

ALCO
HAZMAT

93 DEC -7 AM 11:55

December 3, 1993
SCI 611.002

POB74
CL

953

Mr. Steve Banker
LCB Associates
The Ordway Building
1 Kaiser Plaza, Suite 301
Oakland, California 94612-3603

**Quarterly Groundwater Monitoring
November 1993 Event
910 81st Avenue
Oakland, California**

Dear Mr. Banker:

This letter records the results of the November sampling event for the groundwater monitoring program at the referenced site. The program has been implemented in accordance with Regional Water Quality Control Board and the Alameda County Health Care Services Agency (ACHCSA) guidelines due to the presence of petroleum hydrocarbons in the soil beneath a previous underground fuel storage tank. The monitoring program requires that the on-site well be monitored on a quarterly basis.

Groundwater Sampling

On November 17, 1993, the fourth quarterly event was performed. In general, the event consisted of (1) measuring the groundwater level in the well using an electric well sounder, (2) checking for free product in the well with a steel tape and product sensitive paste, (3) purging water from the well until pH, conductivity and temperature had stabilized (at least 3 well volumes), and (4) after the well had recovered to at least 80 percent of its initial volume, sampling the well with a new disposable sampler. The samples were retained in containers pre-cleaned by the supplier in accordance with EPA protocol. The containers were refrigerated on-site and remained refrigerated until delivery to Curtis & Tompkins, Ltd; the analytical laboratory. Copies of the well purge log and Chain-of-Custody record are attached.

The testing program for the event included analyses for the contaminants of concern including:

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1. Total Extractable Hydrocarbons (TEH) EPA 3550/8015 modified,
2. Total Volatile Hydrocarbons (TVH) EPA 5030/8015 modified, and
3. Benzene, Toluene, Ethylbenzene and Xylene (BTEX) EPA 5030/8020.

The results of the analyses are summarized in Table 1. Analytical test reports are attached.

Conclusions

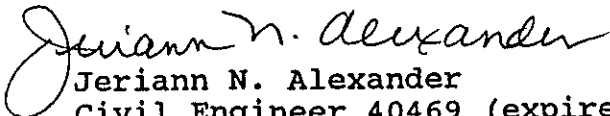
The analytical data indicates that relatively low concentrations of petroleum hydrocarbons exist in groundwater near the previous tank. Hydrocarbon concentrations detected during this event are consistent with those encountered during the previous two events. No free product has been observed to date.

The on-site well has been monitored on a quarterly basis for one year. Since impacts to groundwater appear to be minimal the ACHCSA has concurred with our conclusion that the most appropriate environmental response will be to leave the contaminated soil in place and continue quarterly monitoring. (See ACHCSA letter dated October 15, 1993). As such the next monitoring event will be conducted during the month of February 1994.

If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.


Jeriann N. Alexander
Civil Engineer 40469 (expires 3/31/95)

MFW:JNA:RWR:sld

Attachments: Table 1 Petroleum Hydrocarbons in Groundwater
Plate 1 Site Plan
Well Purge Log
Analytical Test Reports
Chain-of-Custody Documents

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cc: Mr. Barney Chan
Alameda County Health Care Services Agency
80 Swan Way, Room #200
Oakland, California 94621

Table 1.
Hydrocarbon and BTEX Concentrations In Water

<u>Well</u>	<u>Date</u>	<u>Water Depth Below TOC feet</u>	<u>TEH ug/l</u>	<u>TVH ug/l</u>	<u>B ug/l</u>	<u>T ug/l</u>	<u>E ug/l</u>	<u>X ug/l</u>
MW-1	2/02/93	4.22	450	1500	<0.5	<0.5	14	15
	5/07/93	4.74	<50	340	<0.5	<0.5	2.3	<0.5
	8/26/93	5.57	110	380	<0.5	15	1.2	<0.5
	11/17/93	5.65	88	310	<0.5	12	<0.5	1.6

TEH = Total Extractable Hydrocarbons

TVH = Total Volatile Hydrocarbons, as gasoline

B = Benzene

T = Toluene


E = Ethylbenzene

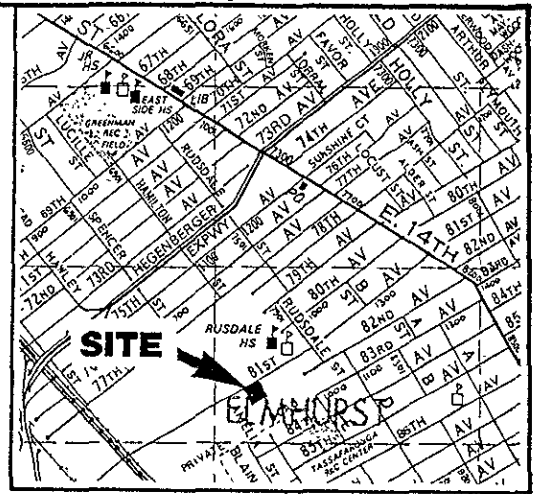
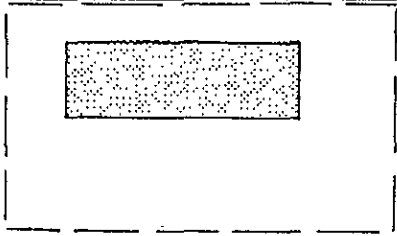
X = Xylenes

ug/L = micrograms per liter

<50 = Contaminant not present at a concentration in excess of the detection limit shown




81ST AVENUE

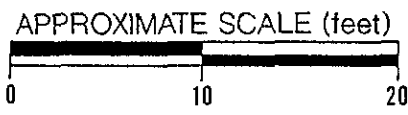
MW-1 



VICINITY MAP


910 81ST AVENUE

	WELL LOCATION
	EXTENT OF FINAL EXCAVATION
	ORIGINAL TANK PIT



SITE PLAN

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910 81ST AVENUE - OAKLAND, CA			PLATE 1
JOB NUMBER	DATE	APPROVED	
611.003	2/25/93		

WELL SAMPLING FORM

Project Name: 81ST AVENUE Well Number: 1
 Job No.: 611.002 Well Casing Diameter: 2 inch
 Sampled By: John Wolf Date: 11/2/93
 TOC Elevation: _____ Weather: cloudy cool

Depth to Casing Bottom (below TOC) 18 18.000 feet
 Depth to Groundwater (below TOC) 5.65 feet
 Feet of Water in Well 12.35 feet
 Depth to Groundwater When 80% Recovered 8.12 feet
 Casing Volume (feet of water x Casing DIA² x 0.0408) 2.01 gallons
 Depth Measurement Method Tape & Paste / Electronic Sounder / Other
 Free Product None
 Purge Method Teflon bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°C)	Conductivity (micromhos/cm)	Salinity S%	Comments
<u>0</u>	<u>7.04</u>	<u>68.7</u>	<u>5.61</u>	_____	_____
<u>2</u>	<u>7.06</u>	<u>68.8</u>	<u>5.31</u>	_____	_____
<u>4</u>	<u>6.84</u>	<u>68.1</u>	<u>5.12</u>	_____	_____
<u>6</u>	<u>6.64</u>	<u>67.2</u>	<u>5.01</u>	_____	_____
<u>8</u>	<u>6.62</u>	<u>66.8</u>	<u>4.91</u>	_____	_____
<u>10</u>	<u>6.61</u>	<u>66.9</u>	<u>4.87</u>	_____	_____

Total Gallons Purged 10 gallons
 Depth to Groundwater Before Sampling (below TOC) 6.02 feet
 Sampling Method Teflon bailer
 Containers Used 3 40 ml 1 liter _____ pint

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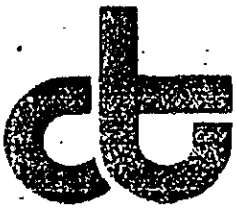
81ST AVENUE - OAKLAND, CALIFORNIA

JOB NUMBER
611.002

DATE

APPROVED

PLATE



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

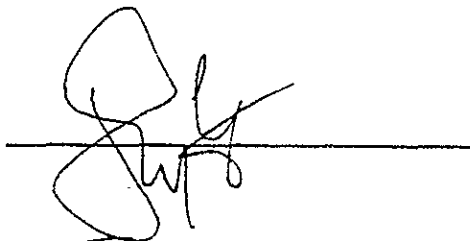
A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
171 12th Street
Suite 201
Oakland, CA 94608

Date: 30-NOV-93
Lab Job Number: 113250
Project ID: 611.002
Location: 81st Avenue

Reviewed by:



Reviewed by:



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LABORATORY NUMBER: 113250
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 611.002
LOCATION: 81ST AVE.

DATE SAMPLED: 11/17/93
DATE RECEIVED: 11/18/93
DATE ANALYZED: 11/25/93
DATE REPORTED: 11/30/93

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
113250-01	MW-1	310	ND(0.5)	12	ND(0.5)	1.6

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	104



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113350
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 611.002
LOCATION: 81ST AVE.

DATE SAMPLED: 11/17/93
DATE RECEIVED: 11/18/93
DATE EXTRACTED: 11/19/93
DATE ANALYZED: 11/23/93
DATE REPORTED: 11/30/93

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
113250-02	MW-1	**	88	50

* Reporting limit applies to all analytes.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	82

CHAIN OF CUSTODY FORM

PROJECT NAME: 81st Avenue
JOB NUMBER: 611.002
PROJECT CONTACT: Marianne Watada
SAMPLED BY: John Wolfe
LAB: Curtis & Tompkins
TURNAROUND: normal
REQUESTED BY: M. Watada

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX :				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES
		WATER	SOIL	WASTE	AIR	VOL	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME	
113250-1	MW-1	X				1				X			X		11	17	93	1400	X VOLUME X TECH
-2	MW-1	X										X							

CHAIN OF CUSTODY RECORD			
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
	11-18-93 12:30		11/18/93 12:30
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Subsurface Consultants, Inc.
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