

#### **MARK BORSUK**

#### Attorney at Law 1626 Yallejo Street San Francisco, CA 94123-5116 (415) 922-4740 FAX 922-1485

Internet: mborsuk@ix.netcom.com

January 25, 1997

Mr. Thomas Peacock Supervising HMS, LOP ACHCSA 1131 Harbor Bay Parkway Alameda, CA 94501 (510) 567-6700 / FAX 337-9335 76325.3440@compuserve.com

SUBJECT: IVQ96 Monitoring Report

1432 Harrison Street, Oakland, CA 94612

**SITE ID 498** 

Dear Mr. Peacock:

Attached is the IVQ96 report for groundwater monitoring at the above location. If you have any questions, please contact me.

Sincerely yours

Mark Borsuk



1680 ROGERS AVENUE SAN JOSE, CALIFORNIA 95112 (408) 573-7771 FAX (408) 573-0555 PHONE

EMVIRONMENTAL PROTECTION

97 JAN 28 PM 3: 01

January 24, 1997

Mark Borsuk 1626 Vallejo Street San Francisco, CA 94123-5116

> Site: 1432 Harrison Street Oakland, California

Date:

December 12, 1996

#### **GROUNDWATER SAMPLING REPORT 961212-J-1**

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results, or become involved with the marketing or installation of remedial systems.

This report deals with the groundwater well sampling performed by our firm in response to your request. Data collected in the course of our work at the site are presented in the TABLE OF WELL MONITORING DATA. This information was collected during our inspection, well evacuation and sample collection. Measurements include the total depth of the well and the depth to water. Water surfaces were further inspected for the presence of immiscibles. A series of electrical conductivity, pH, and temperature readings were obtained during well evacuation and at the time of sample collection.

#### STANDARD PRACTICES

### **Evacuation and Sampling Equipment**

As shown in the TABLE OF WELL MONITORING DATA, the wells at this site were evacuated according to a protocol requirement for the three case volumes of water, before sampling. The wells were evacuated using bailers and electric submersibles.

Samples were collected using bailers.

Bailers: A bailer, in its simplest form, is a hollow tube which has been fitted with a check valve at the lower end. The device can be lowered into a well by means of a cord. When the bailer enters the water, the check valve opens and liquid flows into the interior of the bailer. The bottom check valve prevents water from escaping when the bailer is drawn up and out of the well.

Two types of bailers are used in groundwater wells at sites where fuel hydrocarbons are of concern. The first type of bailer is made of a clear material such as acrylic plastic and is used to obtain a sample of the surface and the near surface liquids, in order to detect the presence of visible or measurable fuel hydrocarbon floating on the surface. The second type of bailer is made of Teflon or stainless steel and is used as an evacuation and/or sampling device.

Bailers are inexpensive and relatively easy to clean. Because they are manually operated, variations in operator technique may have a greater influence than would be found with more automated sampling equipment. Also where fuel hydrocarbons are involved, the bailer may include near surface contaminants that are not representative of water deeper in the well.

Electric Submersible Pumps: Electric submersible pumps are appropriate for the high volume evacuation of wells of any depth provided the well diameter is large enough to admit the pump. Four inch and three inch diameter wells will readily accept electric submersible pumps, while two inch wells do not. In operation, the pump is lowered into the well with a pipe train above it. A checkvalve immediately above the pump and below the first section of pipe prevents water that has entered the pipe from flowing back into the well. Electricity is provided to the pump via an electrical cable and the action of the pump is to push water up out of the well.

Electric submersible pumps are often used as well evacuation devices, which are then supplanted with a more specialized sample collection device (such as a bailer) at the time of sampling. An alternative is to use the pump for both evacuation and sampling. When a bailer is used to collect the sample, interpretation of results by the consultant should allow for variations attributable to near surface contamination entering the bailer. When the electric submersible is, itself, used for

Mark Borusk

sample collection it should be operated with the output restricted to a point where the loss of volatiles becomes indistinguishable from the level obtained with true sampling pumps. It should be noted that when the pump is used for both evacuation and sample collection that it is possible to perform these operations as an uninterrupted continuum. This contrasts with the variations in elapsed time between evacuation and sample collection that occur when field personnel cease one mode of operation and must bring other apparatus into use.

#### Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

#### **Effluent Materials**

The evacuation process creates a volume of effluent water which must be contained. Blaine Tech Services, Inc. will place this water in appropriate containers of the client's choice or bring new 55 gallon DOT 17 E drums to the site, which are appropriate for the containment of the effluent materials. The determination of how to properly dispose of the effluent water must usually await the results of laboratory analyses of the sample collected from the groundwater well. If that sample does not establish whether or not the effluent water is contaminated, or if effluent from more than one source has been combined in the same container, it may be necessary to conduct additional analyses on the effluent material.

#### Sampling Methodology

Samples were obtained by standardized sampling procedures that follow an evacuation and sample collection protocol. The sampling methodology conforms to both State and Regional Water Quality Control Board standards and specifically adheres to EPA requirements for apparatus, sample containers and sample handling as specified in publication SW 846 and T.E.G.D. which is published separately.

## Sample Containers

Sample containers are supplied by the laboratory performing the analyses.

## Sample Handling Procedures

Following collection, samples are promptly placed in an ice chest containing deionized ice or an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

#### Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days, as jobs and projects often do.

#### Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under our standard chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date and signature of person accepting custody of the samples).

## Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory, and is listed as DOHS HMTL #1386.

#### Personnel

All Blaine Tech Services, Inc. personnel receive 29 CFR 1910.120(e)(2) training as soon after being hired as is practical. In addition, many of our personnel have additional certifications that include specialized training in level B supplied air apparatus and the supervision of employees working on hazardous materials sites. Employees are not sent to a site unless we are confident they can adhere to any site safety provisions in force at the site and unless we know that they can follow the written provisions of an SSP and the verbal directions of an SSO.

In general, employees sent to a site to perform groundwater well sampling will assume an OSHA level D (wet) environment exists unless otherwise informed. The use of gloves and double glove protocols protects both our employees and the integrity of the samples being collected. Additional protective gear and procedures for higher OSHA levels of protection are available.

#### Reportage

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody and the certified analytical report issued by the Hazardous Materials Testing Laboratory.

The following addresses have been listed here for your convenience:

Water Quality Control Board San Francisco Bay Region 2101 Webster Street Suite 500 Oakland, CA 94612 ATTN: Richard Hiett

Oakland Fire Prevention Bureau One City Hall Plaza Oakland, CA 94612 ATTN: Stanley Y. Chi

Please call if we can be of any further assistance.

Richard C. Blaine

#### RCB/mc

attachments: table of well monitoring data

certified professional report and gradient map

certified analytical report

chain of custody

cc:

David Elias

Cambria Environmental Technology, Inc.

1144 65th St., Suite C Oakland, CA 94608



January 16, 1997

Jim Keller Blaine Tech Services 1680 Rogers Ave. San Jose, CA 95112

Re:

Fourth Quarter 1996 Monitoring Report

1432 Harrison Street Oakland, California

Dear Mr. Keller:

As you requested, Cambria Environmental Technology, Inc. (Cambria) has summarized the results of the fourth quarter 1996 ground water sampling at the site referenced above. Presented below are sampling activities performed in the fourth quarter of 1996, the anticipated first quarter 1997 activities, and the hydrocarbon distribution in ground water.

#### **FOURTH QUARTER 1996 ACTIVITIES**

Subsurface Investigation: On October 3, 1996, Cambria completed a subsurface investigation to further define the lateral extent of hydrocarbons in soil and ground water. Cambria installed down gradient monitoring wells MW-4 and MW-5 and up gradient well MW-6. The Subsurface Investigation Report for this investigation was sent to the Alameda County Department of Environmental Health (ACDEH).

Ground Water Sampling: On December 12, 1996, Blaine Tech Services (Blaine) gauged all site wells and sampled wells MW-1, MW-2, MW-4, MW-5 and MW-6. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), methyl t-butyl ether (MTBE), and benzene, ethylbenzene, toluene and xylene (BETX). Ground water elevations are shown on Figure 1. Ground water analytic data is tabulated and presented separately by Blaine.

CAMBRIA

ENVIRONMENTAL

TECHNOLOGY, INC.

1144 65TH STREET,

#### **ANTICIPATED FIRST QUARTER 1997 ACTIVITIES**

SUITE B

OAKLAND,

CA 94608

Рн: (510) 420-0700

Fax: (510) 420-9170

Ground Water Sampling: Blaine will gauge all site wells and collect ground water samples from wells MW-1, MW-2, MW-4, MW-5 and MW-6. Cambria will submit a ground water monitoring report summarizing the sampling data.

**C**AMBRIA

Jim Keller January 16, 1997

## HYDROCARBON DISTRIBUTION IN GROUND WATER

Ground water analytic data suggest that hydrocarbon concentrations are highest in wells MW-1 and MW-2, which are near the former underground storage tank area. The horizontal extent is defined to below or near non-detect levels in the upgradient direction by well MW-6 and in the crossgradient direction by wells MW-3 and MW-5.

We appreciate this opportunity to provide environmental consulting services to Blaine Tech Services. Please call if you have any questions or comments.

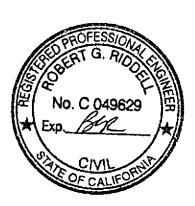
Sincerely,

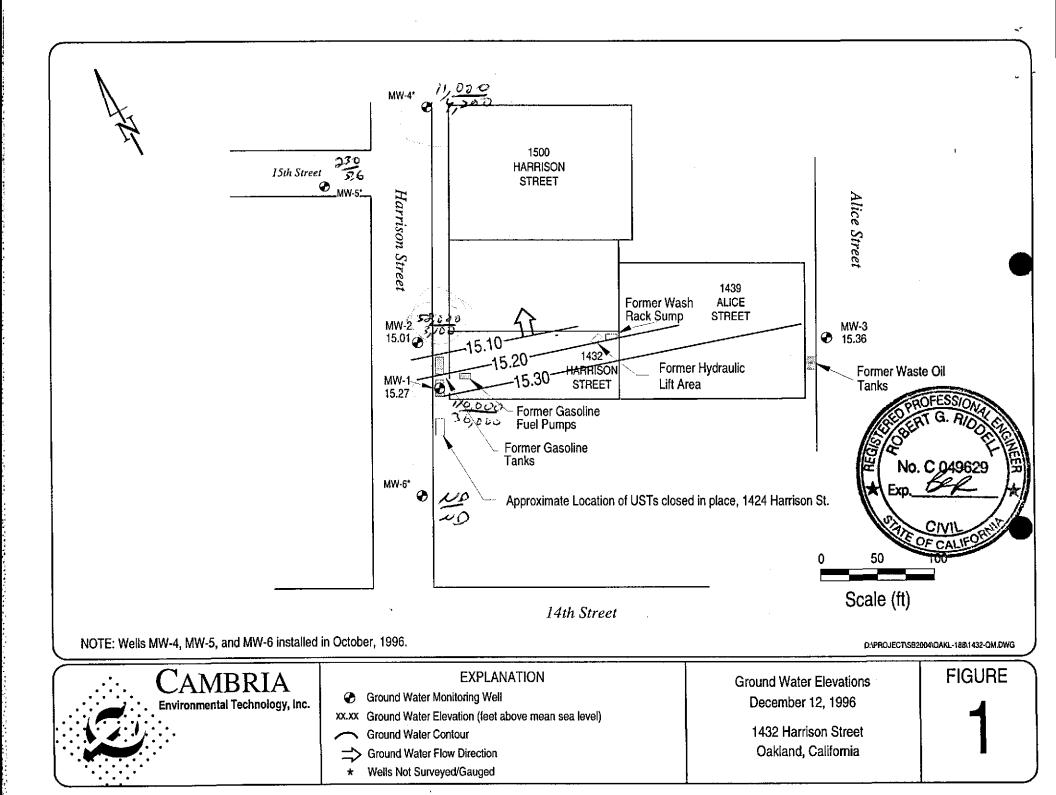
Cambria Environmental Technology, Inc.

Bob Clark-Riddell, P.E.

Principal Engineer

F:\PROJECT\SB-2004\OAKL-188\QM\QM-4-96.WPD





Well I.D.	MW-1			MW-1	MW-1		
Date Sampled	09/26/96			10/28/96	12/12/96	5	
Well Diameter (in.)	4			4	4		
Total Well Depth (ft.)	25.03			25.08	25.12		
Depth To Water (ft.)	19.35			19.58	19.68		
Free Product (in.)	NONE				NONE		
Reason If Not Sampled				GAUGE ONLY			
1 Case Volume (gal.)	3.70				3.50		
Did Well Dewater?	ио				NO		
Gallons Actually Evacuate	d 12.0				11.0		
Purging Device	ELECTRIC	: SUBMERSI	BLE		ELECTRIC	C SUBMERSI	BLE
Purging Device Sampling Device	ELECTRIC BAILER	: SUBMERSI	BLE		ELECTRIC BAILER	C SUBMERSI	BLE
Sampling Device		SUBMERSI	15:01			C SUBMERSI 09:17	BLE 09:19
Sampling Device	BAILER				BAILER		
Sampling Device  Time  Temperature (Fahrenheit)	BAILER	14:59	15:01		BAILER 09:15	09:17	09:19
Sampling Device	BAILER 14:58 70.4 7.1	14:59 70.6	15:01 70.8		BAILER 09:15 61.0	09:17 60.2	09:19 60.0
Sampling Device  Time  Temperature (Fahrenheit)  pH  Conductivity (micromhos/c	BAILER 14:58 70.4 7.1	14:59 70.6 7.1 460	15:01 70.8 7.1		BAILER 09:15 61.0 7.2	09:17 60.2 7.3 550	09:19 60.0 7.3
Sampling Device  Time Temperature (Fahrenheit) pH Conductivity (micromhos/c	BAILER  14:58  70.4  7.1 m) 480	14:59 70.6 7.1 460	15:01 70.8 7.1		DAILER 09:15 61.0 7.2 650	09:17 60.2 7.3 550	09:19 60.0 7.3
Sampling Device  Time  Temperature (Fahrenheit)  pH  Conductivity (micromhos/c	BAILER  14:58 70.4 7.1 m)480  960926-2	14:59 70.6 7.1 460	15:01 70.8 7.1		BAILER 09:15 61.0 7.2 650	09:17 60.2 7.3 550	09:19 60.0 7.3
Time Temperature (Fahrenheit) pH Conductivity (micromhos/c BTS Chain of Custody BTS Sample I.D.	BAILER  14:58 70.4 7.1 m)480  960926-2 MW-1	14:59 70.6 7.1 460	15:01 70.8 7.1		BAILER  09:15 61.0 7.2 650  961212- MW-1	09:17 60.2 7.3 550	09:19 60.0 7.3

SUMMAR	OF CAR RESULTS in parts per billion unless	otherwise noted
DOHS HMTL Laboratory	NET	NET
Laboratory Sample I.D.	268761	271140
		. 🔀
TPH Gasoline	170,000	110,000
Benzene	28,000	36,000
Toluene	40,000	47,000
Ethyl Benzene	2,200	2,500
Yvlene Isomers	15.000	16,000

In the interest of clarity, an addendum has been added to the TABLE which lists analytical results in such a way that our field observations are presented together with the analytical results. This addendum is entitled a SUMMARY OF CAR RESULTS. As indicated by the title, the source documents for these numbers are the laboratory's certified analytical reports. These certified analytical reports (CARs) are generated by the laboratory as the sole official documents in which they issue their findings. Any discrepancy between the CAR and a tabular or text presentation of analytical values must be decided in favor of the CAR on the grounds that the CAR is the authoritative legal document.

ND

Methyl-tert-butyl ether

Well I.D.	MW-2			MW-2	MW-2		
Date Sampled	09/26/96			10/28/96	12/12/96		
					_		
Well Diameter (in.)	2			2	2		
Total Well Depth (ft.)	25.90			26.02	25.83		
Depth To Water (ft.)	19.80			20.18	20.17		
Free Product (in.)	NONE				NONE		
Reason If Not Sampled				GAUGE ONLY			
A G. W. Namer Coroll 1	0.98				0.90		
1 Case Volume (gal.)					NO		
Did Well Dewater?	NO				3.0		
Gallons Actually Evacuate	a 3.0						
Purging Device	BAILER				BAILER		
Sampling Device	BAILER				BAILER		
Sampling Sevice							
Time	15:16	15:17	15:19		09:40	09:42	09:45
Temperature (Fahrenheit)	69.6	69.2	69.0		65.2	63.8	63.2
Hq	7.2	7.2	7.2		7.4	7.3	7.3
Conductivity (micromhos/c	m) 630	640	640		1000	1000	1000
BTS Chain of Custody	960926-Z	4			961212-3	71	
BTS Sample I.D.	MW-2				MW-2		
DOHS HMTL Laboratory	NET				NET		
Analysis	TPH-GAS,	BTEX			TPH-GAS	& BTEX	
unari ara	& MTBE						

SHMMARY OF CAR RESULTS in parts per billion unless	s otherw:	ise noted
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DOHS HMTL Laboratory Laboratory Sample I.D.	NET 268762	NET 271141
		\$8.000 🔌
TPH Gasoline	150,000	
Benzene	20,000	3,100
Toluene	29,000	11,000
Ethyl Benzene	2,800	1,700
Xylene Isomers	12,000	8,100
Methyl-tert-butyl ether	ИД	220

Well I.D. Date Sampled	MW-3 09/26/96	MW-3 10/28/96	MW-3 12/12/96
Well Diameter (in.)	2	2	2
Total Well Depth (ft.)	23.96	23.88	24.00
Depth To Water (ft.)	19.12	19.11	18.61
Free Product (in.)	NONE	NONE	NONE
Reason If Not Sampled	GAUGE ONLY	GAUGE ONLY	GAUGE ONLY

1 Case Volume (gal.)
Did Well Dewater?
Gallons Actually Evacuated

Purging Device Sampling Device

Time
Temperature (Fahrenheit)
pH .
Conductivity (micromhos/cm)

BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis

Well I.D.	MW-4			MW - 4		
Date Sampled	10/28/96			12/12/96		•
				_		
Well Diameter (in.)	2			2		
Total Well Depth (ft.)	24.52			24.85		
Depth To Water (ft.)	19.32			19.42		
Free Product (in.)	NONE			NONE		
Reason If Not Sampled						
1 Case Volume (gal.)	0.80			0.86		
Did Well Dewater?	NO			NO		
Gallons Actually Evacuated	1 2.5			3.0		
Purging Device	BAILER			BAILER		
Sampling Device	BAILER			BAILER		
Time	12:59	13:02	13:04	08:20	08:22	08:25
Temperature (Fahrenheit)	70.4	71.2	70.8	64.8	64.6	64.6
Hq	7.2	6.8	7.0	7.4	7.2	7.2
Conductivity (micromhos/co	m) 1200	1000	1000	1000	1000	1000
-						
BTS Chain of Custody	961028~K	2		961212-J1		
BTS Sample I.D.	MW-4			MW - 4		
DOHS HMTL Laboratory	NET			NET		
Analysis	TPH-GAS,	BTEX		TPH-GAS,	BTEX	
_	& MTBE			& MTBE		

## SUMMARY OF CAR RESULTS in parts per billion unless otherwise noted

DOHS HMTL Laboratory	NET
Laboratory Sample I.D.	271142
TPH Gasoline	11,000
Benzene	4,200
Toluene	. 410
Ethyl Benzene	420
Xylene Isomers	260
Methyl-tert-butyl ether	32

Well I.D.	MW-5			MW-5		
Date Sampled	10/28/96			12/12/96		
Well Diameter (in.)	2			2		
Total Well Depth (ft.)	28.92			28.90		
Depth To Water (ft.)	19.88			20.09		
Free Product (in.)	NONE			NONE		
Reason If Not Sampled						
1 Case Volume (gal.)	1.40			1.40		
Did Well Dewater?	ио		_	NO		
Gallons Actually Evacuated	4.5			4.5		
Purging Device	BAILER			BAILER		
Sampling Device	BAILER			BAILER		
Time	12:39	12:41	12:44	08:00	08:03	08:06
Temperature (Fahrenheit)	67.8	67.6	67.6	61.4	61.4	61.2
рН	7.2	7.2	7.1	7.6	7.6	7.6
Conductivity (micromhos/cm	) 920	850	840	1000	790	770
	24422			061010 71		
BTS Chain of Custody	961028-K2			961212-J1		
BTS Sample I.D.	MW-5			MW-5		
DOHS HMTL Laboratory	NET			NET		
Analysis	TPH-GAS,	BTEX		TPH-GAS, B	TEX	
	& MTBE			& MTBE		

SUMMARY OF CAR	R E S U L T S in parts per billion unless otherwise noted
	No.
DOHS HMTL Laboratory	NET
Laboratory Sample I.D.	271143
TPH Gasoline	230
Benzene	5.6
Toluene	0.9
Ethyl Benzene	ND
Kylene Isomers	0.9
Methyl-tert-butyl ether	3.6

Well I.D.	MW-6			MW-6		
Date Sampled	10/28/96			12/12/96		
Well Diameter (in.)	2			2		
Total Well Depth (ft.)	28.43			28.45		
Depth To Water (ft.)	20.02			20.18		•
Free Product (in.)	NONE			NONE		
Reason If Not Sampled		·				
1 Case Volume (gal.)	1.30			1.30		
Did Well Dewater?	NO			NO		
Gallons Actually Evacuated	1 4.0			4.0		
Purging Device	BAILER			BAILER		
Sampling Device	BAILER			BAILER		
Time	12:17	12:19	12:22	08:50	08:54	08:57
Temperature (Fahrenheit)	70.8	71.0	70.4	63.6	63.2	63.4
Hq	7.2	7.1	7.1	7.2	7.2	7.1
Conductivity (micromhos/cm	n) 1000	1000	1000	1000	1000	1000
BTS Chain of Custody	961028-K2			961212 <b>-</b> J1		
BTS Sample I.D.	MW-6			MM-6		
DOHS HMTL Laboratory	NET			NET		
Analysis	TPH-GAS,	BTEX		TPH-GAS, B	TEX	
-	& MTBE			& MTBE		

s u m m	ARY OF C	AR RESULTS	in parts per billion unless otherwise noted
DOHS HMTL Laboratory	•	4	NET
Laboratory Sample I.	D.		271144
TPH Gasoline			ND
Benzene			ND
Toluene			ND

ND

ND

ND

Ethyl Benzene

Xylene Isomers

Methyl-tert-butyl ether



Santa Rosa Division 3636 North Laughlin Road Suite 110 Santa Rosa, CA 95403-8226

Tel: (707) 526-7200 Fax: (707) 541-2333

Kent Brown Blaine Tech Services 985 Timothy Dr. San Jose, CA 95133 Date: 12/23/1996

NET Client Acct. No: 43200

NET Job No: 96.03459 Received: 12/17/1996

Client Reference Information

Harrison St. Garage/961212-J1

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2305.

Submitted by:

Ginger Brinlee

Project Coordinator

Enclosure(s)

Client Name: Blaine Tech Service

Client Acct: 43200 NET Job No: 96.03459 te: 12/23/19

LAP Cert: 138

Ref: Harrison St. Garage/961212-J1

SAMPLE DESCRIPTION: MW-1

Date Taken: 12/12/1996 Time Taken: 09:25

NET Sample No: 271140										
		Reporting				Date	Date	Batch		
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.		
TPH (Gas/BTXE, Liquid)										
5030/M8015							12/17/1996	3775		
DILUTION FACTOR*	100						12/17/1996	3775		
as Gasoline	110		5.0	mg/L	5030		12/17/1996	3775		
8020 (GC, Liquid)	**			_			12/17/1996	3775		
Benzene	36,000	FI	500	ug/L	8020		12/18/1996	3776		
Toluene	47,000	ΡΙ	500	ug/L	8020		12/18/1996	3776		
Ethylbenzene	2,500		50	ug/L	8020		12/17/1996	3775		
Xylenes (Total)	16,000	FI	500	ug/L	8020		12/18/1996	3776		
Methyl-tert-butyl ether	ND	• •	200	ug/L	8020		12/17/1996	3775		
•			200	49,2			12/17/1996	3775		
SURROGATE RESULTS				S. Dom	5030		12/17/1996	3775		
Bromofluorobenzene (SURR)	104			% Rec.	5030		42,21,200	Ţ., <u>,</u>		

Clarat Name: Blaine Tech Services

Client Acct: 43200 NET Job No: 96.03459 e: 12/23/19

ELAP Cert: 1386 Page: 3

Ref: Harrison St. Garage/961212-J1

SAMPLE DESCRIPTION: MW-2

Date Taken: 12/12/1996
Time Taken: 09:50

NET Sample No: 271141							Run Batch	
ADI Sampis No. 3.1111			Reporting	1	Date	Date		
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)								
5030/M8015							12/17/1996	3775
DILUTION FACTOR*	100						12/17/1996	3775
as Gasoline	58		5.0	mg/L	5030		12/17/1996	3775
				<b>-</b> /			12/17/1996	3775
8020 (GC, Liquid)			50	ug/L	8020		12/17/1996	3775
Benzene	3,100	_		•			12/18/1996	3776
Toluene	11,000	FI	500	ug/L	8020		• •	-
Ethylbenzene	1,700		50	ug/L	8020		12/17/1996	3775
Xylenes (Total)	8,100		50	ug/L	8020		12/17/1996	3775
Methyl-tert-butyl ether	220		200	ug/L	8020		12/17/1996	3775
•				-3, -			12/17/1996	3775
SURROGATE RESULTS					5000		12/17/1996	3775
Bromofluorobenzene (SURR)	106			% Rec.	5030		12/1/11/0	4.75

Client Name: Blaine Tech Services

Client Acct: 43200 NET Job No: 96.03459 ate: 12/23/19

3775

12/17/1996

ELAP Cert: 130 Page: 4

Ref: Harrison St. Garage/961212-J1

114

SAMPLE DESCRIPTION: MW-4

Bromofluorobenzene (SURR)

Date Taken: 12/12/1996 Time Taken: 08:30

Run NET Sample No: 271142 Batch Date Date Reporting Limit Parameter Results Flags TPH (Gas/BTXE, Liquid) 3775 12/17/1996 5030/M8015 12/17/1996 3775 DILUTION FACTOR\* 1 12/18/1996 3776 FF 5.0 mg/L 5030 11 as Gasoline 12/17/1996 3775 8020 (GC.Liquid) 3776 8020 12/18/1996 ug/L FF 50 Benzene 4,200 3776 12/18/1996 8020 ug/L Toluene 410 FF 50 3776 12/18/1996 8020 ug/L Ethylbenzene 420 FF 50 12/18/1996 3776 8020 Xylenes (Total) 50 ug/L 260 12/17/1996 3775 2.0 ug/L 8020 32 Methyl-tert-butyl ether 3775 12/17/1996 SURROGATE RESULTS

5030

% Rec.

Blaine Tech Services

Client Acct: 43200 NET Job No: 96.03459

ELAP Cert: Page:

12/18/1996

12/18/1996

12/19/1996

12/18/1996

12/18/1996

3776

3776

3778

3776

3776

Ref: Harrison St. Garage/961212-J1

0.9

ND

0.9

3.6

98

SAMPLE DESCRIPTION: MW-5

Toluene

Ethylbenzene

Xylenes (Total)

SURROGATE RESULTS

Methyl-tert-butyl ether

Bromofluorobenzene (SURR)

Date Taken: 12/12/1996 Time Taken: 08:10

Run NET Sample No: 271143 Batch Date Date Reporting Analyzed Extracted Method Limit Results Flags <u>Parameter</u> 12/18/1996 TPH (Gas/BTXE, Liquid) 3776 5030/M8015 3776 12/18/1996 1 DILUTION FACTOR\* 3776 12/18/1996 5030 mg/L 0.050 0.23 as Gasoline 3776 12/18/1995 3776 8020 (GC, Liquid) 12/18/1996 8020 0.50 ug/L 5.6 Benzene 12/18/1996 3776 8020 ug/L 0.50

0.50

0.50

2.0

8020

8020

8020

5030

ug/L

ug/L

ug/L

% Rec.

Client Acct: 43200 NET Job No: 96.03459

Ref: Harrison St. Garage/961212-J1

# CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Flags	<u>Units</u>	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE, Liquid)						1 1		2776
as Gasoline	107.0	0.535	0.50		mg/L	12/18/1996		3776
Benzene	105.2	21.03	20.0		ug/L	12/18/1996		3776
Toluene	99.2	19.84	20.0		ug/L	12/18/1996	aal	3776
Ethylbenzene	101.7	20.34	20.0		ug/L	12/18/1996	aal	3776
Xylenes (Total)	96.4	57.86	60.0		ug/L	12/18/1996	aal	3776
Methyl-tert-butyl ether			80.0		ug/L	12/18/1996	aal	3776
Bromofluorobenzene (SURR)	100.0	100	100		% Rec.	12/18/1996	aal	3776
TPH (Gas/BTXE, Liquid)							_	
as Gasoline	85.8	0.429	0.50		mg/L	12/19/1996		3778
Benzene	107.5	21.50	20.0		ug/L	12/19/1996	aal	3778
Toluene	101.7	20.34	20.0		ug/L	12/19/1996	aal	3778
Ethylbenzene	103.4	20.67	20.0		ug/L	12/19/1996	aal	3778
Xylenes (Total)	98.6	59.15	60.0		ug/L	12/19/1996	aal	3778
Methyl-tert-butyl ether	91.3	73.06	80.0		ug/L	12/19/1996	aal	3778
Bromofluorobenzene (SURR)	100.0	100	100		₹ Rec.	12/19/1996	aal	3778

Clinic Name: Blaine Tech Services

Client Acct: 43200 NET Job No: 96.03459 e: 12/23/19

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# METHOD BLANK REPORT

	Method						•
	Blank						Run
	Amount	Reporting			Date	Analyst	Batch
Parameter	Found	Limit	Flags	Units	Analyzed	<u> Initials</u>	Number
TPH (Gas/BTXE, Liquid)							
as Gasoline	ND	0.050		mg/L	12/18/1996	aal	3776
Benzene	ND	0.50		ug/L	12/18/1996	aal	3776
Toluene	ND	0.50		ug/L	12/18/1996	aal	3776
	ND	0.50		ug/L	12/18/1996	aal	3776
Ethylbenzene	ND	0.50		ug/L	12/18/1996	aal	3776
Xylenes (Total)		2.0		ug/L	12/18/1996	aal	3776
Methyl-tert-butyl ether	101	5.7		% Rec.	12/18/1996	aal	3776
Bromofluorobenzene (SURR)	101			-	•		
TPH (Gas/BTXE, Liquid)		0.050		mg/L	12/19/1996	aal	3778
as Gasoline	ND			ug/L	12/19/1996	aal	3778
Benzene	ND	0.50		-	12/19/1996	aal	3778
Toluene	ND	0.50		ug/L	, -	aal	3778
Ethylbenzene	ND	0.50		ug/L	12/19/1996		3778
Xylenes (Total)	ND	0.50		ug/L	12/19/1996	aal	
Methyl-tert-butyl ether	ND	2.0		ug/L	12/19/1996	aal	377B
Bromofluorobenzene (SURR)	107			% Rec.	12/19/1996	aal	3778

Clarit Name: Blaine Tech Se

lient Acct: 43200 NET Job No: 96.03459 te:

12/23/1996

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE

	Matrix Spike	Matrix Spîke Dup		Spike	Sample	Matrix Spike	Matrix Spike Dup.			Date	Run	Sample
Parameter	% Rec.	% Rec.	RPD	Amount	Conc.	Conc	Conc.	Flags	Units_	Analyzed	Batch	Spiked
TPH (Gas/BTXE, Liquid)												271146
as Gasoline	88.8	85.8	3.4	0.50	ND	0.444	0.429		mg/L	12/19/1996	3778	271146
Benzene				4.75	2.6	5.75	5.46		ug/L	12/19/1996	3778	271146
Toluene				42,70	1.3	45.03	43.27		ug/L	12/19/1996	3778	271146
Bromofluorobenzene (SURR)	105.0	103.0	1.9	100	91	105	103		% Rec.	12/19/1996	3778	271146

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I ECH SERVICES INC.	FAX (408) 293-8773					SET BY CALIFORNIA	DHS AND		
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#### KEY TO RESULT FLAGS

: RPD between sample duplicates exceeds 30%. : RPD between sample duplicates or MS/MSD exceeds 20%. \*M : Correlation coefficient for the Method of Standard Additions is less than 0.995. : Sample result is less than reported value. : Value is between Method Detection Limit and Reporting Limit. B-I : Analyte found in blank and sample. : The result confirmed by secondary column or GC/MS analysis. : Cr+6 not analyzed; Total Chromium concentration below Cr+6 regulatory level. CNA COMP : Sample composited by equal volume prior to analysis. : The result has an atypical pattern for Diesel analysis. : The result for Diesel is an unknown hydrocarbon which consists of a single peak. D1 : The result appears to be a heavier hydrocarbon than Diesel. DH : The result appears to be a lighter hydrocarbon than Diesel. DL : Elevated Reporting Limit due to Matrix. DR : Surrogate diluted out of range. DS : The result for Diesel is an unknown hydrocarbon which consists of several peaks. DX : Compound quantitated at a 2X dilution factor. FA : Compound quantitated at a 5X dilution factor. FB: Compound quantitated at a 10X dilution factor. FC: Compound quantitated at a 20% dilution factor. FD : Compound quantitated at a 50% dilution factor. FΕ : Compound quantitated at a 100% dilution factor. FF : Compound quantitated at a 200X dilution factor. FG : Compound quantitated at a 500X dilution factor. FΗ : Compound quantitated at a 1000X dilution factor. FI : Compound quantitated at a greater than 1000x dilution factor. FJ : Compound quantitated at a 25% dilution factor. FK : Compound quantitated at a 250% dilution factor. FL : The result has an atypical pattern for Gasoline. G-: The result for Gasoline is an unknown hydrocarbon which consists of a single peak. G1: The result appears to be a heavier hydrocarbon than Gasoline. : The result appears to be a lighter hydrocarbon than Gasoline. GL: The result for Gasoline is an unknown hydrocarbon which consists of several peaks. GX : Analysis performed outside of the method specified holding time. HTHTC : Confirmation analyzed outside of the method specified holding time. : Prep procedure performed outside of the method specified holding time. HTP : Received after holding time expired, analyzed ASAP after receipt. HTR : Peaks detected within the quantitation range do not match standard used. НX : Value is estimated. : Matrix Interference Suspected. MI MSA : Value determined by Method of Standard Additions. MSA\* : Value obtained by Method of Standard Additions; Correlation coefficient is <0.995. : Sample spikes outside of QC limits; matrix interference suspected. : Sample concentration is greater than 4X the spiked value; the spiked value is considered insignificant. : Matrix Spike values exceed established QC limits, post digestion spike is in NI3 control. : There is >40% difference between primary and confirmation analysis. : pH of sample > 2; sample analyzed past 7 days. P7 : Refer to subcontract laboratory report for QC data. RSC : Matrix interference confirmed by repeat analysis. S2 : Thiocyanate not analyzed separately; total value is below the Reporting Limit for SCN Free Cyanide. UMDL : Undetected at the Method Detection Limit.

#### KEY TO ABBREVIATIONS

**ICVS** 

: Initial Calibration Verification Standard (External Standard).

mean

: Average; sum of measurements divided by number of measurements.

mg/Kg

: Concentration in units of milligrams of analyte per kilogram of sample.

mg/L

: Concentration in units of milligrams of analyte per liter of sample.

mL/L/hr

: Milliliters per liter per hour.

MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.

N/A

: Not applicable.

NA

: Not analyzed.

ND

: Not detected.

NTU

: Nephelometric turbidity units.

RPD

: Relative percent difference.

SNA

: Standard not available.

ug/Kg

: Concentration in units of micrograms of analyte per kilogram of sample.

ug/L

: Concentration in units of micrograms of analyte per liter of sample.

umhos/cm

: Micromhos per centimeter.