

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

May 5, 1995
STID 3623

REMEDIAL ACTION COMPLETION CERTIFICATION

Attn: Donnell Choy
City of Oakland Attorney's Office
Oakland REdevelopment Agency
505-14th St., 12th Floor
Oakland CA 94612

Attn: Andrew Clark-Clough
City of Oakland
Office of Public Works
Environmental Division
1333 Broadway, Suite 330
Oakland CA 94612

RE: City of Oakland, vacant lot/square block, 1330 Martin
Luther King Way (at 14th St.), aka 13th and Jefferson
Streets, Oakland CA 94612

Dear Mr. Choy and Mr. Clark-Clough,

This letter confirms the completion of site investigation and remedial action for the former 1,750-gallon water/oil underground storage tank (UST), the 625-gallon water/oil UST, the 275-gallon gasoline UST, and the 550-gallon gasoline UST at the above referenced site.

Based on the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, **no further action related to the underground tank release is required.**

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761.

Very truly yours,

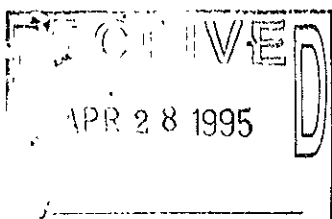
A handwritten signature in black ink, appearing to read "Rafat A. Shahid".

Rafat A. Shahid, Director

May 5, 1995
STID 3623
Attn: Donnell Choy
Attn: Andrew Clark-Clough
page 2 of 2

cc: Bill Raynolds, Acting Chief, Hazardous Materials
Division/file
Kevin Graves, RWQCB
Mike Harper, SWRCB (with attachment)
Jennifer Eberle

LOP/Completion
je 3623clos.let



CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 3/2/95

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pky**
City/State/Zip: **Alameda CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Jennifer Eberle** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **City of Oakland (vacant lot)**
Site facility address: **1330 Martin Luther King Way (at 14th St.), Oakland CA 94612 (this is a square block)**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **3623**
URF filing date: **7/8/88** SWEEPS No: **N/A**

Responsible Parties: **Addresses:** **Phone Numbers:**
Attn: **Donnell Choy**, City Attorney, Oakland Redevelopment Agency, 505-14th St., 12th Floor, Oakland CA 94612 (510-238-3493)

Attn: **Andrew Clark-Clough**, City of Oakland, Office of Public Works, Environmental Division, 1333 Broadway, Suite 330, Oakland CA 94612 (510-238-6361)

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	1,750*	water and oil	removed	9/89
2	625*	water and oil	removed	9/89
3	275*	gasoline	removed	9/89
4	550**	gasoline	removed	6/17/88

*located at 13th and Jefferson Sts
**located at 14th St and MLK Way

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown

Site characterization complete? YES

Date approved by oversight agency: n/a

Monitoring Wells installed? YES Number: at least 24

Proper screened interval? YES

Highest GW depth below ground surface: Lowest depth:
*Gw exists between depths of approximately 25 to 27'bgs.

Flow direction: NW

Leaking Underground Fuel Storage Tank Program

Most sensitive current use: vacant lot

Are drinking water wells affected? NO Aquifer name:

Is surface water affected? NO Nearest affected SW name:

Off-site beneficial use impacts (addresses/locations): unknown

Report(s) on file? YES Where is report(s) filed?
Alameda County, 1131 Harbor Bay Pky, Alameda Ca 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> (include units)	<u>Action (Treatment</u> <u>of Disposal w/destination)</u>	<u>Date</u>
-----------------	----------------------------------	---	-------------

Tanks:

14th and MLK:	550 gal	disposed to H&H	
13th and Jeff:	1,750 gal	disposed to H&H	approx 9/89
	625 gal	disposed to H&H	approx 9/89
	275 gal	disposed to H&H	approx 9/89

Free Product

Soil:

13th and Jefferson Sts: **2,384 tons** disposed to Class 1 HW landfill
(USPCI Grassy Mtn Facility in Knolls UT) 8/89
(see 11/1/89 SCI report--HW manifests)
8,600 yd3 disposed to Class 3 after aeration
(Redwood landfill in Novato) 1990
(see 12/6/90 SCI report--no disposal doc.)***

14th and MLK Way: **2,550 yd3** disposed
(see 12/6/90 SCI report for 1330 MLK--no disposal
doc.)***

Groundwater was treated from 4/90 to 11/93, and was discharged to EBMUD

***disposal documentation was generally not included in reports if the material went to a Class 3 facility.

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued) Maximum Documented Contaminant Concentrations - - Before and After Cleanup

14TH STREET AND MLK WAY

Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After
TPH (Gas)	7,660	1,000	FP#	2.43
TPH (Diesel)	NA	NA	NA	NA
Benzene	0.790	0.167*	3.1	0.058
Toluene	1.2	0.388*	2.7	0.010
Xylene	38	91.2*	5.5	0.163
Ethylbenzene	7.3	0.529*	ND	0.058
Oil & Grease	NA	NA	NA	NA
Heavy metals	NA	NA	NA	NA

Comments (Depth of Remediation, etc.): "Before" water samples are from the first 3 MWs installed in 6/88 near 14th and MLK. "After" water samples are from MW42 on 11/8/94. "Before" soil samples are from the one sample taken at the fill end of UST at 14th and MLK. "After" soil samples are from the soil overexcavation (see **Plate 3 and Table 4**).

#FP = free product

*Since BTEX was NA in the verification samples from overexcavation, the "after" soil samples are from the 3 borings (60-62) put in MLK Way to verify the effectiveness of the SVES and gw extraction system; TPHg was ND in these locations (see **Table 5 and Plate 4**).

Leaking Underground Fuel Storage Tank Program

13TH AND JEFFERSON STREETS

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	2,310*	ND**	1700#@	ND#@
TPH (Diesel)	22,000@	ND@#	110#@	ND#@
Benzene	55*	0.018**	ND#@	ND#@
Toluene	44*	0.026**	1.5#@	ND#@
Xylene	167*	0.063**	20#@	ND#@
Ethylbenzene	trace^	0.071**	28#@	ND#@
Oil & Grease	1,500^	150^^	ND	ND
Kerosene	48,000^	ND^^	###	
Lead	1300#	260##	NA	
Zinc	3200@	0.46@#	NA	
PNAs	@@	ND##	NA	
PCBs/pesticides	ND^			
HVOCs			@@@	

Comments (Depth of Remediation, etc.):

* SB-24 (see Table 7a and Plate 5a)

** See Plate 7a

@ initial tank removal (see Table 1a and Plate 1a)

@# verification samples post-UST-overexcavation (see Table 8a & Plate 1a)

@@ various PNAs (see Table 2a and Plate 2a)

see Table 3a and Plate 3a

see Table 4a and Plate 4a; it is likely that lower concentrations of Pb actually remained in place, because CW-9 was overexcavated, but not resampled in the same exact location

^ soil below sump at 14'bgs (see Table 5a and Plate 6a)

^^ soil below sump at 21'bgs (see Table 6a and Plate 6a)

#@ see Table 9a

the TEH analysis for gw (see Table 9a) included kerosene range

@@@ see Table 10a

IV. CLOSURE

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

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

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES, if it changes to residential

Leaking Underground Fuel Storage Tank Program

Monitoring wells Decommissioned: NOT yet
Number Decommissioned: MW49 (12/18/92; see 1/11/93 SCI letter)
Number Retained: at least 23

List enforcement actions taken: NOV dated 8/16/89 from the County (for submittal of workplan)

List enforcement actions rescinded: unknown

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle Title: Hazardous Materials Specialist
Signature: *J Eberle* Date: 4-10-95

Reviewed by
Name: eva chu Title: Hazardous Materials Specialist
Signature: *eva chu* Date: 4/10/95

Name: Amy Leech Title: Hazardous Materials Specialist
Signature: *A Leech* Date: 4/11/95

VI. RWQCB NOTIFICATION

Date Submitted to RWQCB: 4-11-95 RB Response: *Approved*
RWQCB Staff Name: Kevin Graves Title: AWRCE
Signature: *K Graves* Date: 4/27/95

VII. ADDITIONAL COMMENTS, DATA, ETC. Major Hint: look for the reports w/the red tabs. That's where I got the info for this summary. There are 2 full boxes of reports for this site. You don't want to look at every report.

14TH STREET AND MLK WAY

On 6/17/88, one 550-gallon gasoline UST was removed. This UST was previously used by Oakland's Fire Dept, and was last used in approximately 1978. It is possible the UST (or prior UST) was used since approximately 1930, because the Fire House was built at that time. One soil sample was collected from adjacent to the UST's lower side (fill end). It contained 1,000 ppm TPH-g, 0.790 ppm benzene, 1.2 ppm toluene, 7.3 ppm ethylbenzene, and 38 ppm total xylenes. In addition, 14 soil borings were installed, ranging from 25 to 37' bgs. Three of these borings were converted to MWs. The upper 9-20' consisted of clayey sands. Below this depth are sands w/less silt and clay. Soil and groundwater samples were collected; see attached tables 2 and 3. MW16 contained "a thin layer of floating gasoline;" approximately 1/8" in thickness. MW16 was located approximately 10' NW of the UST. GW was determined to flow NW. See attached Plate 1. (See the 7/29/88 Progress Report 1, by SCI)

Leaking Underground Fuel Storage Tank Program

The extent of contamination was defined by these borings. Contaminated soils were removed by excavation beginning in 12/88. The excavation limits are shown on the attached **Plate 2**, and went to depths of 31' bgs. After excavation, 11 soil samples were collected from the pit bottom and walls; see **Plate 3 and Table 4**. Due to physical constraints such as utilities, soils containing TPHg as high as 1,000 mg/kg were left in place along MLK Way. Approximately 4,000 cubic yards of soil were removed, stockpiled on site, aerated to acceptable levels, and then used to backfill the excavation.

A soil vapor extraction system (SVES) and a gw treatment system were installed to remediate offsite soil and gw contamination beneath MLK Way. The SVES system operated for approximately 3 years (from 2/91 to 11/93). The gw treatment system started on 4/30/90 and was shut down on 11/93, with County approval. The combined system removed all measurable free product, and significantly reduced the dissolved gasoline plume in gw, as well as the soil plume. The SVES consisted of 25 vapor extraction wells that were connected to a vacuum blower; a thermal oxidizer treated the vapors. Vapor extraction well locations are shown on **Plate 4**. The gw treatment system consisted of pumping gw from 2 extraction wells, EW-1 and 28, shown on **Plate 5**. Extraction rates have varied up to about 6 gpm. The pumped gw was treated w/carbon and then discharged into EBMUD. EBMUD monitored the progress of the system, via quarterly reporting. GW has consistently flowed in a NW direction at a gradient of about 0.7 percent. Pump tests indicate a transmissivity of about 280 ft²/day and a hydraulic conductivity of about 5 x 10⁻³ cm/sec.

On 9/8/93, 3 test borings were drilled (60 through 62) within the SVES area to obtain soil samples within the area of contamination. The results are summarized in **Table 5 and Plate 4**. BTEX remained in a thin layer, approximately 1 foot thick, above the gw surface, at maximum concentrations of 0.167 ppm benzene, 0.388 ppm toluene, 91.2 ppm xylenes, and 0.529 ppm ethylbenzene.

The extent of the free and dissolved product gw plumes were defined by the MWs as seen in **Plate 5**. The approximate extent of these gw plumes prior to remediation are also shown in **Plate 5**. The water level data and free product thicknesses are listed in **Table 6**. Up to 40" or 3.7' of free product was measured in several vapor and monitoring wells prior to remediation.

The gw analytical results are summarized in **Table 7**. After ND results were achieved for organic lead and VOCs, and since very low levels of EDB were detected, gw was subsequently only analyzed for TPHg and BTEX.

MW42 has been the only well w/hydrocarbons since 5/93. The gw plume appears to be contained just south of 14th St. at MLK Way, and appears to be degrading, as noted from the decreasing concentrations. No drinking water wells have been identified in the downgradient area from the gw plume. It is therefore unlikely that gw contamination is impacting drinking water.

Leaking Underground Fuel Storage Tank Program

The most recent concentrations (in MW42) can be compared to ASTM numbers. ASTM uses a concentration of 11 ppm (or 11,000 ppb) benzene for the residential scenario (most conservative scenario) via gw-volatilization to outdoor air. The concentrations detected have been well below this value since the initiation of gw sampling in 7/88. The one exception is 18,000 ppb benzene in MW11 on 11/8/89; this has since decreased to ND, and has been ND for the past 6 quarters. See **Table 7**.

Soil concentrations from borings 60-62, emplaced into MLK Way within the area already remediated by SVE (see **Plate 4 and Table 5**) represent soil concentrations remaining in place. The highest hit of benzene was 0.167 ppm. The ASTM value for residential via soil-volatilization to outdoor air is 0.272 ppm benzene. The highest groundwater concentrations remaining in place are below MLK Way at 14th St: 2,430 ppb TPHg, 58 ppb benzene, 10 ppb toluene, 163 ppb xylene, and 58 ppb ethylbenzene. The ASTM value for residential via groundwater-volatilization to outdoor air is 11,000 ppb benzene. There are no values for TPHg, toluene, xylene, or ethylbenzene. **When using ASTM's Emergency Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites, the residual concentrations appear to be of no significant impact to human health.**

This site, known as 1330 MLK Way, is actually a square block in size, including the space between 14th and 13th Streets, and between MLK Way and Jefferson Streets. Another environmental investigation occurred simultaneously for the portion of the site near the corner of Jefferson and 13th Streets. This area contained hydrocarbons, lead and PNAs. See **Plate 5** for an overview of the entire area in 1951. There was extensive remediation by excavation in this portion of the site. Per the County's letter dated 6/2/94 (see attachment), no further action (cleanup or monitoring) was required for this area.

13TH AND JEFFERSON STREETS

Discussions with past City employees confirmed the presence of gasoline storage and dispensing facilities. Three USTs were subsequently uncovered during excavation activities. These 3 USTs were found to have created only localized contamination and therefore do not represent the source of gasoline contamination at 13th and Jefferson. These 3 USTs are included in this closure summary in previous sections, and will be discussed below.

A full history of the environmental work performed in this section of the site is included in the "Request for Site Closure, Hydrocarbon and Lead Contamination Sites, 13th and Jefferson Sts," by Subsurface Consultants Inc. (SCI), dated 4/15/94.

Leaking Underground Fuel Storage Tank Program

Three USTs were removed in 9/89. See the County's inspection report included as **Attachment 1B**. Sampling revealed 22,000 ppm TPHd (Tank 2), up to 73 ppm O&G (by SM503E) (Tank 1), and low concentrations of PNAs beneath Tanks 1 and 2. Tank 3 was ND for TPHg and BTEX. See **Table 1a**. The contaminated soils were satisfactorily removed by excavation; see **Table 8a and Plate 1a**. The soil contamination impacted soils extending approximately 12'bgs, but did not extend to gw, which existed approx at 26'bgs. (See the 9/25/90 "Closure Report, 3 USTs near 13th and Jefferson Sts," by SCI)

Following soil remediation, 8 MWs (MW47, 48, 49, 51, 52, 53, 54, and 59) were installed to monitor gw quality (**See Plate 8a**). TPHg and TEX were initially identified in MW54, but have not been detected during the last 5 quarters. Low levels of HVOCs (1,2-DCA and 1,2-DCE) were detected in gw, but were not detected for at least the last 4 quarters of sampling. Low levels of chloroform (ND-8.0ppb) have been detected in upgradient wells MW51-53, but are not believed to be attributable to this site since there is no apparent source of chloroform in the vicinity. See **Tables 9a and 10a**.