

1 September 1992
Project 1736.11

Ms. Juliet Shin
Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Subject: Underground Storage Tank Compliance
1020 Atlantic Avenue
(Formerly 2051 Sherman Street,
Rigging International Building)
Marina Village Development
Alameda, California

Dear Ms. Shin:

On behalf of Alameda Real Estate Investments (AREI), Geomatrix Consultants, Inc. (Geomatrix) has prepared this letter to provide additional information about two underground storage tanks (USTs) discussed in a letter sent from your office, the Alameda County Department of Environmental Health (ACDEH), to AREI dated 29 June 1992. The ACDEH letter notes that petroleum hydrocarbons and related compounds were detected in one soil and one groundwater sample obtained during the UST removals and site remediation activities in the tank area in 1988. The letter further requires additional soil and groundwater investigations at the site to conform with Regional Water Quality Control Board (RWQCB) guidelines for site closure.

The remainder of this letter presents information obtained from a review of available reports and AREI's files. At AREI's request and in response to the 29 June 1992 letter from ACDEH, Geomatrix is currently preparing a groundwater monitoring plan for the site to comply with RWQCB Guidelines. The basis for the proposed groundwater monitoring plan is discussed in this letter following the summary of soil and groundwater conditions at the site. The plan will be submitted to the ACDEH and the RWQCB when it has been completed.

BACKGROUND

Tank removal and site remediation activities are described in Levine-Fricke's 25 April 1988 report entitled Removal of Petroleum-Affected Soils in the Vicinity of the Rigging International Building, 2051 Sherman Street, Alameda, California. According to the report, the two USTs, one of 1,000-gallon capacity and one of 5,000-gallon capacity, were

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removed on 2 March 1988 by Alameda Paving and Excavation according to AREI files. The tanks most recently had contained diesel fuel, but may have contained gasoline in the past. The ages of the tanks were reportedly unknown but are believed to have been at least 15 years old.

Evidence that the former tank(s) had leaked was apparent during tank removal when residual fuel was observed in the excavation sidewall soil. AREI retained Levine-Fricke to observe subsequent excavation of soil and groundwater in the vicinity of the former USTs and obtain samples of soil and groundwater for analysis. Remediation activities included the removal of 300 cubic yards of petroleum-containing soil and 2000 gallons of groundwater.

Soil

Post-remediation soil sampling and analyses for petroleum hydrocarbons indicated that gasoline and diesel were not present in the sidewalk and bottom of the excavation with the exception of one sample that contained 69 mg/kg diesel. One other sample contained petroleum hydrocarbons characterized as motor oil at a concentration of 120 mg/kg.

Based on the results of the chemical analysis, it appears that the soil containing petroleum hydrocarbons was largely removed during remediation, and the extent of soil containing petroleum hydrocarbons characterized as motor oil was localized. Because the former tanks are reportedly known only to have contained diesel fuel or gasoline, it is unlikely the motor oil detected in the soil samples is related to the fuel leakage from the tanks. As indicated in the cover letter of the 1988 Levine-Fricke report, conversations with a representative from the Regional Water Quality Control Board indicated no further excavation of soil at the site was required as long as groundwater was not significantly affected by the presence of the oil. The excavation was subsequently backfilled with imported fill.

Groundwater

During tank removal and remediation activities, four groundwater samples were analyzed by Anatec Laboratories, Inc., (now NET Pacific Laboratory) for TPHg, TPHd, and benzene, toluene, and xylenes (BTX). One sample was taken at the beginning of remediation, and a second taken midway through remediation from within the excavation; a third sample was taken at the end of remediation from the portable tank used to store pumped groundwater from the excavation; and a fourth sample was taken from a test pit dug adjacent to the tank excavation at the end of remediation.

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The first sample, taken within the excavation at the beginning of remediation, contained 13 mg/l TPHg, 75 mg/l TPHd, and a total of 1.18 mg/l BTX. The analyses on the remaining three samples taken during remediation were significantly improved, reporting non-detect for benzene and xylene, 0.073 mg/kg toluene in one sample, non-detect to 0.6 mg/kg TPHg, and non-detect to 8.5 mg/kg TPHd. These results are generally representative of the groundwater that was removed from the excavation.

After remediation, a groundwater monitoring well (RC-1) was installed at the site (see Figure 1). Initial sampling and analysis of groundwater from well RC-1 was performed on March 28, 1988 shortly after remediation activities were completed and was reported in Levine-Fricke's April 1988 report. The results indicate that TPHg and BTX were not detected above method detection limits and TPHd was detected at a concentration of 1.5 mg/l.

Sampling and analysis of groundwater from well RC-1 was performed a second time in February of 1989 as part of an environmental assessment for a nearby property. The groundwater was analyzed by Med-Tox Associates, Inc., of Pleasant Hill, California (now Quanteq Laboratories), a state-certified laboratory, for volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 624, CAM-17 metals (now California Code of Regulations (CCR) Title 22 metals), and polychlorinated biphenyls (PCBs) by EPA Method 608. Analysis of the groundwater sample for petroleum hydrocarbons was not included in the environmental assessment scope of work.

Results of the analyses indicated that VOCs, including BTX, were not detected in the groundwater, and metals, including lead, generally either were not present or at concentrations typical of background groundwater quality. For your files, analytical data from the 1989 sampling event is attached to this letter.

CURRENT SITE STATUS

Since 1989, the site has been extensively redeveloped. Redevelopment has included elimination of Sherman Road and extension of Atlantic Avenue, construction of a new building in place of the former Rigging International building, and construction of a new parking lot. In the process of redevelopment, well RC-1 was inadvertently covered by the new parking lot. Figure 1 shows the new site layout and the former locations of the tanks, the excavation boundary, and well RC-1. The site address is now 1020 Atlantic Avenue.

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To comply with current RWQCB and ACDEH guidelines for closure of underground storage tank sites, Geomatrix has recommended to AREI that a new monitoring well be installed downgradient with respect to groundwater flow from the formerly excavated area to evaluate the residual effects of the former tanks on groundwater quality. We propose to sample the well quarterly for a period of one year, and analyze the samples for TPHg, TPHd, and benzene, toluene, ethylbenzene, and xylenes (BTEX). We will recommend closure if analyses are non-detect for at least the last two quarters. We are in the process of developing a work plan describing the proposed groundwater monitoring program, and will submit the plan for your review in the near future.

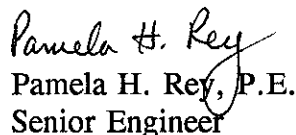
If you require further information, please contact either of the undersigned or Steve Sanders at (415) 434-9400 at your earliest convenience.

Sincerely yours,

GEOMATRIX CONSULTANTS, INC.



Elizabeth Nixon
Project Manager

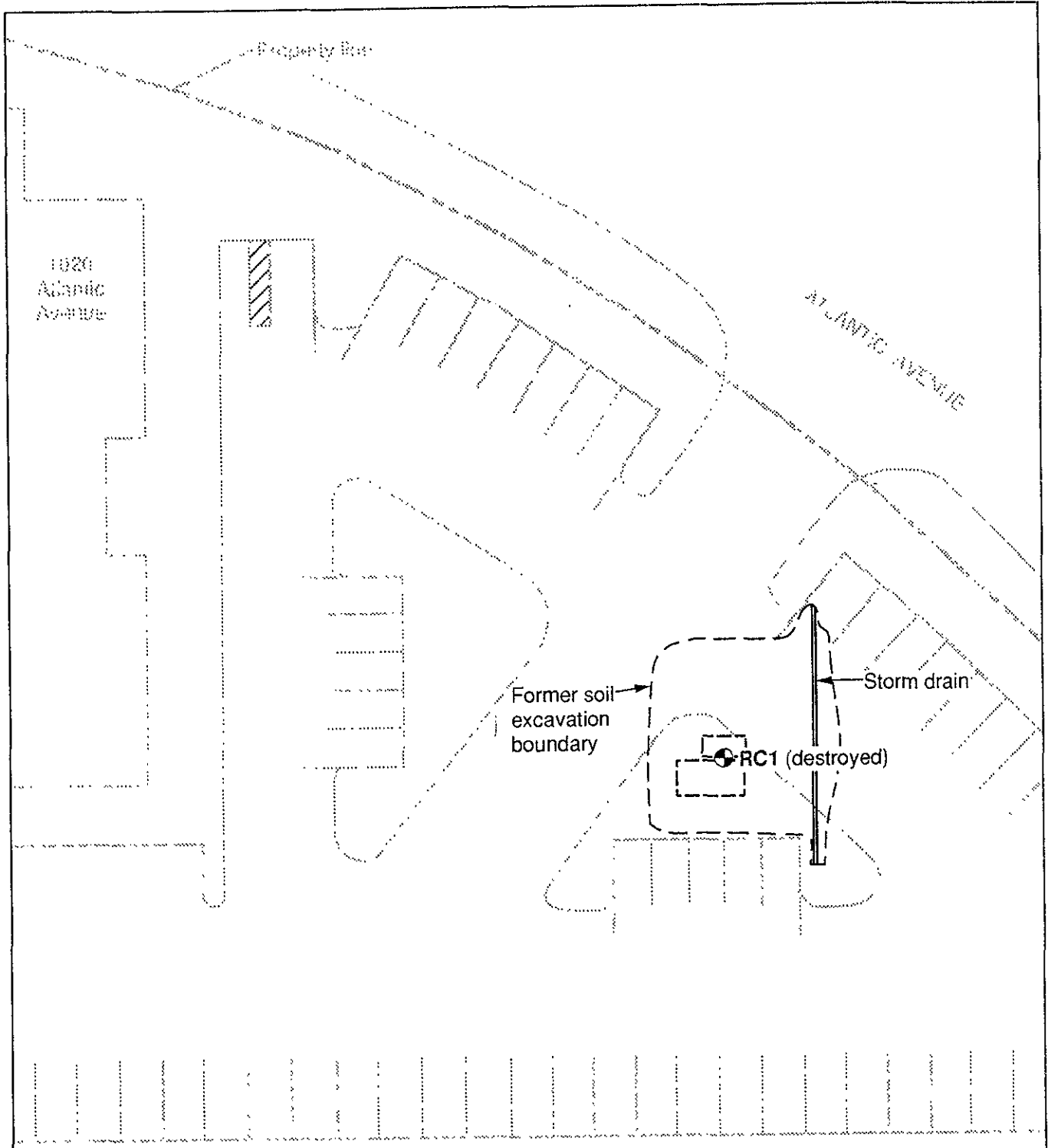


Pamela H. Rey, P.E.
Senior Engineer

EAN/PHR/bap
CONTR11736USTC.LTR

Attachment: 1 - Figure 1 - Former Well and Excavation Location Plan
2 - February 1989 Groundwater Analytical Data for Well RC-1

cc: Ms. Cathy Luck - AREI
Mr. Richard Hiatt - RWQCB



FORMER WELL AND EXCAVATION LOCATION PLAN
 1020 Atlantic Avenue (Formerly 2051 Sherman Street
 Rigging International Building)
 Alameda, California

Figure
 1
 Project No.
 1736.11

ATTACHMENT 2

**February 1989 Groundwater Analytical Data
For Well RC-1**

ENVIRONMENTAL & OCCUPATIONAL HEALTH SERVICES

1440 Vincent Road Pleasant Hill, CA 94523 • (415) 930-9090 • FAX# (415) 930-0256

LABORATORY ANALYSIS REPORT

LEVINE-FRICKE CONSULTING
ENGINEERS AND HYDROGEOLOGISTS
1900 POWELL STREET, 12TH FL.
EMERYVILLE, CA 94608

ATTN: ELIZABETH NIXON

CLIENT PROJECT NO: 1527

REPORT DATE: 02/27/89

DATE SAMPLED: 02/06/89

DATE RECEIVED: 02/06/89

DATE EXTRACTED: 02/11 & 15/89

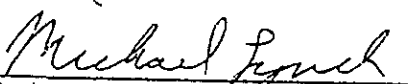
DATE ANALYZED: 02/12 & 15/89

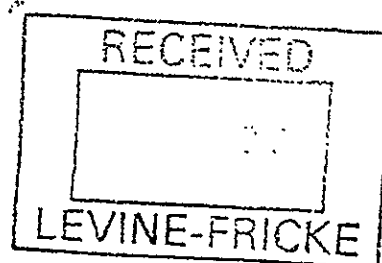
MED-TOX JOB NO: 8902027

ANALYSIS OF: ONE WATER SAMPLE FOR TOTAL PETROLEUM
HYDROCARBONS

METHOD: 8015 (EXTRACTION)

Sample Identification	Lab No.	Total Petroleum Hydrocarbons as Diesel (mg/L)
RC1-GW	01A	ND
Detection Limit		0.3


Michael Lynch, Manager
Organic Laboratory



Results FAXed to Elizabeth Nixon 02/17/89

LEVINE-FRICKE CONSULTING

CLIENT ID: RC1-GW
CLIENT JOB NO: 1527
DATE SAMPLED: 02/06/89
DATE RECEIVED: 02/06/89

MED-TOX LAB NO: 8902026-07A
MED-TOX JOB NO: 8902026
DATE ANALYZED: 02/08/89
REPORT DATE: 02/21/89

EPA METHOD 624
PURGEABLE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon Disulfide	75-15-0	ND	10
Carbon Tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl Vinyl Ether	110-75-8	ND	10
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene Chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	10
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Vinyl Acetate	108-05-4	ND	50
Vinyl Chloride	75-01-4	ND	10
Xylenes, total	-----	ND	10

ND = Not Detected

LEVINE-FRICKE CONSULTING

CLIENT ID: RC1-GW
CLIENT JOB NO: 1527
DATE RECEIVED: 02/06/89

MED-TOX LAB NO: 8902026-07F
MED-TOX JOB NO: 8902026
REPORT DATE: 02/21/89

CAM-17 METALS IN WATER

CODE	METAL	CONCENTRATION (mg/L)	DETECTION LIMIT (mg/L)	METHOD REFERENCE
Sb	Antimony	ND	0.1	7040
As	Arsenic	ND	0.001	7060
Ba	Barium	0.10	0.02	7080
Be	Beryllium	ND	0.003	7090
Cd	Cadmium	ND	0.003	7130
Cr	Chromium	ND	0.01	7190
Co	Cobalt	ND	0.02	7200
Cu	Copper	ND	0.005	7210
Pb	Lead	ND	0.01	7420
Hg	Mercury	ND	0.0003	7471
Mo	Molybdenum	ND	0.05	7480
Ni	Nickel	ND	0.01	7520
Se	Selenium	ND	0.003	7740
Ag	Silver	ND	0.005	7760
Tl	Thallium	ND	0.05	7840
V	Vanadium	ND	0.1	7910
Zn	Zinc	ND	0.003	7950

ND = Not detected at or above indicated method detection limit

NOTE: Sample was filtered through a 0.45um filter
and preserved with HNO₃ on 02/06/89

LEVINE-FRICKE CONSULTING

CLIENT ID: RC1-GW
CLIENT JOB NO: 1527
DATE SAMPLED: 02/06/89
DATE RECEIVED: 02/06/89

MED-TOX LAB NO: 8902026-07E
MED-TOX JOB NO: 8902026
DATE EXTRACTED: 02/10/89
DATE ANALYZED: 02/10/89
REPORT DATE: 02/21/89

EPA METHOD 608
POLYCHLORINATED BIPHENYLS

AROCLOR	CAS #	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Aroclor 1016	12674-11-2	ND	0.5
Aroclor 1221	11104-28-2	ND	0.5
Aroclor 1232	11141-16-5	ND	0.5
Aroclor 1242	53469-21-9	ND	0.5
Aroclor 1248	12672-29-6	ND	0.5
Aroclor 1254	11097-69-1	ND	0.5
Aroclor 1260	11096-82-5	ND	0.5

ND = Not detected at or above indicated method detection limit

Analytical Method: EPA 8080, SW-846 3rd Edition, 1986

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

8902026

Project No.: 1527	Field Logbook No.:	Date: 2/6/89	Serial No.: 4317
Project Name: AMV Assessment	Project Location: Alameda		

Sampler (Signature): **D. Chambers** ANALYSES: **Metals, Lead, PCBs, 8015-dioxin** Samplers: **D. Chambers, E. Nixon**

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES							REMARKS
						EPA 601	EPA 624	Metals	Lead	PCBs	8015-dioxin	HOLD	
C/A G2A FPIA-4'	2/6/89			1	Soil		X					X	Composite FPIA EB for metals & homogenize - but save a portion of each separate sample
FPIB-6'				1	↓		X					X	
FPIC-10'				1	↓		X					X	
AA, 9, 3 FPI-GW				3	water	X						X	
CSA FP2A-4'				1	Soil		X					X	Composite FP2-4' & FP2-8' homogenize as described above
CSA FP2-8'				1	↓		X					X	
CSA FP2-GW				2	water							X	
C7A, 3, 5, 1 RC1-GW				7	water	X	X		X*	X		X	Filter Sample for metals
C6A, 2, C, D, E LF1-GW				4	water	X	X					X	Filter Sample for metals
													* - TPH for RC1 should be on standard 2-wk TAT

RELINQUISHED BY: (Signature) D. Chambers	DATE: 2/6/89	TIME: 4:40	RECEIVED BY: (Signature) L. St John	DATE: 2/6/89	TIME: 18:46
RELINQUISHED BY: (Signature) L. St John	DATE: 2/6/89	TIME: 5:10	RECEIVED BY: (Signature) Shirley Moore	DATE: 2-6-89	TIME: 1715
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS: 6 samples for LF1-GW was received instead of the 4 listed on C.O.C. TPH put on separate work order.		

Sample Collector: **LEVINE-FRICKE**
 1900 Powell Street, 12th Floor
 Emeryville, Ca 94608
 (415) 652-4500

Analytical Laboratory: **MED-TOX** work order. **8902027**

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

8902026

E1
S-D

Project No.: 1527 Field Logbook No.: Date: 2/6/89 Serial No.: 4317
 Project Name: Air V Assessment Project Location: Alameda

Sampler (Signature): D. Chambers ANALYSES: METALS, PESTICIDES, PCBs, 8015-dioxin, HOLD, RUSH-1 week
 Samplers: D. Chambers, E. Nixon

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES							REMARKS
						EPA 601	EPA 624	METALS	PESTICIDES	PCBs	8015-dioxin	HOLD	
FP1A-4'	2/6/89			1	Soil		X					X	Composite FP1A & B for metals & homogenize - but save a portion of each separate sample
FP1B-6'					↓		X					X	
FP1C-10'				1	↓		X					X	
FP1-GW				3	water	X						X	
FP2A-4'				1	Soil		X					X	Composite FP2-4' & FP2-8' (homogenize) so described above
FP2-8'				1	↓		X					X	
FP2-GW				2	water							X	
RCL-GW			8902027	7	water	X	X	X*	X			X	Filter Sample for metals
LFI-GW				4	water	X	X					X	Filter Sample for metals
													* - TPH for RCL should be on standard 2-wk TAT

RELINQUISHED BY: (Signature) <i>D. Chambers</i>	DATE: 2/6/89	TIME: 4:40	RECEIVED BY: (Signature) <i>L. St John</i>	DATE: 2/6/89	TIME: 4:46
RELINQUISHED BY: (Signature) <i>L. St John</i>	DATE: 2/6/89	TIME: 5:10	RECEIVED BY: (Signature) <i>Sheela Moore</i>	DATE: 2-6-89	TIME: 1715
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS: 6 samples for LFI-GW was received instead of the 4 listed on C.O.C. TPH put on separate Analytical Laboratory: MED-TOX work order. 8902027		
Sample Collector:	LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500				