ENVIRONMENTAL PROTECTION 95 OCT 31 PN 3: 02

MARK BORSUK

Attorney at Law 1626 Vallejo Street San Francisco, CA 94123-5116 (415) 922-4740 FAX 922-1485 Internet: mborsuk@ix.netcom.com

October 30, 1996

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: IIIQ96 Monitoring Report 1432 Harrison Street, Oakland, CA 94612 SITE ID 498

Dear Mr. Peacock:

Attached is the IIIQ96 report for groundwater monitoring at the above location. If you have any questions, please contact me.

Sincerely yours

Mark Borsuk



985 TIMOTHY DRIVE SAN JOSE, CA 95133 (408) 995-5535 FAX (408) 293-8773

October 21, 1996

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

> Site: 1432 Harrison Street Oakland, California

Date: September 26, 1996

GROUNDWATER SAMPLING REPORT 960926-Z-4

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.

Mark Borusk

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

Blaine Tech Services, Inc. Report No. 960926-Z-4

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.

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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.

Blaine Tech Services, Inc. Report No. 960926-Z-4

Mark Borusk

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.

llh Richard C. Blaine

RCB/mc

cc:

attachments: table of well monitoring data certified professional report and gradient map certified analytical report chain of custody

David Elias Cambria Environmental Technology, Inc. 1144 65th St., Suite C Oakland, CA 94608

Biaine Tech Services, Inc. Report No. 960926-Z-4

Mark Borusk



October 15, 1996

Jim Keller **Blaine Tech Services** 985 Timothy Drive San Jose, CA 95133

Third Quarter 1996 Monitoring Report Re: 1432 Harrison Street Oakland, California

Dear Mr. Keller:

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

THIRD QUARTER 1996 ACTIVITIES

On September 26, 1996 Blaine Tech Services (BTS) gauged all the site wells, collected ground water samples from wells MW-1 and MW-2, and analyzed the samples for total petroleum hydrocarbons as gasoline (TPHg), methyl tert-butyl ether (MTBE), and benzene, ethylbenzene, toluene and xylenes (BETX). Ground water elevations are shown on Figure 1.

COMPLETED AND ANTICIPATED FOURTH QUARTER 1996 ACTIVITIES

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. BTS will gauge and collect ground water samples from wells MW-1, MW-2, MW-4, MW-5, and MW-6. Cambria will soon submit a Subsurface Investigation Report for this ENVIRONMENTAL investigation to the Alameda County Department of Environmental Health (ACDEH).

TECHNOLOGY, INC.

1144 65TH STREET,

SUITE B

CAMBRIA

OAKLAND,

CA 94608

Рн: (510) 420-0700

Fax: (510) 420-9170

Jim Keller October 15, 1996



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

Sincerely, Cambria Environmental Technology, Inc.

Par-

Bob Clark-Riddell, P.E. Principal Engineer

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TABLE OF WELL MONITORING DATA

				100 1			MW_3				
Well I.D.	MW-1			MW-1			MN-1	r			
Date Sampled	03/26/9	6		06/20/96			09/26/9	Þ	and the second		
Well Diameter (in.)	4			4			4				
Total Well Depth (ft.)	25.03			25.00			25.03				
Depth To Water (ft.)	19.27		•	18.64			19,35				
Free Product (in.)	NONE			NONE			NONE				
Reason If Not Sampled											
1 Case Volume (gal.)	3.70			4.10		•	3.70				
Did Well Dewater?	NO			NO			NO				
Gallons Actually Evacuate	d 12.0			12.5			12.0				
Purging Device	ELECTRI	ELECTRIC SUBMERSIBLE			ELECTRIC SUBMERSIBLE			C SUBMERSI	BLE		
Sampling Device	BAILER			BAILER			BAILER				
Time	07:38	07:41	07:45	15:16	15:18	15:19	14:58	14:59	15:01		
Temperature (Fahrenheit)	65.4	64.4	64.6	69.2	68.6	68.0	70.4	70.6	70.8		
рН	6.7	6.7	6.6	7.0	6.9	6.9	7.1	7.1	7.1		
Conductivity (micromhos/c	m)1400	600	620	950	720	700	480	460	460		
BTS Chain of Custody	960326-	к-1		960620-D-	960620-D-2			960926-24			
BTS Sample I.D.	MW-1			MW-1			MW-1				
DOHS HMTL Laboratory	NET			NET			NET				
Analysis	TPH-GAS	& BTEX		TPH-GAS,	TPH-GAS, BTEX			TPH-GAS, BTEX			
-				≰ MTBE			6 MTBE				

SUMMARY	OF CAR RESULTS	in parts per billion unless	otherwise noted
DOHS HMTL Laboratory	NET	NET	NET
Laboratory Sample I.D.	262571	265432	268761
			1
TPH Gasoline	140,000	110,000	170,000
Benzene	29,000	30,000	28,000
Toluene	36,000	38,000	40,000
Ethyl Benzene	1,900	2,200	2,200
Xylene Isomers	13,000	13,000	15,000
Methyl-tert-butyl ether	ND	ND	ND

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.

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TABLE OF WELL MONITORING DATA

Well I.D.	MW-2			MW-2			MW-2			
Date Sampled	03/26/96			06/20/96	06/20/96			09/26/96		
Well Diameter (in.)	2			2	· .		2			
Total Well Depth (ft.)	25.95		•	25.96			25.90			
Depth To Water (ft.)	19.69			19.20			19.80			
Free Product (in.)	NONE			NONE			NONE			
Reason If Not Sampled										
1 Case Volume (Gal.)	1.0			1.0			0.98			
Did Well Dewater?	NO			NO			NO			
Gallons Actually Evacuated	3.0			3.0			3.0			
Purging Device	BAILER			BAILER			BAILER			
Sampling Device	BAILER			BAILER			BAILER			
Time	08:08	08:09	08:11	14:55	14:57	14:59	15:16	15:17	15:19	
Temperature (Fahrenheit)	68.4	68.8	68.8	69.4	69.2	69.0	69.6	69.2	69.0	
На	6.6	6.6	6.6	6.9	7.0	6.9	7.2	7.2	7.2	
Conductivity (micromhos/cm	1) 640	660	660	700	650	650	630	640	640	
RTS Chain of Custody	960326-K	-1		960620-D	-2		960926-2	2.4		
BTS Sample L.D.	MW-2			MW-2			MW-2			
DOUS HMTL Laboratory	NET			NET			NET			
Analucie	TPH-GAS	E BTEX		TPH-GAS,	BTEX		TPH-GAS	BTEX		
MUGTASTS				& MTBE			& MTBE			

SUMMARY OF CAR RESULTS in parts per billion unless otherwise noted

DOHS HMTL Laboratory	NET	NET	NET
Laboratory Sample I.D.	262572	265433	268762
			\wedge
TPH Gasoline	150,000	94,000	150,000 /
Benzene	23,000	15,000	20,000 1
Toluene	32,000	23,000	29,000 🔏
Ethyl Benzene	2,800	2,400	2,800
Xvlene Isomers	12,000	12,000	12,000
Methyl-tert-butyl ether	ND	ND	ND

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TABLE OF WELL MONITORING DATA

Well I.D. Date Sampled	MW-3 03/26/96	MW-3 06/20/96	MW-3 09/26/96
Well Diameter (in.)	2	2	2
Total Well Depth (ft.)	23.95	23.95	23,96
Depth To Water (ft.)	18.25	18.35	19.12
Free Product (in.) Reason If Not Sampled	NONE GAUGE ONLY	NONE Gauge only	NONE 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

Blaine Tech Services, Inc. Report No. 960926-Z-4

Mark Borsuk



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: 10/09/1996 NET Client Acct. No: 43200 NET Job No: 96.02817 Received: 09/27/1996

Client Reference Information

Harrison St. Garage 1432 Harrison St./960926-Z4

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:

Dee inger Brinlee

Project Coordinator

Enclosure(s)

Client Name: Blaine Tech Services

Client Acct: 43200 NET Job No: 96.02817



Run

Ref: Harrison St. Garage 1432 Harrison St./960926-24

SAMPLE DESCRIPTION: MW-1 Date Taken: 09/26/1996

Time Taken: 15:10

NET Sample No: 268761

HEI Gampie Hot. Boover					1			
		Reporting	T		Date	Date	Batch	
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed	No.	
TPH (Gas/BTXE, Liquid)						·		
5030/M8015						10/04/1996	373B	
DILUTION FACTOR*	1,000					10/04/1996	3738	
as Gasoline	170	50	mg/L	5030		10/04/1996	3738	
8020 (GC, Liquid)						10/04/1996	3738	
Benzene	28,000	500	ug/L	8020		10/04/1996	3738	
Toluene	40,000	500	ug/L	8020		10/04/1996	3738	
Ethylbenzene	2,200	500	ug/L	8020		10/04/1996	3738	
Xylenes (Total)	15,000	500	ug/L	8020		10/04/1996	3738	
SURROGATE RESULTS						10/04/1996	3738	
Bromofluorobenzene (SURR)	94		% Rec.	5030		10/04/1996	3738	

Client Acct: 43200

Client Name: Blaine Tech Services NET Job No: 96.02817

10/09/1996 Da ELAP Cert: 1386 Page: 3

10 Run

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Ref: Harrison St. Garage 1432 Harrison St./960926-Z4

SAMPLE DESCRIPTION: MW-1 Date Taken: 09/26/1996 Time Taken: 15:10

NET Sample No: 268761

			1	Reporting		· · ·	Date	Date	Batch
Parameter	1997 (M. 1997) 1997 - 1997 (M. 1997)	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.
8240 (GCMS, Liquid)									
DILUTION FACTOR*	1	100	•				· · · ·	10/04/1996	1.
Methyl-tert-butyl ether	•	ND		500	ug/L	8240		10/04/1996	1
SURROGATE RESULTS								10/04/1996	1
4-Bromofluorobenzene (SUR	R)	102			% Rec.	8240		10/04/1996	1
Toluene-d8 (SURR)	•	101			✤ Rec.	8240		10/04/1996	1
1,2-Dichloroethane-d4 (SU	RR)	108			₹ Rec.	8240		10/04/1996	1

Client Name: Blaine Tech Services

Client Acct: 43200 NET Job No: 96.02817 Dat 10/09/1996



Run

Ref: Harrison St. Garage 1432 Harrison St./960926-Z4

	· ·		1.01	11.152	14 - C		P j.	1.12
SAMPLE	DESC	RIP	TOL	Ι.	MW-	2	1.14	÷ -
	1.00		1.61		+ <`.			1.1

Date Taken: 09/26/1996

Time Taken: 15:25 NET Sample No: 268762

NOTE :

	1.1. 1.1.	********			Data	Date	Batch	
		Reporting	Г.		Date	Date	Ducon	
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed	NO.	
TPH (Gas/BTXE, Liquid)								
5030/M8015	·					10/05/1996	3738	
DILUTION FACTOR*	1,000			•		10/05/1996	3738	
as Gasoline	150	50	mg/L	5030	· · · · · ·	10/05/1996	3738	
8020 (GC, Liquid)						10/05/1996	3738	
Benzene	20,000	500	ug/L	8020	. · · · ·	10/05/1996	3738	
Toluene	29,000	500	ug/L	8020		10/05/1996	3738	
Ethylbenzene	2,800	500	ug/L	8020		10/05/1996	3738	
- Xylenes (Total)	12,000	500	ug/L	8020		10/05/1996	3738	
SURROGATE RESULTS						10/05/1996	3738	
Bromofluorobenzene (SURR)	93		% Rec.	5030		10/05/1996	3738	

Client Name: Blaine Tech Services Client Acct: 43200

Client Acct: 43200 NET Job No: 96.02817 Dat 10/09/1996 ELAP Cert: 1386 Page: 5

Ref: Harrison St. Garage 1432 Harrison St./960926-24

	and the second
SAMPLE DESCRIPTION:	MW-2
Date Taken:	09/26/1996
Time Taken:	15:25
NET Sample No:	268762

۲.

NET Sample No: 268762	8				· · ·			Run Batch	
		•	Reporting	Г	Date	Date			
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	NO.	
8240 (GCMS, Liquid)									
DILUTION FACTOR*	10						10/08/1996	2	
Methyl-tert-butyl ether	ND		50	ug/L	8240		10/08/1996	2	
SURROGATE RESULTS				-			10/08/1996	2	
4-Bromofluorobenzene (SURR)	99			ł Rec.	8240		10/08/1996	2	
Toluene-dB (SURR)	84			≹ Rec.	8240		10/08/1996	2	
1,2-Dichloroethane-d4 (SURR)	110			% Rec.	8240		10/08/1996	2	

Client Name: Blaine Tech Services Client Acct: 43200 NET Job No: 96.02817



Ref: Harrison St. Garage 1432 Harrison St./960926-Z4

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV Shandard	CCV					Run
	Standard	Amount	Amount			Date	Analyst	Batch
Parameter	& Recovery	Found	Expected	Flags '	Units	Analyzed	Initials	Number
TPH (Gas/ETXE, Liquid)								
as Gasoline	103.6	0.518	0.50		mg/L	10/04/1996	сју	3738
Benzene	100.5	20.09	20.0		ug/L	10/04/1996	сју	3738
Toluene	100.4	20.08	20.0		ug/L	10/04/1996	сју	3738
Ethylbenzene	99.6	19.92	20.0		ug/L	10/04/1996	cjy	3738
Xvlenes (Total)	97.8	58.67	60.0		ug/L	10/04/1996	cjy	3738
Bromofluorobenzene (SURR)	98.0	98	100		% Rec.	10/04/1996	сју	3738

Client Name: Blaine Tech Services Client Acct: 43200 NET Job No: 96.02817



Ref: Harrison St. Garage 1432 Harrison St./960926-Z4

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard * Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Flags	Units	Date Analyzed	Analyst Initials	Run Batch Number
8240 (GCMS, Liquid)								
Methyl-tert-butyl ether	92.2	46.1	50.0		ug/L	10/04/1996	jde	1
4-Bromofluorobenzene (SURR)	103.0	103	100		<pre>% Rec.</pre>	10/04/1996	jde	1
Toluene-dB (SURR)	102.0	102	100		% Rec.	10/04/1996	jde	1
1,2-Dichloroethane-d4 (SURR)	97.0	97	100		ℜ Rec.	10/04/1996	jđe	1



Ref: Harrison St. Garage 1432 Harrison St./960926-Z4

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV	CCV					
	eev	Standard	Standard					Run
	Standard	Amount	Amount			Date	Analyst	Batch
Parameter	% Recovery	Found	Expected	Flags	Units	Analyzed	Initials	Number
8240 (GCMS, Liquid)								
Methyl-tert-butyl ether	112.0	112	100		ug/L	10/08/1996	jde	2
4-Bromofluorobenzene (SURR)	102.0	102	100		* Rec.	10/08/1996	jde	2
Toluene-d8 (SURR)	103.0	103	100		% Rec.	10/08/1996	jde	2
1,2-Dichloroethane-d4 (SURR)	108.0	108	100		ł Rec.	10/08/1996	jde	2

Client Name: Blaine Tech Services Client Acct: 43200 NET Job No: 96.02817 Dat 10/09/1996 ELAP Cert: 1386 Page: 9

Ref: Harrison St. Garage 1432 Harrison St./960926-24

METHOD BLANK REPORT

		DAINA NE	IONI	•			
						-	
	· · ·					-	•
	Method	•					
	Blank						Run
	Amount	Reporting			Date	Analyst	Batch
Parameter	Found	Lim <u>it</u>	Flags	Units	Analyzed	<u>Initials</u>	Number_
TPH (Gas/BTXE, Liquid)							
as Gasoline	ND	0.050		mg/L	10/04/1996	cjy	3738
Benzene	DM	0.50		ug/L	10/04/1996	cjy	3738
Toluene	ND	0.50		ug/L	10/04/1996	cjy	3738
Ethylbenzene	ND	0.50		ug/L	10/04/1996	сју	3738
Xylenes (Total)	ND	0.50		ug/L	10/04/1996	cjy	3738
Bromofluorobenzene (SURR)	9B			% Rec.	10/04/1996	cjy	3738

NOTE: Results apply only to the samples analyzed.

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Ref: Harrison St. Garage 1432 Harrison St./960926-24

METHOD BLANK REPORT

	1						
	Method						
	Blank						Run
. •	Amount	Reporting			Date	Analyst	Batch
Parameter	Found	Limit	Flags	Units	Analyzed	Initials	Number_
8240 (GCMS, Liquid)							
Methyl-tert-butyl ether	ND	5.0		ug/L	10/04/1996	jde	1
4-Bromofluorobenzene (SURR)	106			<pre>% Rec.</pre>	10/04/1996	jde	1
Toluene-dB (SURR)	103			∦ Rec.	10/04/1996	jde	1
1,2-Dichloroethane-d4 (SURR)	106			% Rec.	10/04/1996	jde	1



Ref: Harrison St. Garage 1432 Harrison St./960926-24

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Flags	Units	Date Analyzed	Analyst Initials	Run Batch Number
8240 (GCMS, Liquid)		1 11					
Methyl-tert-butyl ether	ND	5.0		ug/L	10/08/1996	jde	2
4-Bromofluorobenzene (SURR)	103			% Rec.	10/08/1996	jde	2
Toluene-dB (SURR)	105			% Rec.	10/08/1996	jde	2
1,2-Dichloroethane-d4 (SURR)	103			✤ Rec.	10/08/1996	jde	2



Ref: Harrison St. Garage 1432 Harrison St./960926-24

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

						· · ·						
		Matrix					Matrix			•	1.1	
	Matrix	Spike				Matrix	Spike	1999 - A.	· ·			
	Spike	Dup	÷	Spike	Sample	Spike	Dup.			Date	Run	Sample
Parameter	<pre>% Rec.</pre>	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Flags	Units	Analyzed	Batch	Spiked
TPH (Gas/BTXE, Liquid)	-											268828
as Gasoline	101.2	104.8	3.5	0.50	ND	0.506	0.524		mg/L	10/04/1996	3738	268828
Benzene	97.6	100.8	3.1	6.33	ND	6.18	6.38		ug/L	10/04/1996	3738	268828
Toluene	95.6	99.3	3.8	38.61	ND	36,91	38.33		ug/L	10/04/1996	3738	268828
Bromofluorobenzene (SURR)	98.0	99.0	1.0	100	93	98	99		<pre>% Rec.</pre>	10/04/1996	3738	268828

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

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Ref: Harrison St. Garage 1432 Harrison St./96D926-Z4

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

		Materia					Map					-
	Matrix	Spike		•		Matrix	Snike	·		-		· · · ·
	Spike	Dup		Spike	Sample	Spike	Dup.			Date	Run	Sample
Parameter	% Rec.	<pre>% Rec.</pre>	RPD	Amount	Conc.	Conc.	Conc.	Flags	Units	Analyzed	Batch	Spiked
8240 (GCMS, Liquid)												268573
Methyl-tert-butyl ether	91.0	90.0	1.1	50.0	ND	45.5	45.0		ug/L	10/04/1996	1	268573
4-Bromofluorobenzene (SURR)	105.0	97.0	7.8	100	103	105	97		≹ Rec.	10/04/1996	1	268573
Toluene-d8 (SURR)	-4.0	-11.0	93.2	100	121	117	110	MI	<pre>% Rec.</pre>	10/04/1996	1	268573
1,2-Dichloroethane-d4 (SURR)	5.0	-4.0	1800	.100	106	111	102		* Rec.	10/04/1996	1	268573

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CHAIN OF CUS	STODY					٦											CB REGION*	
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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. в-0 : The result confirmed by secondary column or GC/MS analysis. C : 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. D--: 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 FC : Compound quantitated at a 10X dilution factor. FD : Compound quantitated at a 20X dilution factor. : Compound quantitated at a 50X dilution factor. FE : Compound quantitated at a 100X dilution factor. FF : Compound quantitated at a 200X dilution factor. FG FH : Compound quantitated at a 500X dilution factor. : Compound quantitated at a 1000X dilution factor. FT. : Compound quantitated at a greater than 1000x dilution factor. FJ : Compound quantitated at a 25X dilution factor. FK. : Compound quantitated at a 250X 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. GH : 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. HT HTC : Confirmation analyzed outside of the method specified holding time. : Prep procedure performed outside of the method specified holding time. HTP HTR : Received after holding time expired, analyzed ASAP after receipt. : Peaks detected within the quantitation range do not match standard used. HX : Value is estimated. J MI : Matrix Interference Suspected. MSA : Value determined by Method of Standard Additions. MSA* : Value obtained by Method of Standard Additions; Correlation coefficient is <0.995. NI1 : Sample spikes outside of QC limits; matrix interference suspected. NI2 : 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. P : 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 SCN : Thiocyanate not analyzed separately; total value is below the Reporting Limit for Free Cyanide. UMDL : Undetected at the Method Detection Limit.

KEY TO ABBREVIATIONS

		n an
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.

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