INTERNATIONAL GEOLOGIC
ENVIRONMENTAL AND GEOLOGICAL SERVICES

2831 SYLHOWE ROAD, OAKLAND, CALIFORNIA 94602
PHONE (510) 530-8751 FAX (510) 530-8794

May 7, 1997
705-1.LTR

Ms. Susan Hugo
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Division of Environmental Protection
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Subject: Transmittal for Letter Report describing a subsurface investigation related to a suspected underground storage tank location at 1372 Ocean Avenue, Emeryville, California.

Ms. Hugo:

The enclosed report documents exploratory excavation work with soil and groundwater sampling and laboratory analyses conducted at the above mentioned property. International Geologic was contacted by the property owner to observe a limited excavation with regard to a suspected former underground storage tank (UST) location on the property, collect soil and groundwater samples, have the samples laboratory analyzed and to prepare this report.

Based on the laboratory analyses of soil and groundwater samples collected during this investigation, and on the apparent fact that the former UST was removed from the property sometime prior to 1975, International Geologic believes the subject case should be considered a candidate for closure.

A check for $630.00 as required by your agency is enclosed for oversight services.
Thank you for you guidance in this matter, and please feel free to contact me at (510) 530-8751.

Sincerely,
International Geologic

Steve Bittman
Project Manager

cc: Mr. Doug Ralston
Plant Insulation Company
1300 64th Street
Emeryville, California 94662

encl. Check for $630.00 made payable to "Alameda County Environmental Protection Division"

PLANT INSULATION CO., 1300-64TH STREET, EMERYVILLE, CA 94608

THIS CHECK IS TENDERED IN FULL PAYMENT OF INVOICES LISTED BELOW

2782

TRANSACTION NUMBER	REFERENCE	DATE	DESCRIPTION	GROSS AMOUNT	DEDUCTION	NET AMOUNT
		5/1/97	Inspection Fee	630.00	0.00	630.00
VENDOR NO.			AMOUNT	630.00	0.00	630.00

PLEASE DETACH BEFORE DEPOSITING CHECK

CIVIC BANK OF COMMERCE
OAKLAND, CALIFORNIA

2782

90-4095
1211

PLANT INSULATION CO.
CONTRACTORS & DISTRIBUTORS
1300 - 64TH STREET
EMERYVILLE, CALIFORNIA 94608

DATE	CHECK NO.	AMOUNT
5-1-97	#2782	$630.00***

PAY THE SUM OF SIX HUNDRED THIRTY DOLLARS AND NO/100**

PAY TO THE ORDER OF

ALAMEDA COUNTY ENVIRONMENTAL
PROTECTION DIVISION
1131 Harbor Bay Parkway Rm 250
Alameda, CA 94502-6577

PLANT INSULATION CO.

⑈002782⑈ ⑆121140959⑆ 1050232416⑈

INTERNATIONAL GEOLOGIC
ENVIRONMENTAL AND GEOLOGICAL SERVICES

2831 SYLHOWE ROAD, OAKLAND, CALIFORNIA 94602
PHONE (510) 530-8751 FAX (510) 530-8794

May 7, 1997
705-1.UST

Mr. Doug Ralston
Plant Insulation Company
1300 64th Street
Emeryville, California 94662

Subject: Letter Report describing a subsurface investigation related to a suspected underground storage tank location at 1372 Ocean Avenue, Emeryville, California.

Mr. Ralston:

The enclosed report documents exploratory excavation work with soil and groundwater sampling and laboratory analyses conducted at the above mentioned property. International Geologic was contacted by you to observe a limited excavation with regard to a suspected former underground storage tank location (UST) on the property, collect soil and groundwater samples, have the samples laboratory analyzed and to prepare this report.

If you have any questions or comments concerning this matter, please contact me at (510) 530-8751. Thank you.

Sincerely,
International Geologic

Steve Bittman
Project Manager

cc: Ms. Susan Hugo
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
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Subsurface Investigation
Related To A Suspected Underground Storage Tank Location

for
1372 Ocean Avenue
Emeryville, California

Prepared by

INTERNATIONAL GEOLOGIC
2831 Sylhowe Road
Oakland, California 94602

May 7, 1997

INTERNATIONAL GEOLOGIC
ENVIRONMENTAL AND GEOLOGICAL SERVICES

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Subsurface Investigation

Related To A Suspected Underground Storage Tank Location

for
1372 Ocean Avenue
Emeryville, California

INTRODUCTION

The subject property is located at 1372 Ocean Avenue in Emeryville, California and is owned by "Plant Insulation Company" of Emeryville, California. The site consists of a warehouse and adjoining storage yard built in 1955. Past uses of the site include a trucking company, and subsequently a sales location for refractory brick, operated by Kaiser Aluminum and Sales Inc. The most recent use of the property was for material and equipment storage by Plant Insulation Company between 1975 until the present. The property measures approximately 11,600 ft^2 in area, 6,840 ft^2 of which is warehouse space and 2,500 ft^2 is covered storage. The remaining 2,500 ft^2 is a concrete surfaced storage yard adjoining the west side of the warehouse building.

BACKGROUND

During preparations for the sale of the property, a suspected former fuel dispenser island was identified against the west fence in the yard area, suggesting the possible existence of an underground storage tank (UST) beneath the property (see Figure 1, Site Plan/Project Area Map). Mr. Doug Ralston, President of Plant Insulation Company, had no knowledge of a UST beneath the property, and subsurface locating techniques utilized near the area of the apparent fuel dispenser island, failed to locate a tank.

Subsequently on March 31, 1997, an approximately 15 feet by 15 feet area of cracked and broken concrete slab near the former dispenser island was removed. This work uncovered an apparent supply line leading from the suspected fuel dispenser island, but no UST was discovered beneath the area where the end of the supply line terminated at an uncapped union. During excavations that reached approximately 4 feet beneath the surface, large sections of broken concrete slab were brought to the surface, suggesting that at least one UST had been removed at some time prior to Plant Insulation Company's ownership of the property, and that the pieces of concrete were used as part of the backfill for the excavation. The supply line was removed from the subsurface the same day the excavation work took place.

On April 10, 1997, Ms. Susan Hugo of the Alameda County Health Care Services Agency (ACHCSA), met at the site with Mr. Doug Ralston of Plant Insulation Company and Steve Bittman of International Geologic to discuss appropriate ways to address the issue of the former UST location with the goal of closure. It was agreed that soil and groundwater samples would be collected from the former UST location, and a soil sample would be collected from the former dispenser area.

ON SITE WORK

Soil Sampling

A total of two soil samples were collected:

S-5.5-B1 Collected 5.5 feet beneath the surface (observed to be approximately 6 inches above first encountered groundwater) in tank excavation area.

S-2-D1 Collected 2 feet beneath the former dispenser area.

Soil borings were advanced with a hand auger. Soil samples were collected with a slide-hammer type sampler in single brass tube containers, ends covered by aluminum foil and plastic end-caps and sealed by duct-tape. The samples were placed in iced storage for transportation to the laboratory observing chain of custody procedures.

Soil Description

Surface to 2 feet: Silty Clay (CH), dark brown, damp, stiff, no odor.

2 feet to 3 feet: Sand (SP), fine grained, dark brown, no odor.

3 feet to 3.5 feet: Silty Clay (CL), dark brown, damp, very stiff, no odor.

3.5 feet to 6 feet: Silty Clay (CL), gray/green, damp to moist, very stiff, hydrocarbon odor.

6 to 7 feet: Silty Clay (CL), light brown, saturated, stiff, no odor.

GROUNDWATER SAMPLING

One groundwater sample (Sample W-B1) was collected from the area of the suspected former UST location. Groundwater was encountered in the tank pit boring (B1) at a depth of approximately 6 feet beneath the surface. Confined conditions caused the groundwater level to rise to approximately 4.5 feet beneath the ground surface. The groundwater sample was extracted using a new disposable bailer. The water sample was then poured into laboratory-cleaned, 40-milliliter (ml) glass vials with .5 ml Hydrochloric acid added as a preservative, and laboratory cleaned liter bottles. The sample vials were sealed, inspected for air bubbles, and placed in iced storage for transportation to the laboratory observing chain of custody procedures.

LABORATORY ANALYSES

Laboratory analyses were performed at McCampbell Analytical, Inc., Pacheco, California (DHS Certified Number 1644). Tank pit soil sample S-5.5-B1 and groundwater sample W-B1 were analyzed for the following as specified by the ACHCSA:

- Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX), and methyl-tertiary-butyl-ether (MTBE) by EPA Test Method 8015/8020/5030.
- Total Petroleum Hydrocarbons as diesel (TPHd), by EPA Test Method 8015/3550.
- Total lead (soil) and dissolved lead (water), by EPA Test Method 6010/239.2.
- Volatile Organic Compounds (VOCs) by EPA Method 8010/601.
- Semi-Volatile Organic Compounds by EPA Method 8270A.

Dispenser area soil sample S-2-D1 was analyzed for the following:

- Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX), and methyl-tertiary-butyl-ether (MTBE) by EPA Test Method 8015/8020/5030.
- Total Petroleum Hydrocarbons as diesel (TPHd), by EPA Test Method 8015/3550.

Tables 1 and 2 on the following pages present the results of the laboratory analyses.

LABORATORY ANALYTICAL RESULTS

TABLE 1
RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES
1372 Ocean Avenue
Emeryville, California

Compound Detected	Tank Pit Sample S-5.5-B1	Dispenser Island Sample S-2-D1
TPHg	150[a b]	<1.0
TPHd	430[c d]	210[e]
MTBE	<0.2	<5.0
Benzene	<0.01	<0.5
Toluene	0.20	<0.5
Ethylbenzene	0.38	<0.5
Xylenes	1.2	<0.5
TTLC Lead	4.4	N/A
2-Methylnapthalene	0.43	N/A
N-Nitroso-Di-N-Phenylamine	0.18	N/A
~~Pentachlorophenol~~	0.19 chrysene	N/A

Results expressed in parts per million (ppm).

TPHg:	Total petroleum hydrocarbons as gasoline.
TPHd:	Total petroleum hydrocarbons as diesel.
MTBE:	Methyl-Tertiary-Butyl-Ether.
TTLC Lead:	Total Lead.
a:	No recognizable pattern.
b:	Heavier gasoline range compounds are significant (aged gasoline?).
c:	Gasoline range compounds are significant.
d:	Unmodified or weakly modified diesel range compounds are significant.
e:	Oil range compounds are significant.
N/A:	Not analyzed for compound indicated.

TABLE 2
RESULTS OF LABORATORY ANALYSES OF WATER SAMPLE
1372 Ocean Avenue
Emeryville, California

Compound Detected	Tank Pit Grab Sample W-B1
TPHg	330[a b f]
TPHd	7,000[c f g]
MTBE	8.5
Benzene	<0.005
Toluene	<0.005
Ethylbenzene	<0.005
Xylenes	0.69
Dissolved Lead	13
cis 1,2-Dichloroethene	9.4
trans 1,2-Dichloroethene	2.4
Trichlorethene	40
Trichlorflouromethane	2.7
Vinyl Chloride	1.5

Results expressed in parts per billion (ppb).

TPHg:	Total petroleum hydrocarbons as gasoline.
TPHd:	Total petroleum hydrocarbons as diesel.
MTBE:	Methyl-Tertiary-Butyl-Ether.
TTLC Lead:	Total Threshold Limit Concentration.
a:	No recognizable pattern.
b:	Heavier gasoline range compounds are significant (aged gasoline?).
c:	Gasoline range compounds are significant.
d:	Unmodified or weakly modified diesel range compounds are significant.
e:	Oil range compounds are significant.
f:	Lighter than water immiscible sheen present.
g:	Aged diesel?

The Laboratory Analyses Data Sheets, and the Chain of Custody Record are included in Attachment A to this report.

NEARBY ENVIRONMENTAL WORK

RIX Industries, 6460 Hollis Street

RIX Industries at 6460 Hollis Street adjoins the subject property to the west, and has been the subject of soil and groundwater investigations since three monitoring wells were installed on the property in 1992 to monitor five USTs that were to be abandoned in place beneath the facility building. Soil samples collected during the well installations, contained concentrations of up to 1,800 ppm TPHg, 3,000 ppm TPHd, 2,400 ppm kerosene, 2,100 ppm mineral spirits, and 31,000 ppb tetrachloroethene. The five USTs beneath the building were subsequently abandoned in place, and five additional USTs were removed from beneath the yard area adjacent to the east side of the building in December 1994 (see Figure 1). Corrosion of the tanks with apparent through-going holes were noted at the time that the five USTs located outside the building were removed, indicating that leakage had occurred.

Initial sampling of the monitoring wells in 1992, indicated concentrations of up to 9,300 ppb TPHg, 20,000 TPHd, 20,000 ppb kerosene, and 21,000 ppb TPH as mineral spirits to be present in a sample collected from well MW-3 which is located between the removed and abandoned in place UST areas. In addition to petroleum hydrocarbons, up to 40,000 ppb Methyl-Ethyl-Ketone, 2,200 ppb Tetrachloroethene and 300 ppb Trichloroethene were detected in samples from well MW-3. Generally lower concentrations of contaminants were detected in wells MW-1 and MW-2 which are located on the west side of the abandoned UST locations in the building.

The most recent groundwater monitoring to take place at the RIX property was in October 1995. Concentrations of up to 1,200 ppb TPHg, 2,600 TPHd, and 450 ppb TPH as mineral spirits were detected in samples collected from the monitoring wells. In addition to petroleum hydrocarbons, up to 6,600 ppb Methyl-Ethyl-Ketone, 14 ppb Tetrachloroethene and 53 ppb Trichloroethene were detected in groundwater samples. Groundwater flow direction beneath the RIX Industries site was calculated as approximately west towards Hollis Street using measurements from the three onsite wells on October 13, 1995.

Other Nearby Leaking UST Sites

Getz Construction Company located at 1351 Ocean Avenue, is listed on the State of California Leaking Underground Storage Tanks (LUST) list. The State of California Water Resources Control Board maintains this list of leaking USTs. The leak was discovered upon the removal of an underground diesel storage tank in 1988.

H.F.H. Limited located at 6400 Hollis Street, is also a LUST site. The leak was discovered upon the removal of an underground gasoline storage tank in 1986.

Both of the above listed properties are within approximately 250 feet of the subject site, and a total of 69 LUST cases are documented to exist within a 1/2 mile radius of the subject site.

FINDINGS

1) At least one underground fuel storage tank appears to have been removed from beneath the yard area of the subject property prior to 1975. This finding is based on the existence of an apparent fuel dispenser island, and abandoned fuel supply line discovered during an exploratory excavation which took place on March 31 of this year. No tank was discovered during excavation work to a depth of 4 feet below the surface in a 15 foot by 15 foot area beneath the end of the abandoned supply line. The current owners of the property have had no knowledge of a tank on the property since they began operations on the property in 1975.

2) Former use of the property include a trucking company that operated on site approximately during the 1960's.

3) Residual concentrations of hydrocarbons were detected in shallow soil in the excavation area. This finding is based on concentrations of 150 ppm TPHg, and 430 ppm TPHd that were detected in soil sample S-5.5-B1, collected at a depth of 5.5 feet below the surface in the area judged to be the former tank location. BTEX concentrations sample S-5.5-B1 were 0.20 ppm toluene, 0.30 ppm ethylbenzene, and 1.2 ppm xylenes. Concentration of benzene was below laboratory detection limits.

4) The concentration of MTBE in soil sample S-5.5-B1 was below laboratory detection limits.

5) Total lead in sample S-5.5-B1 was detected within background levels. This finding is based on laboratory analytical results indicating a concentration of 4.4 ppm.

6) EPA 8010 and 8270A laboratory analyses of sample S-5.5-B1 indicated nondetectable concentrations of volatile or semi-volatile organic compounds, with the exceptions of 2-methylnapthalene, n-nitroso-di-n-phenylamine, and pentachlorophenol at concentrations of 0.43 ppm, 0.18 ppm and 0.19 ppm respectively.

7) Soil sample S-2-D1 collected at a depth of 2 feet below the former fuel dispenser area contained a concentration of 210 ppm TPHd. Concentrations of TPHg and BTEX were below laboratory detection limits.

8) Residual concentrations of hydrocarbons were detected in shallow groundwater in the excavation area. This finding is based on concentrations of 330 ppb TPHg, and 7,000 ppb TPHd that were detected in groundwater grab sample W-B1, collected from standing groundwater in boring B-1 at a depth of approximately 4.5 feet below the surface in the area judged to be the former tank location. BTEX concentrations sample W-B1 were below laboratory detection limits with the exception of xylenes at 0.69 ppb.

9) The concentration of MTBE in groundwater sample W-B1 was 8.5 ppb.

10) Dissolved lead in sample W-B1 was detected at a concentration of 13 ppb.

11) EPA 8010 and 8270 laboratory analyses of sample W-B1 indicated nondetectable concentrations of volatile or semi-volatile organic compounds, with the exceptions of 9.4 ppb cis-1,2-dichloroethene, 2.4 ppb trans-1,2-dichloroethene, 40 ppb trichloroethene, 2.7 ppb trichloroflouromethane, and 1.5 ppb vinyl chloride.

DISCUSSION

Although aged gasoline and/or diesel hydrocarbons, and low levels of VOCs were detected in the groundwater sample collected from boring B-1, this may not be representative of actual groundwater quality beneath the site. "Grab" samples of this type often contain higher concentrations of contaminants than would be actually present in a sample collected from a properly installed well. It should be noted that the general quality of shallow groundwater beneath the entire Emeryville area has been degraded over the last few decades, and that there are 69 LUST cases alone within a 1/2 mile radius of the subject site. RIX Industries at 6460 Hollis Street, has documented soil and groundwater contamination and directly adjoins the subject site to the west. This suggests that shallow groundwater beneath the subject property may in fact be impacted from one or more off-site sources.

RECOMMENDATION

1) International Geologic recommends submitting this report to the ACHCSA as a request for site closure based on the following:

   - o Any contributing source of hydrocarbons and/or VOCs to the subsurface was removed from the site with the UST sometime before 1975.
   - o Residual concentrations of hydrocarbons and/or VOCs still remaining in soils and groundwater beneath the site will naturally attenuate and/or degrade over time, and do not warrant further investigation.
   - o Contaminants detected in shallow groundwater beneath the subject property may have one or more off site sources.

REFERENCES

Alameda County Health Care Services Agency, Department of Environmental Health. Letter to Mr. Frank DeWolfe, Subject: Confirmation of Closure For Ten USTs at RIX Industries, 6460 Hollis Street, Emeryville, California. May 3, 1995.

Alameda County Health Care Services Agency, Department of Environmental Health. Groundwater Monitoring Summary for RIX Industries, 6460 Hollis Street, Emeryville, California. October, 1995.

Environmental Data Resources. EDR Transaction Screen Map Report, F&P Sales 1265 67th Street, Emeryville, California. February 27, 1997.

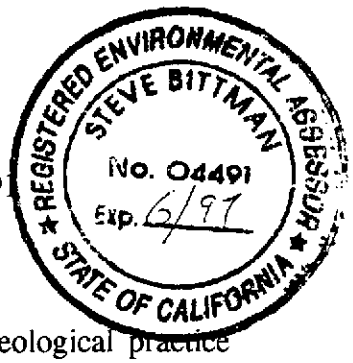
Plant Insulation Company. Letter to Steve Bittman of International Geologic, regarding site history of 1372 Ocean Avenue, Emeryville, California. April 16, 1997

CERTIFICATION

I certify that to the best of my knowledge, the data contained herein is true and accurate, and the work was performed in accordance with professional standards.

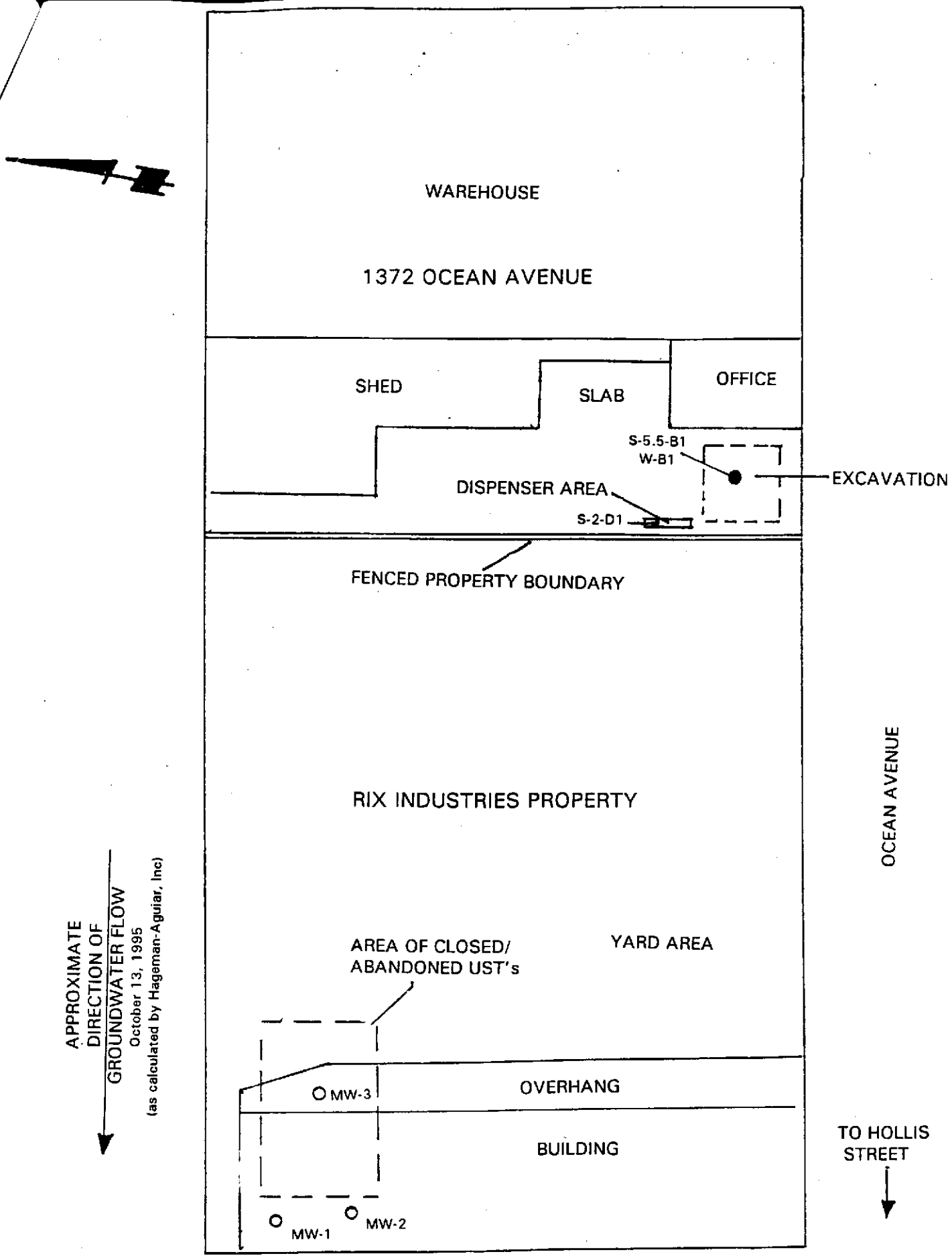
Steve Bittman 5-7-97

Steve Bittman Date
CA Registered Environmental Assessor No. 0499



LIMITATIONS

This report was prepared in accordance with standards of environmental geological practice generally accepted in California at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating environmental conditions with respect to a limited scan of hydrocarbons and lead in the area sampled at the subject property. Evaluation of conditions at and near the site for the purpose of this investigation is made from a limited number of observation points. Actual subsurface conditions may differ at locations not sampled within the property. Further investigation, including subsurface exploration and laboratory testing of soil and groundwater samples collected at the site, can aid in evaluating subsurface environmental conditions and reduce the inherent uncertainties associated with this type of limited environmental assessment. Accuracy or completeness of public and proprietary records used to conduct limited assessments of this type is not implied. No soil engineering or geotechnical references are implied nor should be inferred.



INTERNATIONAL GEOLOGIC Job No. 705-1

SITE PLAN/PROJECT AREA MAP

1372 Ocean Avenue
Emeryville, California

● = SAMPLE LOCATION (SUBJECT PROPERTY)

○ = MONITORING WELL LOCATION (RIX)

APPROXIMATE SCALE: 1 INCH = 25 FEET

FIGURE 1

ATTACHMENT A

LABORATORY CHAIN OF CUSTODY AND ANALYSES DATA SHEETS

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7
PACHECO, CA 94553
(510) 798-1620 FAX (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

REPORT TO: Steve Bittman BILL TO: International Geologic

COMPANY:

TELE: (510) 530-8751 FAX #: 530-8794

PROJECT NUMBER: 705-1 PROJECT NAME:

PROJECT LOCATION: Emeryville CA SAMPLER SIGNATURE: Steve Bittman

SAMPLE ID	LOCATION	SAMPLING DATE	SAMPLING TIME	# CONTAINERS	TYPE CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	METHOD PRESERVED: HCL	HNO_3	OTHER (ICE)	BTEX & TPH as Gasoline (602/8020 & 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/5520 B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080 - PCBs Only	EPA 624/8240/8260	EPA 625/8270	CAM - 17 Metals	EPA - Priority Pollutant Metals	LEAD (7240/7421/239.2/6010)	ORGANIC LEAD	PCI	COMMENTS
S-3½-B1		4-10-97		1	Brass		X						X																H 75560
S-5½-B1				1			X						X	X	X			X					X			X			H 75561
S-2-D1				1			X						X	X	X														H 75562
S-2-EW				1			X						X																H 75563
W-B1				4	VOA	X					X		X	X				X								X			H 75564
W-B1				2	Liter	X							X		X								X						

+2

VOAS | ORG | METALS | OTHER

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATIVE APPROPRIATE ✓
CONTAINERS ✓

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Steve Bittman	4-15-97		[illegible] -767
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[illegible]	4/15	1410	Jim Cluggish
RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY:

REMARKS: Hold S-3½-B1 and S-2-EW
Analyse 4 for MTBE on Gas BTEX analyses
Analyse for Dissolved lead in water samples

Chrome

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7
PACHECO, CA 94553

(510) 798-1620 FAX (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY ☐ ROUTIN

REPORT TO: ED HAMILTON BILL TO: MAI

PROJECT NUMBER: 8476 PROJECT NAME: SB-705-1

PROJECT LOCATION:

ANALYSIS REQUEST | OTHER

JBM #: 9704267 REP: MV
CLIENT: MCCAM
DATE: 04/23/97
SF #: 34172

SAMPLE ID	LOCATION	SAMPLING DATE	SAMPLING TIME	# CONTAINERS	TYPE CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	METHOD PRESERVED: HCL	HNO3	ICE	OTHER	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080 - PCBs Only	EPA 624/8240/8260	EPA 625/8270	CAM - 17 Metals	EPA - Priority Pollutant Metals	LUFT Metals	LEAD (7240/7421/239.2/6010)	ORGANIC LEAD	RCI	COMMENTS
S-5½-B1		4-10-97		1	VOA		X						X							X							75561
W-B1		4-10-97		1	Liter	X							X							X							75564

RELINQUISHED BY: Jenny Milenic DATE 4/16/97 TIME 1430 RECEIVED BY:

RELINQUISHED BY: DATE TIME RECEIVED BY:

RELINQUISHED BY: DATE 4/16/97 TIME 1730 RECEIVED BY LABORATORY:

REMARKS:

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

International Geologic 2831 Sylhowe Road Oakland, CA 94602	Client Project ID: # 705-1	Date Sampled: 04/10/97
		Date Received: 04/15/97
	Client Contact: Steve Bittman	Date Extracted: 04/15-04/16/97
	Client P.O:	Date Analyzed: 04/15-04/16/97

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
75561	S-5.5-B1	S	150,j,b	ND< 0.2	ND< 0.01	0.20	0.38	1.2	95
75562	S-2-D1	S	ND	ND	ND	ND	ND	ND	99
75564	W-B1	W	330,j,b,h	8.5	ND	ND	ND	0.69	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

International Geologic 2831 Sylhowe Road Oakland, CA 94602	Client Project ID: # 705-1	Date Sampled: 04/10/97
		Date Received: 04/15/97
	Client Contact: Steve Bittman	Date Extracted: 04/15/97
	Client P.O:	Date Analyzed: 04/15-04/16/97

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
75561	S-5.5-B1	S	430,d,a	112
75562	S-2-D1	S	210,g	104
75564	W-B1	W	7000,d,c,h	107
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Tele: 510-798-1620 Fax: 510-798-1622

International Geologic 2831 Sylhowe Road Oakland, CA 94602	Client Project ID: # 705-1	Date Sampled: 04/10/97
		Date Received: 04/15/97
	Client Contact: Steve Bittman	Date Extracted: 04/15/97
	Client P.O:	Date Analyzed: 04/16-04/21/97

Lead*

EPA analytical methods 6010/200.7, 239.2+

Lab ID	Client ID	Matrix	Extraction°	Lead*	% Recovery Surrogate
75561	S-5.5-B1	S	TTLC	4.4	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		S	TTLC	3.0 mg/kg	
		W	TTLC	0.005 mg/L	
		---	STLC,TCLP	0.2 mg/L	

* soil and sludge samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP)for soils, sludges, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

° EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

& reporting limit raised due matrix interference

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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International Geologic 2831 Sylhowe Road Oakland, CA 94602	Client Project ID: # 705-1	Date Sampled: 04/10/97
		Date Received: 04/15/97
	Client Contact: Steve Bittman	Date Extracted: 04/15/97
	Client P.O:	Date Analyzed: 04/16-04/21/97

Dissolved Lead*

EPA analytical methods 6010/200.7, 239.2+

Lab ID	Client ID	Matrix	Extraction°	Dissolved Lead*	% Recovery Surrogate
75564	W-B1	W	TTLC	0.013,h	NA
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		S	TTLC	3.0 mg/kg	
		W	TTLC	0.005 mg/L	
		---	STLC,TCLP	0.2 mg/L	

* soil and sludge samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP)for soils, sludges, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

° EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

& reporting limit raised due matrix interference

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

International Geologic	Client Project ID: # 705-1	Date Sampled: 04/10/97
2831 Sylhowe Road		Date Received: 04/15/97
Oakland, CA 94602	Client Contact: Steve Bittman	Date Extracted: 04/15/97
	Client P.O:	Date Analyzed: 04/15/97

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	75561	75564		
Client ID	S-5.5-B1	W-B1		
Matrix	S	W		
Compound	Concentration*			
Bromodichloromethane	ND	ND< 1.3		
Bromoform(b)	ND	ND< 1.3		
Bromomethane	ND	ND< 1.3		
Carbon Tetrachloride(c)	ND	ND< 1.3		
Chlorobenzene	ND	ND< 1.3		
Chloroethane	ND	ND< 1.3		
2-Chloroethyl Vinyl Ether(d)	ND	ND< 1.3		
Chloroform (e)	ND	ND< 1.3		
Chloromethane	ND	ND< 1.3		
Dibromochloromethane	ND	ND< 1.3		
1,2-Dichlorobenzene	ND	ND< 1.3		
1,3-Dichlorobenzene	ND	ND< 1.3		
1,4-Dichlorobenzene	ND	ND< 1.3		
Dichlorodifluoromethane	ND	ND< 1.3		
1,1-Dichloroethane	ND	ND< 1.3		
1,2-Dichloroethane	ND	ND< 1.3		
1,1-Dichloroethene	ND	ND< 1.3		
cis 1,2-Dichloroethene	ND	9.4		
trans 1,2-Dichloroethene	ND	2.4		
1,2-Dichloropropane	ND	ND< 1.3		
cis 1,3-Dichloropropene	ND	ND< 1.3		
trans 1,3-Dichloropropene	ND	ND< 1.3		
Methylene Chloride(f)	ND	ND< 1.3		
1,1,2,2-Tetrachloroethane	ND	ND< 1.3		
Tetrachloroethene	ND	ND< 1.3		
1,1,1-Trichloroethane	ND	ND< 1.3		
1,1,2-Trichloroethane	ND	ND< 1.3		
Trichloroethene	ND	40		
Trichlorofluoromethane	ND	2.7		
Vinyl Chloride(g)	ND	1.5		
% Recovery Surrogate	99	95		
Comments		h		

* water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg and all TCLP extracts in ug/L.

Reporting limit unless otherwise stated: water/TCLP extracts, ND< 0.5ug/L; soil and sludge, ND< 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/15/97 Matrix: Water

Analyte	Concentration (mg/L) Sample (#75519)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	91.7	95.2	100.0	91.7	95.2	3.8
Benzene	0.0	8.5	8.5	10.0	85.0	85.0	0.0
Toluene	0.0	8.9	9.0	10.0	89.0	90.0	1.1
Ethyl Benzene	0.0	9.0	9.3	10.0	90.0	93.0	3.3
Xylenes	0.0	26.9	28.1	30.0	89.7	93.7	4.4
TPH (diesel)	0	140	138	150	94	92	1.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/16/97 Matrix: Water

Analyte	Concentration (mg/L) Sample (#75541)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	99.1	94.0	100.0	99.1	94.0	5.2
Benzene	0.0	8.6	8.0	10.0	86.0	80.0	7.2
Toluene	0.0	8.8	8.4	10.0	88.0	84.0	4.7
Ethyl Benzene	0.0	9.3	9.0	10.0	93.0	90.0	3.3
Xylenes	0.0	27.9	27.0	30.0	93.0	90.0	3.3
TPH (diesel)	0	146	146	150	97	98	0.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/15/97 Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#74208)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.000	2.011	2.008	2.03	99	99	0.1
Benzene	0.000	0.190	0.200	0.2	95	100	5.1
Toluene	0.000	0.200	0.210	0.2	100	105	4.9
Ethylbenzene	0.000	0.206	0.216	0.2	103	108	4.7
Xylenes	0.000	0.608	0.640	0.6	101	107	5.1
TPH (diesel)	0	327	326	300	109	109	0.3
TRPH (oil and grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/16/97 Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#73354)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.000	2.153	2.151	2.03	106	106	0.1
Benzene	0.000	0.208	0.216	0.2	104	108	3.8
Toluene	0.000	0.222	0.230	0.2	111	115	3.5
Ethylbenzene	0.000	0.210	0.216	0.2	105	108	2.8
Xylenes	0.000	0.648	0.666	0.6	108	111	2.7
TPH (diesel)	0	327	326	300	109	109	0.3
TRPH (oil and grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR EPA 8010/8020/EDB

Date: 04/15/97 Matrix: Water

Analyte	Concentration (ug/L) Sample (#74571)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
1,1-DCE	0.0	10.4	10.9	10.0	104	109	4.7
Trichloroethene	0.0	9.0	9.0	10.0	90	90	0.0
EDB	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	0.0	9.0	9.0	10.0	90	90	0.0
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR EPA 8010/8020/EDB

Date: 04/15/97-04/16/97 Matrix: Soil

Analyte	Concentration (ug/kg)				% Recovery		
	Sample (#74307)	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0	113	120	100	113	120	6.0
Trichloroethene	0	96	99	100	96	99	3.1
EDB	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	0	88	95	100	88	95	7.7
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR ICP and/or AA METALS

Date: 04/16/97 Matrix: Dissolved

Extraction: TTLC

Analyte	Concentration (mg/L)			Amount	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
Total Lead	0.0	5.1	5.1	5.00	102	103	0.7
Total Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organic Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

McCAMPBELL ANALYTICAL INC.
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QC REPORT FOR ICP and/or AA METALS

Date: 04/16/97 Matrix: Soil

Extraction: TTLC

Analyte	Concentration (mg/kg,mg/L)			Amount	% Recovery		RPD
	Sample	MS	MSD	Spiked	MS	MSD	
Total Lead	0.0	4.69	4.66	5.0	94	93	0.5
Total Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Copper	0.00	4.55	4.56	5.0	91	91	0.3
STLC Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997 *Submission #:* 9704267

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476
Received: April 16, 1997

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis.
Method: *SW846 Method 8270A Nov 1990*

Client Sample ID: **S-5.5-B1/75561**
Spl#: 126655 *Matrix:* SOIL *Extracted:* April 21, 1997
Sampled: April 10, 1997 *Run#:* 6402 *Analyzed:* April 21, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
PHENOL	N.D.	0.10	N.D.	58.1	1
BIS(2-CHLOROETHYL)ETHER	N.D.	0.10	N.D.	--	1
2-CHLOROPHENOL	N.D.	0.10	N.D.	60.6	1
1,3-DICHLOROBENZENE	N.D.	0.10	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.10	N.D.	67.5	1
BENZYL ALCOHOL	N.D.	0.20	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.10	N.D.	--	1
2-METHYLPHENOL	N.D.	0.10	N.D.	--	1
BIS(2-CHLOROISOPROPYL)ETHER	N.D.	0.10	N.D.	--	1
4-METHYLPHENOL	N.D.	0.20	N.D.	--	1
N-NITROSO-DI-N-PROPYLAMINE	N.D.	0.10	N.D.	72.9	1
HEXACHLOROETHANE	N.D.	0.10	N.D.	--	1
NITROBENZENE	N.D.	0.10	N.D.	--	1
ISOPHORONE	N.D.	0.10	N.D.	--	1
2-NITROPHENOL	N.D.	0.10	N.D.	--	1
2,4-DIMETHYLPHENOL	N.D.	0.10	N.D.	--	1
BIS(2-CHLOROETHOXY)METHANE	N.D.	0.10	N.D.	--	1
2,4-DICHLOROPHENOL	N.D.	0.10	N.D.	--	1
1,2,4-TRICHLOROBENZENE	N.D.	0.10	N.D.	60.6	1
NAPHTHALENE	N.D.	0.10	N.D.	--	1
4-CHLOROANILINE	N.D.	0.20	N.D.	--	1
HEXACHLOROBUTADIENE	N.D.	0.10	N.D.	--	1
4-CHLORO-3-METHYLPHENOL	N.D.	0.20	N.D.	63.6	1
2-METHYLNAPHTHALENE	0.43	0.10	N.D.	--	1
HEXACHLOROCYCLOPENTADIENE	N.D.	0.10	N.D.	--	1
2,4,6-TRICHLOROPHENOL	N.D.	0.10	N.D.	--	1
2,4,5-TRICHLOROPHENOL	N.D.	0.10	N.D.	--	1
2-CHLORONAPHTHALENE	N.D.	0.10	N.D.	--	1
2-NITROANILINE	N.D.	0.50	N.D.	--	1
DIMETHYL PHTHALATE	N.D.	0.50	N.D.	--	1
ACENAPHTHYLENE	N.D.	0.10	N.D.	--	1
3-NITROANILINE	N.D.	0.10	N.D.	--	1
ACENAPHTHENE	N.D.	0.10	N.D.	73.8	1
2,4-DINITROPHENOL	N.D.	0.50	N.D.	--	1
4-NITROPHENOL	N.D.	0.50	N.D.	48.2	1
DIBENZOFURAN	N.D.	0.10	N.D.	--	1
2,4-DINITROTOLUENE	N.D.	0.10	N.D.	58.0	1
2,6-DINITROTOLUENE	N.D.	0.20	N.D.	--	1
DIETHYL PHTHALATE	N.D.	0.50	N.D.	--	1
4-CHLOROPHENYL PHENYL ETHER	N.D.	0.10	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476
Received: April 16, 1997

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis, continued.
Method: *SW846 Method 8270A Nov 1990*

Client Sample ID: **S-5.5-B1/75561**
Spl#: 126655 *Matrix:* SOIL *Extracted:* April 21, 1997
Sampled: April 10, 1997 *Run#:* 6402 *Analyzed:* April 21, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
FLUORENE	N.D.	0.10	N.D.	--	1
4-NITROANILINE	N.D.	0.50	N.D.	--	1
2-METHYL-4,6-DINITROPHENOL	N.D.	0.50	N.D.	--	1
N-NITROSO-DI-N-PHENYLAMINE	0.18	0.10	N.D.	--	1
4-BROMOPHENYL PHENYL ETHER	N.D.	0.10	N.D.	--	1
HEXACHLOROBENZENE	N.D.	0.10	N.D.	--	1
PENTACHLOROPHENOL	N.D.	0.50	N.D.	42.1	1
PHENANTHRENE	0.19	0.10	N.D.	--	1
ANTHRACENE	N.D.	0.10	N.D.	--	1
DI-N-BUTYL PHTHALATE	N.D.	2.0	N.D.	--	1
FLUORANTHENE	N.D.	0.10	N.D.	--	1
PYRENE	N.D.	0.10	N.D.	54.7	1
BUTYL BENZYL PHTHALATE	N.D.	0.50	N.D.	--	1
3,3'-DICHLOROBENZIDINE	N.D.	0.20	N.D.	--	1
BENZO(A)ANTHRACENE	N.D.	0.10	N.D.	--	1
BIS(2-ETHYLHEXYL)PHTHALATE	N.D.	0.50	N.D.	--	1
CHRYSENE	N.D.	0.10	N.D.	--	1
DI-N-OCTYL PHTHALATE	N.D.	0.50	N.D.	--	1
BENZO(B)FLUORANTHENE	N.D.	0.10	N.D.	--	1
BENZO(K)FLUORANTHENE	N.D.	0.20	N.D.	--	1
BENZO(A)PYRENE	N.D.	0.050	N.D.	--	1
INDENO(1,2,3 C,D)PYRENE	N.D.	0.20	N.D.	--	1
DIBENZO(A,H)ANTHRACENE	N.D.	0.20	N.D.	--	1
BENZO(G,H,I)PERYLENE	N.D.	0.20	N.D.	--	1
BENZOIC ACID	N.D.	0.50	N.D.	--	1

Michael Lee
Chemist

Chip Poalinelli
Operations Manager

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997 *Submission #:* 9704267

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476
Received: April 16, 1997

re: **Surrogate** report for 1 sample for Semivolatile Organic Compounds
Method: SW846 Method 8270A Nov 1990
Lab Run#: 6402
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
126655-1	S-5.5-B1/75561	NITROBENZENE-D5	74.3	23-120
126655-1	S-5.5-B1/75561	2-FLUOROBIPHENYL	67.7	30-115
126655-1	S-5.5-B1/75561	P-TERPHENYL-D14	78.0	18-137
126655-1	S-5.5-B1/75561	PHENOL-D5	60.4	24-113
126655-1	S-5.5-B1/75561	2-FLUOROPHENOL	61.9	25-121
126655-1	S-5.5-B1/75561	2,4,6-TRIBROMOPHENOL	63.1	19-122

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
127373-1	*Reagent blank (MDB)*	NITROBENZENE-D5	74.8	23-120
127373-1	*Reagent blank (MDB)*	2-FLUOROBIPHENYL	77.7	30-115
127373-1	*Reagent blank (MDB)*	P-TERPHENYL-D14	66.6	18-137
127373-1	*Reagent blank (MDB)*	PHENOL-D5	79.2	24-113
127373-1	*Reagent blank (MDB)*	2-FLUOROPHENOL	73.5	25-121
127373-1	*Reagent blank (MDB)*	2,4,6-TRIBROMOPHENOL	70.3	19-122
127374-1	*Spiked blank (BSP)*	NITROBENZENE-D5	76.6	23-120
127374-1	*Spiked blank (BSP)*	2-FLUOROBIPHENYL	76.4	30-115
127374-1	*Spiked blank (BSP)*	P-TERPHENYL-D14	63.2	18-137
127374-1	*Spiked blank (BSP)*	PHENOL-D5	82.0	24-113
127374-1	*Spiked blank (BSP)*	2-FLUOROPHENOL	74.2	25-121
127374-1	*Spiked blank (BSP)*	2,4,6-TRIBROMOPHENOL	70.7	19-122
127375-1	*Spiked blank duplicate (BSD)*	NITROBENZENE-D5	75.1	23-120
127375-1	*Spiked blank duplicate (BSD)*	2-FLUOROBIPHENYL	74.2	30-115
127375-1	*Spiked blank duplicate (BSD)*	P-TERPHENYL-D14	66.6	18-137
127375-1	*Spiked blank duplicate (BSD)*	PHENOL-D5	78.8	24-113
127375-1	*Spiked blank duplicate (BSD)*	2-FLUOROPHENOL	70.0	25-121
127375-1	*Spiked blank duplicate (BSD)*	2,4,6-TRIBROMOPHENOL	68.1	19-122
127376-1	*Matrix spike (MS)*	NITROBENZENE-D5	76.4	23-120
127376-1	*Matrix spike (MS)*	2-FLUOROBIPHENYL	82.9	30-115
127376-1	*Matrix spike (MS)*	P-TERPHENYL-D14	88.8	18-137
127376-1	*Matrix spike (MS)*	PHENOL-D5	81.5	24-113

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CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997

Submission #: 9704267

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476

Received: April 16, 1997

re: **Surrogate** report for 1 sample for Semivolatile Organic Compounds

Method: SW846 Method 8270A Nov 1990

Lab Run#: 6402

127376-1	*Matrix spike (MS)*	2-FLUOROPHENOL	71.8	25-121
127376-1	*Matrix spike (MS)*	2,4,6-TRIBROMOPHENOL	91.8	19-122
127377-1	*Matrix spike duplicate (MSD)*	NITROBENZENE-D5	72.6	23-120
127377-1	*Matrix spike duplicate (MSD)*	2-FLUOROBIPHENYL	80.6	30-115
127377-1	*Matrix spike duplicate (MSD)*	P-TERPHENYL-D14	99.4	18-137
127377-1	*Matrix spike duplicate (MSD)*	PHENOL-D5	80.2	24-113
127377-1	*Matrix spike duplicate (MSD)*	2-FLUOROPHENOL	67.0	25-121
127377-1	*Matrix spike duplicate (MSD)*	2,4,6-TRIBROMOPHENOL	85.7	19-122

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CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997 *Submission #:* 9704267

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476
Received: April 16, 1997

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis.
Method: *SW846 Method 8270A Nov 1990*

Client Sample ID: **W-B1/75564**
Spl#: 126656 *Matrix:* WATER *Extracted:* April 18, 1997
Sampled: April 10, 1997 *Run#:* 6374 *Analyzed:* April 18, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
PHENOL	N.D.	2.0	N.D.	16.4	1
BIS(2-CHLOROETHYL)ETHER	N.D.	2.0	N.D.	--	1
2-CHLOROPHENOL	N.D.	2.0	N.D.	50.7	1
1,3-DICHLOROBENZENE	N.D.	2.0	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	2.0	N.D.	63.3	1
BENZYL ALCOHOL	N.D.	5.0	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	2.0	N.D.	--	1
2-METHYLPHENOL	N.D.	2.0	N.D.	--	1
BIS(2-CHLOROISOPROPYL)ETHER	N.D.	2.0	N.D.	--	1
4-METHYLPHENOL	N.D.	2.0	N.D.	--	1
N-NITROSO-DI-N-PROPYLAMINE	N.D.	2.0	N.D.	64.0	1
HEXACHLOROETHANE	N.D.	2.0	N.D.	--	1
NITROBENZENE	N.D.	2.0	N.D.	--	1
ISOPHORONE	N.D.	2.0	N.D.	--	1
2-NITROPHENOL	N.D.	2.0	N.D.	--	1
2,4-DIMETHYLPHENOL	N.D.	2.0	N.D.	--	1
BIS(2-CHLOROETHOXY)METHANE	N.D.	5.0	N.D.	--	1
2,4-DICHLOROPHENOL	N.D.	2.0	N.D.	--	1
1,2,4-TRICHLOROBENZENE	N.D.	2.0	N.D.	65.0	1
NAPHTHALENE	N.D.	2.0	N.D.	--	1
4-CHLOROANILINE	N.D.	2.0	N.D.	--	1
HEXACHLOROBUTADIENE	N.D.	2.0	N.D.	--	1
4-CHLORO-3-METHYLPHENOL	N.D.	5.0	N.D.	61.0	1
2-METHYLNAPHTHALENE	N.D.	2.0	N.D.	--	1
HEXACHLOROCYCLOPENTADIENE	N.D.	2.0	N.D.	--	1
2,4,6-TRICHLOROPHENOL	N.D.	2.0	N.D.	--	1
2,4,5-TRICHLOROPHENOL	N.D.	2.0	N.D.	--	1
2-CHLORONAPHTHALENE	N.D.	2.0	N.D.	--	1
2-NITROANILINE	N.D.	10	N.D.	--	1
DIMETHYL PHTHALATE	N.D.	5.0	N.D.	--	1
ACENAPHTHYLENE	N.D.	2.0	N.D.	--	1
3-NITROANILINE	N.D.	10	N.D.	--	1
ACENAPHTHENE	N.D.	2.0	N.D.	71.0	1
2,4-DINITROPHENOL	N.D.	10	N.D.	--	1
4-NITROPHENOL	N.D.	10	N.D.	16.1	1
DIBENZOFURAN	N.D.	2.0	N.D.	--	1
2,4-DINITROTOLUENE	N.D.	2.0	N.D.	53.3	1
2,6-DINITROTOLUENE	N.D.	5.0	N.D.	--	1
DIETHYL PHTHALATE	N.D.	5.0	N.D.	--	1
4-CHLOROPHENYL PHENYL ETHER	N.D.	2.0	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997

Submission #: 9704267
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MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476
Received: April 16, 1997

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis, continued.
Method: *SW846 Method 8270A Nov 1990*

Client Sample ID: **W-B1/75564**
Spl#: 126656 *Matrix:* WATER *Extracted:* April 18, 1997
Sampled: April 10, 1997 *Run#:* 6374 *Analyzed:* April 18, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
FLUORENE	N.D.	5.0	N.D.	--	1
4-NITROANILINE	N.D.	10	N.D.	--	1
2-METHYL-4,6-DINITROPHENOL	N.D.	10	N.D.	--	1
N-NITROSO-DI-N-PHENYLAMINE	N.D.	2.0	N.D.	--	1
4-BROMOPHENYL PHENYL ETHER	N.D.	5.0	N.D.	--	1
HEXACHLOROBENZENE	N.D.	2.0	N.D.	--	1
PENTACHLOROPHENOL	N.D.	10	N.D.	51.2	1
PHENANTHRENE	N.D.	2.0	N.D.	--	1
ANTHRACENE	N.D.	2.0	N.D.	--	1
DI-N-BUTYL PHTHALATE	N.D.	5.0	N.D.	--	1
FLUORANTHENE	N.D.	2.0	N.D.	--	1
PYRENE	N.D.	2.0	N.D.	64.7	1
BUTYL BENZYL PHTHALATE	N.D.	5.0	N.D.	--	1
3,3'-DICHLOROBENZIDINE	N.D.	5.0	N.D.	--	1
BENZO(A)ANTHRACENE	N.D.	2.0	N.D.	--	1
BIS(2-ETHYLHEXYL)PHTHALATE	N.D.	5.0	N.D.	--	1
CHRYSENE	N.D.	2.0	N.D.	--	1
DI-N-OCTYL PHTHALATE	N.D.	5.0	N.D.	--	1
BENZO(B)FLUORANTHENE	N.D.	2.0	N.D.	--	1
BENZO(K)FLUORANTHENE	N.D.	2.0	N.D.	--	1
BENZO(A)PYRENE	N.D.	2.0	N.D.	--	1
INDENO(1,2,3 C,D)PYRENE	N.D.	2.0	N.D.	--	1
DIBENZO(A,H)ANTHRACENE	N.D.	2.0	N.D.	--	1
BENZO(G,H,I)PERYLENE	N.D.	2.0	N.D.	--	1
BENZOIC ACID	N.D.	10	N.D.	--	1

Note: Surrogates recovery were outside of acceptance limits due to emulsion encountered in extraction. Results biased low. See surrogate summary page.

Michael Lee
Chemist

Chip Poalinelli
Operations Manager

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CHROMALAB, INC.

Environmental Services (SDB)

April 23, 1997 *Submission #:* 9704267

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: SB-705-1 *Project#:* 8476
Received: April 16, 1997

re: **Surrogate** report for 1 sample for Semivolatile Organic Compounds
Method: SW846 Method 8270A Nov 1990
Lab Run#: 6374
Matrix: WATER

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
126656-1	W-B1/75564	NITROBENZENE-D5	31.2	35-114
126656-1	W-B1/75564	2-FLUOROBIPHENYL	23.0	43-116
126656-1	W-B1/75564	P-TERPHENYL-D14	21.1	33-141
126656-1	W-B1/75564	PHENOL-D5	18.0	10-110
126656-1	W-B1/75564	2-FLUOROPHENOL	23.0	25-100
126656-1	W-B1/75564	2,4,6-TRIBROMOPHENOL	24.0	10-123

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
127041-1	*Reagent blank (MDB)*	NITROBENZENE-D5	68.0	35-114
127041-1	*Reagent blank (MDB)*	2-FLUOROBIPHENYL	66.7	43-116
127041-1	*Reagent blank (MDB)*	P-TERPHENYL-D14	70.3	33-141
127041-1	*Reagent blank (MDB)*	PHENOL-D5	23.3	10-110
127041-1	*Reagent blank (MDB)*	2-FLUOROPHENOL	35.1	25-100
127041-1	*Reagent blank (MDB)*	2,4,6-TRIBROMOPHENOL	71.1	10-123
127042-1	*Spiked blank (BSP)*	NITROBENZENE-D5	69.8	35-114
127042-1	*Spiked blank (BSP)*	2-FLUOROBIPHENYL	73.8	43-116
127042-1	*Spiked blank (BSP)*	P-TERPHENYL-D14	73.1	33-141
127042-1	*Spiked blank (BSP)*	PHENOL-D5	21.0	10-110
127042-1	*Spiked blank (BSP)*	2-FLUOROPHENOL	30.4	25-100
127042-1	*Spiked blank (BSP)*	2,4,6-TRIBROMOPHENOL	75.0	10-123
127043-1	*Spiked blank duplicate (BSD)*	NITROBENZENE-D5	64.0	35-114
127043-1	*Spiked blank duplicate (BSD)*	2-FLUOROBIPHENYL	70.3	43-116
127043-1	*Spiked blank duplicate (BSD)*	P-TERPHENYL-D14	66.7	33-141
127043-1	*Spiked blank duplicate (BSD)*	PHENOL-D5	22.2	10-110
127043-1	*Spiked blank duplicate (BSD)*	2-FLUOROPHENOL	31.8	25-100
127043-1	*Spiked blank duplicate (BSD)*	2,4,6-TRIBROMOPHENOL	69.0	10-123

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