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

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATE

StID 3671 Five "C" Group, 4101 Broadway, Oakland, CA, 94611
(1-500 gallons tank removed)

December 16, 1998

Don Christophe
4101 Broadway
Oakland, CA, 94611

Dear Mr. Christophe:

This letter confirms the completion of site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank 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 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, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

c: Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Leroy Griffin, OFD

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: December 1, 1998

Agency name: Alameda County-HazMat **Address:** 1131 Harbor Bay Pkwy
City/State/Zip: Alameda, CA 94502 **Phone:** (510) 567-6746
Responsible staff person: Don Hwang **Title:** Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Five "C" Group
Site facility address: 4101 Broadway, Oakland CA 94611
RB LUSTIS Case No: N/A **Local Case No./LOP Case No.:** 3671
URF filing date: 08/12/96 **SWEEPS No:** N/A

Responsible Parties:	Addresses:	Phone Numbers:
Attn: Don Christophe Five "C" Group	4101 Broadway Oakland CA 94611	(510) 652-1032

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	500	Gasoline	removed	06/12/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **unknown**
Site characterization complete? **YES**
Date approved by oversight agency:
Monitoring Wells installed? **NO** Number:
Proper screened interval? NA
Highest GW depth below ground surface: NA, but GW was encountered in the tank excavation at 8.5 ft. bgs
Lowest depth:
Flow direction: **Regional flow is the west/southwest, based on gradient from 4045 Broadway, located across 41st St.**
Most sensitive current use: **Commercial**
Are drinking water wells affected? **NO** Aquifer name: **N/A**
Is surface water affected? **NO** Nearest affected SW name: **N/A**
Off-site beneficial use impacts (addresses/locations): **none**
Report(s) on file? **YES** Where is report(s) filed?

Alameda County
1131 Harbor Bay Pkwy and
Alameda, CA 94502

Oakland Fire Dept
505 – 14 th St., 7th Floor
Oakland, CA 94612

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	1 – 500 gallon	H&H Ship Service	06/12/91
Soil	35 c.y.	Redwood Landfill	07/25/91

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[2]	Before[3]	After[4]
TPH (Gas)	3,300	ND	16,000	83,000
TPH (Diesel)				
Benzene	34	ND	550	ND[5]
Toluene	200	ND	2,400	900
Ethylbenzene	56	ND	510	3,400
Xylenes	360	ND	3,400	15,000
MTBE	NT	ND	NT	ND[6]

ND=not detected
NT=not tested

1 "Before" soil sample collected from UST pit subsequent to tank removal.
2 "After" soil sample collected from the western edge of the tank pit subsequent to overexcavation.
3 "Before" water was a "grab" sample collected from the UST pit after limited overexcavation.
4 "After" water sample collected was a "grab" sample collected from boring SB-3
5 Initially, 81 ppb resulted from analysis using EPA method 8020. However, this was not confirmed from analysis using EPA method 8260, which yielded ND<25 ppb.
6 Initially, 1,300 ppb resulted from analysis using EPA method 8020. However, this was not confirmed from analysis using EPA method 8260, which yielded ND<25 ppb.

Comments (Depth of Remediation, etc.): See Section VII, Additional Comments, etc.

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: **If a change in land use is proposed or excavation of soils is planned at this site, then an evaluation of risk from exposure to contaminated soil and/or groundwater must be**

made.

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: n/a
Number Decommissioned: Number Retained:
List enforcement actions taken: n/a
List enforcement actions rescinded: n/a

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Don Hwang Title: Haz Mat Specialist

Signature: Don Hwang Date: 12/1/98

Reviewed by

Name: Eva Chu Title: Haz Mat Specialist

Signature: Eva Chu Date: 12/7/98

Name: Thomas Peacock Title: Supervisor

Signature: Thomas Peacock Date: 12-9-98

VI. RWQCB NOTIFICATION

Date Submitted to RB: ~~12/16/98~~ 2/13/99, 4/8/99 RB Response:

RWQCB Staff Name: Chuck Headlee Title: EG

Signature: Thomas Peacock Date: 12-9-98

VII. ADDITIONAL COMMENTS, DATA, ETC.

On June 12, 1991, one 500-gallon underground storage tank (UST) was removed from 4101 Broadway in Oakland CA. (See attachment 1 for site location.) The tank was located beneath the southeasterly sidewalk of Emerald Street. Two soil samples were collected from beneath the UST at each end. Analytical results identified up to 3,300 ppm TPH-g and 34/200/56/360 ppm BTEX, respectively. (See attachments 2A and 2B for UST location and results.)

Limited overexcavation was done on June 18 and July 2, 1991. After the initial overexcavation on June 18, 1991, 5 soil samples were collected: one from each of the four sidewalls at the soil/groundwater interface, and one at the bottom of the excavation. TPH-G and BTEX were ND or < 1 ppm for all samples except for Sample 3, located on the west side of the excavation, where TPH-G and BTEX were 720/4.7/36/12/83 ppm,

respectively. Groundwater was encountered at 8.5 feet bgs. Analytical results of a "grab" groundwater sample collected identified 16,000 ppb TPH-g and 550/2,400/3,400 ppb BTEX, respectively. Additional overexcavation was performed at the west side of the excavation A confirmation soil sample collected from the UST pit after soil was removed was ND for TPH-G and BTEX. (See attachments 3A, 3B, 3C, and 3D, for sample locations and results.)

On May 15, 1997, three borings, SBI through SB3 were installed to assess the vertical and lateral extent of soil and groundwater contamination. All borings were within 5 to 10 ft. of the excavation. (See attachment 4 for boring locations.) TPH-G, BTEX, and MTBE were not identified in any of the soil samples collected from each boring. A "grab" groundwater sample collected from SB2 was also ND for TPH-G, BTEX, and MTBE. The "grab" groundwater samples collected from SB1 and SB3, however, had detectable concentrations for TPH-G, TEX, which were 83,000, 900, 3,400, and 15,000 ppb, respectively, for SB3, and 60,000, 910, 3,000, and 13,000 ppb for SB1. Benzene and MTBE were ND for SB1, and SB3 as confirmed by Method 8260. (See attachment 5 for results.) Although GW appears to be impacted by the fuel relaease, the absence of chemicals of concern (benzene & MTBE) minimizes the potential risk to human health.

No further action is recommended since this site appears to meet the San Francisco RWQCB's definition of a low risk groundwater case:

1. The source of contamination was abated by removal of the UST and overexcavation of contaminated soil in the vicinity of the abandoned UST pit.

2. The extent of impact to soil and groundwater has been evaluated at this site by analysis of multiple soil and groundwater samples collected within and in the vicinity of the UST pit. Additionally, a down gradient well at an adjacent property has not revealed the presence of petroleum hydrocarbons. Soil from borings installed in the vicinity of the tank were ND for TPH-G, and BTEX except for trace amounts of TEX in one sample from SB1. Although groundwater samples from SB1 and SB3 had detectable concentrations for TPH-G, TEX, which were 83,000, 900, 3,400, and 15,000 ppb, respectively, for SB3, and 60,000, 910, 3,000, and 13,000 ppb for SB1, benzene and MTBE were ND. Additionally, the laboratory reports noted that the TPH-G from SB1 and SB3 had siginificant heavier gasoline range compounds as well as having broad chromatographic peaks which may suggest that the gasoline may be aged and biologically altered, indicating that passive bioremediation may be occurring. There is a groundwater monitoring well across the street at 4045 Broadway, which has been ND for all of the same constituents: TPH-G, TPH-D, and BTEX, for the last 3 times samples were collected, 2/21/97, 9/24/97, 1/28/98. Assuming the well is down gradient from the subject property, the contaminants appear not to have migrated to the adjacent site. (Using water level that data provided in this report for the borings, resulted in the gradient being in the opposite direction to that indicated on the site map. However, due to the relatively flat slope and the borings being very close to the excavation, this issue is not critical.)

3. The residual contamination left in soil and groundwater at this site is not expected to significantly impact water wells, deeper drinking water aquifers, surface water, or other sensitive receptors. Shallow groundwater at this site is not used for municipal or domestic purposes.

4. Groundwater is not a source of drinking water or projected to be used within the life of the plume.

5. It does not appear that sensitive ecological receptors are currently impacted by the petroleum hydrocarbon release from this site; therefore, an environmental risk analysis was not performed.

6. Based on a RBCA modified Tier-1/Tier-2 analysis, there is no significant risk to human health (commercial exposure scenario with $1x10^{-5}$ excess cancer risk) from the residual levels of contaminants in soil and groundwater at this site with the current land-use and site configuration. Based on the ASTM "Standard Guide for Rick-Based Corrective Action Applied at Petroleum Release Sites" , the MCL's at the site are not a significant risk to human health .