MARK BORSUK

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

Internet: mborsuk@ix.netcom.com

May 21, 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: IQ'97 Monitoring Report

1432 Harrison Street, Oakland, CA 94612

SITE ID 498

Dear Mr. Peacock:

Attached is the IQ'97 report for groundwater monitoring at the above location. If you have any questions, please contact me.

Mark Borsuk

81 HVA 53 EN 5: 23

ESSENCIONA ESSENCIONA





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

May 14, 1997

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

> Site: 1432 Harrison Street Oakland, California

Date: March 31, 1997

GROUNDWATER SAMPLING REPORT 970331-Z-3

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 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 sample collection.

STANDARD PRACTICES

Sampling Equipment

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.

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.

Sampling Methodology

Samples were obtained by standardized sampling procedures that follow a non-purge sample collection protocol. The sampling methodology conforms to both State and Regional Water Quality Control Board standards for no purge sampling 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.

KEB/mc

attachments: table of well monitoring data

certified professional report and gradient map

certified analytical report

chain of custody

cc:

Scott MacLeod

Cambria Environmental Technology, Inc.

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

Well I.D. Date Sampled	MW-1 10/28/96	MW-1 12/12/96			MW-1 03/31/97	
Well Diameter (in.) Total Well Depth (ft.) Depth To Water (ft.)	4 25.08 19.58	4 25.12 19.68			4 25.06 18.80	7
Free Product (in.) Reason If Not Sampled	GAUGE ONLY	NONE			NONE	
1 Case Volume (gal.) Did Well Dewater? Gallons Actually Evacuated	i .	3.50 NO 11.0			NOT PURGED	
Purging Device Sampling Device		ELECTRIC S	UBMERSIBI	ĿΕ	NONE BAILER	
Time Temperature (Fahrenheit) pH Conductivity (micromhos/cr	n) .	09:15 61.0 7.2 650	09:17 60.2 7.3 550	09:19 60.0 7.3 520	14:04 66.2 7.5 420	
BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis		961212-J1 MW-1 NET TPH-GAS, E	3TEX		970331-Z3 MW-1 LEGEND TPH-GAS, BT & MTBE	EX

SUMMARY OF CAR RES	U L T S in parts per billion	unless otherwise noted
DOHS HMTL Laboratory	NET	LEGEND
Laboratory Sample I.D.	271140	274071
		1
TPH Gasoline	110,000	160,000
Benzene	36,000	24,000
Toluene	47,000	39,000
Ethyl Benzene	2,500	1,900
Xylene Isomers	16,000	13,000
Methyl-tert-butyl ether	מא	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.

page 1

Well I.D. Date Sampled	MW-2 10/28/96	MW-2 12/12/96			MW-2 03/31/97
Well Diameter (in.) Total Well Depth (ft.) Depth To Water (ft.)	2 26.02 20.18	2 25.83 20.17	•		2 25.84 19.67
Free Product (in.) Reason If Not Sampled	 GAUGE ONLY	NONE			NONE
1 Case Volume (gal.) Did Well Dewater? Gallons Actually Evacuated	i	0.90 NO 3.0			NOT PURGED
Purging Device Sampling Device		BAILER BAILER			NONE BAILER
Time Temperature (Fahrenheit) pH Conductivity (micromhos/cm	n)	09:40 65.2 7.4 1000	09:42 63.8 7.3 1000	63.2	
BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis		961212-J1 MW-2 NET TPH-GAS &	BTEX		970331-23 MW-2 LEGEND TPH-GAS, BTEX & MTBE

SUMMARY OF CAR R	ESULTS in parts per billion un	less otherwise noted
DOHS HMTL Laboratory	NET	LEGEND
Laboratory Sample I.D.	271141	274072
TPH Gasoline	58,000	38,000
Benzene	3,100	6,000
Toluene	11,000	7,900
Ethyl Benzene	1,700	690
Xylene Isomers Methyl-tert-butyl ether	8,100 220	3,300 ND

Well I.D. Date Sampled	MW-3 10/28/96	MW-3 12/12/96	MW-3 03/31/97
Well Diameter (in.)	2	2	2
Total Well Depth (ft.)	23.88	24.00	23.90
Depth To Water (ft.)	19.11	18.61	18.35
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			MW - 4
Date Sampled	10/28/96			12/12/96			03/31/97
Well Diameter (in.)	2			2			2
Total Well Depth (ft.)	24.52			24.85			24.84
Depth To Water (ft.)	19.32			19.42			18.67
Free Product (in.)	NONE			NONE			NONE
Reason If Not Sampled							
1 Case Volume (gal.)	0.80			0.86			NOT PURGED
Did Well Dewater?	NO			NO			
Gallons Actually Evacuated	2.5			3.0			
Purging Device	BAILER			BAILER			NONE
Sampling Device	BAILER			BAILER			BAILER
Time	12:59	13:02	13:04	08:20	08:22	08:25	13:44
Temperature (Fahrenheit)	70.4	71.2	70.8	64.8	64.6	64.6	65.8
рН	7.2	6.9	7.0	7.4	7.2	7.2	7.4
Conductivity (micromhos/cm)1200	1000	1000	1000	1000	1000	560
BTS Chain of Custody BTS Sample I.D.	961028-K2	2:		961212-J1 MW-4			970331-23 MW-4
DOHS HMTL Laboratory							LEGEND
Analysis	NET	שמעת		NET	שמתנ		TPH-GAS, BTEX
WustAztz	TPH-GAS, & MTBE	DILA		TPH-GAS, I & MTBE	01 T.V		& MTBE

SUMMARY OF CAR RESULTS	in parts per billion unless	otherwise noted
DOHS HMTL Laboratory	NET	LEGEND
Laboratory Sample I.D.	271142	274073
		0.00
TPH Gasoline	11,000	ND.
Benzene	4,200	ND
Toluene	410	ND
Ethyl Benzene	420 .	nd
Xylene Isomers	260	ND
Methyl-tert-butyl ether	32	ND

Well I.D.	MW-5			MW-5			MW-5	
Date Sampled	10/28/96			12/12/96			03/31/97	
Well Diameter (in.)	2			2			2	
Total Well Depth (ft.)	28.92			28.90			28.86	
Depth To Water (ft.)	19.88			20.09			19.24	
Free Product (in.)	NONE			NONE			NONE	
Reason If Not Sampled								
1 Case Volume (gal.)	1.40			1.40			NOT PURGED)
-	NO			ИО				
Gallons Actually Evacuated	4.5			4.5				
Purging Device	BAILER			BAILER			NONE	
	BAILER			BAILER			BAILER	
Time	12:39	12:41	12:44	08:00	08:03	08:06	13:24	
Temperature (Fahrenheit)	67.8	67.6	67.6	61.4	61.4	61.2	63.4	
Ha	7.2	7.2	7.1	7.6	7.6	7.6	7.4	
Conductivity (micromhos/cm)	920	850	840	1000	790	770	700	
BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis	961028-KZ MW-5 NET TPH-GAS,			961212-J1 MW-5 NET TPH-GAS,			970331-23 MW-5 LEGEND TPH-GAS, I	3TEX
Conductivity (micromhos/cm) BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory	961028-K MW-5 NET	850 2		1000 961212-J1 MW-5 NET	790		970331-Z MW-5 LEGEND TPH-GAS,	

SUMMARY OF CAR RE	SULTS in parts per billion	unless otherwise noted
DOHS HMTL Laboratory	NET	LEGEND
Laboratory Sample I.D.	271143	274074
TPH Gasoline	230	90
Benzene	5.6	3.1
Toluene	0.9	ND
Ethyl Benzene	ND	ND
Xylene Isomers	0.9	ND
Methyl-tert-butyl ether	3.6	ND

Well I.D.	MW-6			MW-6			MW-6
Date Sampled	10/28/96			12/12/96			03/31/97
Well Diameter (in.)	2			2			2
Total Well Depth (ft.)	28.43			28.45			28.42
Depth To Water (ft.)	20.02			20.18			19.81
Free Product (in.)	NONE			NONE			· ——
Reason If Not Sampled							GAUGE ONLY
1 Case Volume (gal.)	1.30			1.30			
Did Well Dewater?	по			NO			
Gallons Actually Evacuated	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	
Нq	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-K	2		961212 - J1			•
BTS Sample I.D.	MW - 6			MW-6			
DOHS HMTL Laboratory	NET			NET			
Analysis	TPH-GAS,	BTEX		TPH-GAS,	BTEX		
	& MTBE			& MTBE			

SUMMARY OF CAR RESULTS	s in parts per billion unless otherwise noted
OOHS HMTL Laboratory	NET
Laboratory Sample I.D.	271144
TPH Gasoline	מא
Benzen e	ND
Toluene	ND
Ethyl Benzene	ND
Kylene Isomers	ND
Methyl-tert-butyl ether	ND



May 13, 1997

Kent Brown Blaine Tech Services 1680 Rogers Ave. San Jose, CA 95112

Re:

First Quarter 1997 Monitoring Report

1432 Harrison Street Oakland, California

Dear Mr. Brown:

the sampling data.

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

FIRST QUARTER 1997 ACTIVITIES

Ground Water Sampling: On March 31, 1997, Blaine Tech Services (Blaine) gauged all site wells and sampled wells MW-1, MW-2, MW-4, and MW-5. No sampling of wells MW-3 or MW-6 is required at this time according to the sampling plan. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), methyl tert-butyl ether (MTBE), and benzene, ethylbenzene, toluene and total xylenes (BETX). Ground water elevations are shown on Figure 1. Ground water analytic data is tabulated and presented separately by Blaine.

Ground Water Sampling: Blaine will gauge all site wells and collect ground water samples from wells

MW-1, MW-2, MW-4, and MW-5. Cambria will submit a ground water monitoring report summarizing

CAMBRIA

ANTICIPATED SECOND QUARTER 1997 ACTIVITIES

ENVIRONMENTAL

TECHNOLOGY, INC.

1144 65th Street,

SUITE B

OAKLAND,

CA 94608

Рн: (510) 420-0700

Fax: (510) 420-9170

HYDROCARBON DISTRIBUTION IN GROUND WATER

Ground water analytic data suggest that hydrocarbon concentrations are highest in wells MW-1 and MW-2, which are located near the former underground storage tank area. The crossgradient horizontal extent is defined to below or near method detection limits by wells MW-3 and MW-5. The southwest extent is defined by MW-6, in which no hydrocarbons were detected during the fourth quarter 1996 sampling event. No hydrocarbons were detected in well MW-4 during the most recent sampling event, although hydrocarbons were detected in this well during the fourth quarter 1996 sampling event. Continued monitoring of well MW-4 will assess whether the northeast hydrocarbon extent is fully defined.

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.

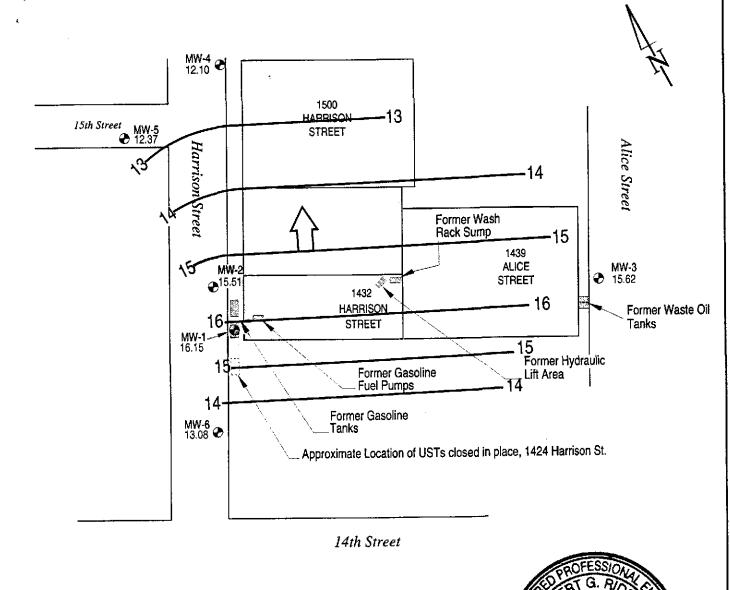
Mauren D. Feineman

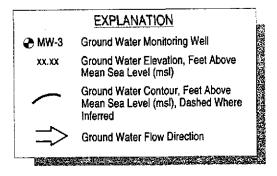
Staff Geologist

Bob Clark-Riddell, P.E.

Principal Engineer

F:\PROJECT\SB-2004\OAKL-188\QM\QM-1-97.WPD





No. C 049629

Exp. Sept Devo

CIVIL PRIME

O 50 100

Scale (ft)

NOTE: Wells MW-4, MW-5, and MW-6 installed in October, 1996.

CAMBRIA
Environmental Technology, Inc.

1432 Harrison Street Oakland, California

F:PROJECT\SB-2004\DAKL-188\FIGURES\10M97-MP.DWG

Ground Water Elevation Contours March 31, 1997 1

FIGURE

LEGEND

Analytical Services

3636 N. Laughlin Road, Suite 110 Santa Rosa, California 95403 707.541.2313 707.541.2333 fax

Kent Brown Blaine Tech Services 1680 Rogers Ave. San Jose, CA 95112 Date: 05/15/1997

LEGEND Client Acct. No: 43200

LEGEND Job No: 97.00660 Received: 04/02/1997

Client Reference Information

Mark Borsuk/970331-Z3

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 Result Flags" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2313.

Submitted by:

Marty French Project Manager

Enclosure(s)

Client Acct: 43200 LEGEND Job No: 97.00660 Date: 05/15/1997

ELAP Cert: 2193 Page: 2

Ref: Mark Borsuk/970331-Z3

SAMPLE DESCRIPTION: MW-1

Date Taken: 03/31/1997
Time Taken: 14:00
LEGEND Sample No. 274071

Time Taken: 14:00							
LEGEND Sample No: 274071							Run
		Reporting				Date	Batch
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)							
5030/M8015						04/07/1997	3824
DILUTION FACTOR*	1,000					04/07/1997	3824
as Gasoline	160	50	mg/L	5030		04/07/1997	3824
8020 (GC, Liquid)						04/07/1997	3824
Benzene	24,000	500	ug/L	8020		04/07/1997	3824
Toluene	39,000	500	ug/L	8020		04/07/1997	3824
Ethylbenzene	1,900	500	ug/L	8020		04/07/1997	3824
Xylenes (Total)	13,000	500	ug/L	8020		04/07/1997	3824
Methyl-tert-butyl ether	ND	2,000	ug/L	8020		04/07/1997	3824
SURROGATE RESULTS	~ *					04/07/1997	3824
Bromofluorobenzene (SURR)	104		% Rec.	5030		04/07/1997	3824

Client Acct: 43200 LEGEND Job No: 97.00660 Date: 05/15/1997

ELAP Cert: 2193 Page: 3

Ref: Mark Borsuk/970331-Z3

SAMPLE DESCRIPTION: MW-2

Date Taken: 03/31/1997

Time Taken: 13:50

LEGEND Sample No: 274072								Run	
-			Reporting	3	Date	Date	Batch		
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.	
TPH (Gas/BTXE,Liquid)									
5030/M8015							04/07/1997	3824	
DILUTION FACTOR*	100						04/07/1997	3824	
as Gasoline	38		5.0	mg/L	5030		04/07/1997	3824	
8020 (GC, Liquid)							04/07/1997	3824	
Benzene	6,000	FI	500	ug/L	8020		04/09/1997	3825	
Toluene	7,900	FI	500	ug/L	8020		04/09/1997	3825	
Ethylbenzene	690		50	ug/L	8020		04/07/1997	3824	
Xvlenes (Total)	3,300		50	ug/L	8020		04/07/1997	3824	
Methyl-tert-butyl ether	ND		200	ug/L	8020		04/07/1997	3824	
SURROGATE RESULTS				=			04/07/1997	3824	
Bromofluorobenzene (SURR)	99			% Rec.	5030		04/07/1997	3824	

Client Name: Blaine Tech Services Date: 05/15/1997

Client Acct: 43200 LEGEND Job No: 97.00660

ELAP Cert: 2193 Page: 4

Ref: Mark Borsuk/970331-Z3

SAMPLE DESCRIPTION: MW-4

Date Taken: 03/31/1997

Time Taken: 13:40

LEGEND Sample No: 274073							Run
_		Reporting	Ī		Date	Date	Batch
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed	No.
TPH (Gas/BTXE, Liquid)							
5030/M8015						04/04/1997	3823
DILUTION FACTOR*	1					04/04/1997	3823
as Gasoline	ND	0.050	mg/L	5030		04/04/1997	3823
8020 (GC, Liquid)						04/04/1997	3823
Benzene	ND	0.50	ug/L	8020		04/04/1997	3823
Toluene	ND	0.50	ug/L	8020		04/04/1997	3823
Ethylbenzene	ND	0.50	ug/L	8020		04/04/1997	3823
Xylenes (Total)	ND	0.50	ug/L	8020		04/04/1997	3823
Methyl-tert-butyl ether	ND	2.0	ug/L	8020		04/04/1997	3823
SURROGATE RESULTS			-			04/04/1997	3823
Bromofluorobenzene (SURR)	98		% Rec.	5030		04/04/1997	3823

Client Acct: 43200 LEGEND Job No: 97.00660 Date: 05/15/1997

ELAP Cert: 2193 Page: 5

Ref: Mark Borsuk/970331-Z3

SAMPLE DESCRIPTION: MW-5

Date Taken: 03/31/1997

Time Taken: 13:30

LEGEND Sample No: 274074								Run	
			Reporting	J	Date	Date	Batch		
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed	No.	
TPH (Gas/BTXE, Liquid)									
5030/M8015							04/04/1997	3823	
DILUTION FACTOR*	1						04/04/1997	3823	
as Gasoline	0.09	G-	0.050	mg/L	5030		04/04/1997	3823	
8020 (GC, Liquid)							04/04/1997	3823	
Benzene	3.1	C	0.50	ug/L	8020	•	04/04/1997	3823	
Toluene	ND		0.50	ug/L	8020		04/04/1997	3823	
Ethylbenzene	ND		0.50	ug/L	8020		04/04/1997	3823	
Xvlenes (Total)	ND		0.50	ug/L	8020		04/04/1997	3823	
Methyl-tert-butyl ether	ND		2.0	ug/L	8020		04/04/1997	3823	
SURROGATE RESULTS				=			04/04/1997	3823	
Bromofluorobenzene (SURR)	106			% Rec.	5030		04/04/1997	3823	

Client Acct: 43200 LEGEND Job No: 97.00660 Date: 05/15/1997

ELAP Cert: 2193 Page: 6

Ref: Mark Borsuk/970331-Z3

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCA	CCV					
	CCV	Standard	Standard					Run
	Standard	Amount	Amount			Date	Analyst	Batch
Parameter	% Recovery	Found	Expected	Flags	Units	Analyzed	Initials	Number
TPH (Gas/BTXE,Liquid)								
as Gasoline	96.6	0.483	0.50		mg/L	04/04/1997	cjy	3823
Benzene	95.6	19.12	20.0		ug/L	04/04/1997	сју	3823
Toluene	92.0	18.39	20.0		ug/L	04/04/1997	cjy	3823
Ethylbenzene	95.1	19.02	20.0		ug/L	04/04/1997	сју	3823
Xylenes (Total)	95.4	57.23	60.0		ug/L	04/04/1997	çjy	3823
Methyl-tert-butyl ether	105.5	84.38	80.0		ug/L	04/04/1997	cjy	3823
Bromofluorobenzene (SURR)	112.0	112	100		% Rec.	04/04/1997	сју	3823
TPH (Gas/BTXE,Liquid)								
as Gasoline	100.8	0.504	0.50		mg/L	04/07/1997	cjy	3824
Benzene	91.3	18.25	20.0		ug/L	04/07/1997	сју	3824
Toluene	87.2	17.44	20.0		ug/L	04/07/1997	cjy	3824
Ethylbenzene	90.8	18.17	20.0		ug/L	04/07/199 7	сју	3824
Xylenes (Total)	90.3	54.20	60.0		ug/L	04/07/1997	сју	3824
Methyl-tert-butyl ether	89.5	71.58	80.0		ug/L	04/07/1997	сју	3824
Bromofluorobenzene (SURR)	103.0	103	100		% Rec.	04/07/1997	сју	3824
TPH (Gas/BTXE, Liquid)								
as Gasoline	104.0	0.52	0.50		mg/L	04/09/1997	vah	3825
Benzene	92.5	18.50	20.0		ug/L	04/09/1997	vah	3825
Toluene	92.1	18.42	20.0		ug/L	04/09/1997	vah	3825
Ethylbenzene	92.9	18.58	20.0		ug/L	04/09/1997	vah	3825
Xylenes (Total)	92.4	55.43	60.0		ug/L	04/09/1997	vah	3825
Methyl-tert-butyl ether	92.7	74.14	80.0		ug/L	04/09/1997	vah	3825
Bromofluorobenzene (SURR)	98.0	98	100		% Rec.	04/09/1997	vah	3825

Client Acct: 43200 LEGEND Job No: 97.00660 Date: 05/15/1997

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Ref: Mark Borsuk/970331-23

METHOD BLANK REPORT

Method Run Blank Analyst Batch Date Reporting Amount Number Initials Analyzed Parameter Found <u>Limit</u> Flags Units TPH (Gas/BTXE, Liquid) mg/L 04/04/1997 сjу 3823 as Gasoline ND 0.050 04/04/1997 cjy 3823 ug/L Benzene NĎ 0.50 3823 04/04/1997 çjy ug/L Toluene ND 0.50 3823 04/04/1997 Ethylbenzene ND 0.50 ug/L сју 0.50 ug/L 04/04/1997 cjy 3823 Xylenes (Total) ND 04/04/1997 3823 ug/L сју Methyl-tert-butyl ether ND 2.0 3823 04/04/1997 % Rec. сју Bromofluorobenzene (SURR) 103 TPH (Gas/BTXE, Liquid) 0.050 mg/L 04/07/1997 сју 3824 ND as Gasoline 0.50 ug/L 04/07/1997 сју 3824 Benzene ND ug/L 04/07/1997 сју 3824 0.50 Toluene ND 04/07/1997 3824 ug/L cjy Ethylbenzene ND 0.50 3824 0.50 ug/L 04/07/1997 сју Xylenes (Total) ND ug/L 04/07/1997 сjу 3824 ND 2.0 Methyl-tert-butyl ether 04/07/1997 3824 % Rec. сју 106 Bromofluorobenzene (SURR) TPH (Gas/BTXE, Liquid) 04/09/1997 vah 3825 mg/L as Gasoline ND 0.050 3825 0.50 ug/L 04/09/1997 vah Benzene ND ug/L 04/09/1997 vah 3825 ND 0.50 Toluene ug/L 04/09/1997 vah 3825 0.50 ND Ethylbenzene 3825 ug/L 04/09/1997 vah Xylenes (Total) ND 0.50 3825 04/09/1997 vah Methyl-tert-butyl ether ND 2.0 ug/L % Rec. 04/09/1997 vah 3825 Bromofluorobenzene (SURR) 105

Client Acct: 43200 LEGEND Job No: 97.00660 Date: 05/15/1997

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Ref: Mark Borsuk/970331-Z3

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

,		Matrix					Matrix	:				
	Matrix	Spike				Matrix	Spike					
	Spike	Dup		Spike	Sample	Spike	Dup.			Date	Run	Sample
Parameter	% Rec.	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Flags	Units	Analyzed	Batch	Spiked
TPH (Gas/BTXE, Liquid)												274079
as Gasoline	93.0	90.6	2.6	0.50	0.08	0.545	0.533		mg/L	04/04/1997	3823	274079
Benzene	106.2	106.6	0.4	7.11	ND	7.55	7.58		ug/L	04/04/1997	3823	274079
Toluene	103.6	102.8	0.8	33.76	ND	34.97	34,72		og/L	04/04/1997	3823	274079
Bromofluorobenzene (SURR)	111.0	111.0	0.0	100 .	107	111	111		% Rec.	04/04/1997	3823	274079
TPH (Gas/BTXE,Liquid)												274114
as Gasoline	97.2	98.8	1.6	0.50	ND	0.486	0.494		mg/L	04/07/1997	3824	274114
Benzene	97.4	98.2	0.8	3.89	ND	3.79	3.82		ug/L	04/07/1997	3824	274114
Toluene	96.7	102.2	5.4	33.79	ND	32.66	34.55		ug/L	04/07/1997	3824	274114
Bromofluorobenzene (SURR)	103.0	105.0	1.9	100	100	103	105		% Rec.	04/07/1997	3824	274114
TPH (Gas/BTXE, Liquid)												274114
Benzene	97.4	98.2	0.8	3.89	ND	3.79	3.82		ug/L	04/07/1997	3824	274114
Toluene	96.7	102.2	5.4	33.79	ND	32.66	34.55		ug/L	04/07/1997	3824	274114
Bromofluorobenzene (SURR)	103.0	105.0	1.9	100	100	103	105		% Rec.	04/07/1997	3824	274114
TPH (Gas/BTXE, Liquid)												274131
as Gasoline	101.8	100.2	1.6	0 50	ND	0.509	0.501		mg/L	04/09/1997	3825	274131
Benzene	96.5	94.5	2.1	4.02	ND	3.88	3.80		ug/L	04/09/1997	3825	274131
Toluene	97.7	96.0	1.8	36.29	ND	35.47	34.83		ug/L	04/09/1997	3825	274131
Bromofluorobenzene (SURR)	104.0	104.0	0.0	100	105	104	104		% Rec.	04/09/1997	3825	274131
TPH (Gas/BTXE, Liquid)												274131
as Gasoline				0.50	ND				mg/L	04/09/1997	3825	274131
Bromofluorobenzene (SURR)				100	105				% Rec.	04/09/1997	3825	274131

KEY TO RESULT FLAGS

: RPD between sample duplicates exceeds 30%. : RPD between sample duplicates or MS/MSD exceeds 20%. : Correlation coefficient for the Method of Standard Additions is less than 0.995. : Sample result is less than reported value. B-I : Value is between Method Detection Limit and Reporting Limit. B-0 : Analyte found in blank and sample. : The result confirmed by secondary column or GC/MS analysis. CNA : Cr+6 not analyzed; Total Chromium concentration below Cr+6 regulatory level. COMP : Sample composited by equal volume prior to analysis. : Parameter cannot be analyzed for in a preserved sample. : Due to the sample matrix, constant weight could not be achieved. : The result has an atypical pattern for Diesel analysis. D1 : The result for Diesel is an unknown hydrocarbon which consists of a single peak. DB: ND for hydrocarbons, non-discrete baseline rise detected. DH : The result appears to be a heavier hydrocarbon than Diesel. DL: The result appears to be a lighter hydrocarbon than Diesel. DR : Elevated Reporting Limit due to Matrix. DS : Surrogate diluted out of range. DX : The result for Diesel is an unknown hydrocarbon which consists of several peaks. FΑ : Compound quantitated at a 2X dilution factor. FB: Compound quantitated at a 5X dilution factor. : Compound quantitated at a 10% dilution factor. FÇ : Compound quantitated at a 20% dilution factor. FE: Compound quantitated at a 50% dilution factor. FF: Compound quantitated at a 100X dilution factor. FG : Compound quantitated at a 200X dilution factor. FH : Compound quantitated at a 500X dilution factor. FI : Compound quantitated at a 1000X dilution factor. FJ : Compound quantitated at a greater than 1000x dilution factor. FΚ : Compound quantitated at a 25% dilution factor. FL: Compound quantitated at a 250% dilution factor. G-: The result has an atypical pattern for Gasoline. G1 : The result for Gasoline is an unknown single peak. GH : The result appears to be a heavier hydrocarbon than Gasoline. GL: The result appears to be a lighter hydrocarbon than Gasoline. GΧ : The result for Gasoline is an unknown hydrocarbon which consists of several peaks. HT: Analysis performed outside of the method specified holding time. HTC : Confirmation analyzed outside of the method specified holding time. : Prep procedure performed outside of the method specified holding time. HTR : Received after holding time expired, analyzed ASAP after receipt. НX : Peaks detected within the quantitation range do not match standard used. J : Value is estimated. ΜI : Matrix Interference Suspected. 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. NI3 : Matrix Spike values exceed established QC limits, post digestion spike is in control. NI4 : MS/MSD outside of control limits, serial dilution within control. : There is >40% difference between primary and confirmation analysis. ₽7 : pH of sample > 2; sample analyzed past 7 days. : Refer to subcontract laboratory report for QC data. \$2 : Matrix interference confirmed by repeat analysis. : Thiocyanate not analyzed separately; total value is below the Reporting Limit for Free Cyanide. : Analysis performed by Selective Ion Monitoring. SIM TND: Conc. of the total analyte ND; therefore this analyte is ND also. UMDL : Undetected at the Method Detection Limit.

UTD : Unable to perform requested analysis.

FORM.FLAGS rev. 04/08/1997

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