CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: September 8, 1999

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

II. CASE INFORMATION

Site facility name: **Diablo Cellular**
Site facility address: **110 Hegenberger, Oakland, CA 94621**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4240**
URF filing date: **9/4/90** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
J.L. David, et al Trs. c/o Ms. Deborah David	1880 Century Park East, Suite 900, Los Angeles CA 90067	(310) 277-0200

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	10,000	Gasoline	Removed	8/22/90
2	10,000	"	"	"
3	10,000	"	"	9/7/90

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **1/10/96**
Monitoring Wells installed? **Yes** Number: **4**
Proper screened interval? gw encountered from **~14.5-19.5' bgs, but gw is confined and rises to much shallower levels.**
Highest GW depth below ground surface: 2.6'bgs Lowest depth: 9.58'bgs
Flow direction: **South-southwest**
Most sensitive current use: **Commercial**
Are drinking water wells affected? **No** Aquifer name:
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**
1131 Harbor Bay Pkwy
Alameda, CA 94502 and

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City of Oakland Fire Services
Office of Emergency Services
1603 Martin Luther King Dr.
Oakland CA 94612

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank & piping	3-10,000 gallon	Disposed at Erickson, Richmond	8/22/90 & 9/5/90
Soil	12 tons	Disposed, Port Costa Materials	8/29/91
	288 cy	Disposed, Vasco Rd, L.F., Livermore	8/29/91
	4-55 gal drum	Kettleman Hill L.F., Kettleman City	10/16/91
	12,860#	TPS Technologies, Richmond CA	10/9/98
Groundwater	200 gallons	Alviso Ind. Oil, Alviso CA	11/6/98

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) 1 Before	2 After	Water (ppb) Before	After
TPH (Gas)	3340	2100 no overexc.		ND
TPH (Diesel)	420	110		ND
Benzene	39.9	19		ND
Toluene	93.3	21		ND
Ethylbenzene	177	26		ND
Xylenes	281	12		ND
TRPH/Oil & Grease	4,000	13,000		ND
Heavy metals:Pb,Zn,Cd,Cr	109,69,10,52	*		
WET Pb	8.0			
SVOCs: napthalene	6.0			ND
2-methylnapthalene	7.9			
Halogenated VOCs:				ND

Comments (Depth of Remediation, etc.):
1 samples from sump/clarifier area
2 samples from tank removal
See Section VII, Additional Comments, etc…

* HA-7-5 / HA-4-5 (Sump soil sample)

STLC for HA-4-5 Pb 0.48 mg/l, ND Cr(VI) (< 2.5 mg/l)

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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: site must remained capped in the area of the former clarifier sump. No construction or excavation in this area should be done without an appropriate health and safety plan.

Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned: **No, pending site closure**
Number Decommissioned: **0** Number Retained: **4**
List enforcement actions taken: NA

List enforcement actions rescinded: NA

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney Chan Title: **Haz Mat Specialist**

Signature: Date:

Reviewed by

Name: Eva Chu Title: **Haz Mat Specialist**

Signature: Date:

Name: **Thomas Peacock** Title: **Supervisor**

Signature: Date:

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:

RWQCB Staff Name: C. Headlee Title: AEG

Signature: Date:

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VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is located on Hegenberger Rd., near the Oakland International Airport. **See Figure 1** for a site map. The site is a 1-1/4 acre parcel, which was formerly a car/truck rental agency and car wash facility. The site was demolished in August and September 1990. Three 10K gallon USTs and a two-stage clarifier sump were removed at that time. The site property is presently occupied by three separate businesses:

1. RBJ Airport Parking and RB Copies at 106 Hegenberger Rd. These two facilities occupy 90 percent of the site property.
2. Cellular Solutions, Inc at 110 Hegenberger. This facility occupies 10 percent of the site property.

When the USTs and sump were removed, 36 soil samples were collected from the excavations. TPHg levels exceeding 100 ppm were detected in soil samples collected from the sidewalls of the UST and sump excavations, and at two locations along the product lines. TPHd and TOG exceeding 100 ppm were detected in soil samples collected from the excavation sidewalls of UST #3 (at 110 Hegenberger Rd) and from a sidewall from the clarifier sump excavation. Up to 80 mg/kg total lead and 8.0 mg/L soluble lead was identified in the soil sample SS-22-4.5, collected from the sump area. Perched and rain water was observed in the UST pit bottom. **See Figure 2** for sample locations **and Table 1 for a summary of analytical data.** No over-excavation was performed. SS-20-5, with the highest petroleum contamination, was located too close to the sidewalk to prevent any over-excavation.

In **April 1991** eight hand-augured borings were placed around the former sump to evaluate the lateral extent of hydrocarbons and metals contamination. Perched water was encountered at ~4.5' bgs. Visual evidence of hydrocarbon contamination was noted in borings HA-3, HA-4, and HA-7. Due to the shallow water levels encountered at the site, soil samples were only collected from borings to the south (HA-4 and HA-7) and to the far west (HA-6). Laboratory analytical results identifed elevated hydrocarbons from boring HA-4 and HA-7 (up to 4,000 ppm TOG, 3,340 ppm TPHg, and 39.9 ppm benzene, 109 mg/kg total lead and 0.98 mg/L soluble lead). Soil from boring HA-6 did not contain significant levels of hydrocarbons. In addition, three borings, BG-1 through BG-3, were advanced to the east of the site in assumed clean locations to serve as background samples. Clearly, there had been petroleum release from the sump, which had impacted its immediate vicinity. See **Plate 1 and Figure 3 for sample locations and Tables 3-1 through 3-3 for analytical results.**

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Originally, Dugan Associates, had identified and recommended the excavation of four areas at this site; the northern end of former UST #3, the southern end of UST#3, the southeast end of UST#2 and the former clarifier sump. However, based upon the recommendations from the LLNL study, it was decided to perform additional investigation in lieu of excavation.

In **February 1994** ten soil borings (B-1, B-3, B-4, B-5, B-8, MW-1, MW-2, MW-3, MW-4A, and MW-4B) were drilled to assess the extent of soil and groundwater contamination at the site. First groundwater was encountered at ~14.5' to 19.5' bgs in the borings, except for borings MW-4A and MW-4B, where groundwater was encountered at ~4.5' bgs. This much shallower groundwater is likely a perched zone of water that is trapped in the coarse gravel backfill material. None of the soil and groundwater samples collected contained elevated levels of TPHg, TPHd, TOG, BTEX, HVOCs, and SVOCs. Levels of metals in soil did not exceed 10x STLC. Groundwater was not analyzed for metals. MW-4B was drilled because flowing sand was encountered in MW-4A. No soil samples were collected from these shallow borings. Boring MW-4B was converted into monitoring well MW-4. MWs were also completed in boring MW-1, MW-2 and MW-3. **See Figure 4 and Table 1A for boring locations and analytical results. Also included are Figures 14-16 (cross-sections) and the boring logs for the wells and borings.**

Groundwater has been sampled six times (from Feb 1994 to Jun 1995) without detecting TPHg, TPHd, BTEX, or TOG. It does not appear that residual hydrocarbons and metals in soil has impacted groundwater quality beneath the site. Groundwater gradient has been fairly consistent, south-south westerly.

since they never sample for dissolved metals, this is not a true statement. Should they sample for dissolved metals?

Up to 39.9 ppm benzene was identified in soil adjacent to the former sump at ~4.5'bgs. A human health risk assessment was performed to evaluate the risk to the residual contaminants within this area. The initial assessment indicated potential excess risk (>10E-5) to the exposure pathway, soil to indoor air. This was due to elevated benzene concentrations found in borings HA-4-5 and HA-7-5. To verify these concentrations, on **September 8, 1997**, two additional borings near these two prior borings were advanced at the site. These borings, B-101 and B-102, confirmed the presence of elevated benzene and similarly failed a human health risk assessment. Boring B-102, located just west of HA-7-5, exhibited 16 ppm benzene at 5' depth. **See Table 2 and Figure 5.**

The area w/ elevated residual benzene concentration is a paved parking lot. No building structures are in the immediate vicinity

To further investigate this area, three options were considered:

- Conduct a soil vapor study
- Excavate the affected soil to benzene levels below SSTL and
- Establish a deed restriction to prevent construction in this area or require special construction precautions.

On October 26, 1998 soil vapor samples were collected in the area of concern, near and down-gradient of the former sump. The original work plan called for the installation of three borings and the collection of vapor samples from two depths within each boring. However, groundwater was encountered at a depth of 3-4', which precluded the sampling from a deeper depth. Instead, a total five shallow vapor samples (at 2 to 5 feet bgs) were collected in summa canisters. Vapor sample V-1, collected near former boring B-102 exhibited 630 ppb benzene. This concentration would result in an approximate risk of 1.6E-5 (soil vapor to indoor air). All other samples did not contain benzene levels that would pose a risk to human health in excess of 10-E5. **See Figure 6 and Tables 4 and 5.** A risk management plan was submitted to address potential risk to human health in the event of future development of the site.
In summary, case closure is recommended because:

- the leak and ongoing primary sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment under current use scenario. A Risk Management Plan is provided to account for future change of site use and to protect subsurface workers.