TIME =

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

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2 "

Excellent recovery in MW # 2 . Collected BTEX from MW # 2 only .

Hall Environmental Analysis Laboratory

Date: 18-Nov-03

CLIENT: Blagg Engineering

Client Sample ID: MW#2

Lab Order: 0311093

Collection Date: 11/11/2003 11:35:00 AM

Project: Leeper GC#1

Lab ID: 0311093-01

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	13		µg/L	5	11/15/2003 3:45:02 AM
Benzene	3.6	2.5		µg/L	5	11/15/2003 3:45:02 AM
Toluene	ND	2.5		µg/L	5	11/15/2003 3:45:02 AM
Ethylbenzene	4.5	2.5		µg/L	5	11/15/2003 3:45:02 AM
1,2,4-Trimethylbenzene	21	2.5		µg/L	5	11/15/2003 3:45:02 AM
1,3,5-Trimethylbenzene	14	2.5		µg/L	5	11/15/2003 3:45:02 AM
Xylenes, Total	28	2.5		µg/L	5	11/15/2003 3:45:02 AM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	5	11/15/2003 3:45:02 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

Client: BLAGG ENGR. / BP AMERICA

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

Phone #: (505) 632-1199

Fax #: (505) 632-3903

Accreditation Applied:
NELAC ☐ USACE ☐

Other:

Project Name:

LEEPER GC #1

Project #:

Project Manager:
$$T \subset B$$

Sampler: *NTV*

Sample Temperature: 100

Preservative

HEAL No.

10311093

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

BTEX + MTBE + TPH (Gasoline Only)

TPH Method 8015B MOD (Gas/Diesel)

TRH (Method 418.1)

ENB (Method 504.1)

END (Method 8021)

(HVC) VNU ULCB	(I 378 POLIMAI) 703
----------------	---------------------

000A 0 M A-1-

SIEMENS & HANS

Cations (Na, K, Ca, Mg)

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

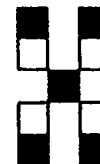
8081 Pesticides / PCB's (8082)

8260 (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

ANALYSIS REQUEST



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com

11/11/03	1135	WATER	MW # 2	2-40 ml	✓				1
----------	------	-------	--------	---------	---	--	--	--	---

Date: 11/12/03	Time: 0700	Relinquished By: (Signature) <i>[Signature]</i>	Remarks: <i>[Signature]</i> 11/12/03
Date:	Time:	Relinquished By: (Signature)	Remarks: 11/59

Remarks:

Hall Environmental Analysis Laboratory

Date: 18-Nov-03

CLIENT: Blagg Engineering

Work Order: 0311093

Project: Leeper GC#1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R10113	Test Code: SW8021	Units: µg/L	Analysis Date 11/14/2003 8:31:34 AM				Prep Date		
Client ID:			Run ID: PIDFID_031114A		SeqNo: 226805						
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	20.43	0	20	0	102	74	118	0			

Sample ID	Reagent Blank 5m	Batch ID: R10113	Test Code: SW8021	Units: µg/L	Analysis Date 11/14/2003 6:04:51 PM				Prep Date		
Client ID:			Run ID: PIDFID_031114A		SeqNo: 226874						
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	20.1	0	20	0	100	74	118	0			

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 18-Nov-03

CLIENT: Blagg Engineering
Work Order: 0311093
Project: Leeper GC#1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	BTEX Std 100ng	Batch ID: R10113	Test Code: SW8021	Units: µg/L	Analysis Date	11/14/2003 9:32:43 AM	Prep Date				
Client ID:		Run ID:	PIDFID_031114A		SeqNo:	226872					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.84	0.50	20	0	109	81.3	121	0			
Toluene	21.87	0.50	20	0	109	84.9	118	0			
Ethylbenzene	21.58	0.50	20	0	108	53.8	149	0			
Xylenes, Total	64.07	0.50	60	0	107	83.1	122	0			

Sample ID	BTEX Std 100ng	Batch ID: R10113	Test Code: SW8021	Units: µg/L	Analysis Date	11/14/2003 8:07:05 PM	Prep Date				
Client ID:		Run ID:	PIDFID_031114A		SeqNo:	226873					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.2	0.50	20	0	108	81.3	121	21.84	2.98	27	
Toluene	20.17	0.50	20	0	101	84.9	118	21.87	8.09	19	
Ethylbenzene	19.71	0.50	20	0	98.6	53.8	149	21.58	9.04	10	
Xylenes, Total	59.71	0.50	60	0	99.5	83.1	122	64.07	7.04	13	

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

Work Order Number **0311093**

Received by **AMG**

Checklist completed by

Abongalo
Signature

11/12/03
Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

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

CLIENT: BP AMER. PROD. CO.

CHAIN-OF-CUSTODY #: N / A

LEEPER GC #1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: May 27, 2004

SAMPLER: N J V

Filename: 05-27-04.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.80	97.92	6.88	15.21	1255	6.63	1,200	22.3	4.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

05/27/04 1245

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

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2".

Excellent recovery in MW #2. Collected sample for BTEX analysis only.

Hall Environmental Analysis Laboratory

Date: 07-Jun-04

CLIENT: Blagg Engineering

Client Sample ID: MW #2

Lab Order: 0405255

Collection Date: 5/27/2004 12:55:00 PM

Project: Leeper GC#1

Lab ID: 0405255-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	80	2.5		µg/L	5	6/4/2004 1:55:12 PM
Toluene	ND	2.5		µg/L	5	6/4/2004 1:55:12 PM
Ethylbenzene	5.4	2.5		µg/L	5	6/4/2004 1:55:12 PM
Xylenes, Total	140	2.5		µg/L	5	6/4/2004 1:55:12 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	5	6/4/2004 1:55:12 PM

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

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

CHAIN-OF-CUSTODY RECORD

Accreditation Applied:
☐ NEAC ☐ USACE

Other:

Project Name:

Client: Black River / BP America

Project #:

P.O. Box 87

Project Manager:

NTV

Sampler:

NTV

Sample Temperature:

3.2

Sample ID. No.

Phone #: 505-632-1199
 Fax #: 505-632-3903

Matrix

Water

Time

5/27/04 1255

Date

5/27/04 1255

Number/Volume

2-40ml

Preservative

HgCl₂, HNO₃

HEAL No.

05205

✓ **(BTEX + MTBE + TPB) (80218)**

BTEX + MTBE + TPB (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PMA or PAH)

PCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

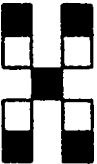
8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

ANALYSIS REQUEST



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

Remarks:

Received By: (Signature)

Donna L. 05/28/04
K70

Relinquished By: (Signature)

7/1/04
0700

Time:

0700

Date:

5/28/04

Hall Environmental Analysis Laboratory

Date: 07-Jun-04

CLIENT: Blagg Engineering
Work Order: 0405255
Project: Leeper GC#1

QC SUMMARY REPORT

Method Blank

Sample ID: Reagent Blank 5m	Batch ID: R12078	Test Code: SW8021	Units: µg/L	Analysis Date: 6/4/2004 10:07:58 AM	Prep Date:						
Client ID:	Run ID: PIDFID_040604A	SeqNo: 277970									
Analyte	Result	ML	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND										
Toluene	ND										
Ethylbenzene	ND										
Xylenes, Total	ND										
Sum: 4-Bromofluorobenzene	19.89		20	0	99.4	74	118	0			

2 / 4

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

Hall Environmental Analysis Laboratory

Date: 07-Jun-04

CLIENT: Blagg Engineering
Work Order: 0405255
Project: Leeper GC#1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID	BTEX std 100ng	Batch ID: R12078	Test Code: SW8021	Units: µg/L	Analysis Date	6/5/2004 3:44:45 AM	Prep Date				
Client ID:		Run ID: PIDFID_040604A	SeqNo: 278029								
Analyte	Result	MQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.9		20	0	99.5	81.3	121	0			
Toluene	20.1		20	0	101	84.9	118	0			
Ethylbenzene	20.17		20	0	101	53.8	149	0			
Xylenes, Total	61.75		60	0	103	83.1	122	0			

3 / 4

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

1

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

Work Order Number **0405255**

Received by **AMG**

Checklist completed by

Obonpalio **05/28/04**

Matrix

Carrier name **Greyhound**

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

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

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

CLIENT: BP AMER. PROD. CO.

CHAIN-OF-CUSTODY #: N / A

LEEPER GC # 1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: June 23, 2005

SAMPLER: N J V

Filename: 06-23-05.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.80	99.69	5.11	15.21	0835	6.81	800	21.3	5.00
11	102.44	97.23	5.21	20.40	-	-	-	-	-
13	100.31	94.23	6.08	20.40	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

06/23/05 0630

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

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2".

Excellent recovery in MW # 2 . Collected sample for BTEX analysis only .

Hall Environmental Analysis Laboratory

Date: 29-Jun-05

CLIENT: Blagg Engineering
Lab Order: 0506235
Project: Lceper GC#1
Lab ID: 0506235-01

Client Sample ID: MW #2
Collection Date: 6/23/2005 8:35:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: KTM
Benzene	7.9	0.50		µg/L	1	6/29/2005 2:27:48 AM
Toluene	ND	0.50		µg/L	1	6/29/2005 2:27:48 AM
Ethylbenzene	1.5	0.50		µg/L	1	6/29/2005 2:27:48 AM
Xylenes, Total	2.0	0.50		µg/L	1	6/29/2005 2:27:48 AM
Surr: 4-Bromofluorobenzene	107	83.3-121		%REC	1	6/29/2005 2:27:48 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

Client: BLAZE ENR. / BP AMERICA

NELAC ☐ USACE ☐

Other:

Project Name:

LEPPER GC #1

Address: P.O. BOX 87

BLFD. NM 87413

Project #:

Project Manager:



Phone #: 632-1199

Sampler: *NV*

Fax #: 632-3903

Sample Temperature: 2.0

[illegible]

Date: _____

Time:

Relinquished By (Signature)

Received By: (Signature)

Remarks:

Date:

Time:

Relinquished By: (Signature)

Received By: (Signature)



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

Hall Environmental Analysis Laboratory

Date: 29-Jun-05

CLIENT: Blagg Engineering
Work Order: 0506235
Project: Leeper GC#1

QC SUMMARY REPORT

Method Blank

Sample ID	Reagent Blank 5m	Batch ID: R15814	Test Code: SW8021	Units: µg/L	Analysis Date 6/27/2005 10:15:08 AM				Prep Date		
Client ID:			Run ID: PIDFID_050627A			SeqNo: 374760					
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			

Sample ID	Reagent Blank 5m	Batch ID: R15826	Test Code: SW8021	Units: µg/L	Analysis Date 6/28/2005 10:11:52 AM				Prep Date		
Client ID:			Run ID: PIDFID_050628A			SeqNo: 375119					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.15	0	20	0	90.7	83.3	121	0			

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

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

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 29-Jun-05

CLIENT: Blagg Engineering
Work Order: 0506235
Project: Leeper GC#1

QC SUMMARY REPORT
Laboratory Control Spike - generic

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 Date				
Client ID:		Run ID: PIDFID_050627A	SeqNo: 374788								
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 ID	BTEX LCS 100ng	Batch ID: R15828	Test Code: SW8021	Units: µg/L	Analysis Date	6/29/2005 5:01:22 AM	Prep Date				
Client ID:		Run ID:	PIDFID_050628A		SeqNo:	375362					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.38	0.5	20	0	98.9	88.7	114	0			
Toluene	19.71	0.5	20	0	98.5	89.3	112	0			
Ethylbenzene	19.73	0.5	20	0	98.7	88.6	113	0			
Xylenes, Total	58.38	0.5	60	0	99.0	89.4	112	0			

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

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

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

Work Order Number **0506235**

Received by **AMG**

Checklist completed by

Signature

Date

Matrix:

Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☒	
Chain of custody present?	Yes ☒	No ☐		
Chain of custody signed when relinquished and received?	Yes ☒	No ☐		
Chain of custody agrees with sample labels?	Yes ☒	No ☐		
Samples in proper container/bottle?	Yes ☒	No ☐		
Sample containers intact?	Yes ☒	No ☐		
Sufficient sample volume for indicated test?	Yes ☒	No ☐		
All samples received within holding time?	Yes ☒	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒	
Container/Temp Blank temperature?	2°	4° C ± 2 Acceptable If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

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

CLIENT: BP AMER. PROD. CO.

CHAIN-OF-CUSTODY #: N / A

LEEPER GC #1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: September 20, 2005

SAMPLER: N J V

Filename: 09-20-05.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.80	95.90	8.90	15.21	0930	6.80	900	22.6	3.25

INSTRUMENT CALIBRATIONS =

7.00 2,800

DATE & TIME =

09/20/05 0845

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

(i.e. 2" MW $r = (1/12) \text{ ft}$ $h = 1 \text{ ft}$) (i.e. 4" MW $r = (2/12) \text{ ft}$ $h = 1 \text{ ft}$)

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2 ".

Excellent recovery in MW #2. Collected sample for BTEX analysis only.

Hall Environmental Analysis Laboratory

Date: 28-Sep-05

CLIENT: Blagg Engineering
Lab Order: 0509225
Project: Leeper GC#1
Lab ID: 0509225-01

Client Sample ID: MW#2
Collection Date: 9/20/2005 9:30:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/23/2005 7:03:09 PM
Benzene	ND	0.50		µg/L	1	9/23/2005 7:03:09 PM
Toluene	ND	0.50		µg/L	1	9/23/2005 7:03:09 PM
Ethylbenzene	1.8	0.50		µg/L	1	9/23/2005 7:03:09 PM
1,2,4-Trimethylbenzene	4.5	0.50		µg/L	1	9/23/2005 7:03:09 PM
1,3,5-Trimethylbenzene	2.6	0.50		µg/L	1	9/23/2005 7:03:09 PM
Xylenes, Total	2.1	0.50		µg/L	1	9/23/2005 7:03:09 PM
Surr 4-Bromofluorobenzene	112	82.2-119		%REC	1	9/23/2005 7:03:09 PM

Qualifiers: ND - Not Detected at the Reporting Limit
I - 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

Client: BLAGG ENR. / BP AMERICA

Other:

Project Name:

LEEPER GC #1

Address: P.O. BOX 87

BLFD. NM 87413

Project #:

Project Manager:

TCB

Phone #: 505-632-1199

Sampler: *NU*

Fax #:

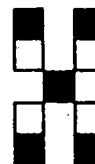
Sample Temperature: 3°

[illegible]

Date: 9/21/05	Time: 1000	Relinquished By: (Signature) <i>[Signature]</i>
Date:	Time:	Relinquished By: (Signature)

Received By: (Signature) *[Signature]* C/2/05
@ 1700
Received By: (Signature)

Remarks:



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

ANALYSIS REQUEST

[illegible]

Hall Environmental Analysis Laboratory

Date: 28-Sep-05

CLIENT: Blagg Engineering
Work Order: 0509225
Project: Leeper GC#1

QC SUMMARY REPORT

Method Blank

Sample ID: Reagent Blank 5m	Batch ID: R16759	Test Code: SW8021	Units: µg/L	Analysis Date: 9/23/2005 9:37:19 AM	Prep Date:						
Client ID:	Run ID: PIDFID_050923A	SeqNo: 403397									
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									
Surf: 4-Bromofluorobenzene	18.68	0	20	0	93.3	82.2	119	0			

2 / 4

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

1

Hall Environmental Analysis Laboratory

Date: 28-Sep-05

CLIENT: Blagg Engineering
Work Order: 0509225
Project: Leeper GC#1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: BTEX fcs 100ng	Batch ID: R16759	Test Code: SW8021	Units: µg/L	Analysis Date: 9/23/2005 10:09:01 PM	Prep Date:						
Client ID:	Run ID: PIDFID_050923A	SeqNo: 403402									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	23.87	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			

3 / 4

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

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

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received

9/20/2005

Work Order Number **0509225**

Received by **GLS**

Checklist completed by

Robert P. Brown 9/20/05
Signature Date

Matrix

Carrier name Greyhound

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

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

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

CLIENT: BP AMER. PROD. CO.

CHAIN-OF-CUSTODY #: N / A

LEEPER GC # 1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED: HALL ENVIRONMENTAL

Date: June 30, 2006

SAMPLER: N J V

Filename: 06-30-06.WK4

PROJECT MANAGER: N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	102.80	95.82	6.98	15.21	1000	6.93	800	23.3	4.75
3	101.28	94.74	6.54	11.30					
10	103.50	96.29	7.21	19.90	-	-	-	-	-
11	102.44	96.08	6.36	20.40	-	-	-	-	-
12	101.68	93.77	7.91	19.70	1030	6.96	800	22.9	6.00

INSTRUMENT CALIBRATIONS =

DATE & TIME =

7.00	2,800
06/28/2006	0630

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

(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2"

Excellent recovery in MW # 2 . Collected sample for BTEX analysis only .

Hall Environmental Analysis Laboratory, Inc.

Date: 11-Jul-06

CLIENT: Blagg Engineering
Project: Leeper GC #1**Lab Order:** 0606353**Lab ID:** 0606353-01**Collection Date:** 6/28/2006 10:00:00 AM**Client Sample ID:** MW #2**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	1.0	1.0		µg/L	1	7/10/2006 2:12:52 PM
Toluene	ND	1.0		µg/L	1	7/10/2006 2:12:52 PM
Ethylbenzene	ND	1.0		µg/L	1	7/10/2006 2:12:52 PM
Xylenes, Total	4.2	3.0		µg/L	1	7/10/2006 2:12:52 PM
Surr: 4-Bromofluorobenzene	106	72.2-125		%REC	1	7/10/2006 2:12:52 PM

Lab ID: 0606353-02**Collection Date:** 6/28/2006 10:30:00 AM**Client Sample ID:** MW #12**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	7/10/2006 2:42:05 PM
Toluene	ND	1.0		µg/L	1	7/10/2006 2:42:05 PM
Ethylbenzene	ND	1.0		µg/L	1	7/10/2006 2:42:05 PM
Xylenes, Total	ND	3.0		µg/L	1	7/10/2006 2:42:05 PM
Surr: 4-Bromofluorobenzene	90.2	72.2-125		%REC	1	7/10/2006 2:42:05 PM

Qualifiers:

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

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

QA/QC SUMMARY REPORT

Client: Blagg Engineering
 Project: Leeper GC #1

Work Order: 0606353

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: SML RB		MBLK							
Batch ID: R19846							Analysis Date: 7/10/2006 8:44:37 AM		
benzene	ND	µg/L	1.0						
toluene	ND	µg/L	1.0						
ethylbenzene	ND	µg/L	1.0						
xylene, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS		LCS							
Batch ID: R19846							Analysis Date: 7/10/2006 1:14:32 PM		
benzene	19.16	µg/L	1.0	95.8	85	115			
toluene	18.37	µg/L	1.0	90.3	85	118			
ethylbenzene	19.10	µg/L	1.0	95.5	85	116			
xylene, Total	59.24	µg/L	3.0	98.2	85	119			
Sample ID: 100NG BTEX LCSD		LCSD							
Batch ID: R19846							Analysis Date: 7/10/2006 6:40:10 PM		
benzene	18.17	µg/L	1.0	95.9	85	115	0.0730	27	
toluene	17.96	µg/L	1.0	88.2	85	118	2.27	19	
ethylbenzene	18.63	µg/L	1.0	93.2	85	116	2.48	10	
xylene, Total	59.62	µg/L	3.0	98.8	85	119	0.843	13	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spi 2 / 3 recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

6/30/2008

Work Order Number **0808353**

Received by **AT**

Checklist completed by

Signature

Date

6/30/06

Matrix

Carrier name **Greyhound**

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

Container/Temp Blank temperature?

6°

4° C ± 2 Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

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

CLIENT : BP AMER. PROD. CO.

CHAIN-OF-CUSTODY # : N / A

LEEPER GC #1
UNIT L, SEC. 34, T32N, R10W

LABORATORY (S) USED : HALL ENVIRONMENTAL

Date : August 30, 2006

SAMPLER : J C B

Filename : 08-30-06.WK4

PROJECT MANAGER : N J V

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
2	104.68	97.83	6.85	15.21	1135	6.95	800	25.5	4.25
3	102.76	95.39	7.37	11.30	-	-	-	-	-
10	104.84	97.74	7.10	19.90	-	-	-	-	-
11	103.79	97.60	6.19	20.40	-	-	-	-	-
12	103.05	94.90	8.15	19.70	-	-	-	-	-

INSTRUMENT CALIBRATIONS =

7.00	2,800
08/29/2006	1000

DATE & TIME =

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

(i.e. 2" MW $r = (1/12) \text{ ft.}$ $h = 1 \text{ ft.}$) (i.e. 4" MW $r = (2/12) \text{ ft.}$ $h = 1 \text{ ft.}$)

Ideally a minimum of three (3) wellbore volumes:

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

2 bails per foot - small teflon bailer.

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

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

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

Comments or note well diameter if not standard 2".

Excellent recovery in MW #2. Collected sample for BTEX analysis only.

Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: Blagg Engineering
Lab Order: 0608372
Project: Leeper GC #1
Lab ID: 0608372-01

Client Sample ID: MW #2
Collection Date: 8/30/2006 11:35:00 AM
Date Received: 8/31/2006
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NS8
Benzene	ND	1.0		µg/L	1	9/7/2006 2:10:35 AM
Toluene	ND	1.0		µg/L	1	9/7/2006 2:10:35 AM
Elthylbenzene	ND	1.0		µg/L	1	9/7/2006 2:10:35 AM
Xylenes, Total	ND	3.0		µg/L	1	9/7/2006 2:10:35 AM
Surr: 4-Bromofluorobenzene	96.3	72.2-125		%REC	1	9/7/2006 2:10:35 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- 1 Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

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

Client: BLAGE ENGR. / BP AMERICA

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

Phone #: 632-1199

Fax #:

QA / GC Package:

Std ☐ Level 4 ☐

Other:

Project Name:

LEEPER GC #1

Project #:

Project Manager:

JCB

Sampler:

W

Sample Temperature:

20

HEAL No.

060K372

8/30/66	1135	WATER	MW # 2
---------	------	-------	--------

2-40ml	✓
--------	---

Preservative

HgCl₂ HNO₃

HEAL No.

060K372

Date:	Time:
8/2/06	0715

Date:	Time:
-------	-------

Relinquished By: (Signature)

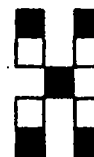
Relinquished By: (Signature)

Received By: (Signature)

Received By: (Signature)

8-5106
16/5

Remarks:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4801 Hawkins NE, Suite O
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

WMBE-TV (80218)

BITEX + MTBE + TPH (Gasoline Only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

B310 (PNA or PAH)

RCRA & Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / PCB's (8082)

02808 (VOA)

8270 (Semi-VOA)

Air Bubbles or Headspace (Y or N)

QA/QC SUMMARY REPORT

Client: Blagg Engineering
Project: Leeper GC #1

Work Order: 0608372

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

Method: SW8021

Sample ID: 5ML REAGENT BLA

MBLK

Batch ID: R20581

Analysis Date:

9/8/2006 11:07:46 AM

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

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R20581

Analysis Date:

9/8/2006 10:45:52 PM

Benzene 21.00 µg/L 1.0 105 85 115
Toluene 21.78 µg/L 1.0 109 85 118
Ethylbenzene 23.42 µg/L 1.0 117 85 118
Xylenes, Total 67.49 µg/L 3.0 111 85 119

S

Sample ID: 100NG BTEX LCSD

LCSD

Batch ID: R20581

Analysis Date:

9/8/2006 11:14:40 PM

Benzene 20.84 µg/L 1.0 104 85 115 0.748 27
Toluene 20.71 µg/L 1.0 104 85 118 5.06 19
Ethylbenzene 21.79 µg/L 1.0 109 85 118 7.20 10
Xylenes, Total 84.88 µg/L 3.0 107 85 119 3.83 13

Qualifiers:

E Value above quantitation range
J Analyte detected below quantitation limits
K RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S 2/3 Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

8/31/2006

Work Order Number **0608372**

Received by: **GLS**

Checklist completed by

B. Schleppe 8-31-06
Signature Date

Matrix

Carrier name Greyhound

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

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

Appendix E

Domestic Water Well Laboratory Analytical Data Reports

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	Private Well	Date Reported:	08-25-98
Chain of Custody:	6236	Date Sampled:	08-24-98
Laboratory Number:	D850	Date Received:	08-25-98
Sample Matrix:	Water	Date Analyzed:	08-25-98
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	1.2	1	0.2
Toluene	1.4	1	0.2
Ethylbenzene	1.0	1	0.2
p,m-Xylene	3.6	1	0.2
o-Xylene	1.1	1	0.1

Total BTEX 8.3

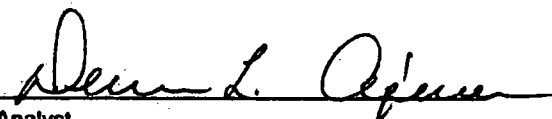
ND - Parameter not detected at the stated detection limit.

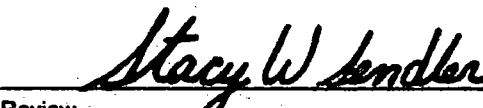
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

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: Leeper GC #1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

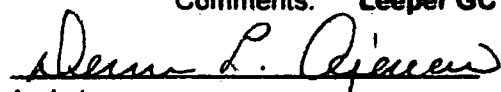
CATION / ANION ANALYSIS

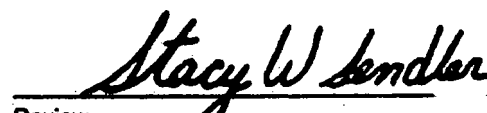
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	Private Well	Date Reported:	08-25-98
Laboratory Number:	D850	Date Sampled:	08-24-98
Chain of Custody:	6236	Date Received:	08-25-98
Sample Matrix:	Water	Date Extracted:	NA
Preservative:	Cool	Date Analyzed:	08-25-98
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	6.67	s.u.		
Conductivity @ 25° C	658	umhos/cm		
Total Dissolved Solids @ 180C	330	mg/L		
Total Dissolved Solids (Calc)	324	mg/L		
SAR	0.0	ratio		
Total Alkalinity as CaCO3	226	mg/L		
Total Hardness as CaCO3	274	mg/L		
Bicarbonate as HCO3	226	mg/L	3.70	meq/L
Carbonate as CO3	<1	mg/L	0.00	meq/L
Hydroxide as OH	<1	mg/L	0.00	meq/L
Nitrate Nitrogen	2.4	mg/L	0.04	meq/L
Nitrite Nitrogen	0.007	mg/L	0.00	meq/L
Chloride	15.1	mg/L	0.43	meq/L
Fluoride	0.77	mg/L	0.04	meq/L
Phosphate	0.2	mg/L	0.01	meq/L
Sulfate	64.2	mg/L	1.34	meq/L
Iron	0.001	mg/L		
Calcium	85.7	mg/L	4.28	meq/L
Magnesium	14.7	mg/L	1.21	meq/L
Potassium	3.7	mg/L	0.09	meq/L
Sodium	<0.1	mg/L	0.00	meq/L
Cations			5.58	meq/L
Anions			5.55	meq/L
Cation/Anion Difference			0.51%	

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

Comments: Leeper GC #1.


Analyst


Review

CHAIN OF CUSTODY RECORD

6236

Client / Project Name BLAGG / AMOCO			Project Location LEEPER GC #1		ANALYSIS / PARAMETERS								
Sampler: J.C. Blagg			Client No. 04034-10		No. of Containers 4	BTEX X	Cyanide X	w/ Iron					Remarks
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix									
PRIVATE WELL	8-24-98	1810	D850	WATER									
Relinquished by: (Signature) J.C. Blagg			Date 8-25-98	Time 0701	Received by: (Signature) Debra L. O'Brien			Date 8-25-98	Time 0701				
Relinquished by: (Signature)					Received by: (Signature)								
Relinquished by: (Signature)					Received by: (Signature)								
ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615										Sample Receipt			
											Y	N	NA
										Received Intact	✓		
										Cool - Ice/Blue Ice	✓		

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	08-25-BTEX QA/QC	Date Reported:	08-25-98
Laboratory Number:	D850	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-25-98
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF: Accept. Range 0 - 15%	%Diff.	Blank Conc	Detect. Limit
Benzene	2.1127E-001	2.1195E-001	0.32%	ND	0.2
Toluene	9.1808E-002	9.1780E-002	0.20%	ND	0.2
Ethylbenzene	9.0053E-002	9.0433E-002	0.42%	ND	0.2
p,m-Xylene	6.0014E-002	6.0026E-002	0.02%	ND	0.2
o-Xylene	7.1496E-002	7.1711E-002	0.30%	ND	0.1

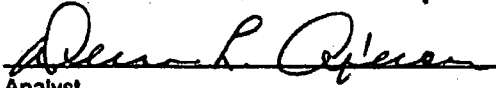
Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Benzene	1.2	1.1	8.3%	0 - 30%
Toluene	1.4	1.4	0.0%	0 - 30%
Ethylbenzene	1.0	1.0	0.0%	0 - 30%
p,m-Xylene	3.6	3.4	3.3%	0 - 30%
o-Xylene	1.1	1.1	0.0%	0 - 30%

Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Benzene	1.2	50.0	51.2	100%	39 - 150
Toluene	1.4	50.0	51.4	100%	48 - 148
Ethylbenzene	1.0	50.0	51.0	100%	32 - 160
p,m-Xylene	3.6	100	104	100%	46 - 148
o-Xylene	1.1	50.0	51.1	100%	48 - 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 sample D850.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Blagg / AMOCO
Sample ID: Private Well
Chain of Custody: 6260
Laboratory Number: D899
Sample Matrix: Water
Preservative: HgCl₂ & Cool
Condition: Cool & Intact

Project #: 04034-10
Date Reported: 09-04-98
Date Sampled: 09-03-98
Date Received: 09-03-98
Date Analyzed: 09-04-98
Analysis Requested: BTEX

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	ND	1	0.2
Toluene	ND	1	0.2
Ethylbenzene	ND	1	0.2
p,m-Xylene	ND	1	0.2
o-Xylene	ND	1	0.1

Total BTEX ND

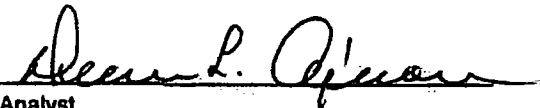
ND - Parameter not detected at the stated detection limit.

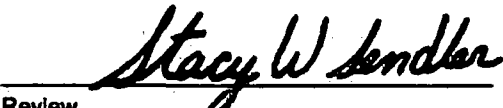
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

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: Leeper GC #1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

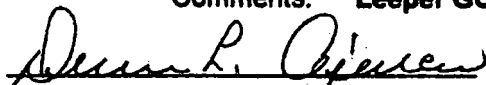
Client: Blagg / AMOCO
Sample ID: Private Well
Laboratory Number: D899
Chain of Custody: 6260
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 04034-10
Date Reported: 09-04-98
Date Sampled: 09-03-98
Date Received: 09-03-98
Date Extracted: NA
Date Analyzed: 09-04-98

Parameter	Analytical Result	Units		Units
pH	7.08	s.u.		
Conductivity @ 25° C	751	umhos/cm		
Total Dissolved Solids @ 180C	375	mg/L		
Total Dissolved Solids (Calc)	374	mg/L		
SAR	0.1	ratio		
Total Alkalinity as CaCO3	243	mg/L		
Total Hardness as CaCO3	302	mg/L		
Bicarbonate as HCO3	243	mg/L	3.98	meq/L
Carbonate as CO3	<1	mg/L	0.00	meq/L
Hydroxide as OH	<1	mg/L	0.00	meq/L
Nitrate Nitrogen	<0.1	mg/L	0.00	meq/L
Nitrite Nitrogen	0.007	mg/L	0.00	meq/L
Chloride	19.6	mg/L	0.55	meq/L
Fluoride	0.85	mg/L	0.04	meq/L
Phosphate	0.1	mg/L	0.00	meq/L
Sulfate	84.6	mg/L	1.76	meq/L
Iron	0.223	mg/L		
Calcium	96.8	mg/L	4.83	meq/L
Magnesium	14.6	mg/L	1.20	meq/L
Potassium	6.5	mg/L	0.17	meq/L
Sodium	3.4	mg/L	0.15	meq/L
Cations			6.35	meq/L
Anions			6.35	meq/L
Cation/Anion Difference			0.01%	

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

Comments: Leeper GC #1.


Analyst


Review

CHAIN OF CUSTODY RECORD

6260

Client / Project Name BLAGG/AMOCO			Project Location Leeper GC #1		ANALYSIS / PARAMETERS								
Sampler: J-C. Blagg			Client No. 04034-10		No. of Containers 3	BTEX	CATALAN/ANION W/IRON					Remarks	
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix									
PRIVATE Well	9-3-98	1430	D 899	Water									
Relinquished by: (Signature) J-C. Blagg			Date 9-3-98	Time 1617	Received by: (Signature) Debra L. Aprian			Date 9-3-98	Time 1617				
Relinquished by: (Signature)					Received by: (Signature)								
Relinquished by: (Signature)					Received by: (Signature)								
ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615										Sample Receipt			
											Y	N	N/A
										Received Intact	✓		
										Cool - Ice/Blue Ice	✓		

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	09-04-BTEX QA/QC	Date Reported:	09-04-98
Laboratory Number:	D899	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-04-98
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect. Limit
		Accept. Range 0 - 15%			
Benzene	1.0251E-002	1.0284E-002	0.32%	ND	0.2
Toluene	4.4438E-003	4.4527E-003	0.20%	ND	0.2
Ethylbenzene	4.9217E-003	4.9424E-003	0.42%	ND	0.2
p,m-Xylene	3.8788E-003	3.8794E-003	0.02%	ND	0.2
o-Xylene	4.1377E-003	4.1501E-003	0.30%	ND	0.1

Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Benzene	ND	ND	0.0%	0 - 30%
Toluene	ND	ND	0.0%	0 - 30%
Ethylbenzene	ND	ND	0.0%	0 - 30%
p,m-Xylene	ND	ND	0.0%	0 - 30%
o-Xylene	ND	ND	0.0%	0 - 30%

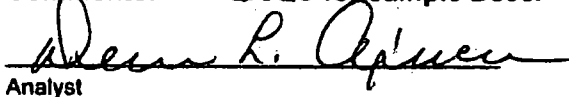
Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Benzene	ND	50.0	50.0	100%	39 - 150
Toluene	ND	50.0	50.0	100%	46 - 148
Ethylbenzene	ND	50.0	50.0	100%	32 - 160
p,m-Xylene	ND	100	100	100%	46 - 148
o-Xylene	ND	50.0	50.0	100%	46 - 148

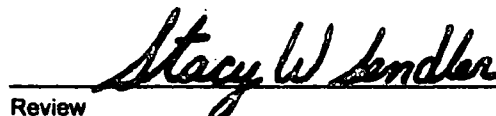
ND - Parameter not detected at the stated detection limit.

* - Administrative Limits set at 80 - 120%.

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 sample D899.


Analyst


Review



Acculabs Inc.

Durango

75 Suttle Street, Durango CO 81301 ■ 970-247-4220 ■ Fax 247-4227

Blagg Engineering Inc
PO Box 87
Bloomfield, CO 87413
Attention: Jeff Blagg

Acculabs I.D.: 7-906-037-01

Date Received: 06/09/99

Date Reported: 06/22/99

QC Batches:

PROJECT NAME: 0
PROJECT NUMBER: 0
SAMPLE I.D.: Alfonso

Sample Date: 06/09/99

Sample Matrix: Water

Wet Chemistry

RESULTS

PARAMETER	METHOD	REPORT LIMIT	RESULT	DIL	UNITS	DATE ANALYZED	ANALYST
Methane	USGS	0.02	0.24		mg/L		


Ida Green, Laboratory Director

Phoenix ■ Tucson ■ North Phoenix ■ Davis/Sacramento ■ Durango ■ Golden ■ Sparks/Reno



Acculabs Inc.

Durango

75 Suttle Street, Durango CO 81301 ■ 970-247-4220 ■ Fax 247-4227

Blagg Engineering Inc
PO Box 87
Bloomfield, CO 87413
Attention: Jeff Blagg

Acculabs I.D.: 7-806-037-02

Date Received: 06/09/99

Date Reported: 06/22/99

QC Batches:

PROJECT NAME: 0
PROJECT NUMBER: 0
SAMPLE I.D.: McLanahan

Sample Date: 06/09/99

Sample Matrix: Water

Wet Chemistry

RESULTS

PARAMETER	METHOD	REPORT LIMIT	RESULT	DIL	UNITS	DATE ANALYZED	ANALYST
Methane	USGS	0.02	<0.02		mg/L		


John Green, Laboratory Director

Phoenix ■ Tucson ■ North Phoenix ■ Davis/Sacramento ■ Durango ■ Golden ■ Sparks/Reno



Acculabs Inc.

Durango

75 Suttle Street, Durango CO 81301 ■ 970-247-4220 ■ Fax 247-4227

Client Name: Blagg Engineering Inc

Address: PO Box 87

City, St Zip: Bloomfield, CO 87413

Attention: Jeff Blagg

Date Received: 06/09/99

Date Reported: 06/22/99

Lab I.D.: 7-906-037,01-02

Project Name:

Project Number:

Sample I.D.:

Sample Date: 06/09/99

Sample Time: 13:35-14:00

Date Extracted:

Date Analyzed:

ADHS No. AZ0563

Sample Units

Sample Matrix Water

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Blagg / AMOCO
Sample ID: Alafonso
Chain of Custody: 7041
Laboratory Number: F478
Sample Matrix: Water
Preservative: HgCl2 & Cool
Condition: Cool & Intact

Project #: 403410
Date Reported: 06-10-99
Date Sampled: 06-09-99
Date Received: 06-10-99
Date Analyzed: 06-10-99
Analysis Requested: BTEX

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	0.3	1	0.2
Toluene	0.7	1	0.2
Ethylbenzene	ND	1	0.2
p,m-Xylene	0.8	1	0.2
o-Xylene	0.5	1	0.1

Total BTEX 2.3

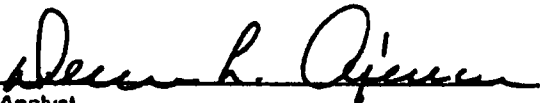
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

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: Leeper GC 1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client: Blagg / AMOCO
Sample ID: Alafonso
Laboratory Number: F478
Chain of Custody: 7041
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

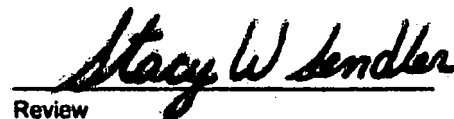
Project #: 403410
Date Reported: 08-10-99
Date Sampled: 08-09-99
Date Received: 08-10-99
Date Extracted: N/A
Date Analyzed: 08-10-99

Parameter	Analytical Result	Units	Units
pH	7.16	s.u.	
Conductivity @ 25° C	964	umhos/cm	
Total Dissolved Solids @ 180C	480	mg/L	
Total Dissolved Solids (Calc)	475	mg/L	
SAR	0.6	ratio	
Total Alkalinity as CaCO3	266	mg/L	
Total Hardness as CaCO3	345	mg/L	
Bicarbonate as HCO3	266	mg/L	4.37 meq/L
Carbonate as CO3	<1	mg/L	0.00 meq/L
Hydroxide as OH	<1	mg/L	0.00 meq/L
Nitrate Nitrogen	<0.1	mg/L	0.00 meq/L
Nitrite Nitrogen	0.003	mg/L	0.00 meq/L
Chloride	35.5	mg/L	1.00 meq/L
Fluoride	0.81	mg/L	0.04 meq/L
Phosphate	<0.1	mg/L	0.00 meq/L
Sulfate	126	mg/L	2.61 meq/L
Iron	0.290	mg/L	
Calcium	103	mg/L	5.14 meq/L
Magnesium	21.4	mg/L	1.76 meq/L
Potassium	2.9	mg/L	0.07 meq/L
Sodium	24.1	mg/L	1.05 meq/L
Cations			8.02 meq/L
Anions			8.02 meq/L
Cation/Anion Difference			0.00%

Reference: U.S.E.P.A., 800/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Leeper GC 1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Blagg / AMOCO
Sample ID: McLanahan
Chain of Custody: 7041
Laboratory Number: F477
Sample Matrix: Water
Preservative: HgCl₂ & Cool
Condition: Cool & Intact

Project #: 403410
Date Reported: 06-10-99
Date Sampled: 06-09-99
Date Received: 06-10-99
Date Analyzed: 06-10-99
Analysis Requested: BTEX

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	1.3	1	0.2
Toluene	3.4	1	0.2
Ethylbenzene	1.0	1	0.2
p,m-Xylene	10.2	1	0.2
o-Xylene	3.8	1	0.1

Total BTEX 19.7

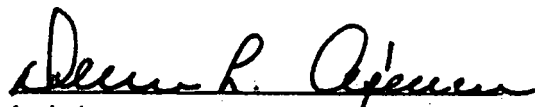
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	97 %

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: Leeper GC 1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

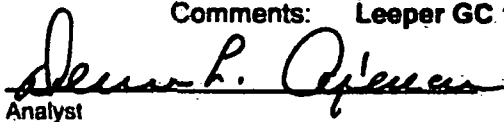
CATION / ANION ANALYSIS

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	McLanahan	Date Reported:	06-10-99
Laboratory Number:	F477	Date Sampled:	06-09-99
Chain of Custody:	7041	Date Received:	06-10-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	06-10-99
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	6.94	s.u.		
Conductivity @ 25° C	860	umhos/cm		
Total Dissolved Solids @ 180C	430	mg/L		
Total Dissolved Solids (Calc)	429	mg/L		
SAR	0.2	ratio		
Total Alkalinity as CaCO3	269	mg/L		
Total Hardness as CaCO3	336	mg/L		
Bicarbonate as HCO3	269	mg/L	4.41	meq/L
Carbonate as CO3	<1	mg/L	0.00	meq/L
Hydroxide as OH	<1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.2	mg/L	0.00	meq/L
Nitrite Nitrogen	0.005	mg/L	0.00	meq/L
Chloride	13.6	mg/L	0.38	meq/L
Fluoride	0.55	mg/L	0.03	meq/L
Phosphate	<0.1	mg/L	0.00	meq/L
Sulfate	114	mg/L	2.37	meq/L
Iron	0.001	mg/L		
Calcium	110	mg/L	5.49	meq/L
Magnesium	14.8	mg/L	1.22	meq/L
Potassium	3.7	mg/L	0.09	meq/L
Sodium	9.0	mg/L	0.39	meq/L
Cations			7.20	meq/L
Anions			7.20	meq/L
Cation/Anion Difference			0.04%	

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

Comments: Leeper GC 1.


Analyst


Review

7041

[illegible]

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client: N/A
Sample ID: 06-10-BTEX QA/QC
Laboratory Number: F477
Sample Matrix: Water
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 06-10-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 06-10-99
Analysis: BTEX

Benzene	1.6360E-002	1.6412E-002	0.32%	ND	0.2
Toluene	1.7583E-002	1.7568E-002	0.02%	ND	0.2
Ethylbenzene	7.1313E-003	7.1398E-003	0.12%	ND	0.2
p,m-Xylene	8.5740E-003	8.5758E-003	0.02%	ND	0.2
o-Xylene	7.9281E-003	7.8520E-003	0.30%	ND	0.1

Benzene	1.3	1.3	0.0%	0 - 30%
Toluene	3.4	3.4	0.0%	0 - 30%
Ethylbenzene	1.0	1.0	0.0%	0 - 30%
p,m-Xylene	10.2	10.6	3.9%	0 - 30%
o-Xylene	3.8	3.8	0.0%	0 - 30%

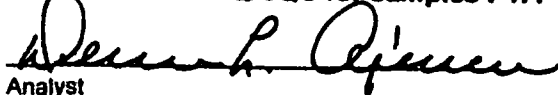
Benzene	1.3	50.0	51.3	100%	39 - 150
Toluene	3.4	50.0	53.4	100%	46 - 148
Ethylbenzene	1.0	50.0	51.0	100%	32 - 160
p,m-Xylene	10.2	100.0	110	100%	46 - 148
o-Xylene	3.8	50.0	53.8	100%	46 - 148

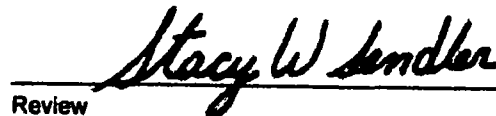
ND - Parameter not detected at the stated detection limit.

* - Administrative Limits set at 80 - 120%.

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

Comments: QA/QC for samples F477 - F480.


Analyst


Review

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Jun-99

Client: Blagg Engineering

Work Order: 9906047

Lab ID: 9906047-01A

Project: Leeper GC 1

Matrix: AQUEOUS

Client Sample Info: Leeper GC 1

Client Sample ID: Alafonso Well

Collection Date: 6/10/99 2:50:00 PM

COC Record: 10201

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Benzene	ND	0.5		µg/L	1	6/17/99
Toluene	ND	0.5		µg/L	1	6/17/99
Ethylbenzene	ND	0.5		µg/L	1	6/17/99
m,p-Xylene	ND	1		µg/L	1	6/17/99
o-Xylene	ND	0.5		µg/L	1	6/17/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

R - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surrogate - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Jun-99

Client:	Blagg Engineering	Client Sample Info:	Leeper GC 1
Work Order:	9906047	Client Sample ID:	McLanahan Well
Lab ID:	9906047-02A	Matrix:	AQUEOUS
Project:	Leeper GC 1	Collection Date:	6/10/99 3:20:00 PM
		COC Record:	10201

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Benzene	ND	0.5		µg/L	1	6/17/99
Toluene	ND	0.5		µg/L	1	6/17/99
Ethylbenzene	ND	0.5		µg/L	1	6/17/99
m,p-Xylene	ND	1		µg/L	1	6/17/99
o-Xylene	ND	0.5		µg/L	1	6/17/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

On Site Technologies, LTD.

Date: 21-Jun-99

CLIENT: Blagg Engineering
Work Order: 9906047
Project: Leeper GC 1

QC SUMMARY REPORT
Method Blank

Sample ID: MB1		Batch ID: GC-1_990617		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/17/99			Prep Date:	
Client ID:		9906047		Run ID:		GC-1_990617A		SeqNo:		16071		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	.0318	0.5									J	
Ethylbenzene	ND	0.5										
m,p-Xylene	ND	1										
Methyl tert-Butyl Ether	ND	1										
o-Xylene	ND	0.5										
Toluene	.0955	0.5									J	

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

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

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 21-Jun-99

CLIENT: Blagg Engineering
Work Order: 9906047
Project: Leeper GC 1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9906023-01AMS	Batch ID: GC-1_990617	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/17/99				Prep Date:		
Client ID:	9906047	Run ID:	GC-1_990617A		SeqNo:		16072				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	735.1	5	400	315.5	104.9%	73	115				
Ethylbenzene	436.8	5	400	16.79	105.0%	74	117				
m,p-Xylene	960.4	10	800	152	101.1%	76	112				
Methyl tert-Butyl Ether	491.6	10	400	29.85	115.4%	62	122				
o-Xylene	467.6	5	400	47.16	105.1%	83	112				
Toluene	880.9	5	400	466.4	103.6%	71	120				

Sample ID: 9906023-01AMSD	Batch ID: GC-1_990617	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/17/99				Prep Date:			
Client ID:	9906047	Run ID:	GC-1_990617A	SeqNo: 16073							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	729.1	5	400	315.5	103.4%	73	115	735.1	0.8%	8	
Ethylbenzene	427.2	5	400	16.79	102.6%	74	117	436.8	2.2%	9	
m,p-Xylene	938.9	10	800	152	98.4%	76	112	960.4	2.3%	9	
Methyl tert-Butyl Ether	489.1	10	400	29.85	114.8%	62	122	491.6	0.5%	7	
o-Xylene	458.8	5	400	47.16	102.9%	83	112	467.6	1.9%	9	
Toluene	859.5	5	400	466.4	98.3%	71	120	880.9	2.5%	9	

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

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

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 21-Jun-99

CLIENT: Blagg Engineering
Work Order: 9906047
Project: Leeper GC 1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990617	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/17/99	Prep Date:						
Client ID:	9906047	Run ID: GC-1_990617A	SeqNo: 16070								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.46	0.5	40	0.0318	111.1%	84	110				✓ S
Ethylbenzene	43.33	0.5	40	0	108.3%	86	113				
m,p-Xylene	84	1	80	0	105.0%	81	114				MS
Methyl tert-Butyl Ether	46.57	1	40	0	116.4%	69	129				GC
o-Xylene	43.2	0.5	40	0	108.0%	86	112				
Toluene	43.46	0.5	40	0.0955	108.4%	85	111				

S < 115%
#5 6/21/99
6/21/99

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

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

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 21-Jun-99

CLIENT: Blagg Engineering
Work Order: 9906047
Project: Leeper GC 1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9902 Batch ID: GC-1_990617 Test Code: SW8021B Units: µg/L Analysis Date: 6/17/99 Prep Date:
Client ID: 9906047 Run ID: GC-1_990617A SeqNo: 16066

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.08	0.5	20	0	115.4%	85	115				S CONFIRMED w/ CCV2
Ethylbenzene	22.55	0.5	20	0	112.7%	85	115				
m,p-Xylene	43.86	1	40	0	109.6%	85	115				
Methyl tert-Butyl Ether	23.5	1	20	0	117.5%	85	115				S 4/8 6/21/99 6/21/99
o-Xylene	22.39	0.5	20	0	112.0%	85	115				
Toluene	22.53	0.5	20	0	112.7%	85	115				
1,4-Difluorobenzene	94.72	0	100	0	94.7%	88	100				
4-Bromochlorobenzene	94.04	0	100	0	94.0%	90	104				
Fluorobenzene	97.38	0	100	0	97.4%	89	101				

Sample ID: CCV2 BTEX_9902 Batch ID: GC-1_990617 Test Code: SW8021B Units: µg/L Analysis Date: 6/17/99 Prep Date:
Client ID: 9906047 Run ID: GC-1_990617A SeqNo: 16067

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.57	0.5	20	0	112.8%	85	115				
Ethylbenzene	22.02	0.5	20	0	110.1%	85	115				
m,p-Xylene	42.91	1	40	0	107.3%	85	115				
Methyl tert-Butyl Ether	22.92	1	20	0	114.6%	85	115				
o-Xylene	22	0.5	20	0	110.0%	85	115				
Toluene	22.05	0.5	20	0	110.2%	85	115				
1,4-Difluorobenzene	94.8	0	100	0	94.8%	88	100				
4-Bromochlorobenzene	94.56	0	100	0	94.6%	90	104				
Fluorobenzene	97.59	0	100	0	97.6%	89	101				

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

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

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering
Work Order: 9906047
Project: Leeper GC 1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990617	Test Code: SW8021B		Units: µg/L		Analysis Date: 6/17/99			Prep Date:	
Client ID:		9906047	Run ID: GC-1_990617A				SeqNo: 16088				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.46	0.5	20	0	107.3%	85	115				
Ethylbenzene	20.84	0.5	20	0	104.2%	85	115				
m,p-Xylene	40.48	1	40	0	101.2%	85	115				
Methyl tert-Butyl Ether	21.99	1	20	0	109.9%	85	115				
o-Xylene	20.87	0.5	20	0	104.3%	85	115				
Toluene	20.82	0.5	20	0	104.1%	85	115				
1,4-Difluorobenzene	94.85	0	100	0	94.9%	86	100				
4-Bromochlorobenzene	95.46	0	100	0	95.5%	90	104				
Fluorobenzene	97.48	0	100	0	97.5%	89	101				

Sample ID: CCV4 BTEX_9902		Batch ID: GC-1_990617	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/17/99			Prep Date:			
Client ID:	9906047	Run ID:	GC-1_990617A		SeqNo:	16089					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.33	0.5	40	0	110.8%	85	115				
Ethylbenzene	43.32	0.5	40	0	108.3%	85	115				
m,p-Xylene	83.19	1	80	0	104.0%	85	115				
Methyl tert-Butyl Ether	42.8	1	40	0	107.0%	85	115				
o-Xylene	42.98	0.5	40	0	107.5%	85	115				
Toluene	43.48	0.5	40	0	108.7%	85	115				
1,4-Difluorobenzene	94.19	0	100	0	94.2%	86	100				
4-Bromochlorobenzene	93.77	0	100	0	93.8%	90	104				
Fluorobenzene	96.81	0	100	0	96.8%	89	101				

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

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

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 21-Jun-99

CLIENT: Blagg Engineering
 Work Order: 9906047
 Project: Leeper GC 1
 Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
9906023-01A	94.4	94	96.9
9906023-01AMS	91.6	94.6	95.2
9906023-01AMSD	93.9	94.4	96
9906036-01A	95.1	92.6	98.6
9906036-02A	95.2	94.4	98.7
9906047-01A	94.5	94.2	98.3
9906047-02A	95	93.3	98.7
9906049-02A	95.3	94.7	98.8
9906049-03A	95.3	94.1	98.6
9906049-04A	95.2	94.6	98.8
9906049-05A	95.6	95.6	98.6
9906049-06A	95.3	95.8	98.9
9906049-07A	95.1	93.9	98.7
9906049-08A	95.8	93	98.9
9906049-09A	95.6	94.3	98.5
9906049-10A	95.5	97	98.7
9906049-11A	95.5	97.1	98.8
9906049-12A	94.3	97.6	97.5
9906049-13A	95.3	93.7	98.6
9906049-14A	99.8	101	100
CCV1 BTEX_99020	94.7	94	97.4
CCV2 BTEX_99020	94.8	94.6	97.6
CCV3 BTEX_99020	94.8	95.5	97.5
CCV4 BTEX_99020	94.2	93.8	96.8
LCS WATER	93.9	94	96.8
MBI	95.1	94.2	98.6

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	86-100
4BCBZ	= 4-Bromochlorobenzene	90-104
FLBZ	= Fluorobenzene	89-101

* Surrogate recovery outside acceptance limits

/

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

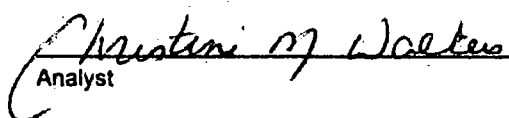
Client: Blagg / AMOCO
Sample ID: Alafonso 1221991035
Laboratory Number: G647
Chain of Custody: 7607
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

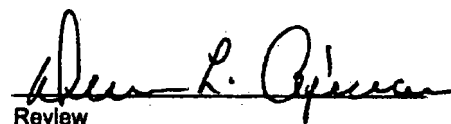
Project #: 403410
Date Reported: 12-27-99
Date Sampled: 12-21-99
Date Received: 12-21-99
Date Extracted: N/A
Date Analyzed: 12-21-99

Parameter	Analytical Result	Units	Units
pH	7.18	s.u.	
Conductivity @ 25° C	813	umhos/cm	
Total Dissolved Solids @ 180C	468	mg/L	
Total Dissolved Solids (Calc)	450	mg/L	
SAR	0.6	ratio	
Total Alkalinity as CaCO3	310	mg/L	
Total Hardness as CaCO3	327	mg/L	
Bicarbonate as HCO3	310	mg/L	5.08 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	<0.1	mg/L	0.00 meq/L
Nitrite Nitrogen	0.005	mg/L	0.00 meq/L
Chloride	20	mg/L	0.56 meq/L
Fluoride	1.03	mg/L	0.05 meq/L
Phosphate	<0.1	mg/L	0.00 meq/L
Sulfate	95	mg/L	1.98 meq/L
Iron	0.234	mg/L	
Calcium	110	mg/L	5.49 meq/L
Magnesium	13	mg/L	1.05 meq/L
Potassium	3.7	mg/L	0.09 meq/L
Sodium	24	mg/L	1.04 meq/L
Cations			7.68 meq/L
Anions			7.68 meq/L
Cation/Anion Difference			0.01%

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

Comments: Leeper GC 1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

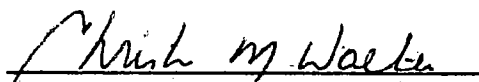
Water Analysis

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	Alafonso 1221991035	Date Reported:	12-27-99
Laboratory Number:	G647	Date Sampled:	12-21-99
Sample Matrix:	Water	Date Received:	12-21-99
Preservative:	Cool	Date Analyzed:	12-21-99
Condition:	Cool & Intact	Chain of Custody:	7607

Parameter	Analytical Result	Units
Manganese	2.7	mg/L
Ferrous Iron	0.01	mg/L

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

Comments: Leeper GC 1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client: Blagg / AMOCO
Sample ID: McClanahan 1221991145
Laboratory Number: G648
Chain of Custody: 7607
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 403410
Date Reported: 12-27-99
Date Sampled: 12-21-99
Date Received: 12-21-99
Date Extracted: N/A
Date Analyzed: 12-21-99

Parameter	Analytical Result	Units		Units
pH	7.22	s.u.		
Conductivity @ 25° C	663	umhos/cm		
Total Dissolved Solids @ 180C	420	mg/L		
Total Dissolved Solids (Calc)	370	mg/L		
SAR	0.0	ratio		
Total Alkalinity as CaCO3	236	mg/L		
Total Hardness as CaCO3	302	mg/L		
Bicarbonate as HCO3	236	mg/L	3.87	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.1	mg/L	0.00	meq/L
Nitrite Nitrogen	0.001	mg/L	0.00	meq/L
Chloride	11	mg/L	0.30	meq/L
Fluoride	0.72	mg/L	0.04	meq/L
Phosphate	<0.1	mg/L	0.00	meq/L
Sulfate	96	mg/L	2.00	meq/L
Iron	<0.001	mg/L		
Calcium	96	mg/L	4.78	meq/L
Magnesium	15	mg/L	1.25	meq/L
Potassium	3.9	mg/L	0.10	meq/L
Sodium	1.8	mg/L	0.08	meq/L
Cations			6.21	meq/L
Anions			6.21	meq/L

Cation/Anion Difference 0.00%

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

Comments: Leeper GC 1.

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

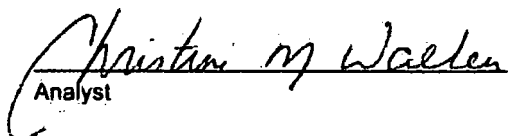
Water Analysis

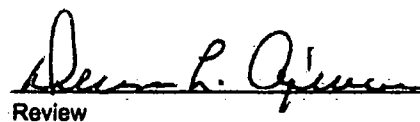
Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	McClanahan 1221991145	Date Reported:	12-27-99
Laboratory Number:	G648	Date Sampled:	12-21-99
Sample Matrix:	Water	Date Received:	12-21-99
Preservative:	Cool	Date Analyzed:	12-21-99
Condition:	Cool & Intact	Chain of Custody:	7607

Parameter	Analytical Result	Units
Manganese	0.1	mg/L
Ferrous Iron	0.02	mg/L

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

Comments: Leeper GC 1.


Analyst


Review

CHAIN OF CUSTODY RECORD

7607

Client / Project Name BLAGG/Amoco			Project Location LEEPER GC 1		ANALYSIS / PARAMETERS								
Sampler: J.C. Blagg			Client No. 403410		No. of Containers	Cation	Anion	Fe + Mn					Remarks
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix									
ALAFONSO 1221991035	12/2/99	1035	G647	WATER	1	X	X						
McClanahan 1221991145	"	1145	G648	"	1	X	X						
Relinquished by: (Signature) J.C. Blagg			Date 12/2/99	Time 1413	Received by: (Signature) Christine W. Carter			Date 12/2/99	Time 1413				
Relinquished by: (Signature)					Received by: (Signature)								
Relinquished by: (Signature)					Received by: (Signature)								
ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615										Sample Receipt			
											Y	N	N/A
										Received Intact	✓		
										Cool - Ice/Blue Ice	✓		

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Dec-99

Client:	Blagg Engineering	Client Sample Info:	Leeper GC 1
Work Order:	9912029	Client Sample ID:	Alafonso 1221991035
Lab ID:	9912029-01A	Matrix:	AQUEOUS
Project:	Leeper GC 1	Collection Date:	12/21/1999 10:35:00 AM
		COC Record:	10452

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	12/21/1999
Toluene	ND	0.5		µg/L	1	12/21/1999
Ethylbenzene	ND	0.5		µg/L	1	12/21/1999
m,p-Xylene	ND	1		µg/L	1	12/21/1999
o-Xylene	ND	0.5		µg/L	1	12/21/1999

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Dec-99

Client:	Blagg Engineering	Client Sample Info:	Leeper GC 1
Work Order:	9912029	Client Sample ID:	McClanahan 1221991145
Lab ID:	9912029-02A	Matrix:	AQUEOUS
Project:	Leeper GC 1	Collection Date:	12/21/1999 11:45:00 AM
		COC Record:	10452

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	12/21/1999
Toluene	ND	0.5		µg/L	1	12/21/1999
Ethylbenzene	ND	0.5		µg/L	1	12/21/1999
m,p-Xylene	ND	1		µg/L	1	12/21/1999
o-Xylene	ND	0.5		µg/L	1	12/21/1999

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surrogate - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT



CHAIN OF CUSTODY RECORD

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

Date: _____

Page: _____ of _____

Purchase Order No.:		Project No.:		REPORT RESULTS TO		Name			Title			
SEND INVOICE TO		Name				Company			Mailing Address			
		Company				Dept.		City, State, Zip				
		Address				City, State, Zip		Telephone No.		Telefax No.		
PROJECT LOCATION:				Number of Containers		ANALYSIS REQUESTED						
SAMPLER'S SIGNATURE:						LAB ID						
SAMPLE IDENTIFICATION		SAMPLE										
DATE	TIME	MATRIX	PRES.									
Relinquished by: _____		Date/Time: _____		Received by: _____			Date/Time: _____					
Relinquished by: _____		Date/Time: _____		Received by: _____			Date/Time: _____					
Relinquished by: _____		Date/Time: _____		Received by: _____			Date/Time: _____					
Method of Shipment:				Rush		24-48 Hours		10 Working Days		By Date		
Authorized by: _____ Date: _____ (Client Signature <u>Must</u> Accompany Request)				Special Instructions / Remarks:								

On Site Technologies, LTD.

Date: 31-Dec-99

CLIENT: Blagg Engineering

Work Order: 9912029

Project: Leeper GC 1

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date: 12/21/1999	Prep Date:						
Client ID:	9912029	Run ID: GC-1_991221A		SeqNo: 22213							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1926	0.5									J
Ethylbenzene	.215	0.5									J
m,p-Xylene	.3975	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	.1448	0.5									J
Toluene	.2676	0.5									J

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

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

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 31-Dec-99

CLIENT: Blagg Engineering
Work Order: 9912029
Project: Leeper GC I

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9912026-01AMS	Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date 12/21/1999				Prep Date:			
Client ID:	9912029	Run ID:	GC-1_991221A		SeqNo:	22214					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1940	5	400	1500	110.1%	80	116				
Ethylbenzene	1229	5	400	820.6	102.2%	80	118				
m,p-Xylene	4004	10	800	3093	113.8%	77	116				E
Methyl tert-Butyl Ether	618.2	10	400	217.8	100.1%	62	122				
o-Xylene	862.7	5	400	458.6	101.0%	83	117				
Toluene	2128	5	400	1687	110.4%	80	116				E

Sample ID: 9912026-01AMSD	Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date: 12/21/1999	Prep Date:						
Client ID:	9912029	Run ID: GC-1_991221A		SeqNo: 22215							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1999	5	400	1500	124.7%	80	116	1940	3.0%	7	S ✓
Ethylbenzene	1261	5	400	820.6	110.1%	80	118	1229	2.5%	7	
m,p-Xylene	4113	10	800	3093	127.5%	77	116	4004	2.7%	7	ES ✓
Methyl tert-Butyl Ether	644.8	10	400	217.8	106.8%	62	122	618.2	4.2%	7	
o-Xylene	887.8	5	400	458.6	107.3%	83	117	862.7	2.9%	6	
Toluene	2181	5	400	1687	123.5%	80	116	2128	2.4%	6	ES ✓

CONFIRMED - LCS
① 12/31/99

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

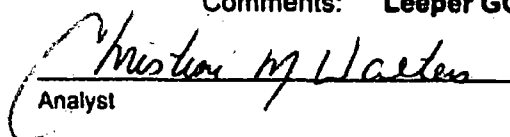
Client: Blagg / AMOCO
Sample ID: Animas 1222990935
Laboratory Number: G652
Chain of Custody: 7610
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

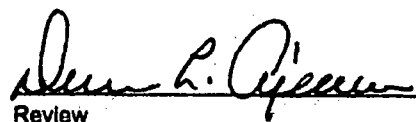
Project #: 403410
Date Reported: 12-27-99
Date Sampled: 12-22-99
Date Received: 12-22-99
Date Extracted: N/A
Date Analyzed: 12-22-99

Parameter	Analytical Result	Units	Units
pH	7.87	S.U.	
Conductivity @ 25° C	648	umhos/cm	
Total Dissolved Solids @ 180C	456	mg/L	
Total Dissolved Solids (Calc)	420	mg/L	
SAR	0.8	ratio	
Total Alkalinity as CaCO3	149	mg/L	
Total Hardness as CaCO3	268	mg/L	
Bicarbonate as HCO3	149	mg/L	2.44 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	0.2	mg/L	0.00 meq/L
Nitrite Nitrogen	0.004	mg/L	0.00 meq/L
Chloride	23	mg/L	0.65 meq/L
Fluoride	0.58	mg/L	0.03 meq/L
Phosphate	<0.1	mg/L	0.00 meq/L
Sulfate	173	mg/L	3.60 meq/L
Iron	0.007	mg/L	
Calcium	93	mg/L	4.62 meq/L
Magnesium	8.8	mg/L	0.72 meq/L
Potassium	4.1	mg/L	0.10 meq/L
Sodium	30	mg/L	1.28 meq/L
Cations			6.73 meq/L
Anions			6.73 meq/L
Cation/Anion Difference			0.03%

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

Comments: Leeper GC 1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

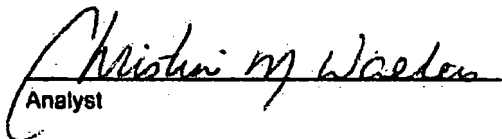
Water Analysis

Client:	Blagg / AMOCO	Project #:	403410
Sample ID:	Animas 1222990935	Date Reported:	12-27-99
Laboratory Number:	G652	Date Sampled:	12-22-99
Sample Matrix:	Water	Date Received:	12-22-99
Preservative:	Cool	Date Analyzed:	12-22-99
Condition:	Cool & Intact	Chain of Custody:	7610

Parameter	Analytical Result	Units
Manganese	0.2	mg/L
Ferrous Iron	<0.01	mg/L

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

Comments: Leeper GC 1.


Analyst


Review

CHAIN OF CUSTODY RECORD

7610

Client / Project Name BLAGG / AMOCO			Project Location LEEPER GC 1		ANALYSIS / PARAMETERS									
Sampler: J-C BLAGG			Client No. 0403410		No. of Containers 1	CATION X	ANION X	Fe ⁺⁺ Mn X						Remarks
Sample No/ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix										
ANIMAS 1222990935	12/22/19	0935	G652	Water										
Relinquished by: (Signature) J-C Blagg			Date 12/22/19	Time 1127	Received by: (Signature) Ezora L. Boaguel					Date 12/22/19	Time 11:29			
Relinquished by: (Signature)					Received by: (Signature)									
Relinquished by: (Signature)					Received by: (Signature)									
ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615										Sample Receipt				
											Y	N	N/A	
										Received Intact	✓			
										Cool - Ice/Blue Ice	✓			

Appendix F
Monitor Well Logs

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 832-1199	LOCATION NO: _____
----------------------	---	--------------------

FIELD REPORT: SITE ASSESSMENT	PAGE No: <u>1</u> of <u>1</u>
PROJECT: <u>PIT ASSESSMENT SET GW wells</u> CONTRACTOR: <u>BLAGG ENGINEERING</u>	DATE STARTED: <u>9/14/98</u> DATE FINISHED: <u>9/19/98</u>

LOCATION: NAME: <u>Leper GC</u>	WELL #: <u>1</u>	PIT: <u>SEP</u>	
QUAD/UNIT: <u>L</u>	SEC: <u>34</u>	TWP: <u>32N</u>	RNG: <u>10W</u> PM: <u>NM</u> CNTY: <u>SS</u> ST: <u>NM</u>

FIELD NOTES & REMARKS:

Set MW#1 w/ BACKHoe @ New Excavation
 Set MW#2 w/ BACKHoe @ EDGE of Excavation (SO-TH)
 Set MW#3 w/ BACKHoe @ Repair Hole for Fiberglass line.

TEST HOLE LOGS:

TH#:	SOIL TYPE:	SMPL TYPE:	OVM/TPH:	TH#:	SOIL TYPE:	SMPL TYPE:	OVM/TPH:	TH#:	SOIL TYPE:	SMPL TYPE:	OVM/TPH:	TH#:	SOIL TYPE:	SMPL TYPE:	OVM/TPH:
MW#1				MW#2				MW#3							
0	2" Riser			0	2" Riser			0	2" Riser						
1				1				1							
2				2				2							
3				3				3							
4				4				4							
5				5				5							
6				6				6							
7				7				7							
8				8				8							
9				9				9							
10				10				10							
11				11				11							
12				12				12							
13				13				13							
14				14				14							
15				15				15							

SOIL TYPE: C - Clay, M - Sil. S - Sand, G - Gravel

Plasticity: L - None, W - Plastic

Grading: P - Poorly, W - Well

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

BORING #..... BH - 1
MW #..... 4
PAGE #..... 1
DATE STARTED 12/30/99
DATE FINISHED 12/30/99
OPERATOR..... DE
PREPARED BY NJV

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: S84W, 390 FEET FROM WELL HEAD.

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
				TOP OF CASING APPROX. 0.20 FT. BELOW GROUND SURFACE.
1				
2				
3				
4				
5				
6				
7				
8				
9				
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12				
13				
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15				
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28				
29				
30				
31				

TOS = 5.08

TD = 20.08

MODERATE TO DARK YELLOWISH BROWN SILTY SAND, NON COHESIVE, DRY TO SLIGHTLY MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.0 - 11.0 FT. INTERVAL).

OVM @ 8 ft. = 0.0 ppm COLLECTED 10:30 am READING 10:54 am

GW DEPTH ON 12/31/99 = 11.80 FT. (APPROX.) FROM GROUND SURFACE.

OVM @ 12 ft. = 0.0 ppm COLLECTED 10:40 am READING 10:54 am

MODERATE TO DARK YELLOWISH BROWN SILTY SAND WITH GRAVEL OBSERVED IN CUTTINGS, NON COHESIVE, MOIST TO SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (11.0 - 21.0 FT. INTERVAL).

MEDIUM BLUISH GRAY SHALE, UNABLE TO DISCERN COMPACTION OR FRIABILITY DUE TO DRILLING METHOD, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (21.0 - 24.0 FT. INTERVAL).

NOTE:

- SILTY SAND.
- SILTY SAND WITH GRAVEL.
- SHALE BEDROCK.
- TOS - TOP OF SCREEN FROM GROUND SURFACE.
- TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
- GW - GROUND WATER.
- ppm - PARTS PER MILLION.

DRAWING: BH-01.SKD DATE: 12/31/99 DWN BY: NJV

MONITOR WELL #4

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP ENCASED WITH 8 X 12"
MANHOLE COVER
(top of casing approx. 0.20 ft.
below ground surface)

GROUND
SURFACE

TOTAL CASING
LENGTH = 4.88 ft.
FROM TOP OF CASING
TO TOP OF SCREEN

PORTLAND CEMENT
(approx. 1 ft. interval)

BENTONITE PLUG
(approx. 2.50 ft. interval)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 6.72 ft.
above water table)

8.30 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 1.58 ft. above
screen interval)

WATER TABLE
APPROX. 11.80 ft. FROM
GROUND SURFACE
(measured 12/31/99)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 8.28 ft. below
water table)

12.20 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 20.08 ft.
FROM GROUND SURFACE

AMOCO PRODUCTION COMPANY
LEEPER GC # 1
MONITOR WELL CONSTRUCTION & COMPLETION
INSTALLED WITH MOBILE RIG

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

MONITOR WELL SCHEMATIC
DRAFTED BY: NJV
DATE: JAN. '00
FILENAME: MW-4

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 336 FEET, S75W FROM WELL HEAD.

BORING #..... BH - 2
MW #..... 5
PAGE #..... 2
DATE STARTED 12/30/99
DATE FINISHED 12/30/99
OPERATOR..... DE
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
1				TOP OF CASING APPROX. 3.60 FT. ABOVE GROUND SURFACE.
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

MODERATE TO DARK YELLOWISH BROWN SILTY SAND, SLIGHTLY COHESIVE, DRY TO SLIGHTLY MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.0 - 7.0 FT. INTERVAL).

OVM @ 8 ft. = 0.0 ppm COLLECTED 2:25 pm READING 3:16 pm

▼ GW DEPTH ON 12/31/99 = 10.68 FT. (APPROX.) FROM GROUND SURFACE.

OVM @ 12 ft. = 0.0 ppm COLLECTED 2:37 pm READING 3:16 pm

MODERATE TO DARK YELLOWISH BROWN SILTY SAND WITH GRAVEL OBSERVED IN CUTTINGS, NON COHESIVE, MOIST TO SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (7.0 - 22.0 FT. INTERVAL).

MEDIUM BLUISH GRAY SHALE, UNABLE TO DISCERN COMPACTION OR FRIABILITY DUE TO DRILLING METHOD, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (22.0 - 24.0 FT. INTERVAL).

NOTE:  - SILTY SAND.

 - SILTY SAND WITH GRAVEL.

 - SHALE BEDROCK.

TOS - TOP OF SCREEN FROM GROUND SURFACE.

TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

GW - GROUND WATER.

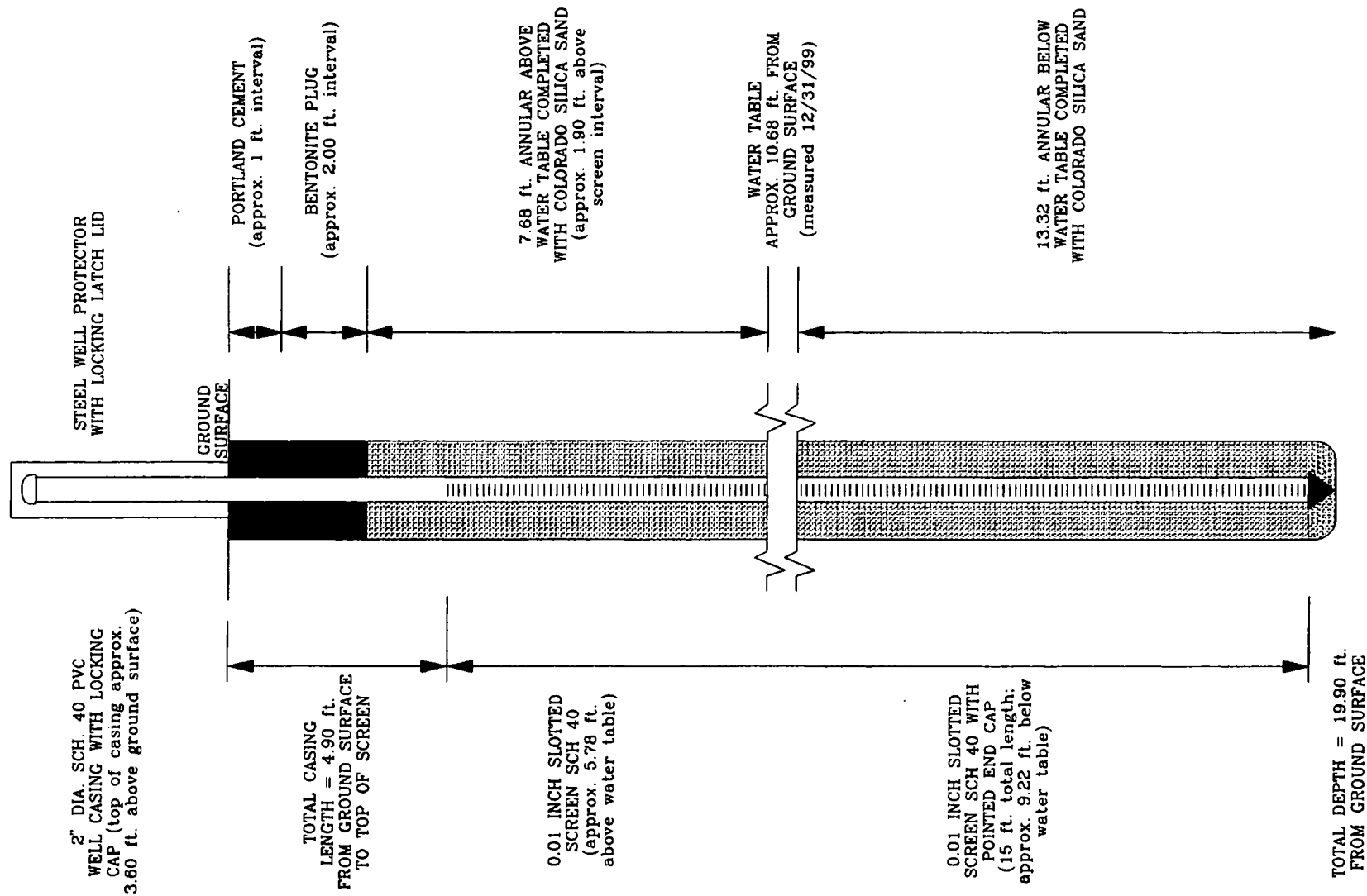
ppm - PARTS PER MILLION.

DRAWING: BH-02.SKD

DATE: 12/31/99

DWN BY: NJV

MONITOR WELL #5



AMOCO PRODUCTION COMPANY

LEEPER GC # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC

DRAFTED BY: NJV

DATE: JAN. '00

FILENAME: MW-5

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 246 FEET, S79.5W FROM WELL HEAD.

BORING #..... BH - 3
MW #..... 6
PAGE #..... 3
DATE STARTED 12/31/99
DATE FINISHED 12/31/99
OPERATOR..... DE
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
1				GROUND SURFACE
2				TOP OF CASING APPROX. 3.70 FT. ABOVE GROUND SURFACE.
3				
4				MODERATE TO DARK YELLOWISH BROWN SILTY SAND. SLIGHTLY COHESIVE. DRY TO SLIGHTLY MOIST. FIRM. NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.0 - 16.0 FT. INTERVAL).
5				
6				
7				
8				OVM @ 8 ft. = 0.0 ppm COLLECTED 9:54 am READING 10:11 am SOIL TEMP. 59° F.
9				▼ GW DEPTH ON 12/31/99 @ 12:10 pm = 10.11 FT. (APPROX.) FROM GROUND SURFACE.
10				SAA. SATURATED.
11				
12				OVM @ 12 ft. = 0.0 ppm COLLECTED 10:03 am READING 10:23 am SOIL TEMP. 61° F.
13				
14				
15				
16				
17				
18				
19				MODERATE TO DARK YELLOWISH BROWN SILTY SAND WITH GRAVEL OBSERVED IN CUTTINGS, NON COHESIVE. MOIST TO SATURATED. FIRM. NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (16.0 - 24.0 FT. INTERVAL).
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

NOTE:  - SILTY SAND.
 - SILTY SAND WITH GRAVEL.
TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.
ppm - PARTS PER MILLION.
SSA - SAME AS ABOVE.

DRAWING: BH-03.SKD

DATE: 12/31/99

DWN BY: NJV

MONITOR WELL #6

AMOCO PRODUCTION COMPANY
LEOPER GC # 1
MONITOR WELL CONSTRUCTION & COMPLETION
INSTALLED WITH MOBILE RIG

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

MONITOR WELL SCHEMATIC
DRAFTED BY: NJV
DATE: JAN. '00
FILENAME: MW-6

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (top of casing approx.
3.70 ft. above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

GROUND
SURFACE

TOTAL CASING
LENGTH = 4.30 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

PORTLAND CEMENT
(approx. 1 ft. interval)

BENTONITE PLUG
(approx. 1.50 ft. interval)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 5.81 ft.
above water table)

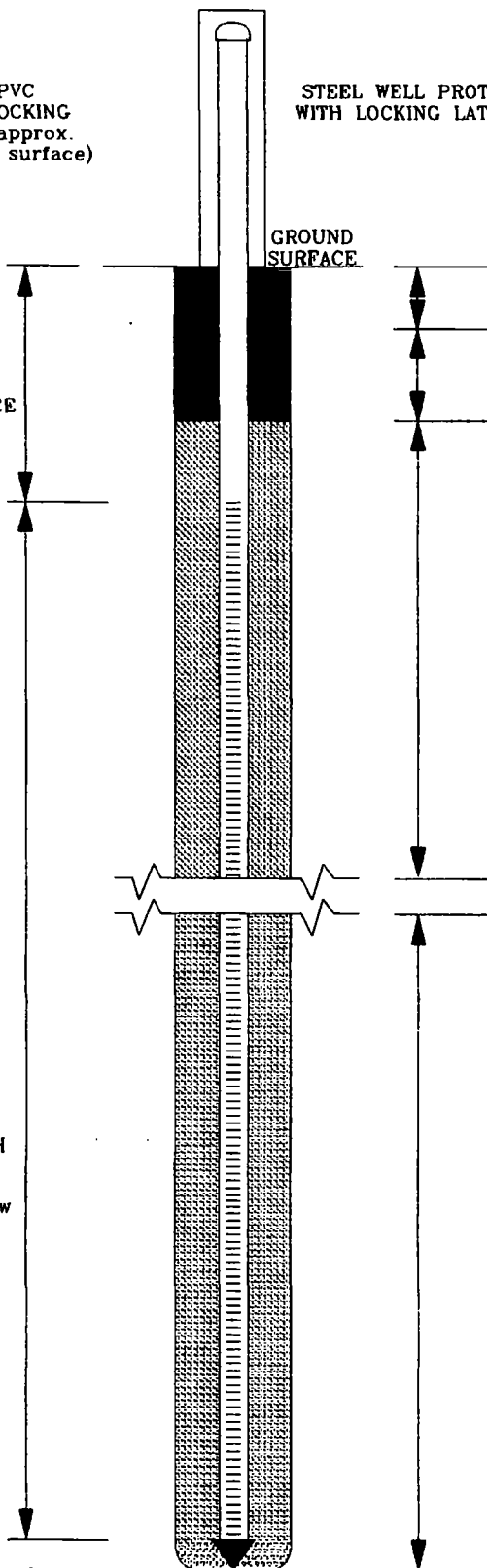
7.61 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 1.80 ft. above
screen interval)

WATER TABLE
APPROX. 10.11 ft. FROM
GROUND SURFACE
(measured 12/31/99)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 9.19 ft. below
water table)

13.89 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 19.30 ft.
FROM GROUND SURFACE



BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 303 FEET, S60W FROM WELL HEAD.

BORING #..... BH - 4
MW #..... 7
PAGE #..... 4
DATE STARTED 12/31/99
DATE FINISHED 12/31/99
OPERATOR..... DE
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
				TOP OF CASING APPROX. 3.60 FT. ABOVE GROUND SURFACE.
1				
2				
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25				
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28				
29				
30				
31				

TOS 3.40

MODERATE TO DARK YELLOWISH BROWN SILTY SAND TO SILTY CLAY, SLIGHTLY COHESIVE, DRY TO SLIGHTLY MOIST, FIRM TO SLIGHTLY STIFF, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.0 - 9.0 FT. INTERVAL).

OVM @ 8 ft. = 0.0 ppm COLLECTED 11:54 am READING 12:20 pm SOIL TEMP. 69° F.

▼ GW DEPTH ON 01/03/2000 = 10.13 FT. (APPROX.) FROM GROUND SURFACE.

MODERATE TO DARK YELLOWISH BROWN SILTY SAND, NON TO SLIGHTLY COHESIVE, SLIGHTLY MOIST TO SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (9.0 - 13.0 FT. INTERVAL).

OVM @ 12 ft. = 0.0 ppm COLLECTED 12:04 pm READING 12:22 pm SOIL TEMP. 68° F.

BROWNISH TO OLIVE GRAY SILTY SAND TO SAND, NON COHESIVE, SATURATED, FIRM TO LOOSE, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (13.0 - 16.0 FT. INTERVAL).

MODERATE TO DARK YELLOWISH BROWN SAND WITH GRAVEL OBSERVED IN CUTTINGS, NON COHESIVE, SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (16.0 - 19.0 FT. INTERVAL).

TD 18.40

NOTE:

-  - SILTY SAND TO SILTY CLAY.
-  - SILTY SAND.
-  - SILTY SAND TO SAND.
-  - SAND WITH GRAVEL.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.
ppm - PARTS PER MILLION.

DRAWING: BH-04.SKD

DATE: 01/03/00

DWN BY: NJV

MONITOR WELL #7

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (top of casing approx.
3.60 ft. above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

GROUND
SURFACE

TOTAL CASING
LENGTH = 3.40 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

PORTLAND CEMENT
(approx. 1 ft. interval)

BENTONITE PLUG
(approx. 2.00 ft. interval)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 6.30 ft.
above water table)

6.70 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 0.40 ft. above
screen interval)

WATER TABLE
APPROX. 9.70 ft. FROM
GROUND SURFACE
(measured 12/31/99)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 8.70 ft. below
water table)

9.30 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 18.40 ft.
FROM GROUND SURFACE

AMOCO PRODUCTION COMPANY

LEPPER GC # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC

DRAFTED BY: NJV

DATE: JAN. '00

FILENAME: MW-7

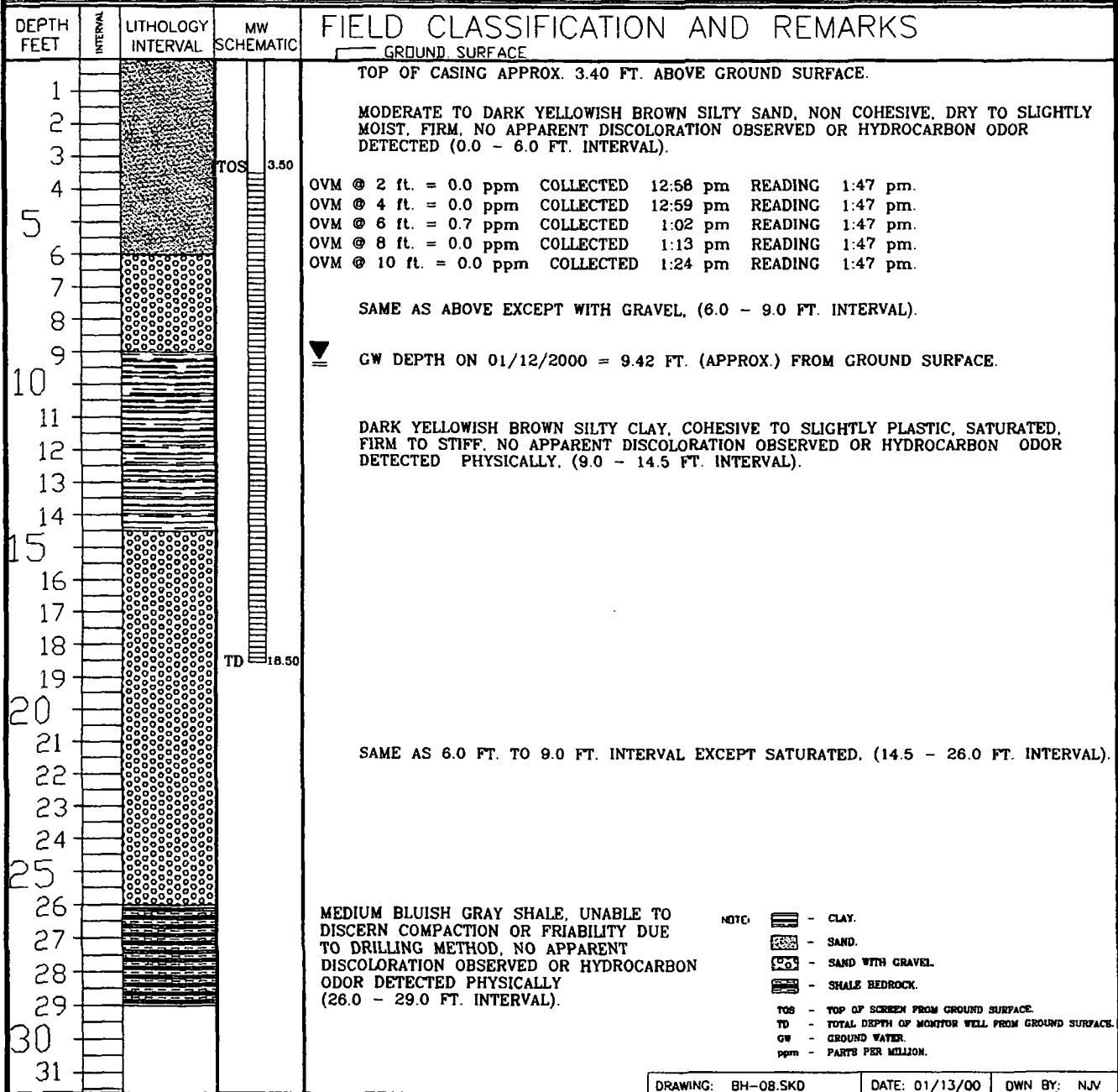
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 300 FEET, S35W FROM WELL HEAD.

BORING #..... BH - 8
MW #..... 8
PAGE #..... 5
DATE STARTED 01/11/00
DATE FINISHED 01/11/00
OPERATOR..... DE
PREPARED BY NJV



MONITOR WELL #8

INSTALLED WITH MOBILE RIG

MONITOR WELL CONSTRUCTION & COMPLETION

LEPPER GC # 1

AMOCO PRODUCTION COMPANY

BLOOMFIELD, NEW MEXICO 87413

P.O. BOX 87

CONSULTING PETROLEUM / RECLAMATION SERVICES

BLAGG ENGINEERING, INC.

PHONE: (505) 632-1199

FILENAME: MW-8

DATE: JAN. '00

DRAFTED BY: NJV

MONITOR WELL SCHEMATIC

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (approx. 3.40 ft.
above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

GROUND
SURFACE

TOTAL CASING
LENGTH = 3.50 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

PORTLAND CEMENT
(approx. 0.50 ft. thickness)

BENTONITE PLUG
(approx. 1 ft. thickness)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 5.92 ft.
above water table)

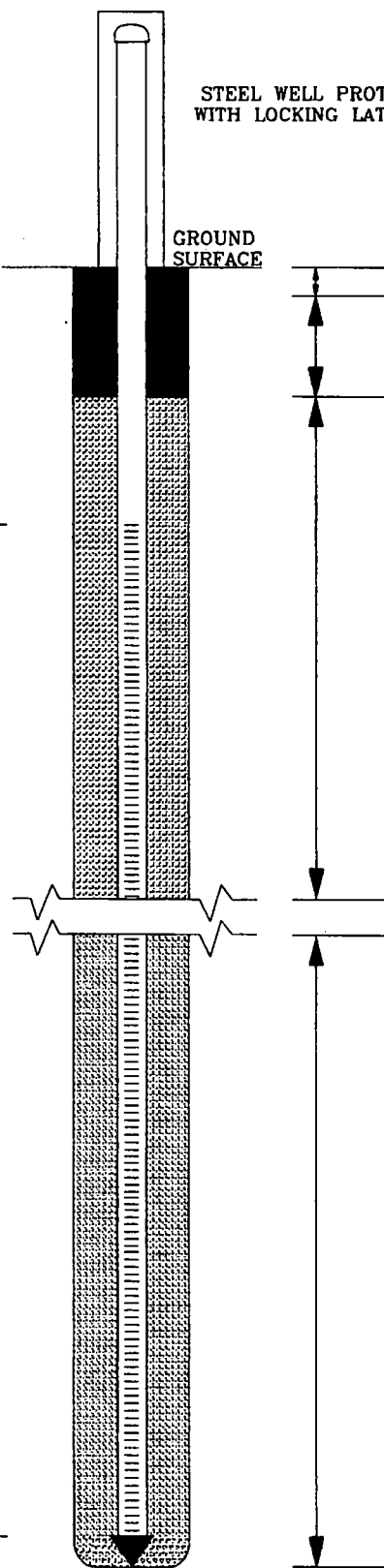
7.92 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 2 ft. above
top of screen)

WATER TABLE
APPROX. 9.42 ft. FROM
GROUND SURFACE
(measured 01/12/00)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 9.08 ft. below
water table)

9.43 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 18.50 ft.
FROM GROUND SURFACE



BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 176 FEET, S15W FROM WELL HEAD.

BORING #..... BH - 9
MW #..... 9
PAGE #..... 6
DATE STARTED 01/12/00
DATE FINISHED 01/12/00
OPERATOR..... DE
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
1				TOP OF CASING APPROX. 2.80 FT. ABOVE GROUND SURFACE.
2				MODERATE TO DARK YELLOWISH BROWN SILTY SAND. NON COHESIVE, DRY TO SLIGHTLY MOIST. FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (0.0 - 4.0 FT. INTERVAL).
3				OVM @ 2 ft. = 0.0 ppm COLLECTED 9:41 am READING 11:42 am.
4				OVM @ 4 ft. = 0.0 ppm COLLECTED 9:43 am READING 11:42 am.
5				OVM @ 6 ft. = 0.0 ppm COLLECTED 9:51 am READING 11:42 am.
6				OVM @ 8 ft. = 0.0 ppm COLLECTED 9:53 am READING 11:42 am.
7				SAME AS ABOVE EXCEPT WITH GRAVEL (4.0 - 9.0 FT. INTERVAL).
8				▼ GW DEPTH ON 01/13/2000 = 7.43 FT. (APPROX.) FROM GROUND SURFACE.
9				MODERATE TO DARK YELLOWISH BROWN CLAY, COHESIVE TO SLIGHTLY PLASTIC, SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED (9.0 - 10.0 FT. INTERVAL).
10				
11				
12				
13				
14				SAME AS 4.0 - 9.0 FT. INTERVAL EXCEPT SATURATED (10.0 - 16.0 FT. INTERVAL).
15				
16				
17				PALE YELLOWISH BROWN SANDSTONE, UNABLE TO DISCERN CONSOLIDATION OR FRIABILITY DUE TO THE DRILLING METHOD. DRY, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (16.0 - 20.0 FT. INTERVAL).
18				
19				
20				
21				SAME AS 10.0 - 16.0 FT. INTERVAL (20.0 - 22.0 FT. INTERVAL).
22				
23				MEDIUM BLUISH GRAY SHALE, UNABLE TO DISCERN COMPACTION OR FRIABILITY DUE TO DRILLING METHOD. NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (22.0 - 24.0 FT. INTERVAL).
24				
25				
26				
27				
28				
29				
30				
31				

NOTE:  - SILTY SAND.
 - CLAY.
 - SAND WITH GRAVEL.
 - SANDSTONE BEDROCK.
 - SHALE BEDROCK.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.
ppm - PARTS PER MILLION.

DRAWING: BH-09.SKD

DATE: 01/13/00

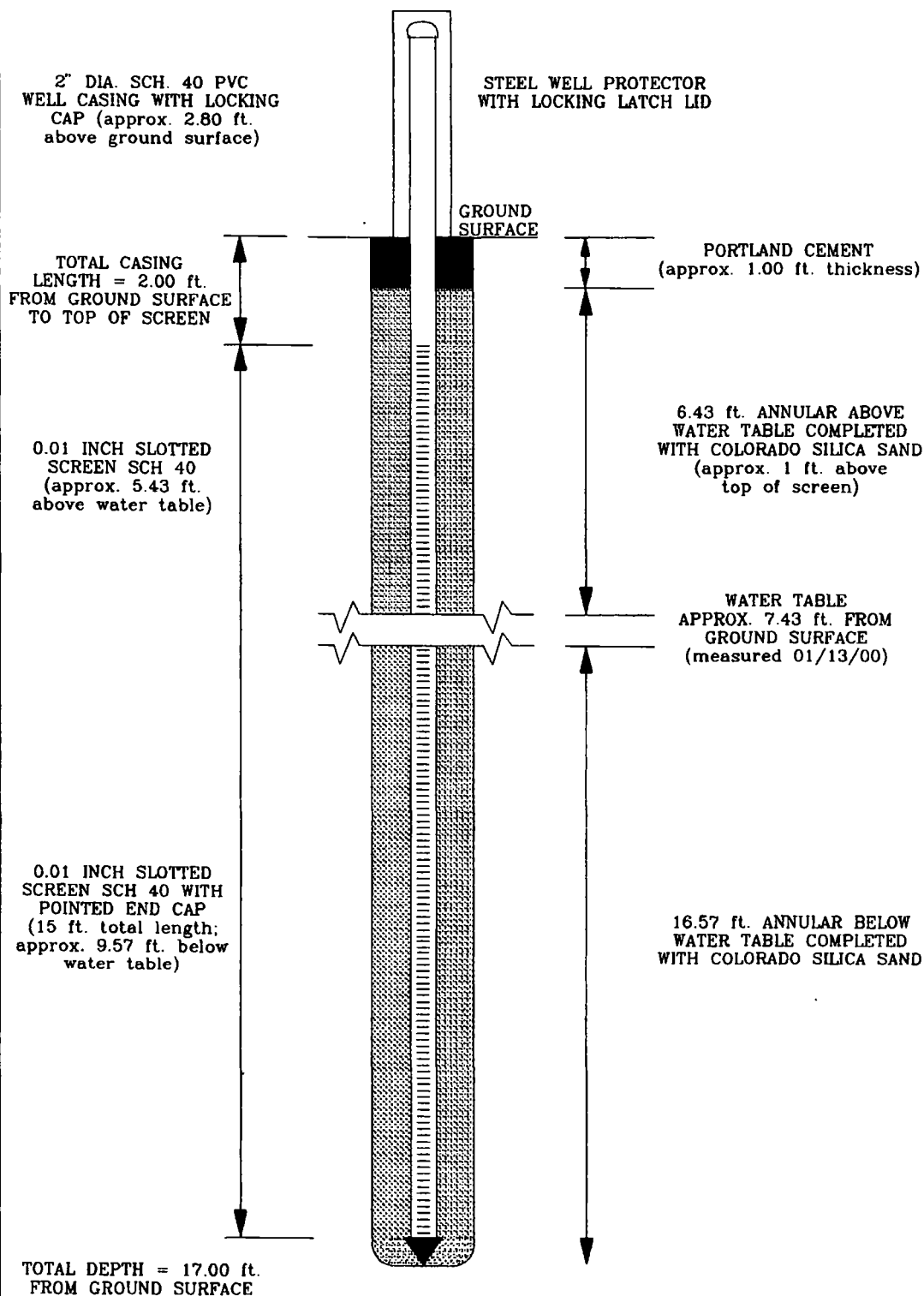
DWN BY: NJV

MONITOR WELL #9

AMOCO PRODUCTION COMPANY
LEOPER GC # 1
MONITOR WELL CONSTRUCTION & COMPLETION
INSTALLED WITH MOBILE RIG

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

MONITOR WELL SCHEMATIC
DRAFTED BY: NJV
DATE: JAN. '00
FILENAME: MW-9



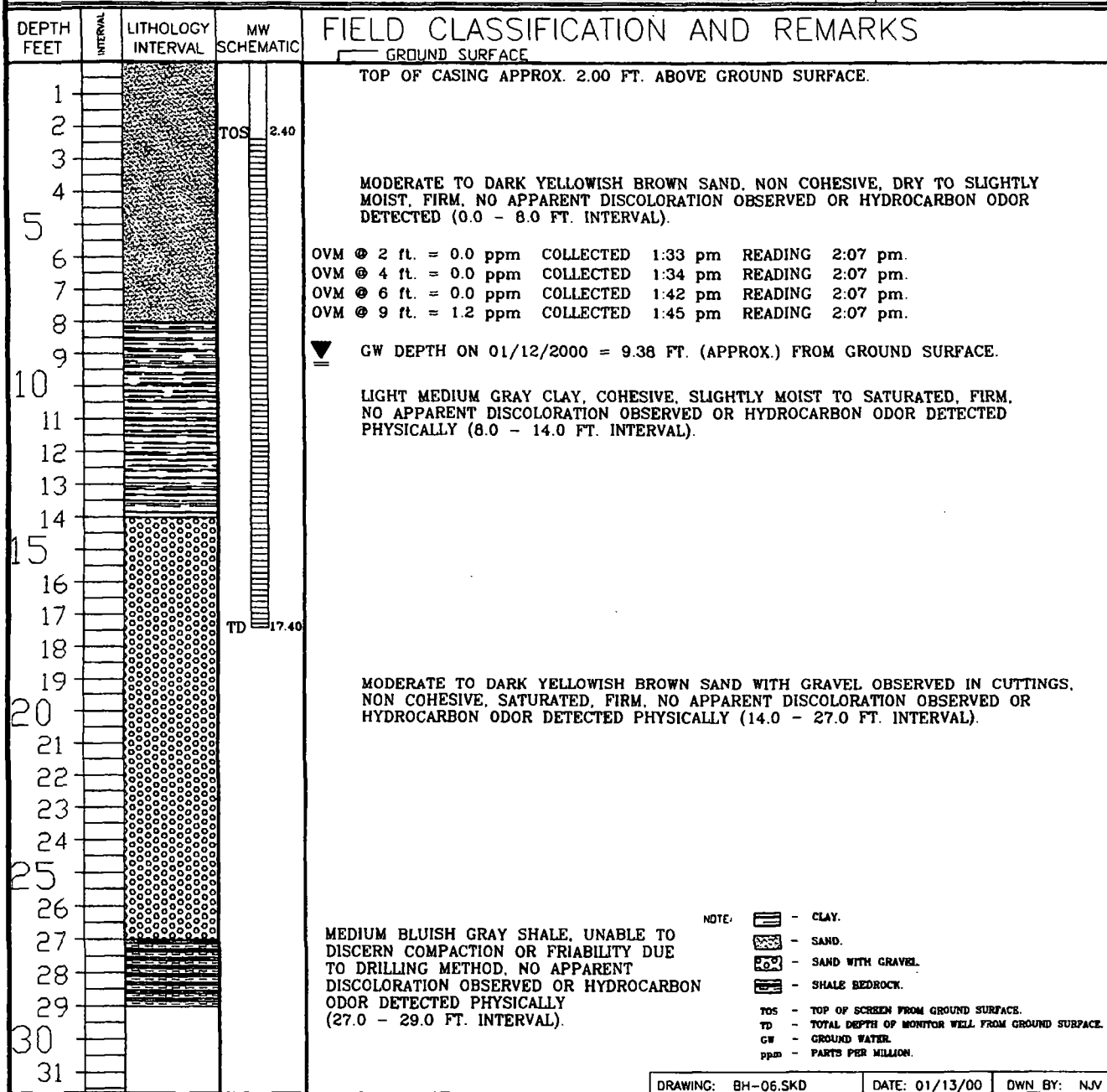
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

BORING #..... BH - 6
MW #..... 10
PAGE #..... 7
DATE STARTED 01/10/00
DATE FINISHED 01/10/00
OPERATOR..... DE
PREPARED BY NJV

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 131 FEET, N43W FROM WELL HEAD.



MONITOR WELL #10

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (approx. 2.00 ft.
above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

GROUND
SURFACE

TOTAL CASING
LENGTH = 2.40 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

PORTLAND CEMENT
(approx. 1.00 ft. thickness)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 6.98 ft.
above water table)

8.38 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 1.40 ft. above
top of screen)

WATER TABLE
APPROX. 9.38 ft. FROM
GROUND SURFACE
(measured 01/12/00)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 8.02 ft. below
water table)

8.37 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 17.40 ft.
FROM GROUND SURFACE

AMOCO PRODUCTION COMPANY

LEEPER GC # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC

DRAFTED BY: NJV

DATE: JAN. '00

FILENAME: MW-10

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 84 FEET, N61W FROM WELL HEAD.

BORING #..... BH - 7
MW #..... 11
PAGE #..... 8
DATE STARTED 01/11/00
DATE FINISHED 01/11/00
OPERATOR..... DE
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
1				TOP OF CASING APPROX. 1.93 FT. ABOVE GROUND SURFACE.
2				MODERATE TO DARK YELLOWISH BROWN SAND, NON COHESIVE, DRY TO SLIGHTLY
3				MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON ODOR
4				DETECTED (0.0 - 4.0 FT. INTERVAL).
5				OVM @ 2 ft. = 0.0 ppm COLLECTED 10:07 am READING 10:43 am.
6				OVM @ 4 ft. = 0.0 ppm COLLECTED 10:08 am READING 10:43 am.
7				OVM @ 6 ft. = 5.7 ppm COLLECTED 10:17 am READING 10:43 am.
8				OVM @ 8 ft. = 402 ppm COLLECTED 10:18 am READING 10:43 am.
9				LIGHT TO MEDIUM GRAY SILTY CLAY PHASING INTO DARKER SHADE CLAY, SLIGHTLY
10				COHESIVE TO SLIGHTLY PLASTIC, MOIST TO SATURATED, DISCOLORATION MAY BE
11				ASSOCIATED WITH HYDROCARBON CONTAMINATION (BASED ON PHYSICAL,
12				OVM, & LAB TPH RESULTS) OBSERVED BETWEEN 8.0 FT. TO 11.5 FT.
13				INTERVAL, (4.0 - 11.5 FT. INTERVAL).
14				▼ GW DEPTH ON 01/12/2000 = 8.56 FT. (APPROX.) FROM GROUND SURFACE.
15				
16				MODERATE YELLOWISH BROWN SAND WITH GRAVEL OBSERVED IN CUTTINGS,
17				NON COHESIVE, SATURATED, LOOSE, NO APPARENT DISCOLORATION OBSERVED OR
18				HYDROCARBON ODOR DETECTED PHYSICALLY (11.5 - 21.0 FT. INTERVAL).
19				
20				
21				
22				MEDIUM BLUISH GRAY SHALE, UNABLE TO DISCERN COMPACTION OR FRIABILITY DUE
23				TO DRILLING METHOD, NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON
24				ODOR DETECTED PHYSICALLY (21.0 - 24.0 FT. INTERVAL).
25				
26				
27				
28				
29				
30				
31				

NOTE:  - CLAY.
 - SAND.
 - SAND WITH GRAVEL.
 - SHALE BEDROCK.

TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.
ppm - PARTS PER MILLION.

DRAWING: BH-07.SKD DATE: 01/13/00 DWN BY: NJV

MONITOR WELL #11

INSTALLED WITH MOBILE RIG

MONITOR WELL CONSTRUCTION & COMPLETION

LEPPER GC # 1

AMOCO PRODUCTION COMPANY

BLOOMFIELD, NEW MEXICO 87413

P.O. BOX 87

CONSULTING PETROLEUM / RECLAMATION SERVICES

BLAGG ENGINEERING, INC.

PHONE: (505) 632-1199

FILENAME: MW-11

DATE: JAN. '00

DRAFTED BY: NJV

MONITOR WELL SCHEMATIC

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (approx. 1.93 ft.
above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

TOTAL CASING
LENGTH = 3.00 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

GROUND
SURFACE

PORTLAND CEMENT
(approx. 1.00 ft. thickness)

BENTONITE PLUG
(approx. 1.00 ft. thickness)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 5.56 ft.
above water table)

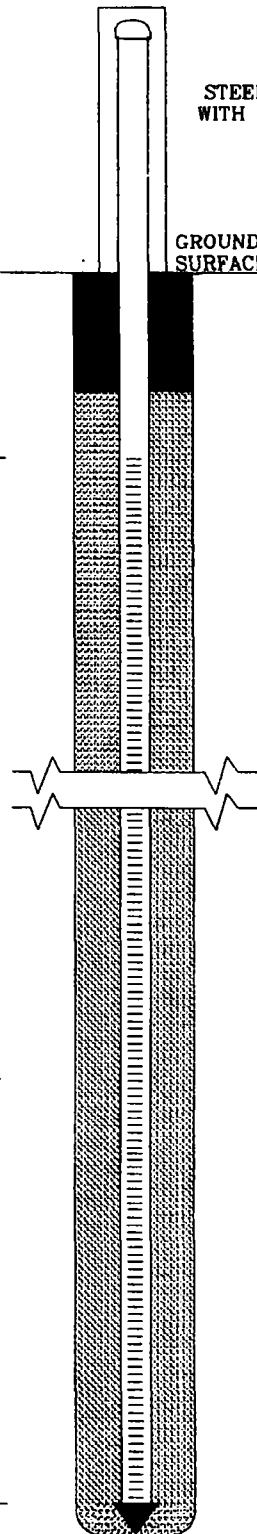
6.56 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 1 ft. above
top of screen)

WATER TABLE
APPROX. 8.56 ft. FROM
GROUND SURFACE
(measured 01/12/00)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 9.44 ft. below
water table)

9.79 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 18.00 ft.
FROM GROUND SURFACE



BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 88 FEET, N67.5W FROM WELL HEAD.

BORING #..... BH - 5
MW #..... 12
PAGE #..... 9
DATE STARTED 01/10/00
DATE FINISHED 01/10/00
OPERATOR..... DE
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
1				TOP OF CASING APPROX. 2.00 FT. ABOVE GROUND SURFACE.
2				MODERATE TO DARK YELLOWISH BROWN SAND WITH GRAVEL OBSERVED IN CUTTINGS.
3				NON COHESIVE, SATURATED, FIRM, NO APPARENT DISCOLORATION OBSERVED OR
4				HYDROCARBON ODOR DETECTED PHYSICALLY (0.0 - 5.0 FT. INTERVAL).
5				OVM @ 2 ft. = 0.0 ppm COLLECTED 10:30 am READING 11:10 am.
6				OVM @ 4 ft. = 0.8 ppm COLLECTED 10:36 am READING 11:10 am.
7				OVM @ 6 ft. = 1.6 ppm COLLECTED 10:45 am READING 11:10 am.
8				OVM @ 8 ft. = 0.8 ppm COLLECTED 10:47 am READING 11:10 am.
9				SAME AS ABOVE EXCEPT SAND ONLY. (5.0 - 6.0 FT. INTERVAL).
10				▼ GW DEPTH ON 01/12/2000 = 8.64 FT. (APPROX.) FROM GROUND SURFACE.
11				SAME AS ABOVE EXCEPT WITH GRAVEL. (6.0 - 15.5 FT. INTERVAL).
12				
13				
14				
15				
16				
17				
18				PALE YELLOWISH BROWN SANDSTONE, UNABLE TO DISCERN CONSOLIDATION
19				OR FRIABILITY DUE TO THE DRILLING METHOD. DRY, NO APPARENT DISCOLORATION
20				OBSERVED OR HYDROCARBON ODOR DETECTED PHYSICALLY (15.5 - 20.0 FT. INTERVAL).
21				
22				MEDIUM BLUISH GRAY SHALE, UNABLE TO DISCERN COMPACTION OR FRIABILITY DUE
23				TO DRILLING METHOD. NO APPARENT DISCOLORATION OBSERVED OR HYDROCARBON
24				ODOR DETECTED PHYSICALLY (20.0 - 24.0 FT. INTERVAL).
25				
26				
27				
28				
29				
30				
31				

NOTE:  - SAND.
 - SAND WITH GRAVEL.
 - SANDSTONE BEDROCK.
 - SHALE BEDROCK.
TOS - TOP OF SCREEN FROM GROUND SURFACE.
TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
GW - GROUND WATER.
ppm - PARTS PER MILLION.

DRAWING: BH-05.SKD DATE: 01/13/00 DWN BY: NJV

MONITOR WELL #12

AMOCO PRODUCTION COMPANY
LEPPER GC # 1
MONITOR WELL CONSTRUCTION & COMPLETION
INSTALLED WITH MOBILE RIG

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

MONITOR WELL SCHEMATIC
DRAFTED BY: NJV
DATE: JAN. '00
FILENAME: MW-12

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (approx. 2.00 ft.
above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

TOTAL CASING
LENGTH = 2.25 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

GROUND
SURFACE

PORTLAND CEMENT
(approx. 1.00 ft. thickness)

BENTONITE PLUG
(approx. 1.00 ft. thickness)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 6.21 ft.
above water table)

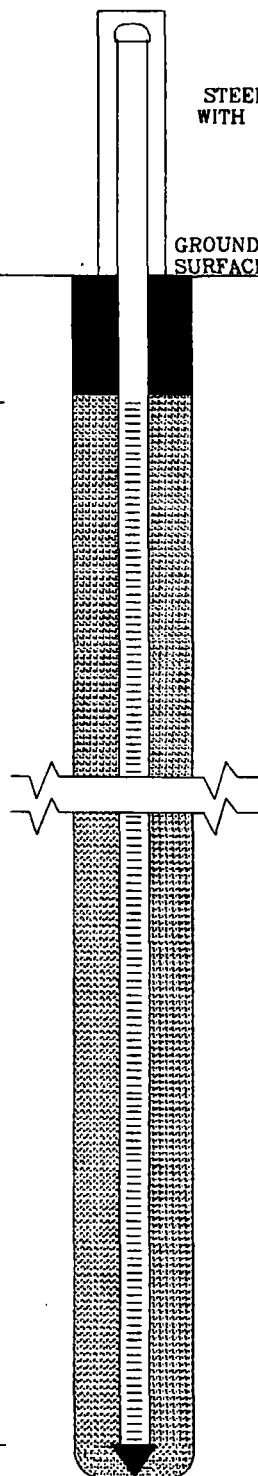
6.46 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 0.25 ft. above
top of screen)

WATER TABLE
APPROX. 8.46 ft. FROM
GROUND SURFACE
(measured 01/12/00)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 8.79 ft. below
water table)

15.54 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 17.25 ft.
FROM GROUND SURFACE



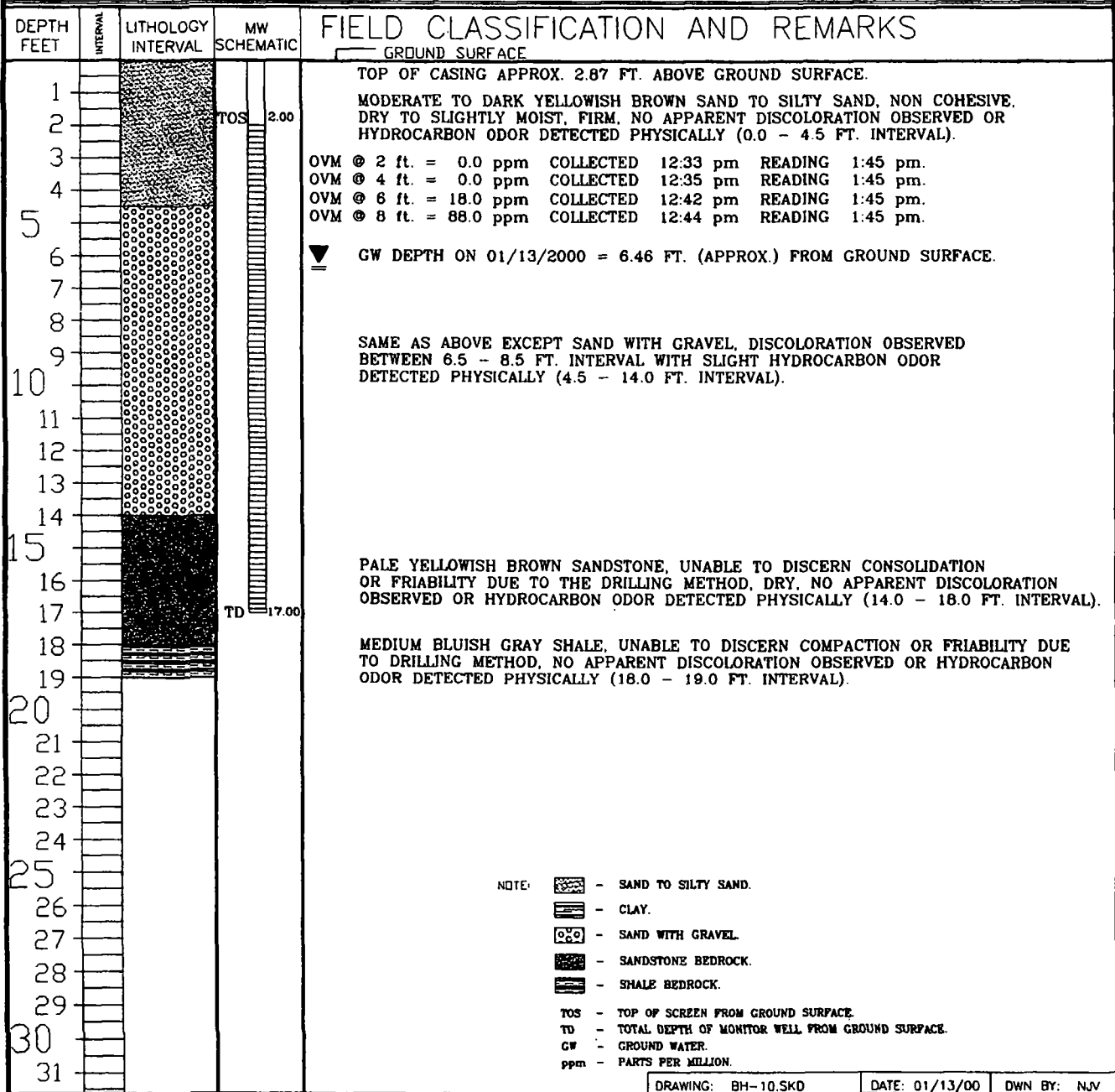
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

CLIENT: BP AMOCO
LOCATION NAME: LEEPER GC # 1
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (ENVIROTECH CME 61)
BORING LOCATION: 89 FEET, S28E FROM WELL HEAD.

BORING #..... BH - 10
MW #..... 13
PAGE #..... 10
DATE STARTED 01/12/00
DATE FINISHED 01/12/00
OPERATOR..... DE
PREPARED BY NJV



DRAWING: BH-10.SKD

DATE: 01/13/00

DWN BY: NJV

MONITOR WELL #13

2" DIA. SCH. 40 PVC
WELL CASING WITH LOCKING
CAP (approx. 2.87 ft.
above ground surface)

STEEL WELL PROTECTOR
WITH LOCKING LATCH LID

GROUND
SURFACE

TOTAL CASING
LENGTH = 2.00 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

PORTLAND CEMENT
(approx. 1.00 ft. thickness)

0.01 INCH SLOTTED
SCREEN SCH 40
(approx. 4.46 ft.
above water table)

5.46 ft. ANNULAR ABOVE
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND
(approx. 1 ft. above
top of screen)

WATER TABLE
APPROX. 6.46 ft. FROM
GROUND SURFACE
(measured 01/13/00)

0.01 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED END CAP
(15 ft. total length;
approx. 10.54 ft. below
water table)

12.54 ft. ANNULAR BELOW
WATER TABLE COMPLETED
WITH COLORADO SILICA SAND

TOTAL DEPTH = 17.00 ft.
FROM GROUND SURFACE

AMOCO PRODUCTION COMPANY

LEEPER GC # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC

DRAFTED BY: NJV

DATE: JAN. '00

FILENAME: MW-13