

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

September 13, 1994
STID 1099

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

REMEDIAL ACTION COMPLETION CERTIFICATION

Gary Negherbon
Negherbon Auto Center
2345 Broadway
Oakland CA 94612

Dear Mr. Negherbon,

This letter confirms the completion of site investigation and remedial action for the former 550-gallon underground waste oil storage tank and the former 1000-gallon underground gasoline storage tank at your 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.

Very truly yours,

A handwritten signature in cursive script that reads "Rafat A. Shahid".

Rafat A. Shahid
Assistant Agency Director

cc: Edgar B. Howell, Chief, Hazardous Materials Division/files
Kevin Graves, RWQCB
Mike Harper, SWRCB
Jennifer Eberle

LOP/Completion
je 1099clos.let

SEP 02 1994 *KG*

QUALITY CONTROL BOARD

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 6/10/94

Agency name: Alameda County-HazMat Address: 80 Swan Wy., Rm 200
 City/State/Zip: Oakland Phone: (510) 271-4320
 Responsible staff person: Jennifer Eberle
 Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Negherbon Auto Center
 Site facility address: 2345 Broadway, Oakland CA 94612
 RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 1099
 URF filing date: 8/6/91 SWEEPS No: N/A

ALCO
 HAZMAT
 04 SEP 12 AM 9:51

Responsible Parties: Addresses: Phone Numbers:
 Gary Negherbon, 2345 Broadway, Oakland CA 94612

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	1000 gal	leaded gasoline	removed	7/25/91
2	550 gal	waste oil	removed	7/25/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: *Unknown*
 Site characterization complete? YES NO
 Date approved by oversight agency:
 Monitoring Wells installed? YES *!* Number: one
 Proper screened interval? YES (from 20' to 29'bgs bec. gw was first encountered at 21.5'bgs)
 Highest GW depth below ground surface: 9.36' Lowest depth: 11.00
 Flow direction: since the well was placed in the waste oil UST pit, flow direction is not an issue
 Most sensitive current use:
 Are drinking water wells affected? NO Aquifer name:
 Is surface water affected? NO Nearest affected SW name:
 Off-site beneficial use impacts (addresses/locations):

Report(s) on file? YES Where is report(s) filed? Alameda County
 80 Swan Wy., Rm 200
 Oakland CA 94621

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment of Disposal w/destination)</u>	<u>Date</u>
Tanks	1000 gal UST	disposed at H&H	7/25/91
	550 gal UST	disposed at Erickson	7/25/91
Soil	120 yd3,	disposed at City of Mtn View Public LandFill,	5/27/93
Purgewater:	103 gal,	disposed at Gibson	3/2/93 and 6/24/94
Oil fm UST	1942 pounds	disposed at SafetyKleen	5/31/94

Leaking Underground Fuel Storage Tank Program

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer EBerle Title: Haz. Mat. Specialist
Signature: *JEBerle* Date: 8-15-94

Reviewed by
Name: Eva Chu Title: Haz. Mat. Specialist
Signature: *Eva Chu* Date:

Name: Juliet Shin Title: Haz. Mat. Specialist
Signature: *Juliet Shin* Date:

VI. RWQCB NOTIFICATION

Date Submitted to RB: *7/25/91* RB Response: *Approved*
RWQCB Staff Name: Kevin Graves Title: San. Engineering Asso. Date: *9/7/94*

VII. ADDITIONAL COMMENTS, DATA, ETC.

Two USTs were removed on 7/25/91: a 1000-gal leaded gasoline UST and a 550-gal waste oil UST. Hits were found beneath both USTs, and in the stockpiled soil. The pit was overexed on 7/29/91. Overex was limited due to site constraints (24th ST., the building, and utilities). Confirmatory samples also got hits. See Section III for the concs.

Several borings were proposed in the UST vicinity. However, due to the proximity of utilities, only one boring and one well were installed on 6/26/92. The well was placed in the waste oil tank backfill. The HCs were ND or trace concs. 35 ppb chlorobenzene was found in the well boring at 20'bgs. GW was found at 21.5'bgs, then stabilized at 10.5'bgs. See attached table 1.

The perched water at 13' in B1 could be from surface water (possibly from storm drains in the shallow subsurface), and then it was hung up in the sand above the clay layer. The perched water could have been dispersed between B1 and MW1, because a) there's approx. 25 lateral feet between them, and b) there was pea gravel in MW1 to 14'bgs, then clayey sand from 14-17'bgs; therefore, any perched water would have moved right through this gravel and sand. See the attached letter from Resna dated 8/12/94 for additional explanation.

GW was monitored for 5 events (see tables 1 & 2 in the attached Resna report). HCs have been ND for the past 4 quarters. Lead in gw was only detected once at 9.9 ppb. However, the MCL for lead is 50 ppb. VOCs are still being detected in gw. However, they are not the same VOCs as were detected in soil in the tank pit. It is possible that the VOCs in gw are from another source. DCA and DCE were ND in the tank pit, as were TCA and

Leaking Underground Fuel Storage Tank Program

TCE. Even though chlorobenzene was detected in the tank pit soils, it has been ND for 4 quarters. (see attached table 3). TCE and DCE are breakdown products of PCE. PCE was detected in soil during UST removal; this may explain the presence of TCE and DCE in gw. See the attached letter from Resna dated 8/12/94 for additional explanation.

The only vexing issue is the presence of HCs and chlorobenzene in the tank pit. The tank pit is under a paved sidewalk, and adjacent to the paved street and adjacent building. It appears that there is minimal threat to human health due to a limited route of exposure. Again, due to site constraints, no further excavation was possible. There is good gw data, and a layer of sandy clay from 13.5'bgs to approximately 21'bgs. For these reasons, this case can be closed.

Negherbon Auto Center
Project No. F3107.31

SB + well installation

TABLE 1
SOIL ANALYSIS DATA

Boring Number	Sample Date	Depth (ft)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	TPHd (ppm)	TOG (ppm)	Organic Lead (ppm)	Halogenated Volatiles (ppb)	pH	Permeability (cm/sec)
B-1	B1-1	4-1/2	<0.005	<0.005	<0.005	<0.005	<1.0	<10	<50	NR	ND	NR	NR
	B1-2	9-1/2	<0.005	<0.005	<0.005	<0.005	<1.0	<10	<50	NR	ND	NR	NR
	B1-3	14-1/2	<0.005	<0.005	<0.005	<0.005	<1.0	<10	<50	NR	ND	NR	NR
	B1-4	19-1/2	<0.005	0.008	<0.005	0.031	<1.0	<10	<50	NR	ND	NR	NR
MW-1	MW1-1	16	<0.005	<0.005	<0.005	<0.005	<1.0	<10	<50	<0.050	ND	NR	NR
	MW1-1B	17	NR	NR	NR	NR	NR	NR	NR	NR	NR	7.3	1 x 10 ⁻⁶
	MW1-2	20	<0.005	<0.005	<0.005	<0.005	<1.0	<10	<50	<0.050	35*	NR	NR

TPHg Total petroleum hydrocarbons as gasoline
 TPHd Total petroleum hydrocarbons as diesel
 TOG Total oil and grease
 ft Feet
 ppm Parts per million
 ppb Parts per billion
 NR Not requested
 ND Not detected
 * Chlorobenzene, sample identified as MW-2 on chain-of-custody

42501 Albrae Street, Suite 100
Fremont, California 94538
Phone: (510) 440-3300
FAX: (510) 651-2233

June 16, 1994

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

Subject: Request for Case Closure Discussion, Negherbon Auto Center, 2345
Broadway, Oakland, California

Ms. Eberle:

Thank you for the telephone discussions we had on Friday, June 10, 1994 regarding the Request for Closure of Negherbon Auto Center. One of the subjects we covered was the August 16, 1991 report on the over-excavation of the underground storage tank (UST) excavation (The Environmental Construction Company, August 16, 1991). You voiced concerns over analytical results contained in this report which indicated that petroleum hydrocarbons and chlorobenzene remained, primarily in the sidewalls, after the over-excavation was completed. While these results do indicate that these compounds did remain in the soil around the excavation, the following should be considered.

1. Size of the excavation was limited due to conditions at the site. These limiting conditions were: 24th Street to the north, the Negherbon Auto building to the south, a sewer line to the east, and a water line to the west.
2. Existing surface coverings have effectively capped the area. The area to the north of the excavation is 24th Street, a paved roadway; the area above, eastward and westward is a concrete sidewalk; and the area to the south is the Negherbon Auto building. These surface conditions would eliminate, or severely limit, the infiltration of surface water.
3. Native soil encountered in the excavation was a dark gray, highly plastic clay. Highly plastic clays will act to contain the petroleum hydrocarbons, and chlorobenzene, and inhibit movement of these compounds through the soil to the groundwater.
4. Petroleum hydrocarbon related compounds are not impacting the groundwater. Total oil and grease (TOG), total petroleum hydrocarbons as gasoline (TPHg), and

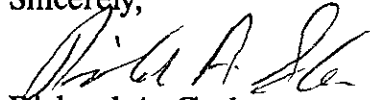
benzene, ethylbenzene, and total xylenes have not been detected in the groundwater since sampling was initiated in July 1992. Toluene was detected in the analyses of samples collected on December 3, 1993, however, toluene was also detected in the bailer blank from this analyses. Laboratory analyses of confirmation sampling conducted on December 28, 1994 did not detect the presence of benzene, toluene, ethylbenzene, and total xylenes (BTEX). This would indicate that the December 3, 1993 samples were inadvertently contaminated during the sampling process. In addition, total petroleum hydrocarbons as diesel (TPHd) were only detected in the analyses of samples collected on July 3, 1992. STLC Lead was only detected in the analyses of samples collected on March 25, 1993 (See Table 1).

The halogenated volatile organic (HVO), chlorobenzene, which was detected during the excavation process, was only detected in the analyses of groundwater samples collected on July 3, 1992. Laboratory analyses of groundwater samples collected since July 30, 1992 have indicated the presence of low concentrations of other HVOs which were not detected during the excavation process. It is probable that these compounds are coming from an off-site source.

In summary, limiting conditions at the site prevented the excavation of all impacted soil, however, the excavation area is effectively capped with a street, a sidewalk, and a building. The soil in the excavated area was a highly plastic clay, which would tend to contain the compounds, and inhibit their movement to the groundwater. Compounds which were detected in the excavation samples TOG, TPHd, TPHg, BTEX, STLC lead, and chlorobenzene have not been detected in groundwater samples since at least March 1993. However, HVOs not detected in the excavation have been detected in groundwater samples. The low concentrations of these compounds (the concentration of many are below the maximum contaminant levels for drinking water.), the intermittent detection of some of these HVOs, and the nondetection of chlorobenzene (see Table 2), would indicate that the HVOs which are being detected in the groundwater samples from MW-1 could be coming from an off-site source.

We believe that consideration of all these facts would support a recommendation of case closure for this site. If you have any questions please call me at (510) 440-3361.

Sincerely,



Richard A. Garlow
Project Geologist

Attachments:

References Cited

- Table 1: Groundwater Analyses - Petroleum Hydrocarbons and
STLC Lead
- Table 2: Groundwater Analyses, Detected* Halogenated Volatile
Organics

REFERENCES CITED

The Environmental Construction Company. August 16, 1991. Excavation of Petroleum Hydrocarbon Contaminated Soils, Negherbon Lincoln-Mercury, 2345 Broadway, Oakland, California. Unpublished report for Negherbon Lincoln-Mercury, Oakland, California.

TABLE 1
GROUNDWATER ANALYSES - PETROLEUM HYDROCARBONS
AND STLC LEAD
Negherbon Auto Center
Oakland, California
(Page 1 of 1)

Sample Number	Date Sampled	Depth to Groundwater (feet)	TOG (ppb)	TPHd (ppb)	TPHg (ppb)	BTEX (ppb)	STLC Lead (ppb)
MW-1	07/03/92	10.62	<5,000	93	<50	<0.5	NR
	12/30/92	9.36	NR	<50	NR	NR	NR
	03/25/93	9.64	<5,000	<50	<50	<0.5	9.9
	06/17/93	10.68	<5,000	<50	<50	<0.5	<5.0
	07/26/93	11.38	NR	NR	NR	NR	NR
	09/13/93	11.00	<5,000	<50	<50	<0.5	<5.0
	12/03/93	10.60	<5,000	<50	<50	0.73*	<5.0
	12/28/93	10.66	NR	NR	NR	<0.5	NR

TOG	Total oil and grease
TPHd	Total petroleum hydrocarbons as diesel
TPHg	Total petroleum hydrocarbons as gasoline
BTEX	Benzene, toluene, ethylbenzene and total xylenes
STLC	Soluble threshold limit concentration
ppb	Parts per billion ($\mu\text{g/L}$)
<	Not detected above listed laboratory detection limit for the method
NR	Analysis not requested
*	Detected concentration of toluene (benzene, ethylbenzene, and total xylenes not detected[<0.5 ppb])

TABLE 2
GROUNDWATER ANALYSES
DETECTED* HALOGENATED VOLATILE ORGANICS
Negherbon Auto Center
Oakland, California
(Page 1 of 1)

Sample Number	Sample Date	Chloro-benzene (ppb)	1,1-DCA (ppb)	1,2-DCA (ppb)	1,1-DCE (ppb)	Cis-1,2-DCE (ppb)	Trans-1,2-DCE (ppb)	1,1,1-TCA (ppb)	TCE (ppb)
MW-1	07/03/92	0.70	2.6	<0.50	2.0	0.60	<0.50	<0.50	0.80
	12/30/92	<0.50	1.6	0.53	<0.50	<0.50	<0.50	<0.50	1.7
	03/25/93	<0.50	5.7	0.69	1.6	1.5	<0.50	2.2	1.7
	07/26/93	<0.50	8.7	1.1	6.8	2.0	1.0	<0.50	1.8
	09/13/93	<0.50	0.93	<0.50	2.8	0.93	0.60	<0.50	1.0
	12/03/93	<0.50	5.9	0.67	5.1	1.3	0.91	<0.50	1.8
DHS DWS MCLs**		30	5	0.50	6	6	10	200	5

* Halogenated volatile organics which have been detected either previously or presently

1,1-DCA	1,1-dichloroethane	Cis-1,2-DCE	Cis 1,2-dichloroethene
ppb	Parts per billion ($\mu\text{g/L}$)	Trans-1,2-TCE	Trans-1,2-Dichloroethene
1,2-DCA	1,2-dichloroethane	1,1,1-TCE	1,1,1-Trichloroethene
1,1-DCE	1,1-dichloroethene	TCE	Trichloroethene

< Not detected above listed laboratory detection limit for the method

**California Department of Health Services (DHS), Drinking Water Standard (DWS) Maximum Contaminant Levels (MCLs), Marshack, J.B., September 18, 1991)

42501 Albrae Street, Suite 100
Fremont, California 94538
Phone: (510) 440-3300
FAX: (510) 651-2233

August 12, 1994

Ms. Jennifer Eberle
Hazardous Materials Specialist
Alameda County Health Agency
Department of Environmental Health
Division of Hazardous Materials
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Subject: Case Closure for Negherbon Auto Center

Ms. Eberle:

I wanted to thank you for meeting with me this past Wednesday (August 10, 1994) and discussing this site. The exchange of ideas and information was beneficial and it was nice to see who I have been talking with for the past few months.

As we discussed, there are concerns about the source of some of the halogenated volatile organics (HVOs) which have been detected in groundwater samples from the onsite well. Specifically, trichloroethene (TCE), cis-1,2-dichloroethene (Cis-1,2-DCE), and trans-1,2-dichloroethene (trans-1,2-DCE) as these compounds can occur both by themselves, and as breakdown products of the HVO tetrachloroethylene (PCE). As low concentrations of PCE (0.039 parts per million [ppm]) were detected in excavation soil samples it is possible that these compounds could have an onsite source as well as possible offsite sources. However, as we also discussed, these compounds are being detected at very low concentrations. As shown in Table 2 of my letter to you dated June 16, 1994 (Table 2 attached) the detected concentrations of these three compounds has consistently been below the California Department of Health Services (CDHS) maximum contaminant level (MCL) for drinking water. This table also shows that the detected concentrations of chlorobenzene, and 1,1,1-trichloroethane (1,1,1-TCA) have also been consistently detected at concentrations below the CDHS MCL for drinking water. In addition, in the last 2 quarters of 1993, detected concentrations of 1,1-dichloroethene (1,1-DCE) were below this MCL and concentrations of 1,1-dichloroethane (1,1-DCA) and 1,2-dichloroethane (1,2-DCA) were below this MCL in the third quarter 1993, and only slightly above in the fourth quarter. It is clear that these concentrations are consistently very low. We recommend closure on the basis of the LUFT

Manual (October 1989, page 61) which states ..."If pollution continues to be stable or decline, the monitoring requirements may be discontinued."

Another concern was the possible source and significance of the trace "perched water", noted at a depth of about 13 feet, in the boring log for boring B-1 drilled on June 26, 1992. As we discussed, a likely nearby source could be leaking storm water drains beneath adjacent streets. These drains carry runoff water from rains, and are not designed to be water tight. As a result they can provide a source of subsurface water in paved areas.

As also shown on the boring logs, this perched water was found at the interface between an overlying sandy soil (clayey sand), and as underlying clayey soil (sandy clay). Since groundwater will typically move more rapidly through a sandy soil than a clayey soil, as the water's downward movement is slowed at the clay, it can collect and form a temporary perched zone. As the water spreads both laterally and vertically this perched zone can pinch out. This could explain the absence of this perched water at this sand/clay interface in the boring log for monitoring well MW-1, which was located approximately 25 feet from boring B-1. Over this distance the water could have dispersed and infiltrated into the clay or been diverted by a rise or a depression in this interface.

Also discussed was the possibility of the aquifer being confined and hydraulically connected to the perched water. In both boring logs water was encountered at a depth of about 21½ feet below the surface. After the well was developed the measured water level obtained on July 3, 1992 was 10.62 feet below the surface. This apparent rise in the water level would indicate that the aquifer below the site is confined. While we have no information beyond the boring logs on the extent of the sandy clay, which appears to be the confining layer, we do have water level and soil moisture information which suggest that the perched water is not hydraulically connected to the aquifer.

The water level obtained on July 3, 1992 was 10.62 feet below the surface. This varies significantly from the level of the perched water at a depth of about 13 feet even when factors of distance and time are considered. (Water levels obtained between July 3, 1992 and September 13, 1993 have only varied from 9.36 feet to 11.38 feet below the surface, indicating small short term variations in the water level).

The moisture content in the sandy clay was noted as only damp on both boring logs. If these two occurrences of groundwater were hydraulically connected indicating long term exposure to water on both the upper and lower surfaces of the sandy clay, it would be likely that the moisture content of this soil would be at least moist. This data would indicate that the perched zone is not hydraulically connected with the aquifer, and that the screened interval of the monitoring well is in the proper location.

I think that after you consider the above information you will conclude that the onsite monitoring well has been properly installed. I think that you will also conclude that

concentration levels are sufficiently low to follow the recommendations of the LUFT Manual to discontinue monitoring, and recommend closure on this case.

If you have any questions please call me at (510) 440-3361.

Sincerely,



Richard A. Garlow
Project Geologist

TABLE 2
GROUNDWATER ANALYSES
DETECTED* HALOGENATED VOLATILE ORGANICS
 Negherbon Auto Center
 Oakland, California
 (Page 4 of 1)

Sample Number	Sample Date	Chloro-benzene (ppb)	1,1-DCA (ppb)	1,2-DCA (ppb)	1,1-DCE (ppb)	Cis-1,2-DCE (ppb)	Trans-1,2-DCE (ppb)	1,1,1-TCA (ppb)	TCE (ppb)
MW-1	07/03/92	0.70	2.6	<0.50	2.0	0.60	<0.50	<0.50	0.80
	12/30/92	<0.50	1.6	0.53	<0.50	<0.50	<0.50	<0.50	1.7
	03/25/93	<0.50	5.7	0.69	1.6	1.5	<0.50	2.2	1.7
	07/26/93	<0.50	8.7	1.1	6.8	2.0	1.0	<0.50	1.8
	09/13/93	<0.50	0.93	<0.50	2.8	0.93	0.60	<0.50	1.0
	12/03/93	<0.50	5.9	0.67	5.1	1.3	0.91	<0.50	1.8

* Halogenated volatile organics which have been detected either previously or presently
 1,1-DCA 1,1-Dichloroethane
 1,2-DCA 1,2-Dichloroethane
 1,1-DCE 1,1-Dichloroethene
 Cis 1,2-DCE cis 1,2-dichloroethene
 < Not detected above listed laboratory detection
 Trans 1,2-DCE
 1,1,1-TCA
 TCE
 ppb
 trans-1,2-Dichloroethene
 1,1,1-Trichloroethane
 Trichloroethene
 Parts per billion (μ/L)

**California Department of Health Services (DHS), Drinking Water Standard (DWS), Maximum Contaminant Levels (MCLs), Marshack, J.B., September 18, 1991)