



Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Financial Assistance

1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5660 FAX (916) 341-5806 • www.waterboards.ca.gov/cwphome/ustcf



Arnold Schwarzenegger
Governor

EXHIBIT 8 UST Case Closure Summary

This Underground Storage Tank (UST) Case Closure Summary has been prepared in support of a recommendation by the Petroleum Underground Storage Tank Cleanup Fund (Fund) to the State Water Resources Control Board (State Water Board) for closure of the UST case at 7475 14th Avenue in Sacramento, California (Site).

Agency Information

Agency Name: Sacramento County Environmental Management Department (SCEMD)	Address: 10590 Armstrong Avenue, Suite A, Mather, CA 95655
--	--

Case Information

County Case No: D572	Global ID: T0606701090
Site Name: Curtis Roofing Company	Site Address: 7475 14 th Avenue Sacramento, CA
Responsible Party: William Hunting	Mailing Address: 7475 14 th Avenue Sacramento, CA 95820-3537
USTCF Claim No.: 14725	USTCF Expenditures to Date: \$103,483
	Number of Years Open: 11 years

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active?	Date
T-1	4,000	Diesel	Removed	Jun 99
T-2	10,000	Gasoline	Removed	Jun 99

Release Information

- Source of Release: UST System
- Date of Release: 6/22/99
- Affected Media: Soil and Groundwater

Site Information

- GW Basin: Sacramento Valley
- Beneficial Uses: Municipal and Domestic Water Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), and Industrial Process Supply (PRO)
- Land Use Designation: Commercial
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no supply wells within ½ mile of the site.
- Minimum Groundwater Depth: 42.35 feet below ground surface (bgs) at monitoring well MW-3
- Maximum Groundwater Depth: 54.80 feet bgs at monitoring well MW-3
- Groundwater Flow Direction: Predominately to the south with an average gradient of 0.002 feet/foot (ft/ft).
- Soil Types: Soil underneath the Site consists of interbedded and intermixed sand, silt and clay.

California Environmental Protection Agency



Recycled Paper

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Most Recent Depth to Groundwater (feet bgs) (8/31/10)
MW-1	Jul 02	?-61	48.93
MW-2	Jul 02	?-60	49.25
MW-3	Jul 02	?-56	50.29
MW-4	Jul 04	?-64	49.58
MW-5	Jul 04	?-60	47.43

Petroleum Hydrocarbon Constituent Concentration

Contaminant	Soil (mg/kg)		Water ug/L		WQOs (ug/L)
	Maximum (06/1999)	Latest	Maximum	Latest (8/31/10)	
TPHg	32,000	NA	93	<50	5
TPHd	4,200	NA	4,700 ¹	97	56
Benzene	120	NA	15	<0.3	0.15
Toluene	1,100	NA	6.6	<0.3	42
Ethylbenzene	500	NA	1.6	<0.3	29
Xylenes	3,100	NA	7.1	<0.3	17
MTBE	530	NA	130	32	5
TBA	20	NA	170	<50	12
1,2-DCA	<5	NA	<5	<1	0.4
Lead	NA	NA	NA	NA	2
Naphthalene	NA	NA	NA	NA	21

NA: Not Analyzed, Not Applicable or Data Not Available

WQO: Water Quality Objectives

mg/kg: milligrams per kilogram, parts per million

ug/L: micrograms per liter, parts per billion

1. Chromatography inconsistent with fuel fingerprint.

Site Description

The Site is located on the north side of 14th Avenue and east of 73rd Street. The Site is comprised of two storage shed/maintenance buildings with roll-up doors and a front office building. According to reports, the northern portion of the site was a former soil waste disposal facility which closed in the mid-1970s. Properties in the immediate vicinity are mostly commercial.

Site History/Assessments:

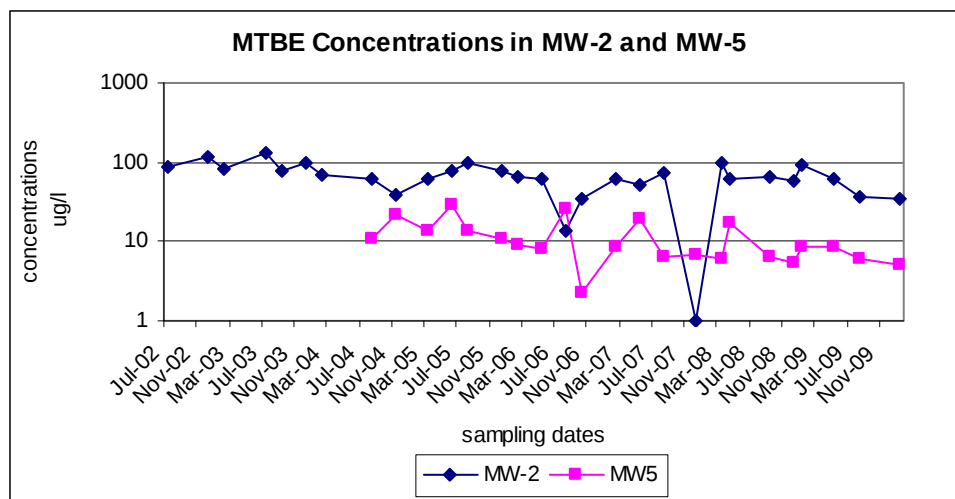
One 4,000-gallon diesel UST and one 10,000-gallon gasoline UST were removed in June 1999. During tank removal, petroleum hydrocarbon contamination was found in soil beneath the west end of the diesel tank, the former dispensers and the fuel conveyance piping. In March 2001, two soil borings were advanced in the vicinity of the former USTs and the dispenser area. Between July 2002 and July 2004, five groundwater monitoring wells were installed. Soil sampling indicates that petroleum hydrocarbon contamination is limited in extent. Furthermore, approximately eight years of monitoring have shown that groundwater beneath the site is minimally impacted.

Remediation Summary

- Free Product Removal: No free product was documented throughout the life of this case.
- Soil Excavation: No documentation of soil excavation was located.
- In-Situ Soil Remediation: No in-situ soil remediation has been conducted at the site.
- Groundwater Remediation: No groundwater remediation has been conducted at the site.

General Site Conditions

- Geology and Hydrogeology: The Site is underlain by interbedded and intermixed gravel, sand, silt, and clay. The depth to groundwater varies seasonally between 42 and 55 feet bgs.
- Groundwater Trends: The concentrations of MTBE in groundwater in MW-2 and MW-5 show a stable and/or an overall decreasing trend as shown in the following graph.



Water Quality Objectives (WQO): It is estimated that MTBE concentration will take approximately ten years to meet water quality objectives. TPHg, benzene and TBA were not detected above the reporting limit of 50, 0.3 and 50 ug/L respectively. The WQO of 5 ug/l for TPHg, 0.15 ug/l for benzene and 12 ug/l for TBA will be met within a reasonable period of time, if they are not currently met. All other water quality objectives have already been attained.

Sensitive Receptor Survey

A sensitive receptor survey conducted by the consultant for the site did not locate municipal or domestic supply wells within a 2,000-foot radius of the Site. The nearest surface water body is American River located approximately 7,000 feet north of the Site.

Risk Evaluation

Soil sampling conducted approximately two years after tank removal in the area where the highest petroleum hydrocarbons were detected have demonstrated that petroleum hydrocarbons in soil attenuate with distance and depth and will continue to attenuate with time. Since it has been approximately eleven years since the soil with the highest petroleum hydrocarbon concentration was collected, any residual petroleum hydrocarbons, if present in the soil would be at very low concentrations.

Since residual concentrations are low, the Site and surrounding areas are paved, there is little potential for hydrocarbon vapors to migrate or pose a threat to human health or the environment.

Although MTBE in the source area still exceeds the WQO, the residual concentration of MTBE in groundwater beneath the Site is unlikely to impact the aquifer downgradient from the source area. MTBE concentrations in groundwater attenuate with distance and WQO has been met in the most downgradient well during the January 2010 groundwater monitoring event.

Furthermore, the impacted groundwater is not currently being used as a source of drinking water or other beneficial uses. It is highly unlikely that the impacted groundwater will be used as a source of drinking water or other beneficial use in the foreseeable future. Water in the vicinity of the Site is provided to water users by the City of Sacramento.

Closure

Does corrective action performed ensure the protection of human health, safety and the environment? Yes.

Is corrective action and UST case closure consistent with State Water Board Resolution 92-49? Yes.

Is achieving background water quality feasible? No.

To remove all traces of residual petroleum constituents at the Site would require significant effort and cost. Removal of all traces of residual petroleum hydrocarbon constituents contributing to detectable concentrations in shallow groundwater can be accomplished, but would require excavation of additional soil as well as additional remediation of shallow groundwater. The soil excavation could also entail relocation of existing utilities, demolition of existing buildings and road closures. If complete removal of detectable traces of petroleum constituents becomes the standard for UST corrective actions, however, the statewide technical and economic implications will be enormous. Because of the high costs involved and minimal benefit of attaining further reductions in concentrations of MTBE at this Site, and the fact that beneficial uses are not threatened, attaining background water quality at this Site is not feasible.

If achieving background water quality is not feasible:

Is the alternative cleanup level consistent with the maximum benefit to the people of the State? Yes.

It is impossible to determine the precise level of water quality that will be attained given the limited residual petroleum hydrocarbons that remain at the Site. In light of all the factors discussed above, and the fact that the residual petroleum constituents will not unreasonably affect present and anticipated beneficial uses of groundwater, a level of water quality will be attained that is consistent with the maximum benefit to the people of the state.

Will the alternative cleanup level unreasonably affect present and anticipated beneficial uses of water? No.

Impacted groundwater is not used as a source of drinking water or any other beneficial use currently. It is highly unlikely that the impacted groundwater will be used as a source of drinking water or any other beneficial use in the foreseeable future.

Will the alternative level of water quality exceed water quality prescribed in applicable Basin Plan? No.

The final step in determining whether cleanup to a level of water quality less stringent than background is appropriate for this Site requires a determination that the alternative level of water quality will not result in water quality less than that prescribed in the relevant basin plan. Pursuant to State Water Board Resolution 92-49, a Site may be closed if the basin plan requirements will be met within a reasonable time frame.

Have factors contained in Title 23 of the California Code of Regulations, Section 2550.4 been considered? Yes.

In approving an alternative level of water quality less stringent than background, the State Water Board considers the factors contained in California Code of Regulations, title 23, section 2550.4, subdivision (d). As discussed earlier, the adverse effect on shallow groundwater will be minimal and localized, and there will be no adverse effect on the groundwater contained in deeper aquifers, given the physical and chemical characteristics of petroleum constituents, the hydrogeological characteristics of the Site and surrounding land, and the quantity of the groundwater and direction of the groundwater flow. In addition, the potential for adverse effects on beneficial uses of groundwater is low, in light of the proximity of the groundwater supply wells, the current and potential future uses of groundwater in the area, the existing quality of groundwater, the potential for health risks caused by human exposure, the potential damage to wildlife, crops, vegetation, and physical structures, and the persistence and permanence of potential effects.

Finally, a level of water quality less stringent than background is unlikely to have any impact on surface water quality, in light of the volume and physical and chemical characteristics of petroleum constituents; the hydrogeological characteristics of the Site and surrounding land; the quantity and quality of groundwater and direction of groundwater flow, the patterns of precipitation in the region, and the proximity of residual petroleum to surface waters.

Has the requisite level of water quality been met? No.

Though the requisite level of water quality has not been met, the approximate time period in which the requisite level of water quality will be met is approximately ten years. This is a reasonable period in which to meet the requisite level of water quality because the impacted groundwater is not currently being used as a source of drinking water and it is highly unlikely that impacted groundwater will be used as a source of drinking water in the foreseeable future. Residential and commercial water users are currently connected to the municipal drinking water supply. Other designated beneficial uses of the impacted groundwater are not threatened and it is highly unlikely that they will be. Considering these factors in the context of the Site setting, Site conditions do not represent a substantial threat to human health and safety and the environment and case closure is appropriate.

Objections to Closure and Response

According to the March 29, 2010 Sacramento County staff notes in GeoTracker, the County does not agree with the Fund's recommendation for low-risk closure. The County does not believe that the vapor intrusion pathway has been adequately investigated.

The Fund Manager does not believe that any potential residual petroleum hydrocarbons at this Site represent a significant risk to human health and safety, and the environment. It has been approximately 11 years since the soil with the highest petroleum hydrocarbon concentration was collected and any residual petroleum hydrocarbons, if present in the soil, would be at very low concentrations. Soil samples collected subsequent to and within 15 feet of the sample with the highest petroleum hydrocarbon concentration in soil were much lower and demonstrate that petroleum hydrocarbon concentrations have attenuated with distance and depth. Soil samples collected closer to the buildings also showed minor concentrations or non-detects.

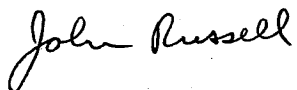
Furthermore, the storage shed/maintenance buildings have roll-up doors and therefore, would allow adequate air exchange. Based on this information, it is highly unlikely that vapors, if any, will result in significant risk to the workers at the site.

With regards to the remaining hydrocarbon contamination dissolved in groundwater, there are no domestic or public water supply wells within 2000 feet of the Site. Water in the vicinity of the Site is provided to water users by the City of Sacramento.

The Fund is conducting public notification and the SCEMD has the regulatory responsibility to supervise the abandonment of monitoring wells.

Summary and Conclusion

The Site is located on 7475 14th Avenue in Sacramento. There is no water supply well within 2,000 feet of the Site. To date, \$103,483 in corrective action costs have been reimbursed. Although MTBE in groundwater exceeds the WQO, it is estimated that the WQO will be met in approximately ten years. The shallow groundwater is not currently being used as a source of drinking water and it is unlikely that the impacted groundwater will be used as a source of drinking water or other beneficial use in the foreseeable future. In addition, in the unlikely event that a water supply well is drilled in the future, standard construction practices and requirements would prevent impacts from any residual petroleum contamination. Based on available information, the residual petroleum hydrocarbons at the Site do not pose significant risks to public health, safety, and the environment, and the Fund Manager recommends that the case be closed.



John Russell PG No. 8396

December 15, 2010

Date

