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

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

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

June 10,1994
STID 1140

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Dave Camille
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

SUBJECT: **Case Closure**
Unocal Station 2656
4251 E. 14th St.
Oakland CA 94601

Dear Mr. Camille:

This letter confirms the completion of site investigation and remedial action for the former 280 gallon waste oil and two 10,000 gallon gasoline underground storage tanks removed from the the above site on 1/5/90 and 4/15/92. With the provision that the information provided to this agency was accurate and representative of existing conditions, this office has determined that no further action is required at this time.

Based on the information submitted and current requirements, the RWQCB has also accepted the determination of this agency that no further action is required at this time. Further work could be required if conditions change or a water quality threat is discovered at the site.

If you have any questions regarding this letter, please give Barney Chan a call at (510) 271-4530.

Very truly yours,

Rafat A. Shahid
Assistant Agency Director

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

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date:** 4/18/94

Agency name: **Alameda County-HazMat** Address: **80 Swan Wy., Rm 200**

City/State/Zip: **Oakland** Phone: **(510) 271-4530**

Responsible staff person: Barney Chan Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: Unocal Station 2656

Site facility address: 4251 E. 14th St., Oakland CA 94601

RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: 1140

URF filing date: 1/9/90 SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Mr. Dave Camille Unocal Corporation	2000 Crow Canyon Place, Ste 400 P.O. Box 5155 San Ramon, CA 94583	(510) 277-2335

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	280	Waste Oil	Removed	1/05/90
2	10k	UL gasoline	Removed	4/15/92
3	10k	UL gasoline	Removed	4/15/92

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown cause, soil release, minimal groundwater

Site characterization complete? NO, physical constraints prevent complete characterization in the west direction beneath the building. The other directions are characterized to ND or low levels.

Monitoring Wells installed? YES Number: 6

Proper screened interval? YES

Highest GW depth below ground surface: 30′ Lowest depth: 40′

Flow direction: gradient is very flat, 0.0006 ft/ft. It is westerly on the west side and easterly on the east side.

Leaking Underground Fuel Storage Tank Program

Most sensitive current use: Undetermined

Are drinking water wells affected? NO Aquifer name:Merritt Sand

Is surface water affected? NO Nearest affected SW name: NA

Off-site beneficial use impacts (addresses/locations): None

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:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	1-280g and 2-10k	Removed	1/5/90 & 4/15/92
Piping			
Soil	300 cy	GSX Buttonwillow CA	6/26/90
	200 cy	GSX/Laidlaw, Buttonwillow CA	6/26/90
	765 cy	Redwood Landfill, Novato CA	6/92

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After
TPH (Gas)	1800	310	NA	ND
TPH (Diesel)	200	ND	NA	ND
Benzene	5.7	0.051	NA	ND
Toluene	110	0.48	NA	ND
Xylene	240	6.6	NA	ND
Ethylbenzene	41	1.9	NA	ND
Oil & Grease	2900	ND	NA	ND
Heavy metals Cd,Cr, Pb, Ni:	ND, 30, 6.5, 41 ppm			
Other: Chlorinated solvents	ND			
Semi-volatiles	ND			

Comments (Depth of Remediation, etc.): No overexcavation performed in the area of the gasoline tank pit.

IV. CLOSURE

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

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

Does corrective action protect public health for current land use? YES

Site management requirements:

Leaking Underground Fuel Storage Tank Program

Should corrective action be reviewed if land use changes? YES

Monitoring wells Decommisioned: NO

Number Decommisioned: 0 Number Retained: 6

List enforcement actions taken: None

List enforcement actions rescinded:None

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney M. Chan Title: Hazardous Materials Specialist

Signature: Barney M Chan Date: 4/19/94

Reviewed by

Name: Eva Chu Title: Hazardous Materials Specialist

Signature: Eva Chu Date: 4/18/94

Name: Juliet Shin Title: Hazardous Materials Specialist

Signature: Juliet Shin Date: 5/9/94

VI. RWQCB NOTIFICATION

Date Submitted to RB: 5/10/94 RB Response: OK. Kevin Graves

RWQCB Staff Name: Kevin Graves Title: San Engineering Assoc. Date:

VII. ADDITIONAL COMMENTS, DATA, ETC.

Site Summary for 4251 E. 14th St. Oakland CA 94601
StID # 1140
Unocal Station # 2656

Site located on the northwest corner of the intersection of High St. and E. 14 th St. in Oakland.

On January 5, 1990 one 280 gallon waste oil tank was removed from the west (rear) side of this site. Several holes observed in tank. The tank was located near the rear of the station building, limiting the extent of any excavation in that direction (easterly). Although the soil sample beneath the tank at 10′ was ND for TOG, TPHd, TPHg, BTEX and chlorinated solvents, the sidewall samples detected as high as 2900 ppm TOG and 200 ppm TPHd. The metals, cadmium, chromium, lead and nickel were found at ND, 30, 6.5 and 41 ppm respectively.

May 1990 the waste oil pit was overexcavated laterally in all directions and confirmatory soil samples taken at the same depth of the original samples (9-10′). Results indicate that excavation was successful with the exception of the east wall next to the building which left in place 630 ppm TOG and 130 ppm TPHd and the northwest wall where 270 ppm TOG and 180 ppm TPHd were left in place.

September 19, 1990 three 2" monitoring wells were installed around the former waste oil tank pit. Groundwater was encountered at approximately 38-40′. The gradient was determined to be westerly. The borings from the wells detected up to 34 ppm TPHg and 5.2 ppm TPHd.

March 1992 Monitoring well 4 was installed around the waste oil tank to further characterize the limits of any groundwater contamination.

April 1992 the case was transferred to LOP.

April 15, 1992 two 10k gasoline tanks were removed from site along with the associated piping. One UST had a 1/4 inch hole on its side. Samples from east and west ends of tank were ND for TPHg and BTEX, however, a north sidewall sample from the pit detected 1800 ppm TPHg, and 5.7, 110, 240 and 41 ppm BTEX respectively (SW1 (10)). A soil sample beneath this one at 12.5′ was ND for gasoline and BTEX. In an attempt to determine the limits of this contamination, a boring approximately 15′ further north was advanced. Two soil samples were analyzed from this boring. The 10′ sample exhibited 190 ppm TPHg and 0.4, 0.57, 2.3 and 0.54 ppm BTEX respectively. The 12.5′ sample at this location was ND. Instead of excavating further in this direction, the consultant, KEI, decided to see if this area would be amendable to soil-vapor extraction.

Soil samples from the piping run on the south side of the site detected up to 520 ppm TPHg, ND benzene and low levels of TEX in two areas. After overexcavation, soil samples indicate that contamination had been reduced to 45 ppm TPHg and low BTEX. **April 30, 1992** two borings, BS1 and BS2, were drilled northwest of the gasoline tank pit to delineate the extent of soil contamination. Up to 200 ppm TPHg was found in the 10' boring from BS2, however, at 12.5', ND gasoline and BTEX was found.

October 27, 1992 Groundwater gradient appears to have reversed from westerly to easterly.

November 19, 1992 2-2" monitoring wells, MW5 and MW6, installed along with subsurface piping on the north side of the gasoline tank pit, to facilitate soil vapor extraction if feasible. MW5 was located downgradient to the tank pit and sidewall sample which detected 1800 ppm TPHg. MW6 is located upgradient to the piping area exhibiting gasoline contamination. The vapor extraction conduit extended beyond borings BS1 and BS2.

December 4, 1992 gradient indicates that groundwater on the west side of the site flows westerly while that on the east side, easterly.

March 4, 1993 Three 2" vapor extraction wells installed to test the viability of VE for the north side of the site near the former gasoline tank pit. These wells were installed to a depth of 12' and screened from 3.5-12' BGS. From April 26-30, 1993 a VET was performed. KEI recommended no further work be performed in this area since low concentrations of gasoline were found in the air samples, 7-51 ug/l and benzene from 0.077 to 0.47 ug/l. Based on the flow rate of 90 CFM the system achieved up to 0.021 lbs/hr gasoline removal. Because of the only slight negative pressure detected in VE2 and VE3, indicating good air flow, KEI concluded that there is only a limited amount of shallow soil contamination.

A summary of groundwater monitoring data shows that:

MWs 1-3 have been monitored since October 1990, MW-4 since March of 1992 and MWs 5 and 6 since December 1992 (five consecutive events) and have shown relatively non-detectable hydrocarbons in the groundwater. Although some soil contamination exists near the west side of the building and to the north side of the gasoline tank pit, it appears that groundwater has not been impacted and there is nearly 30 feet between impacted soil and groundwater.