ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510)

June 18, 1998

REMEDIAL ACTION COMPLETION CERTIFICATE

Hiro & Dianne Fukushima
1301 Hilliker Place
Livermore CA 94550-9618

RE: Underground Storage Tank Closures, Hiro's Nursery, 1630 162nd Avenue, San Leandro 94578 (Our site # 1361)

Dear Mr. and Mrs. Fukushima:

This letter confirms the completion of a site investigation for the underground storage tanks formerly located at the above referenced location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above referenced file and with the provision that the information provided to this agency was accurate and complete, no further action related to the underground tank investigation is required.

This Notice is issued pursuant to a regulation contained in Section 2721(e) of Title 23 of the California Code of Regulations.

Please contact Pamela Evans of our office with any questions at (510)567-6770.

Sincerely,

Mee Ling Tung
Director, Environmental Health Specialist

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510)

May 29, 1998

Chuck Headlee
California Regional Water Quality Control Board
2101 Webster St., Suite 500
Oakland CA 94612

RE: Case Closure – Hiro's Nursery, 1630 162nd Avenue, San Leandro 94578
Our site #1361

Dear Mr. Headlee:

Enclosed is a case closure summary for your review and sign-off.

Thank you for your attention and assistance in this matter. Please contact me with any questions at 567-6770.

Sincerely,

Pamela J. Evans

Pamela J. Evans
Senior Hazardous Materials Specialist

Enclosure

C Hiro & Dianne Fukushima, 1301 Hilliker Place, Livermore CA 94550-9618

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

Rpt'd # 01-1436

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510)

May 29, 1998

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California Regional Water Quality Control Board
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Sincerely,

Pamela J. Evans
Senior Hazardous Materials Specialist

Enclosure

C Hiro & Dianne Fukushima, 1301 Hilliker Place, Livermore CA 94550-9618

CASE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 4/9/98

Agency name: **Alameda County-EPD** Address: **1131 Harbor Bay Pkwy**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6770**
Responsible staff person: **Pamela J. Evans** Title: **Senior Hazardous Materials Specialist**

II. CASE INFORMATION

Site facility name: **Hiro's Nursery**
Site facility address: **1630 162nd Av., San Leandro CA 94578**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **1361**
URF filing date: **2/11.93 and 8/1/94** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Hiro Fukushima	1301 Hilliker Place	(510)886-1666
Hiro's Nursery, Inc.	Livermore CA 94550-9618	

Tank #	Size in gal.	Contents	Closed in place or removed?	Date
1	1,000	Gasoline, leaded	Removed	9/3/92
2	500	Gasoline, unleaded	Removed	8/1/94

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Suspected leak, tank #2 was severely pitted with several holes at removal.**
Site characterization complete? **Yes**
Date approved by oversight agency: **6/28/95**
Monitoring Wells installed? **Yes** Number: **Three**
Proper screened interval? **Yes, 5 to 20 feet bgs.**
Highest GW depth below ground surface: **7.64'bgs** (MW-1, 11/95)
Lowest depth: **8.34' bgs** (MW-3, 8/95)
Flow direction: **West to northwesterly**
Most sensitive current use: **residential**
Are drinking water wells affected? **No** Aquifer name: **San Leandro Cone**
Is surface water affected? **No** Nearest affected SW name: **None known**
Off-site beneficial use impacts (addresses/locations): **None**
Report(s) on file? **YES** Where is report filed? **Alameda County, 1131 Harbor Bay Pkwy, Alameda CA 94502**

Material	Amount (include units)	Treatment and Disposal of Affected Material: Action (Treatment or Disposal w/destination	Date
Tank 1	1,000 gallon	Disposal at Erickson, Inc., 255 Parr Blvd. Richmond CA	9/3/92
Tank 2	500 gallons	Disposal at Erickson, Inc., 255 Parr Blvd Richmond CA	8 1 94
Product and rinsate	400 gallons	Disposal, PRC, 13331 N Hwy 33, Patterson CA	8 1 94
Piping	Unknown	Any piping believed to be removed with tank	
Soil	Unknown	Tested and used as backfill with County approval, both tank pits	Tank 1 9 92 Tank 2 3 9[illegible]

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (in ppm) Before	After	Water(in ppb) Before	After
TVH/TPHg	230.0	18.0	290.0	<50 0
Benzene	<1.0	0.45	4.5	<0.5
Toluene	<1.0	0.025	<0.5	<0.5
Ethyl benzene	<1.0	0.025	<0.5	<0 5
Xylenes	10	1.3	10.7	<0.5

Notes:
Before samples for soil were taken from boring SB-1, collected at ~10'bgs, except xylenes result, which was taken from boring SB-2, same depth, August 1989.
Before samples for water were from grab sample from boring SB-5.
After samples for soil were taken from H-1, native soil at ~6' bgs, beneath former UST 2, at August 1994 tank removal.
After samples for water were taken from monitoring wells MW-1, -2 and -3.

Notes 2: During a Phase II assessment in 1989, five grab soil samples were collected at various locations through out this commercial plant nursery site. Depth of samples was ~ 1.0 to 1.5'bgs from locations where pesticides were known or suspected to have been applied (See Figure 2). Samples were analyzed for volatile halogenated and chlorinated compounds (EPA method 8010) and for chlorinated herbicides (EPA method 8080). Analysis results indicate that herbicide and pesticide compounds are present in shallow soil at the site, however, at concentrations below regulatory action levels (See Attachment 3).

Comments:

This 4.5 acre site is a former plant nursery. As of 1989, there were two gasoline USTs, three domestic water wells, several greenhouses, three residences and a variety of other buildings. In the early 1990s, the back portion of the site was developed into single family dwellings (see Attachment 2 showing current site use). Two other "tanks" are pictured in a site diagram dating from August, 1989 (see Attachment 2). No description or explanation of these structures exists in any file report. The property owner, Hiroshi Fukushima, could not explain why tanks are represented in those locations on the diagram. Mr. Fukushima told me that no above ground or below ground tanks containing fuel or any other substance existed in those locations. He said that a 55 gallon waste oil drum may have been stored behind the storage shed.

Three domestic wells once existed on the property. According to written reports and my recent (1/22/98) conversation with a former consultant (Valentin Constantinescu of ALFA Environmental Remediation Services), all three wells were destroyed in October, 1993. An active domestic groundwater well (well 1) existed near the former south tank (tank #1) but was used only to water nursery stock during drought years, and not as a source of drinking water. Grab water samples taken from wells 1 and 2 around August, 1989 were analyzed for TPHg, BTEX, VOCs and chlorinated pesticides. All results were non-detect. According to owner Dianne Fukushima, (telephone conversation, 4/9/98) the third well at the north east edge of the property.

On 8/1/89 a Phase II investigation was done for this property. The report for this investigation indicates that both of the two tanks described in this summary were replacements for older tanks believed to have leaked sometime in the past 20 years. As of August 1989, tank #1 was no longer in use, but tank #2 was still being used. Soil borings SB-1 through SB-4 were advanced at both ends of each of the two tanks (see Attachment 2). Slight to strong petroleum hydrocarbon odors were noted during their advancement. Soil samples were analyzed for total volatile hydrocarbons (TVH) and BTEX (see above Table of Maximum Contaminant Concentrations). No TVH or BTEX were detected in soil samples from around tank #1 at approximately 7'bgs. Soil samples from the borings around tank #2 showed up to 230 ppm total volatile hydrocarbons (TVH), and 10 ppm total xylenes at approximately 10'bgs. Samples from other shallow borings were tested for contaminants of concern, including pesticide residues. These contaminants were not found at significant levels. (See Note 2, above Table and Attachment 3).

Additional site investigation was carried out 8/31/89 Soil and groundwater sampling was done to define the extent of contamination previously detected Two new borings, SB-5 and SB-6, were advanced in the area of tank #2, in both the presumed up gradient and down gradient directions (see Attachment 3) No contaminants were detected in the soil samples from these borings Groundwater was found at 10 5 bgs in the up gradient boring (SB-5) and at 13' in the down gradient boring (SB-6) Analytical results of grab groundwater samples showed up to 4 5 ppb benzene, 10 7 xylenes and 290 ppb TVH in SB-5 (see above Table of Maximum Documented Contaminant Concentrations)

In September of 1992, tank #1, a 1,000 gallon gasoline UST, was removed. Robert Weston of Alameda County Environmental Health Services reported that the tank was single-walled steel, with no pits, holes or leakage and that no petroleum odors came from the tank pit. Soil samples collected from beneath the tank at 9' bgs and from the stockpiles showed no detectable TPHg or BTEX contamination. The excavation was later backfilled with the stockpiled soil. On December 30, 1992, this Office issued a "no further action" letter regarding soil and groundwater investigation for tank #1.

On August 1, 1994, tank #2, a 500 gallon gasoline UST was removed. Scott Seery of this Office was present and noted that the single-walled steel UST was very rusted and pitted, with several small holes distributed through out the tank's surface. Mr. Seery also noted that soil beneath the tank had a strong gasoline odor. Laboratory analysis of soil from beneath the tank at approximately 6' bgs contained 18 ppm TPHg, 0.45 benzene, as well as other BTEX contamination. This tank pit remained open until March of 1997. Water remaining in pit was removed under a bill of lading March 31, 1997. At that time, the pit was backfilled using stockpiled soil that had been tested and found ND for TPHg and BTEX.

Groundwater contamination was further investigated beginning in May, 1995. Three monitoring wells, MW-1, MW-2 and MW-3 were installed within 20' of the former #2 tank pit. These wells were installed to the north/northwest, northeast and southeast of the former tank. Buildings exist immediately west of the former tank pit (see Attachment 3), so no well placement was possible in the immediate down gradient direction. Soil and groundwater samples taken at the time of well installations revealed no contamination above detection limits. The wells were sampled quarterly through February, 1996. Groundwater flow was to the west or northwest during this period. Depth to groundwater ranged from between approximately 7.5 and 8.5' bgs. No detectable concentrations of TPHg or BTEX were found in the course of these sampling events. Boring logs from the installation of these wells show predominantly clay soils.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? **Yes**
Site management requirements: **No**
Should corrective action be reviewed if land use changes? **No**

Monitoring wells Decommissioned: **Yes**.
Number Decommissioned: **Three** Number Retained: **None**

List enforcement actions taken: **None**
List enforcement actions rescinded:

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Pamela J. Evans** Title: **Senior Hazardous Materials Specialist**
Signature: Pamela J Evans Date: April 9, 1998

Reviewed by
Name: Thomas F. Peacock Title Supervising Hazardous Materials Specialist
Signature Thomas F. Peacock Date 4-16-98

Name: Scott O. Seery Title Hazardous Materials Specialist
Signature Date

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:
RWQCB Staff Name: **Chuck Headlee** Title: ~~Associate~~ **Engineering Geologist**
Signature: Chuck Headlee Date: 6/4/98

VII. ADDITIONAL COMMENTS, DATA, ETC.

Site closure is recommended for the following reasons:

The contamination source (tanks) has been removed. Contaminated soil remaining in place is not a significant source of potential groundwater contamination.

The site has been adequately characterized. A total of six borings were drilled, five shallow soil samples were collected, two domestic wells and three monitoring wells were sampled. The locations of the soil borings were appropriate for this investigation. The site hydrogeology has been logged and groundwater flow direction was consistent over the four sampling events. The soil and groundwater data indicate that the release has been limited to soils in the pit area of former tank #2.

No groundwater impact has been shown to exist. No contaminants of concern have been found above MCLs or other applicable water quality objectives in monitoring wells. Monitoring well locations were not optimal given groundwater flow direction. However, well placement options were limited by surrounding structures.

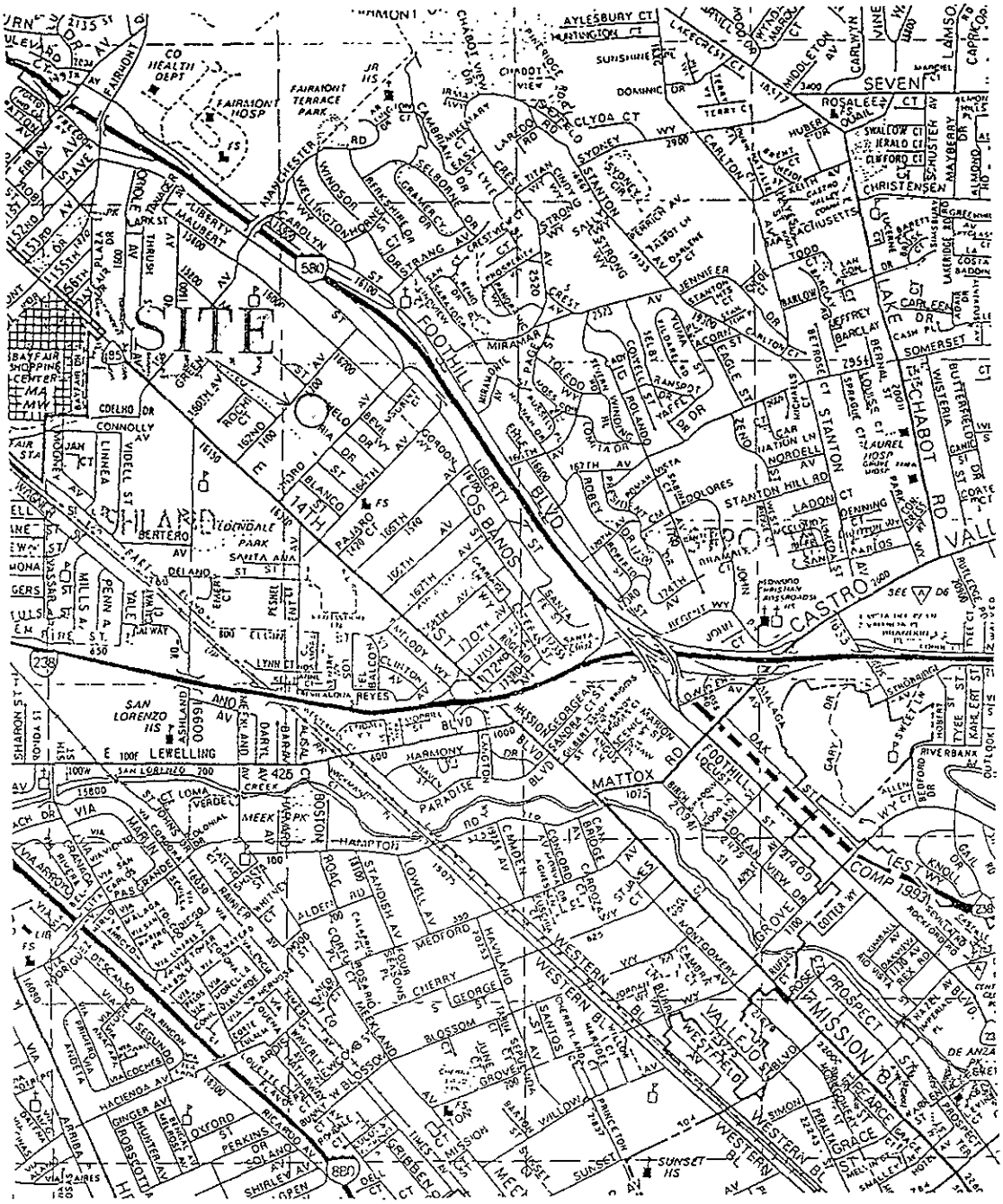
No water wells, deeper drinking water aquifers, surface waters, or other sensitive receptors are likely to be impacted. Groundwater samples collected from the domestic wells showed no detectable concentrations of TPHg, BTEX, HVOCs, VOCs or chlorinated pesticides. No other receptors are known to have been impacted.

The site presents no significant risk to human health or the environment. Contamination appears to be localized and at concentrations that do not pose a significant risk to human health or the environment. Of the soil left in place, only one soil sample contained concentrations above Tier 1 risk-based screening levels (RBSLs) found in the RBCA Tables. This sample was taken from the former #2 tank pit at a depth of 6'. Boring logs from the area adjacent to the tank pit show that sandy clay soils, containing between 35-50% clay, exist between 1 and 10' bgs. Soil samples from these borings did not contain detectable amounts of benzene, indicating that benzene contamination is very localized to the tank pit. Therefore, it is not likely that benzene contamination represents a significant health risk for future residents of the site.

See attachments:

1. Site general vicinity map.
2. Site diagram showing boring, tank, domestic well and building locations.
3. Table showing pesticide analysis results.
4. Site diagram showing monitoring well locations.
5. (a-d) Tables showing contaminant concentrations in wells.
6. (a-i) Boring logs for monitoring wells and SB-1 through SB-6.
7. Soil boring sampling analysis reports
8. UST 1 sampling analysis report
9. UST 2 sampling analysis report

#1361



Environetics Geo-Engineering		HIRO'S NURSERY, INC. 1630 162nd AVENUE, SAN LEANDRO, CA 94578	1
Project No. 70721	Drawn by: V. N C.	SITE LOCATION MAP	
Date: 10/15/92	Checked by J. P B		

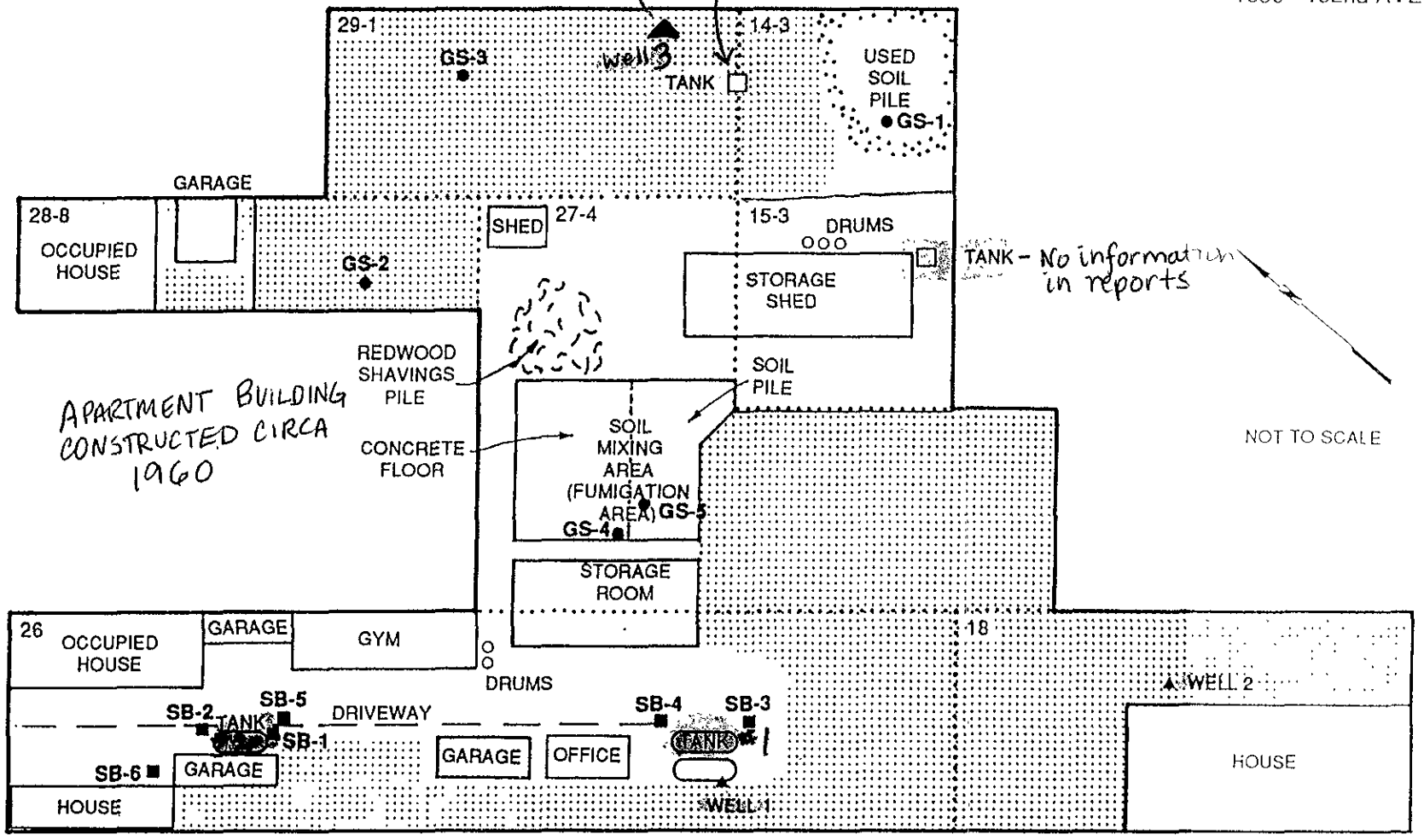
Attachment 1

Approximate location of well, Dianne Fukushima, 4/9/98

No information in reports

FIGURE 2
SOIL BORING AND
GRAB SAMPLE LOCATIONS
1630 - 162nd AVENUE

Attachment 2



Tanks - USTs

Area developed into residences early 1990's

LEGEND

- GREEN HOUSE OR OUTDOOR NURSERY
- 29-1 PARCEL NUMBER
- ..... PARCEL BOUNDARIES
- SB-1 ■ SOIL BORING LOCATION
- GS-1 ● GRAB SAMPLE LOCATION
- ▲ WELL

McLaren Environmental Engineering

Date of Sampling: 8/1/89 PE

TABLE 1

GRAB SAMPLE ANALYTICAL RESULTS
(mg/kg = parts per million)

Sample Designation	EPA Method 8010	EPA Method 8150	EPA Method 8080
GS-1	---[1]	0.01 2,4,5-TP[2]	---
GS-2	---	---	0.001 4,4-DDE[3]
GS-3	---	---	0.002 4,4-DDD[3] 0.003 4,4-DDE
GS-4	---	0.1 dichloroprop	0.002 4,4-DDD 0.002 4,4-DDE 0.005 4,4-DDT[3]
GS-5	---	---	0.002 4,4-DDD 0.001 4,4-DDE

[1] = Compound not detected

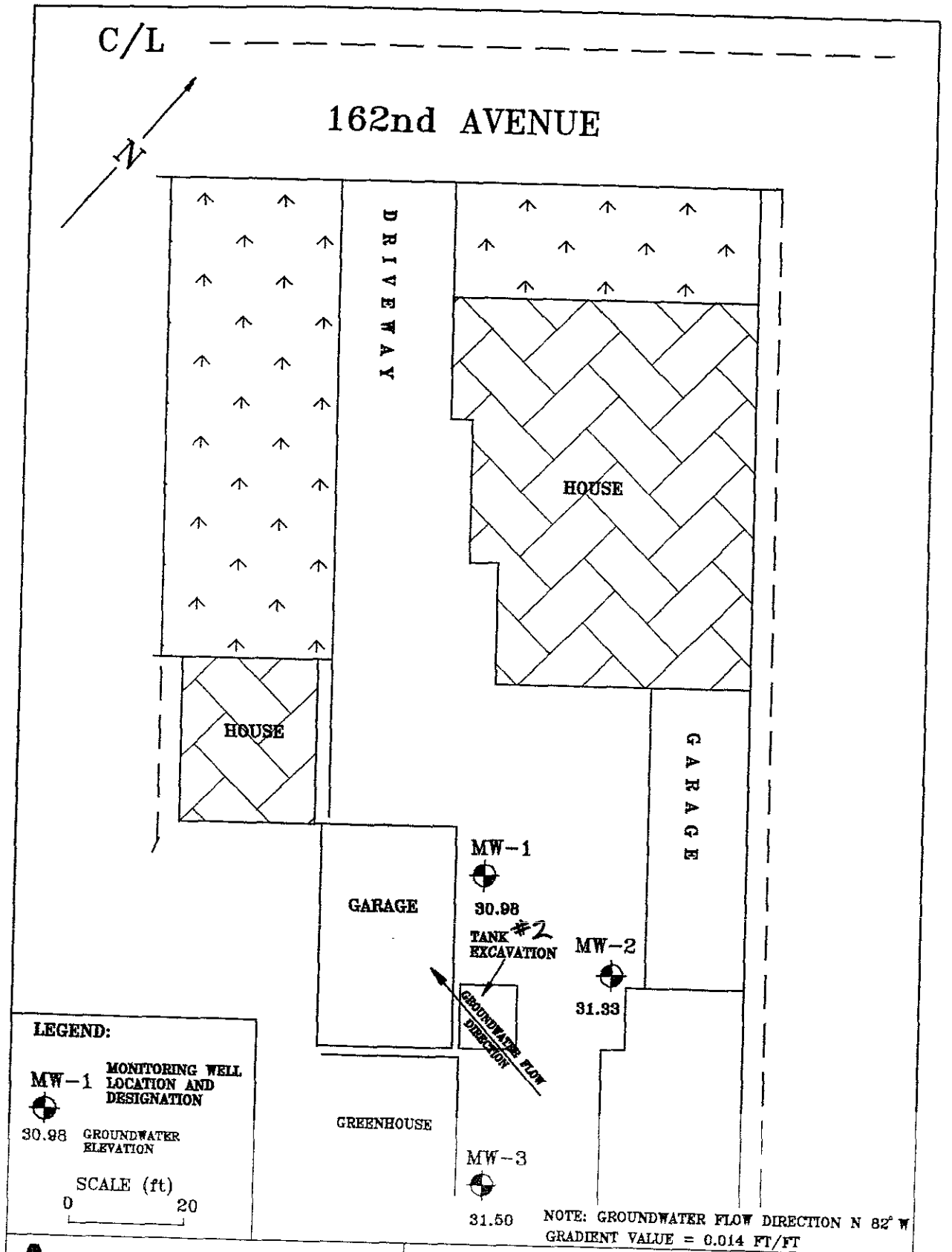
[2] = 2,4,5 trichlorophenol regulatory action level* is 1.0 ppm

[3] = DDD, DDE, and DDT regulatory action level is 1.0 ppm

* Regional Water Quality Control Board, Jon Marshack, May, 1989.

0927DAN2.K&B

Attachment



ALFA ENVIRONMENTAL REMEDIATION SERVICES		HIRO'S NURSERY 1630 162nd AVENUE, SAN LEANDRO, CALIFORNIA SITE MAP	Plate 1
Project No. 95023	Drawn by: V.N.C.		
Date: 5/28/95	Checked by. M.D.K.		

Attachment 4

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

March 02, 1996

PEL # 9602053

ALFA ENVIRONMENTAL, INC.

Attn: Valentin Constantinescu

Re: Four water samples for Gasoline/BTEX analysis.

Project name: Hiro

Date sampled: Feb 29, 1996
Date extracted: Feb 29-Mar 01,1996

Date submitted: Feb 29, 1996
Date analyzed: Feb 29-Mar 01,1996

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	96.3%	84.6%	80.2%	86.7%	89.7%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602

David Duong
Laboratory Director

Attachment 5 a

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

December 02, 1995 PEL # 9512002

HIRO FUKUSHIMA

Attn: Valentin Constantinescu

Re: Four water samples for Gasoline/BTEX analysis.

Project name: Hiro

Date sampled: Nov 30, 1995
Date extracted: Dec 01-02, 1995

Date submitted: Nov 30, 1995
Date analyzed: Dec 01-02, 1995

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	103.4%	81.6%	89.7%	80.6%	94.0%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602

David Duong
Laboratory Director

Attachment 5b

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-966

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

August 30, 1995

PEL # 9508101

HIRO FUKUSHIMA

Re: Four water samples for Gasoline/BTEX analysis.

Project name: Hiro

Date sampled: Aug 29, 1995
Date extracted: Aug 29-30, 1995

Date submitted: Aug 29, 1995
Date analyzed: Aug 29-30, 1995

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)
MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	109.4%	105.7%	97.0%	97.9%	91.1%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602

David Duong
Laboratory Director

Attachment 5c

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

May 26, 1995

PEL # 9505071

HIRO FUKUSHIMA

Attn: Valentin Constantinescu

Re: Four water samples for Gasoline/BTEX analysis.

Project name: Hiro

Date sampled: May 22, 1995
Date extracted: May 24-25, 1995

Date submitted: May 23, 1995
Date analyzed: May 24-25, 1995

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	83.7%	86.1%	94.2%	88.4%	102.9%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602

David Duong
Laboratory Director

Attachment 5d

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

SOIL BORING LOG

LOCATION: 1620–162nd AVENUE, SAN LEANDRO, CA

CLIENT: HIRO FUKUSHIMA BORE HOLE: MW–1

DATE DRILLED: 5/9/95 DRILLED BY: BAYLAND DRILLING

LOGGED BY: VALENTIN CONSTANTINESCU

Depth Below Surface	Samples Collected: INT	Samples Collected: Sample No.	SOIL DESCRIPTION: Color, Grain size, Texture, Moisture, Consistency, Odor	Unified Soil Classification	Log	Penetration Collected: Blows / 18"	PID Readings
			ASPHALT (3") AND FILL MATERIAL.				
5		MW1–5'	CLAY, VERY DARK GRAY, (10YR3/1), LOW DILATANCY, HIGH TOUGHNESS, STIFF, DAMP, NO ODOR.	CL		5, 8, 6	0 PPM
10		MW1–10'	CLAY, BLACK, (10YR2/1), LOW DILATANCY, HIGH TOUGHNESS, VERY STIFF, MOIST TO VERY MOIST, NO ODOR			5, 8, 14	0 PPM
			GROUNDWATER ENCOUNTERED AT APPROX. 10 FT.				
15			CLAYEY SAND, YELLOWISH BROWN, (10YR5/4), 15% CLAY, SAND: MEDIUM TO COARSE, POORLY SORTED, SUBANGULAR TO SUBROUNDED, MEDIUM DENSE, WET, NO ODOR	SC		4, 5, 6	0 PPM
20			CLAYEY SAND, YELLOWISH BROWN (10YR5/4), 20% CLAY, SAND: MEDIUM TO COARSE, POORLY SORTED, ANGULAR TO SUBROUNDED, LOOSE, WET, NO ODOR.			4, 6, 2	0 PPM
25							
30							

Attachment 6a

SOIL BORING LOG

LOCATION: 1630–162nd AVENUE, SAN LEANDRO, CA

CLIENT: HIRO FUKUSHIMA BORE HOLE: MW–2

DATE DRILLED: 5/9/95 DRILLED BY: BAYLAND DRILLING

LOGGED BY: VALENTIN CONSTANTINESCU

Depth Below Surface	Samples Collected		SOIL DESCRIPTION	Unified Soil Classification	Log	Penetration Collected	PID Readings
	INT	Sample No.	Color, Grain size, Texture, Moisture, Consistency, Odor			Blows / 18"	
			ASPHALT (3") AND FILL MATERIAL				
5		MW2--5'	CLAY, BLACK, (10YR2/10, LOW DILATANCY, HIGH TOUGHNESS, STIFF, DAMP, NO ODOR.	CL		4, 6, 9	0 PPM
10		MW2–10'	CLAY, VERY DARK BROWN, (10YR2/2), LOW DILATANCY, MEDIUM TOUGHNESS, VERY STIFF, MOIST TO VERY MOIST, NO ODOR			4, 7, 14	0 PPM
			GROUNDWATER ENCOUNTERED AT APPROX. 10 FT.				
15			CLAYEY SAND, YELLOWISH BROWN, (10YR5/4), 20% CLAY, SAND: FINE TO MEDIUM, POORLY SORTED, SUBANGULAR TO SUBROUNDED, MEDIUM DENSE, WET, NO ODOR	SC		4, 6, 7	0 PPM
20			CLAYEY SAND, YELLOWISH BROWN, (10YR5/4), 20% CLAY, SAND: FINE TO MEDIUM, POORLY SORTED, ANGULAR TO SUBROUNDED, LOOSE TO MEDIUM DENSE, WET, NO ODOR.			3, 5, 5	0 PPM
25							
30							

Attachment 6b

SOIL BORING LOG

LOCATION: 1630–162nd AVENUE, SAN LEANDRO, CA

CLIENT: HIRO FUKUSHIMA BORE HOLE: MW–3

DATE DRILLED: 5/9/95 DRILLED BY: BAYLAND DRILLING

LOGGED BY: VALENTIN CONSTANTINESCU

Depth Below Surface	Samples Collected INT	Samples Collected Sample No.	SOIL DESCRIPTION Color, Grain size, Texture, Moisture, Consistency, Odor	Unified Soil Classification	Log	Penetration Collected Blows / 18"	PID Readings
			ASPHALT (3") AND FILL MATERIAL.				
5		MW3–5'	CLAY, BLACK, (10YR2/1), LOW DILATANCY, MEDIUM TOUGHNESS, STIFF, DAMP, NO ODOR	CL		4, 6, 8	0 PPM
10		MW3–10'	CLAY, VERY DARK GRAYISH BROWN, (10YR3/2), LOW DILATANCY, MEDIUM TOUGHNESS, VERY STIFF, MOIST, NO ODOR. GROUNDWATER ENCOUNTERED AT APPROX. 10 FT			5, 7, 10	0 PPM
15			CLAYEY SAND, BROWN, (10YR5/3), 20% CLAY, SAND: FINE TO COARSE, POORLY SORTED, SUBANGULAR TO ROUNDED, LOOSE TO MEDIUM DENSE, WET, NO ODOR.	SC		3, 4, 6	0 PPM
20			CLAYEY SAND, GRAYISH BROWN, (10YR5/2), 15 CLAY, SAND: FINE TO MEDIUM, POORLY SORTED, SUBROUNDED TO ROUNDED, LOOSE, WET, NO ODOR.			2, 4, 5	0 PPM
25							

Attachment 6c

SOIL DRILLING LOG

McLAREN

SB/MW # : SB-6
D- 4379
Page 1 of 1
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 13' NW OF GARAGE ADJACENT TO NORTHERN TANK
ELEVATION _____ MONITORING DEVICE 580A OVM
SAMPLING DATE(S) 8-31-89 START _____ FINISH _____
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL EXPLORATION CME - 55
MEMO GRAB WATER SAMPLE COLLECTED WITH BAILER AT 14'

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
						Asphalt (4") and roadbase.	RB		
5'	4 - 6 - 9	15	5.0-6.5	-	2.6	Black (10YR 2/1) silty clay; 45% clay; very stiff; highly plastic; slightly moist.	CH		
	4 - 7 - 11	18	6.5-8.0	5116	2.1				
10'	6 - 8 - 13	21	9.0-10.5	5117	2.0	Very dark grayish brown (10YR 3/2) sandy clay; 40% clay; stiff; highly plastic; medium to coarse sand; slightly moist.	CH		
15'	6 - 9 - 12	21	15.0-16.5	-	-	Brown (10YR5/3) sandy clay; 35% clay; very stiff; highly plastic; fine to very coarse sand; fine pebble gravel; slightly moist to moist. 3" lens of loamy sand at 10.5'; saturated. 3" lens of loamy sand at 14.0'; saturated.	CL (SM)		
	8 - 11 - 17	28	18.0-19.5	5118	2.1				
20'						Brown (10YR 5/3) silty clay; 45% clay; very stiff; highly plastic; moist.	CH		
25'									
30'									

Borehole Abandonment/ Well Construction Details: Concrete; Backfilled with Granular Bentonite; 19.5' T.D.

Neil Hirschfeld
SIGNATURE OF FIELD SUPERVISOR
Associate Soil Scientist
TITLE

Jean Hughes
SIGNATURE OF REVIEWER
Senior Soil Scientist
TITLE

Attachment 6-d

SOIL DRILLING LOG

McLAREN

SB/MW # : SB-5
D- 4378
Page 1 of 1
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 7' EAST OF NORTHERN TANK FILLPORT
ELEVATION _____ MONITORING DEVICE 580A OVM
SAMPLING DATE(S) 8-31-89 START _____ FINISH _____
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL EXPLORATION CME - 55
MEMO GRAB WATER SAMPLE COLLECTED WITH BAILER AT 12'

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
0						Asphalt (4").	AC			Concrete
						Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; medium and coarse sand; slightly moist to moist.	CH			
5'						Very dark grayish brown (10YR 3/2) sandy clay; 50% clay; very stiff; highly plastic; medium sand; slightly moist.	CH			Backfilled with Granular Bentonite
10'						Yellowish brown (10YR 5/4) sandy clay; 35% clay; medium sand; slightly moist.	CL			
▽	8 - 17 - 19	38	14.0-15.5	5113	-	Brown (10YR 5/3) sandy loam; 20% clay; slightly plastic; medium and coarse sand; saturated.	SC-SM			
15'	9 - 16 - 17	33	15.5-16.5	5115	3.6	Brown (10YR 5/3) sandy clay; 45% clay; very stiff; highly plastic; moist.	CH			16' T.D.
20'										
25'										
30'										

Rick Fischbeck
SIGNATURE OF FIELD SUPERVISOR
Associate Soil Scientist
TITLE

Alan Hughes
SIGNATURE OF REVIEWER
Senior Soil Scientist
TITLE

Attachment 6c

SOIL DRILLING LOG

McLAREN

SB/MW # : SB-4
D- 4377
Page 1 of 1
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 3' NE OF SOUTHERN TANK
ELEVATION _____ MONITORING DEVICE 580A OVM
SAMPLING DATE(S) 8 - 15 - 89 START _____ FINISH _____
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO _____

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
			1.0-1.5	5104	0.7	Very dark gray (10YR 3/1) sandy clay; 35% clay; stiff; highly plastic; coarse sand; slightly moist.	CL			Concrete
5'	4 - 10 - 14	24	5.0-6.5	5105	0.5	Very dark gray (10YR 3/1) sandy clay; 45% clay; very stiff; highly plastic; fine and medium sand; slightly moist.	CH			Backfilled with Granular Bentonite
	6 - 11 - 14	25	6.5-8.0	5106	0.5					
10'	5 - 10 - 15	25	9.5-11.0	5107	0	Yellowish brown (10YR 5/4) sandy clay; 35% clay; stiff; highly plastic; small pebble gravel; moist.	CL			11' T.D.
15'										
20'										
25'										
30'										

Karl Hirschfeld
SIGNATURE OF FIELD SUPERVISOR
Associate Soil Scientist
TITLE

Jan Hughes
SIGNATURE OF REVIEWER
Senior Soil Scientist
TITLE

Attachment 6 f

SOIL DRILLING LOG

McLAREN

SB/MW # : SB-3
D- 4376
Page 1 of 1
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 5' EAST OF SOUTHERN TANK FILLPORT
ELEVATION _____ MONITORING DEVICE 580A OVM
SAMPLING DATE(S) 8-15-89 START _____ FINISH _____
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO _____

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
			1.0-1.5	4750	2.5	Very dark gray (10YR 3/1) sandy clay; 35% clay; stiff; highly plastic; coarse sand; slightly moist.	CL			Concrete
5'	4-6-11	17	5.0-6.5	5101	0.7	Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; fine and medium sand; slightly moist to moist.	CH			Backfilled with Granular Bentonite
	6-11-14	25	6.5-8.0	5102	0.7					
10'	5-9-11	20	9.5-11.0	5103	0.1	Yellowish brown (10YR 5/4) sandy clay; 35% clay; stiff; highly plastic; moist.	CL			11' T.D.
15'										
20'										
25'										
30'										

Hal Hirschfeld
SIGNATURE OF FIELD SUPERVISOR
Associate Soil Scientist
TITLE

Glen Hughes
SIGNATURE OF REVIEWER
Senior Soil Scientist
TITLE

Attachment 6g

SOIL DRILLING LOG

McLAREN

SB/MW # : SB-2
D- 4374
Page 1 of 1
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 8' NW OF NORTHERN TANK
ELEVATION _____ MONITORING DEVICE 580A OVM
SAMPLING DATE(S) 8-15-89 START _____ FINISH _____
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO _____

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
			1.0-1.5	4743	43	Asphalt (5") and roadbase.	RB			Concrete
5'	6-11-15	26	5.0-6.5	4744	35	Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; medium and coarse sand; slightly moist to moist. Slight to strong petroleum odor.	CH			Backfilled with Granular Bentonite
	6-12-16	28	6.5-8.0	4745	151					
10'	7-12-16	28	9.5-11.0	4746	383	Yellowish brown (10YR 5/4) sandy clay; 40% clay; very stiff; highly plastic; moist. Strong petroleum odor.	CH			11' T.D.
15'										
20'										
25'										
30'										

Hart Hirschfeld
SIGNATURE OF FIELD SUPERVISOR
Associate Soil Scientist
TITLE

Jean Hughes
SIGNATURE OF REVIEWER
Senior Soil Scientist
TITLE

Attachment 6h

SOIL DRILLING LOG

McLAREN

SB/MW # : SB-1
D- 4375
Page 1 of 1
Sampler: H. HIRSCHFELD

PROJECT K&B SL-2 LOCATION 4' EAST OF NORTHERN TANK FILLPORT
ELEVATION MONITORING DEVICE 580A OVM
SAMPLING DATE(S) 8-15-89 START FINISH
SAMPLING METHO 8" HOLLOW STEM AUGER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Borehole Abandonment/ Well Construction Details
			1.0-1.5	4742	2.0	Asphalt (4"). Very dark gray (10YR 3/1) sandy clay; 40% clay; very stiff; highly plastic; medium and coarse sand; slightly moist to moist.	AC / CH			Concrete; Backfilled with Granular Bentonite
5'	2-4-11	15	5.0-6.5	4747	2.5					
	4-6-9	14	6.5-8.0	4748	29	Very dark grayish brown (10YR 3/2) sandy clay; 50% clay; very stiff; highly plastic; medium sand; slightly moist. Slight to moderate odors.	CH			
10'	6-9-12	21	9.5-11.0	4749	307	Yellowish brown (10YR 5/4) sandy clay; 35% clay; medium sand; slightly moist. Strong odors.	CL			11' T.D.
15'										
20'										
25'										
30'										

Hal Hirschfeld
SIGNATURE OF FIELD SUPERVISOR
Associate Soil Scientist
TITLE

SIGNATURE OF REVIEWER
Senior Soil Scientist
TITLE

Attachment 6i

VOLATILE AROMATIC COMPOUNDS
MODIFIED EPA METHOD 8020 (BTEX)
AND
TOTAL VOLATILE HYDROCARBONS

Project: K&B SL-2

Lab Project Number: 2121

Sample Location: ~~HA~~-1 10.0-10.5' SB

Lab ID Number: 29358

Sample Number: 4749

Date Received: 08/16/89

Date Sampled: 08/15/89

Date Analyzed: 08/21/89

COMPOUND	ANALYTE CONCENTRATION ug/g (ppm)	REPORTING LIMIT ug/g (ppm)
Benzene	< 1	1.
Toluene	< 1	1.
Ethylbenzene	< 1	1.
p-Xylene	3.	1.
m-Xylene	< 1	1.
o-Xylene	< 1	1.
Total Volatile Hydrocarbons	230.	50.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	102%	

Comments: 1:50 dilution used in analysis.

Analyst: Teresita Leyesa T. Leyesa Reviewed By: A. Putnam Date: 08/24/89

Laboratory Director: J. M. Bartell

McLaren

VOLATILE AROMATIC COMPOUNDS
MODIFIED EPA METHOD 8020 (BTEX)
AND
TOTAL VOLATILE HYDROCARBONS

RECEIVED
SEP 5 1989
McLAREN

Project: K&B SL-2

Lab Project Number: 2121

Sample Location: NUGT HA-2 10.0-10.5' SB

Lab ID Number: 29357

Sample Number: 4746

Date Received: 08/16/89

Date Sampled: 08/15/89

Date Analyzed: 08/18/89

COMPOUND	ANALYTE CONCENTRATION ug/g (ppm)	REPORTING LIMIT ug/g (ppm)
Benzene	< 2	2.
Toluene	< 2	2.
Ethylbenzene	< 2	2.
p-Xylene	3.	2.
m-Xylene	7.	2.
o-Xylene	< 2	2.
Total Volatile Hydrocarbons	< 100 *	100.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	76%	

Comments: 1:100 dilution used in analysis due to late eluting matrix interference.
* Total Volatile Hydrocarbons are present at 79 ppm which is below reporting limit.

Analyst: S Pedersen S. Pedersen Reviewed By: A Putnam A. Putnam Date: 08/24/89

Laboratory Director: J. M. Bartell for

McLaren

VOLATILE AROMATIC COMPOUNDS
MODIFIED EPA METHOD 8020 (BTEX)
AND
TOTAL VOLATILE HYDROCARBONS

Project: K&B SL-2

Lab Project Number: 2121

Sample Location: ~~HA~~SB-3 7.0-7.5'

Lab ID Number: 29359

Sample Number: 5102

Date Received: 08/16/89

Date Sampled: 08/15/89

Date Analyzed: 08/17/89

COMPOUND	ANALYTE CONCENTRATION ug/g (ppm)	REPORTING LIMIT ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
Total Volatile Hydrocarbons	< 1	1.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	86%	

Comments:

Analyst: A. Putnam Reviewed By: T. Leyesa Date: 08/24/89

Laboratory Director: J. M. Bartell

McLaren

VOLATILE AROMATIC COMPOUNDS
MODIFIED EPA METHOD 8020 (BTEX)
AND
TOTAL VOLATILE HYDROCARBONS

Project: K&B SL-2

Lab Project Number: 2121

Sample Location: SUGT ~~HA~~SB-4 7.0-7.5'

Lab ID Number: 29360

Sample Number: 5106

Date Received: 08/16/89

Date Sampled: 08/15/89

Date Analyzed: 08/21/89

COMPOUND	ANALYTE CONCENTRATION ug/g (ppm)	REPORTING LIMIT ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
Total Volatile Hydrocarbons	< 1	1.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	106%	

Comments:

Analyst: Teresita Leyesa T. Leyesa Reviewed By: A. Putnam Date: 08/22/89

Laboratory Director: J. M. Bartell

McLaren

VOLATILE AROMATIC COMPOUNDS
MODIFIED EPA METHOD 8020 (BTEX)
AND
TOTAL VOLATILE HYDROCARBONS

Project: K & B SL-2

Lab Project Number: 2169

Sample Location: SB-5 14.5-15.0

Lab ID Number: 30096

Sample Number: Tank 5113

Date Received: 09/01/89

Date Sampled: 08/31/89

Date Analyzed: 09/06/89

COMPOUND	ANALYTE CONCENTRATION ug/g (ppm)	REPORTING LIMIT ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
Total Volatile Hydrocarbons	< 1	1.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	122%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 09/09/89

Laboratory Director: J. M. Bartell

McLaren

VOLATILE AROMATIC COMPOUNDS
MODIFIED EPA METHOD 8020 (BTEX)
AND
TOTAL VOLATILE HYDROCARBONS

Project: K & B SL-2

Lab Project Number: 2169

Sample Location: SB-6 9.5-10.0

Lab ID Number: 30093

Sample Number: Garage 5117

Date Received: 09/01/89

Date Sampled: 08/31/89

Date Analyzed: 09/06/89

COMPOUND	ANALYTE CONCENTRATION ug/g (ppm)	REPORTING LIMIT ug/g (ppm)
Benzene	< 0.02	0.02
Toluene	< 0.02	0.02
Ethylbenzene	< 0.02	0.02
p-Xylene	< 0.02	0.02
m-Xylene	< 0.02	0.02
o-Xylene	< 0.02	0.02
Total Volatile Hydrocarbons	< 1	1.
Surrogate recovery (percent) a,a,a-Trifluorotoluene	102%	

Comments:

Analyst: S. Pedersen Reviewed By: A. Putnam Date: 09/09/89

Laboratory Director: J. M. Bartell

McLaren

1992 UST 1 CLOSURE SAMPLE

Excelchem
Environmental Labs
8112 Patton Avenue
Citrus Heights, CA 95610
(916) 729-5313

ANALYSIS REPORT

Attention: Mr. Valentin Constantineson
E. G. E.
200 Brown Road, Suite 200
Freemont, Ca. 94539

Project: HIRO

Date Sampled : 9-3-92
Date Received: 9-4-92
BTEX Analyzed: 9-10-92
TPHg Analyzed: 9-10-92
TPHd Analyzed: NR
Matrix: Soil

	Benzene PPM	Toluene PPM	Ethyl-benzene PPM	Total Xylenes PPM	TPHg PPM	TPHd PPM
Reporting Limit:	0.005	0.005	0.005	0.005	1.0	10
SAMPLE Laboratory Identification						
S1 S0992084	ND	ND	ND	ND	ND	NR
S2 S0892085	ND	ND	ND	ND	ND	NR
S3,4,5,6 S0892086	ND	ND	ND	ND	ND	NR

PPM = Parts per million = mg/Kg = milligram per kilogram
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.
TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.

TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Laboratory Representative

9-15-92
Date Reported

EXCELCHEM ENVIRONMENTAL LABS IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY (Certification No. 1760)

1994 UST 2 CLOSURE SAMPLE

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

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559	Client Project ID: Hiro's Nursery	Date Sampled: 08/01/94
		Date Received: 08/03/94
	Client Contact: Leland Yiatelis	Date Extracted: 08/04/94
	Client P.O:	Date Analyzed: 08/04-08/06/94

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with 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)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
40140	H-1	S	18,a	0.45	0.025	0.66	1.3	92
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

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

cluttered chromatogram, sample peak co-elutes 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 are significant, no recognizable pattern, 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 phase is present

DHS Certification No 1644

Edward Hamilton, Lab Director

Attachment 1