

**ZONE 7 WATER AGENCY
TOXIC SITES SURVEILLANCE REPORT
2009 WATER YEAR**

INTRODUCTION

Zone 7 documents and tracks polluted sites across the groundwater basin that pose a potential threat to drinking water. Information is gathered from state, county, and local agencies, as well as from Zone 7's well permitting program. This tracking program is designated the "Toxic Sites Surveillance (TSS) Program" and a report is generated annually to update the progress of investigations and clean-ups. Each site has been given a Zone 7 number, which corresponds to the file number containing reports or other information about the site. In addition, all sites are reviewed and given a ranking based on criteria used by the Regional Water Quality Control Board (RWQCB) and Alameda County Environmental Health (ACEH) that have been modified to meet Zone 7 standards. Attachment A shows the priority ranking scheme. A site is designated as a high priority site if the following conditions occur:

1. Contamination at the site is in groundwater at concentrations greater than the maximum contaminant level (MCL) and
2. A water supply well is within 2,000 feet (ft) downgradient of the site, or
3. It is shown that drinking water will likely be impacted by the contamination at the site.

A secondary ranking is used to represent the remedial status of the site. Attachment B shows the status codes used in Zone 7's database. These codes differ slightly from those used by ACEH and RWQCB to better meet the needs of Zone 7. For example, a closed case is listed as a Status "CL" in the TSS program database, instead of the RWQCB's code of "9."

Zone 7's GIS database and map system allows for basic information on each site to be stored and displayed geographically. This database is maintained by Zone 7 staff to help assess the potential threat to our drinking water posed by a given site. Zone 7 Staff may access the database at **\\zone7-file\mapinfo\Toxic\Toxsit.mdb**, read with MS Access database software. The public may contact Cheryl Dizon at (925) 454-5000 for information regarding particular sites.

PRIMARY CONTAMINANTS

In general, the TSS program has found two types of contamination threatening groundwater in the Livermore-Amador Groundwater Basin: fuels and industrial chemicals. The fuels are petroleum-based products that include total petroleum hydrocarbon from gasoline (TPHg), TPH from diesel (TPHd), benzene, toluene, ethylbenzene, xylene (collectively known as BTEX), and oxygenates including methyl tertiary-butyl ether (MTBE) and tertiary-butyl alcohol (TBA).

MTBE was used as a fuel additive in gasoline between approximately 1979 and 2004; the state of California banned the use of MTBE in gasoline on January 1, 2004. MTBE is a particularly troublesome compound because it readily dissolves in groundwater creating contamination that tends to migrate faster and farther than the other fuel components. California has established a primary Maximum Contaminant Level (MCL) for MTBE in drinking water of 13 micrograms per liter ($\mu\text{g/L}$) or parts per billion (ppb) and a cleanup goal of 5 $\mu\text{g/L}$ (ppb) which represents the threshold for taste and odor detection.

TBA is another oxygenate that has been detected in our groundwater basin. TBA can be manufactured and added to gasoline as an oxygenate or it can occur as a degradation product of existing MTBE contamination. California has established a Provisional Action Goal (PAG) of 12 $\mu\text{g/L}$ (ppb) for TBA. Of the BTEX constituents, benzene is considered to be the most harmful to human health and therefore has the lowest corrective action threshold; 1 $\mu\text{g/L}$ (ppb), which is the MCL. A cleanup standard for total petroleum hydrocarbons as gasolines (TPHg) or as diesel (TPHd) has not officially been established. Cleanup standards for TPHg and TPHd vary among the different county and local regulatory agencies, and are generally driven by the cleanup standard for BTEX and MTBE. Environmental Screening Levels (ESLs) may also be used as the cleanup goal on a site specific basis.

The primary industrial chemical contaminants of concern in the Tri-Valley are tetrachloroethene (PCE), trichloroethene (TCE), and their degradation products. Both chemicals are chlorinated solvents. PCE is a common chemical used in the dry cleaning of garments. TCE is a common degreaser used in the electronics, automotive and metal plating industries. The MCL for both PCE and TCE is 5 $\mu\text{g/L}$ (ppb).

UNDERGROUND STORAGE TANK CLEANUP PROGRAM

State Water Board has undertaken recent efforts to streamline the process for site closure in the interest of conserving the Underground Storage Tank (UST) Fund, without compromising water quality objectives and human health and safety. On May 19, 2009, the State Water Board passed Resolution 2009-0042 which put forth several requirements that affected sites within Zone 7 Water Agency's groundwater basin. In addition to other requirements, the Resolution directed Regional Water Boards and Local Oversight Programs (LOPs) to perform cases reviews of all petroleum Program Fund sites and prioritize the sites that are ready for closure. Case reviews and reports to the State Board are due by June 30, 2010. The Resolution also required that all petroleum cases reduce quarterly monitoring events to a semi-annual basis or less frequent unless site-specific conditions warrant otherwise. An additional requirement led to the creation of a Department of Water Quality Task Force whose goal was to provide recommendations to improve the UST Cleanup regulatory program, including additional approaches to risk-based cleanup. Zone 7 Staff was involved in the Task Force since its inception and assisted in developing six recommendations to the State Water Board in December 2009.

CASE INFORMATION

Zone 7 Water Agency is currently tracking the progress of 81 active sites where contamination has been detected in groundwater or is threatening groundwater. There are 18 active sites within 2,000 feet of a municipal water supply well; however, only 11 are classified as "High Priority" cases due to their impact or threat of impact on potable groundwater supplies. Zone 7's database contains 223 other contamination cases that have been either "Closed" or deemed "No Action Required" because they have been cleaned up or they pose minimal threat to drinking water supplies. Six new cases have been opened since the publication of the last Toxic Site Surveillance TSS Annual Report in March 2009. During this same period, four cases were closed, and six more were being considered for closure at the time of this report.

The locations of all the toxic sites are shown on the enclosed maps; Livermore-Figure 1, Pleasanton-Figure 2, and Dublin-Figure 3. The maps also show the toxic site's proximity to the Valley's municipal water wells. Figure 4 shows all the VOC plumes in Zone 7's groundwater basin. Table 1 contains an informational summary for each of the 81 active sites including the case status, its priority, and which agency is responsible for providing oversight on the case. It also shows the chemicals of concern for each case and provides brief notes regarding the case. Attachment A of this report describes the priority ranking scheme for sites, whereas, Attachment B contains the key for the Status Code designations.

New Sites:

The following Toxic Sites represent the new cases that were discovered and documented since the last TSS Annual Report was issued. All are classified "Low" to "Medium Priority" at this time; however, their priorities will be reevaluated as the results from further investigations are reported.

- Site 303: J Line Spill, Brighton Drive and Village Parkway, Dublin. Soil and groundwater contamination from an auto/tanker accident which caused about 1,400 to 1,800 gallons of gasoline to spill into the storm drain and flowed Zone 7's flood control channel. Active remediation using MicroBlaze, a bioremediation agent with surfactant properties, was implemented during the summer and fall. Post-remediation sampling will occur after the rainy season to verify that the site has been cleaned up sufficiently to justify site closure.
- Site 304: Shell #16-5112, 4895 Hacienda Drive, Dublin. The site is an active service station. MTBE in soil and groundwater was discovered during a "due diligence" investigation in support of a real property transaction. A Work Plan is currently underway to further define the extent of contamination.
- Site 305: I-580 East-bound Shoulder, I-580 EB between First St and Vasco Rd, Livermore. Four leaky USTs were discovered during CalTrans' construction project. Ownership of USTs is unknown. Contaminated soil was investigated at the time of discovery. A Work Plan to define the extent of contamination by installing 3 CPTs is acceptable to ACEH.
- Site 306: City of Dublin Civic Center, 100 Civic Plaza, Dublin. Contaminated groundwater was discovered after removal of a UST on site. A Work Plan has been requested of the City of Dublin, by ACEH for further site assessment.
- Site 307: City of Pleasanton Theater Parking Lot, 0 Kottinger Drive, Pleasanton. A rail line corridor occupied the Site from 1888 through the early 1990s and has been vacant since removal of the rail line by 1993. In July 2009, a limited site investigation was performed in an effort to redevelop the site into a parking lot. Arsenic concentrations exceeding commercial ESLs were detected in the northern portion of the Site. ACEH will issue the City a notice to comply for failure to submit a Supplementary Site Investigation Report.
- Site 308: Green on Park Place, 5411 Martinelli Way, Dublin. A UST used to store diesel was discovered and removed from the site. Over excavation was performed to remove TPH from the soil. Currently awaiting results of the remedial evaluation.

Closed Sites:

The following Toxic Sites were granted “Case Closed” status since the last TSS Annual Report was issued. Generally, the contamination at these sites was characterized, remediated and monitored sufficiently to demonstrate that they no longer pose a risk to human health and the environment. Zone 7 Staff concurred with the lead agency’s decision to close these cases.

- Site 9: Hexcel, 10 Trevarno Road, Livermore, Considering the deed restriction on shallow groundwater uses and the proposed residential use, RWQCB issued a case closure letter on June 5, 2008. See “Other Special Sites” Section for additional information.
- Site 232: Groth Brothers, 59 South L Street, Livermore. A case closure letter was issued by ACEH on November 5, 2009 for several former USTs around the site tracked by Geotracker ID T0600101656. The remaining soil or groundwater contamination in other areas of the site is still being addressed under Geotracker ID SL0600147081.
- Site 258: Wentz Winery, 5565 Tesla Road, Livermore. A case closure letter was issued by ACEH on November 5, 2009.
- Site 301: 414-448 Beverly St. A case closure letter was issued by ACEH on March 5, 2009.

Sites Requesting Closure:

“Case Closure” was requested by representatives for the following Toxic Sites. At the time of this report, the Lead Agencies have considered the requests, but have asked for additional information before making their decision.

- Site 90: Mobil #4H6J, 1024 Main Street, Pleasanton. Case closure was requested for this site based on recent results for soil vapor sampling. ACEH has requested a detailed Well Survey Report prior to performing closure review. This case is classified as moderate priority because it is inside the main basin but drinking water is not likely impacted.
- Site 124: Dublin Rock and Ready Mix, 6393 Scarlett Court, Dublin. Case closure summary report is under review. This case is classified as low priority because it is outside the main groundwater basin.
- Site 192: Fred’s Auto BP Oil, 6400 Dublin Blvd., Dublin: Case closure was requested for this site. Case closure is pending additional rounds of monitoring and sampling. Monitoring frequency has been reduced from quarterly to semi-annually. This case is classified as low priority because it is outside the main groundwater basin. The remaining groundwater concentrations are very low.
- Site 213: Camp Parks, 5th Street, Dublin: DTSC determined that no further action is needed therefore the Army is seeking official site closure. This case is classified as low priority because it is outside the main groundwater basin.
- Site 283: Former Quest Laboratory, 6511 Golden Gate Drive, Dublin. No Further Action was requested for this site based on three consecutive quarters of total petroleum hydrocarbon detections below the reports limits. This case is classified as moderate priority because it is inside the main basin but drinking water is not likely impacted.

- Site 297: Pleasanton Fire Station #3, 3200 Santa Rita Road, Pleasanton: No Further Action has been requested by the RP and they have addressed the technical comments made by ACEH prior to closure assessment. This case is classified as moderate priority because it is inside the main basin but drinking water is not likely impacted.

High Priority Sites:

The following are summaries of the “High Priority” Toxic Sites organized by the city in which they are located. The most recent activities are summarized in the “*Current Action*” sub-sections. The key for the priority numbering system can be found in “Attachment A”.

Livermore

SITE 62: B&C Mini Mart (Desert Petroleum)

Priority: 1A2

Background

This gas station, currently known as Valley Gas, is located at 2008 First Street in Livermore. Desert Petroleum owned and operated the site until 1994, when it filed for bankruptcy and sold the property to its current owner. The site is contaminated with TPHg, MTBE, and benzene. In total, there are 30 monitoring wells associated with this site.

Contamination was first detected at the site in 1988 in the backfill surrounding the underground storage tanks (USTs). Free product was detected in MW-2. Product removal from this well began at that time and continued on a semi-monthly basis until early 1995. In March 1995, another release was reported from the site. Again free product was detected in MW-2 and product removal was performed. In 1996, all USTs were replaced with double-walled fiberglass tanks, fiberglass piping, and an automated leak detection system. Two additional monitoring wells were installed offsite at this time to further delineate the extent of the plume. Free product was detected in these wells and remedial actions were taken to remove the product from these wells. In 1999, nine more monitoring wells were installed further downgradient to define the extent of the plume, including monitoring wells D-1 and D-2 which were completed in a lower aquifer to examine whether contamination had impacted the deeper semi-confined aquifer that California Water Services’s wells produce from.

ACEH requested additional site characterization in 2003, including the installation of multi-level wells with more discreet screened intervals to replace the current long-screen wells, leading to a site conceptual model and to help define the northern edge of the plume. Four of the multi-level wells requested by ACEH were installed and sampled in August 2003. Three are located off-site at the northern edge of the plume and one is located on-site near the source. MTBE was detected in the upper screened intervals of two of the three multi-level wells. The concentration of MTBE has fluctuated since then but has recently been detected in the onsite well above the MCL of 13 $\mu\text{g/L}$ (ppb) for three of the last four quarters. The northern edge of the plume has moved beyond the three multi-level wells. Well 8K2, located to the northwest and cross-gradient of

CWS-08 is sampled annually during the 4th quarter and is historically non-detect for all volatile organic compounds (VOCs). The plume does not appear to be moving directly toward CWS-08.

A site investigation was performed in March 2006 to better define the extent of the source zone. Groundwater confirmation samples were consistent with previously established plume concentrations. However, benzene and TPHg were detected at 2,000 µg/L and 82,000 µg/L, respectively, at a depth of 26 feet in CB-8, collected from a neighboring property (Groth Brothers). From the data collected during this investigation, the source zone area has been estimated to be approximately 250 feet long, extending to the northwest from the tank pit toward and under the Groth Brothers showroom, and approximately 80 to 120 feet wide. The zone of LNAPL (Light Non-Aqueous Phase Liquids) is generally confined to the lower coarse grained unit with the majority of the impacted sediment from 36 to 48 feet bgs. In March 2008, the consultant for the site began pilot testing of a combination groundwater sparging and vapor extraction remediation system. The results were less than they hoped for.

Special Notes

The former California Water Service (CWS) supply well CWS-03, the closest water supply well to the site, has been properly destroyed. However, the contamination is within 800 feet of CWS-08, one of CWS' active municipal supply wells.

Current Action

Quarterly monitoring for fuel components, i.e., total petroleum hydrocarbons as gas (TPHg), total petroleum hydrocarbons as diesel (TPHd), the aromatic compounds benzene, toluene, ethylbenzene, and xylenes (known collectively as BTEX), and methyl tertiary-butyl ether (MTBE), has been reduced to a semi-annual basis due to State Water Board Resolution 2009-0042. In the latest submission of a Corrective Action Plan, several remedial alternatives were evaluated. The consultant proposes to continue the use of a combination of Ozone Air Sparging System as long as the sparge points are submerged and Soil Vapor Extraction when the source zone is unsaturated. Should this approach proved to be ineffective in reducing contaminant concentrations, then Dual Phase Extraction will be used as a contingency plan.

SITE 115: Livermore Arcade/Miller's Outpost Shopping Centers (LASC/MOSC) **Priority: 1A2**

Background

The LASC/MOSC site formerly housed two dry cleaners that had various leaks/releases through time that caused groundwater contamination from PCE, a common dry-cleaning fluid. In 1990, due to the property acquisition of LASC by Grubb & Ellis, soil and groundwater investigations determined the presence of PCE and petroleum hydrocarbons in groundwater. Remedial extraction wells were installed at the site in 1990. In 1992, it was determined that the contamination at the LASC was co-mingled with contamination from the dry cleaner at MOSC. Soil-vapor extraction and air sparging began in 1993 as a joint remediation effort, and continued until late 1995, when monitoring determined that the amount of PCE being extracted was no longer significant. The pump and treat extraction wells continued operations until February 1996. In 1996, a non-attainment area (NAA), with an associated risk management plan was established around the LASC/MOSC, and approved by the RWQCB. Following the establishment of the NAA, PCE contamination was routinely detected in levels exceeding the

MCL or action levels outside of the NAA, and also in minor amounts at two downgradient water supply wells owned by CWS. In March 2000, the RWQCB revised the sampling requirements for the site and requested that a workplan be drafted to reinstate groundwater remediation at the site. In late summer 2000, two additional downgradient monitoring wells, one in the shallow zone and one in the deep, were installed outside the NAA, approximately 580 ft upgradient of CWS-14. In response to elevated PCE concentrations detected in July 2003, the Water Board issued a Notice of Violation for failure to resume active remediation and submit an adequate 5-Year Status Report.

PCE and degradation products were detected in monitoring wells MW-13 and MW-15 exceeding established trigger levels in consecutive rounds of sampling. In 2004, the remedial strategy of in-situ chemical oxidation was pilot-tested using injected chemical oxidizers. Results of the pilot test showed the injection of permanganate reduced concentrations of PCE to below detection limits; however, no plans for a full-scale in-situ remediation project have been received by the RWQCB or Zone 7.

In 2007, Orion submitted a 5-Year Status Report and reported trigger level exceedences for MW-33 in 2007 and CWS-14 in 2003 and 2004. In January 2008, Zone 7 requested that the Water Board to issue a Cease and Desist Order for Violation of Order No. 96-052 and adopt a new clean up order with a more aggressive characterization and remediation. Zone 7 also suggested that the RP should pay CWS for any actual damages caused by the violation. In a March 21, 2008 letter, the RWQCB approved a Contingency Plan which recalculated trigger levels of eight monitoring wells within the non-attainment area using the same method established in the original Board Order, but included data from 1992 to 2007. The Plan also established trigger levels for CWS-08 and CWS-14 at less than half the MCL of PCE and requires a trigger level for CWS-31 if further investigation shows that the LASC/MOSC plume is impacting this additional downgrading municipal well.

In 2008 the multiple RPs collectively formed a Trust, the LASC/MOSC 2008 Trust 1 (2008 Trust) to manage and coordinate the ongoing investigation and future remedial plans.

Special Notes

The site is in close proximity to two CWS supply wells (CWS-08 and CWS-14) which are experiencing upward trends of PCE detection. CWS has since installed a carbon wellhead treatment unit on well CWS-14 to address the increasing PCE trends in the well. In June of 2007, the RP requested that no further action be required of them. Zone 7 and the RWQCB disagree with this approach.

Current Action

This site is still a major concern because PCE continues to impact California Water Service (CWS) wells CWS-08, CWS-14 and CWS-31. CWS currently operates a granulated activated carbon (GAC) system to remove PCE from the water produced by CWS-14 which otherwise has PCE concentrations above the MCL. In a Groundwater Investigation Report submitted this year, the consultant suggested other potential contributors to the plume; however, insufficient data suggesting commingling weakens this argument. A delineation of the PCE plume in the shallow and deeper aquifer and its impact to CWS-08, CWS-14 and CWS-31; and concept level evaluation of remedial activities were also presented. The RP has also met with the RWQCB,

CWS and Zone 7 to discuss the findings of the investigation to help them develop a revised Contingency Plan and Remedial Action Plan.

SITE 191: Former Beacon, #3604

Priority 1A2

Background

The site is currently an active service station and is located southwest from the Livermore Arcade Miller's Outpost (LASC/MOSC) site. In November 1992, three USTs were removed and replaced with new double-walled USTs. The fuel tank excavation was over-excavated to 27' bgs removing approximately 1,200 cy of contaminate soil. A confirmatory soil sample contained 490,000 µg/L (ppb) TPHg, 1400 µg/L (ppb) benzene and 13,000 µg/L (ppb) naphthalene. Hydropunch borings were advanced to further delineate the down gradient extent of the contaminant plume. In 1995, 7 dual-completion wells (capable of soil vapor and groundwater extraction) were installed and 20 dual-completions wells were installed in the parking lot of LASC/MOSC. The remediation system began operating in June 1996 and ceased in January 1997. Benzene levels decreased from 21,000 µg/L (ppb) in March 1994 to 3,900 µg/L (ppb) in June 1997. MTBE has not been detected in groundwater at this site.

In November 1999, the 20 wells in the LASC/MOSC parking lot were properly destroyed. In May 2002, Beacon Oil Company sold the station for Tesoro Refining and Marketing Company. In December 2002 Tesoro sold the property to Green Valley LLC but retained responsibility for the cleanup. In September 2003, three groundwater monitoring wells were installed to determine the lateral extent of petroleum hydrocarbons. Elevated levels of TPHg were detected in the 2004 1st Quarterly Monitoring Report; therefore, a Multiphase Pilot Testing Work Plan was developed and implemented. In January 2006, six direct push soil borings 50 to 70 feet bgs were drilled down gradient of the site and 14 soil gas, soil and grab groundwater samples were tested. Benzene and MTBE were not detected in the soil gas samples; therefore ongoing sources of MTBE in the vadose zone were ruled out. Petroleum hydrocarbons were detected at concentrations of 2,000 and 1,000 µg/L (ppb) in grab groundwater samples which prompted ACEH to require remedial action. In September 2008, ACEH approved an Interim Remedial Action Plan to install deep monitoring wells, an oxygen injection system and a soil vapor extraction system.

Special Notes

CWS supply well CWS-08, is located approximately 1,600 ft down gradient from this site.

Current Actions

The consultant is continuing to work with the City of Livermore to obtain Encroachment Permits prior to construction and installation of the remediation system. Quarterly monitoring for fuel components, i.e., total petroleum hydrocarbons as gas (TPHg), total petroleum hydrocarbons as diesel (TPHd), the aromatic compounds benzene, toluene, ethylbenzene, and xylenes (known collectively as BTEX), and methyl tertiary-butyl ether (MTBE), has been reduced to a semi-annual basis due to State Water Board Resolution 2009-0042.

SITE 226: Livermore Gas & Mini Mart

Priority: 1A2

Background

This gas station is located at 160 Holmes Street in Livermore. In February 1999, a grab sample showed that the groundwater beneath the site had been impacted by petroleum hydrocarbons. In April 1999, three gasoline USTs and one diesel UST were removed. In July 2000, three groundwater monitoring wells were installed at the site and TPHg, TPHd, benzene, and MTBE were detected in groundwater samples. At that time, the benzene and MTBE concentrations greatly exceeded the MCLs of 1 $\mu\text{g/L}$ and 13 $\mu\text{g/L}$, respectively.

Three additional offsite monitoring wells and an onsite extraction well were installed at the site in 2001. The extraction well did not produce a significant amount of water so a groundwater extraction system was not installed. During an additional investigation in November 2005, elevated levels of TPHg, TPHd, and MTBE were detected in groundwater samples collected adjacent to the former UST pit and directly downgradient of the site in all three water bearing zones tested (28, 50 and 70 feet bgs). The concentrations were highest in the initial water bearing zone at 28 feet bgs and decreased with depth. However, TPHg and MTBE were detected in the 70-foot zone at concentrations up to 990 $\mu\text{g/L}$ and 1,200 $\mu\text{g/L}$, respectively, south of the USTs.

Based on the data collected during the 2005 investigation, seven new monitoring wells and two new extraction wells were installed in the first quarter of 2006. The new monitoring wells allow for multi-level monitoring screened at 3 discrete levels. Elevated concentrations of fuel components and oxygentates were detected in newly installed, off-site well MW-7. Additional grab groundwater samples were collected in early 2007 to help define the source area and delineate the extent of contamination. The highest MTBE and TPHg concentrations to date (1,500,000 $\mu\text{g/L}$ and 210,000 $\mu\text{g/L}$, respectively) were detected in CP-14, close to the source area.

A Dual Phase Extraction pilot test was conducted in the two new extraction wells, but there was no vapor recovery so it doesn't appear to be an effective remediation alternative for this site. An interim remediation plan was approved by ACEH and groundwater batch extractions began on September 6, 2006. During the first quarter of 2007, 16,652 gallons of groundwater was extracted and an estimated 0.49 pounds of TPHg, 0.033 pounds of benzene, and 2.21 pounds of MTBE was removed. Installation of an additional extraction well has been proposed adjacent to the location of CP-14. The proposed remedial action of groundwater extraction was not approved by ACEH, however a Work Plan proposing Pilot Testing of a Soil Vapor Extraction (SVE) system was approved.

Special Notes

Former CWS supply well CWS-03, which was approximately 1,000 ft downgradient from this site, has been destroyed. However, the contamination is within 1,500 feet of CWS supply well CWS-08.

Current Action

The UST Cleanup Fund is still in a financial crisis and reimbursement payments to claimants continue to be significantly delayed. Consequently, the Work Plan for Pilot Test Soil Vapor Extraction (SVE) & Operation was delayed. The RP finally began constructing the SVE system in November 2009 and ACEH approved an extension for Pilot Test Report to April 30, 2010.

Quarterly monitoring for this site has been reduced to a semi-annual basis due to State Water Board Resolution 2009-0042.

SITE 231: Unocal Station #4186

Priority: 1A2

Background

This gas station is located at 1771 First Street in Livermore and is owned by Tosco Marketing Co. Contamination includes TPH, benzene, and MTBE. Five groundwater monitoring wells were installed between 1998 and 2001. MTBE has been detected in both onsite and offsite wells. In December 2001, an Ozone Microsparge system was put into operation. Concentrations in the on-site wells have decreased since the Ozone Microsparge system began operating, but the concentrations remained above the MCLs in both on- and off-site wells. In April 2006, seven additional borings were advanced to a depth of 60 feet bgs to delineate the vertical extent of contamination in the source area at the site, to define the lateral extent of contamination present within the sand and gravel layer, and to more clearly define the subsurface lithology. Three coarse-grained water-bearing units were identified, suggesting a possible pathway for downgradient hydrocarbon migration. Dissolved phase hydrocarbons were detected in all three. ACEH requested additional investigation to delineate the vertical extent of contamination. ACEH also had questions about the effectiveness of the Ozone Microsparge remediation system. The Ozone Microsparge system was shut down in October 2006 to assess whether dissolved gasoline concentrations would rebound or remain stable in the absence of ozone injection with the current well and system configuration. After the two consecutive quarters of monitoring, the consultant proposed replacement ozone sparge wells to upgrade the system. ACEH concurred with this approach provided that the consultant submits a report discussing the effectiveness of the proposed improvements to their remedial efforts prior to the upgrade.

Special Notes

ACEH re-prioritized this site to 1A2 based on Zone 7's recommendation due to the proximity to CWS-08, and the presence of MTBE and benzene in concentrations exceeding their MCLs. ACEH does not feel that investigation of an off-site upgradient source is warranted since there are no known potential off-site contributors.

Current Action

Quarterly monitoring for this site has been reduced to a semi-annual basis due to State Water Board Resolution 2009-0042. The Ozone Microsparge System remains off. The RP's consultant claims that while existing data shows that ozone injection is effective in reducing petroleum hydrocarbon impact to the groundwater, tertiary-butyl alcohol, a fuel oxygenate, (TBA) concentrations remain elevated; therefore, the configuration of the current system needs to be re-evaluated. ACEH has directed the RP to submit a Remedial Performance Summary, which include the reasons for the system not being active, and a Work Plan for Ozone Sparging System Upgrade by February 24, 2010.

SITE 238: All Rents**Priority: 1A2***Background*

This site at 2247 Second Street in Livermore once housed a dry cleaner. The soil and groundwater at this site are contaminated with PCE. The contamination was detected during a Phase I/limited Phase II site assessment when the property was being sold to the present owner in 1999. Two soil borings were sampled down to a depth of four feet. PCE was detected up to 5,280 micrograms per kilogram ($\mu\text{g}/\text{kg}$ --the equivalent of ppb in soil) in one of the four-foot depth samples. An additional site assessment was performed in May 2000 and confirmed that the contamination had spread to groundwater. One groundwater sample at a depth of 27 ft showed a PCE concentration of 430 $\mu\text{g}/\text{L}$ and a TCE concentration of 250 $\mu\text{g}/\text{L}$. No permanent monitoring wells have been installed on the site; however, Zone 7 requested at least one downgradient well be installed subsequent to the removal of contaminated soil. The current property owner has no plans to fund clean up or investigation activities, and is researching the option of selling the property "as is".

Special Notes

Source removal at this site could theoretically downgrade its ranking to moderate or low priority, assuming the contamination is not widespread. The property is currently occupied by "It's All About Dancing," a dance studio.

Current Action

At this time, no action has been formally requested by the RWQCB because the RWQCB does not recognize this site as an official case. In June 2009, Zone 7 Staff forwarded a letter from the property owner indicating that prior groundwater sampling took place at the site. Information on previous dry cleaners in the vicinity from the dry cleaner survey performed by ACEH was also provided to the RWQCB. Now that we've identified a viable RP, Zone 7 is urging the RWQCB to open this site as a formal case and direct corrective action.

Pleasanton**SITE 23: South Hop Shell****Priority: 1A2***Background*

This Shell gas station is located at 3790 Hopyard Road on the corner of Hopyard Rd. and W. Las Positas Blvd; approximately 1,500 feet northwest of Zone 7's supply well Hopyard No. 6. In 1987, the first two of many monitoring wells were installed. Detections of TPH-g and BTEX constituents caused Zone 7 to request additional monitoring wells. Three monitoring wells were installed in early 1988. Groundwater remediation began in 1989. Quarterly sampling was being conducted until 1995, when sampling was reduced to annual remediation. Quarterly sampling was reinstated by ACEH in September 2000, due to a MTBE concentration spike that occurred between 1999 and 2000. In May 2001, groundwater extraction resumed in three monitoring wells. In 2002, two shallow wells were installed downgradient to the southeast of the site between the source zone and Zone 7's municipal supply well, Hopyard No. 6.

Between 2004 and 2005, site investigation work required by ACEH was conducted including the installation of additional soil borings, two sets of cluster wells, and two downgradient wells along the Arroyo Mocho to help define the extent of contamination off-site. Groundwater samples were collected from three identified water-bearing zones in the nine soil borings. Most of the detections of MTBE and TBA were in the first water bearing zone at approximately 15 to 20 feet bgs. However, these contaminants were detected in three of 16 samples collected below the clay aquitard identified at around 50 feet bgs. As a result, an additional soil boring was drilled and two cluster wells were installed to help further define the vertical extent of contamination. MTBE was detected in the groundwater samples from the deeper zones. The concentrations were significantly lower than those detected in the shallow groundwater; however, MTBE was detected at 23 $\mu\text{g/L}$ in a 61-foot deep well located offsite. The MCL for MTBE is 13 $\mu\text{g/L}$.

Two monitoring wells were installed on the south side of the Arroyo Mocho to help determine the lateral extent of groundwater contamination. MTBE was not detected in one well and the other well was dry. Based on the MTBE concentration maps, it was thought that the southern edge of the MTBE plume may be discharging to the Arroyo Mocho. Samples collected to date from the Arroyo indicate that surface water quality does not appear to have been impacted.

In all, the groundwater extraction and remediation system has removed 7.96 pounds of hydrocarbons and 15.6 pounds of MTBE since activation on July 1, 2003. Since the system began operating, influent concentrations have decreased significantly, from 3,400 ppb of MTBE in July 2003 to 2.9 ppb in March 2006. After approval from ACEH, the groundwater extraction system was shut down in May 2006 to monitor groundwater quality under non-pumping (equilibrium) conditions. Based on the results of post-remediation monitoring for eight quarters under non-pumping conditions, the MTBE and TBA (tert-butyl alcohol) plumes appeared to be relatively stable.

Special Notes

The contamination appears to be approximately 1,100 ft from Zone 7's municipal supply well Hopyard Well No. 6. Very low levels of MTBE detected in Hopyard Well No. 6 during Zone 7's aquifer storage recovery (ASR) project conducted in 2001 are attributed to low levels of MTBE present in the surface water injected into the well. Shell's consultant has done record searches and performed field surveys but has been unsuccessful in locating a nearby abandoned well identified in a Zone 7 well records search. There is some evidence that the well may be located off site and under a neighboring office building.

Current Action

Additional monitoring results indicate an increasing trend of TBA concentrations in an offsite well. While the GWES may have been controlling plume migration, it was not achieving mass removal. In a meeting between the RP and ACEH, source area treatment was discussed and the RP proposed sulfate treatment in the UST area. ACEH requested a Work Plan to conduct pilot test source area treatment by March 16, 2010. Monitoring for this site has been reduced to a semi-annual basis due to State Water Board Resolution 2009-0042, but may revert to quarterly sampling when active remediation resumes.

SITE 60: Former Steve's Exxon, #7-3399**Priority: 1A2***Background*

This former Exxon gas station is located at 2991 Hopyard Road on the corner of Hopyard Rd. and Valley Ave. Pleasanton Well No. 7 is 250 ft from the site but has not operated since 1993. Zone 7's Hopyard Well No. 9 is 950 ft from the site. Contaminants at this site include TPHg, MTBE, and benzene. Quarterly groundwater sampling was initiated after free product was detected in an onsite well in 1988. Groundwater extraction and vapor recovery began shortly after and continued until June 1990 due to dropping groundwater levels. Vapor extraction methods were used intermittently to remove hydrocarbons from the subsurface until March 1993. In general, the majority of contamination was found in a perched aquifer that is encountered at a depth of approximately 10 ft. Some elevated levels of MTBE are documented in the 'Zone 1' aquifer at a depth of approximately 55 ft. In August 2000, three additional monitoring wells, two deep (up to 135 ft below grade) and one intermediate (70 ft below grade), were installed offsite to examine the extent of contamination and to serve as sentinel wells for municipal supply wells Pleasanton Well No. 7 and Hopyard Well No. 9.

Active groundwater remediation was restarted in March 2001. The groundwater extraction system targeted the perched (10 ft) and "Zone 1" (55 ft) aquifers. In March 2004, ExxonMobil requested authorization to shut down their groundwater extraction system citing low flow rates, influent chemical concentrations and mass removal rates. The groundwater extraction system was shut down in October 2004 to monitor the groundwater under non-pumping conditions after having removed a total of 0.0078 pounds of benzene and 0.782 pounds of MTBE. The groundwater extraction system was restarted in February 2007 due to trigger levels being exceeded for three consecutive quarters and has been continuously running with the exception of a few incidences where maintenance issues occurred.

Special Notes

MTBE has never been detected in Hopyard Well No. 9. Hydraulic communication between Zone 7's Hopyard 9 and the sentinel wells was confirmed in 2002. Some minor detections of MTBE had been reported in the sentinel wells in the past but they are thought to be from cross contamination during sampling and these wells are now non-detect.

Current Action

Groundwater monitoring and active remediation continues at this site. The 4th Quarter 2009 Report states that 7.536 lbs TPH, 0.0812 lbs benzene and 4.904 lbs MTBE were removed last quarter. Quarterly monitoring for this site has been reduced to a semi-annual basis due to State Water Board Resolution 2009-0042.

SITE 242: Alameda County Fairgrounds**Priority: 1A1**

Background

The Alameda County Fairgrounds is located within the Bernal Subbasin and is considered to be a small public supplier of drinking water. In December 2000, PCE was detected in the main fairgrounds well 3S/1E 20B 2 (20B2) at 5 ppb, which is the MCL established by the State. In early 2001, the well was resampled and the PCE level had risen to 16 ppb. This 500-foot deep well is within 7,000 feet of the Hopyard Well Field and within 4,000 feet of the San Francisco Water District's (SFWD) well field. The screened interval for 20B2 is 218 to 500 feet below ground surface. This interval overlaps the screened intervals of the major water supply wells in the vicinity; however, it is currently not known at what depth the PCE contamination is entering 20B2.

Under the direction of the Department of Health Services (DHS), the Fairgrounds installed a granular activated carbon (GAC) filtration system in June 2001. The well and treatment system are still in operation.

Zone 7 staff formally requested that the RWQCB open this site as an official case. As a result, the RWQCB is focusing some staff time on this site. There are several active dry cleaners in the area; however, the source of the PCE contamination still has not been determined. PCE is continuing to be detected in the Fairgrounds well, and there is some concern these concentrations could be trending upward.

Special Notes

The PCE contamination is not an official case at the RWQCB because a potential source has not been identified. Due to the proximity of the Fairgrounds Well to other potable water wells operated by Zone 7 (existing and proposed) and SFWD, Zone 7 staff sampled and analyzed a few monitoring wells existing in the area for general VOCs in an attempt to locate the source/direction of the PCE plume. The groundwater samples were analyzed in August 2001, but PCE was not detected in any of the samples. PCE has not been detected in any of the SFWD wells.

Current Action

Zone 7 is continuing its effort convincing the RWQCB that this site should be opened as an official case. Staff is also continuing to research locations of former dry cleaners with ACEH's help to identify potential sources of the contamination. Historic aerial maps and Sanborn maps of the area will be examined to help determine past uses of properties nearby.

SITE 245: Hopyard Cleaners

Priority 1A2

Background

The Hopyard Cleaners is located at 2771 Hopyard Road in Pleasanton, just southeast of Site 60, Former Steve's Exxon. Phase II investigations of soil and groundwater were conducted at this site in April 2002. Soil and groundwater samples were collected from beneath the concrete floor within the building. VOCs were detected in two soil samples and one groundwater sample. As a result, additional investigation was requested by the RWQCB. During the follow-up investigation in April 2003, four groundwater samples were collected from within the dry cleaners. PCE and its breakdown daughter product, TCE, were detected in all groundwater

samples collected, with the highest concentrations of PCE and TCE being 1,500 µg/L (ppb) and 20 µg/L (ppb), respectively. Investigations conducted between September 2003 and May 2004, detected PCE and TCE up to 3,300 µg/L (ppb) and 440 µg/L (ppb), respectively in groundwater samples collected near the dry cleaners. The MCLs for PCE and TCE are both 5 ppb.

In January 2006, membrane interface probes (MIP) were advanced north and south of the entrance driveway to access the extent and relative concentration of VOCs in soil in these areas and also determine if dense non-aqueous phase liquid (DNAPL) is present at the site. The investigation found dissolved phase PCE and DNAPL sequestered within the silt/clay confining zones beneath the water bearing zones.

In September 2006, the RWQCB adopted a tentative order containing proposed site cleanup requirements. This tentative order requires the responsible party to finalize site investigation, implement interim remedial actions, and propose final remedial actions.

Between 2007 and 2008 additional monitoring wells were installed in the shallow (A-zone) and (B-zone) deeper zones, both on and off-site. PCE and TCE are primarily present in the A-zone groundwater, from 20 to 35 ft bgs, below the parking area to the west site. In on-site A-zone monitoring wells, PCE and TCE respectively range up to 1,500 and 2,000 ppb. Concentrations of PCE and TCE in groundwater above the MCL extend to the detached commercial building, from the west of the site and to the northeast side of Hopyard Road. PCE has also been detected above the MCL in B-zone groundwater samples, from 40 to 60 ft bgs, collected to the south and southwest of the site. In the off-site A-zone wells, PCE and TCE respectively range up to 8,200 and 590 ppb in monitoring well MW-2. In off-site soil gas, PCE and TCE respectively range up to 64,000 ug/m³ and 7,500 ug/m³. PCE was not detected or was detected below the MCL in samples collected from the two CPT locations in the residential area beyond Hopyard Road.

RWQCB issued Board Order R2-2008-0032 which set final site cleanup standards and required additional site investigation, implementation of a cleanup plan, and long term groundwater monitoring. RWQCB's approved a Work Plan for a Soil Vapor Extraction and Treatment (SVET) System using 5 SVE wells within the footprint of the building. The remedial action objectives (RAOs) for the shallow soil at the Site are: (1) to reduce PCE concentrations in soil to a level below 790; µg/kg and (2) reduce PCE and TCE soil gas concentrations to levels below 1,400 µg/m³ and 4,100 µg/m³, respectively. Installation and startup of the SVET System was initiated in August 2008. With elevated levels of PCE currently detected in shallow groundwater, the RWQCB issued a deed restriction for the site, which prevents use of shallow groundwater beneath the site, and prohibits sensitive uses of the site such as day care or residential during the remediation.

Special Notes

At this time, no outside funding source is available to assist with the investigation and clean up of "dry cleaner" cases.

Current Actions

The SVET system is currently running and successfully removing VOC mass. For the first month of the SVET operation, it removed a total of approximately 4 pounds of contamination. The groundwater-VOC plume appears to be stable and not expanding and soil-VOC plume is

confined on-site, under the dry cleaning facility. The next groundwater remedial action will either employ in-situ chemical oxidation (ISCO) or enhanced in-situ bioremediation (EISB).

Sunol

SITE 250: Sunol Tree Gas Station

Priority 1A1

Background

Five 15,000-gallon gasoline USTs were removed from the site in April of 2002. During the tank removal approximately 4,000 cubic yards of contaminated soil were over excavated from the pit and approximately 160,000 gallons of water impacted by hydrocarbons were removed. The onsite supply well was tested and no fuel contaminants were detected. However, MTBE and TPHg were detected in soil samples collected from borings drilled near the former UST. In addition, five shallow groundwater samples were collected from beneath the site. Four of the five samples contained elevated levels of MTBE and TPHg. The highest MTBE and TPHg concentrations were 43 µg/L (ppb) and 17,000 µg/L (ppb), respectively.

In February 2003, MTBE was detected in a domestic supply well adjacent to the Sunol Tree Station. Zone 7 collected a confirmation sample at ACEH's request, and 130 µg/L (ppb) of MTBE was detected in the sample.

The then gas station owners installed a temporary water treatment system at the neighbors impacted well, in late 2003. In addition, ACEH required additional work be conducted to further characterize the contamination at the site so that a site conceptual model could be developed and remediation at the site could progress. The gas station owner did not comply with the ACEH directives, so the contamination investigation was taken over by ACEH under the Emergency, Abandoned, Recalcitrant (EAR) UST Account, administered by the State Water Resources Control Board.

In July 2004, ACEH installed three nested piezometers on the impacted property to help characterize the extent of contamination. In December 2004, a new domestic supply well was installed at the neighboring property to replace the well that was impacted and provide a clean drinking water source. Further investigation was also conducted in December 2004 including the installation of a row of multi-level piezometers that transect the plume. Samples collected from these piezometers in July 2005 detected MTBE at levels up to 320 µg/L (ppb), which is well above the MCL established for MTBE in groundwater of 13 µg/L (ppb). The original domestic supply well at the adjacent property continues to pump and treat the groundwater using granulated active carbon filters as a remedial action.

The Sunol Tree Gas Station property was purchased by Khan Petroleum in February 2006 and the responsibility of maintaining the wellhead treatment system at the T-Bear Ranch and any remaining corrective actions was transferred to Khan Petroleum as the new responsible party in 2007. ACEH is still discussing the next phase of work with the new RP's consultant.

Special Notes

Although this site is outside of the Main Groundwater Basin, it is within Zone 7's service area. It qualifies as a high priority site because it has impacted a water supply well. The domestic water well located at the neighboring property was being used as a drinking water and household water source for several residents as well as for the care of livestock. MTBE was not detected in any of the other water supply wells on the surrounding properties.

Current Actions

Zone 7 has contacted ACEH recently and requested that they expedite action on this case since the MTBE plume, with concentrations above the MCL, appears to be migrating offsite.

Dublin

Although several sites in Dublin have elevated levels of MTBE (i.e., >10,000 ppb) and one has elevated levels of TCE, none are classified as High Priority because they are not near drinking water sources.

Other Special Sites:

The following sites are not listed as high priority sites for the endangerment of the Livermore-Amador Valley Municipal Supply; however, these sites have a high profile due to media attention, recent activities, and/or local involvement. They are not considered to be high risk to drinking water because they either are in non-municipal supply areas of the groundwater basin and/or have undergone extensive remediation.

SITE 1:Lawrence Livermore National Laboratory (LLNL) Priority 3A1

LLNL is a multipurpose research facility owned by the U.S. Department of Energy (DOE) and run by a management team which includes Bechtel National, University of California, Babcock and Wilcox, Washington Division of URS Corporation, and Battelle. Prior to its current use, the site was a Naval Air Station where aircraft maintenance was performed. The site was added to the National Priorities List (NPL) in 1984 and Superfund activities began at this time to address westward migrating Volatile Organic Compounds (VOCs) present in the groundwater. An annual environmental report is produced by LLNL to update monitoring and remedial activities that are occurring at the site. Copies of this report and other environmental publications can be accessed via the Web at www-envirinfo.llnl.gov. Since remediation began, in 1989, to March of 2008, approximately 2,762 kg of VOCs have been removed. The LLNL 2008 Annual Report states that VOC concentrations remain relatively unchanged in most of the groundwater plumes since 2007. Hydraulic containment along most portions of the western and southern boundaries of the site was maintained, but limited progress was made towards cleanup of interior plumes and source areas because of curtailed active remediation caused by Fiscal Year 2008 budget reductions. Remedial activity has been back to fully active status as of January 2009. The latest results will be published in next LLNL Annual update due out in Spring 2010.

Site 300, LLNL's Experimental Test Site, is located 12 miles east of the Livermore site in the Altamont Hills of the Diablo Range in San Joaquin and Alameda Counties. The major contaminants of concern at Site 300 are VOCs (primarily TCE), nitrate, perchlorate, tritium, depleted uranium, and metals. Site 300 is located outside of our main groundwater basin. The contamination plumes at Site 300 have been clearly defined and are part of an ongoing monitoring and remediation program. Annual Reports are forwarded to Zone 7 on a regular basis.

SITE 5: Sandia National Laboratory (SNL)

Priority 3A3

SNL consists of two sites of concern that are monitored on a quarterly basis: Navy Landfill and Fuel Oil Spill Site. The Navy Landfill was operated from 1942 to approximately 1960, and received construction debris and soil.

Carbon tetrachloride was detected in one monitoring well (NLF-6) in 1998. The RWQCB approved closure of the case in 1998 with conditions, including the monitoring of well NLF-6.

A diesel fuel spill occurred in 1975 at the Fuel Oil Spill Site (FOS). SNL began monitoring this site in 1985 and detected low levels of contamination. A cleanup system was installed and in 1995, bioremediation was begun. In 1999, the RWQCB allowed remediation to cease and monitoring to continue at a reduced scale.

Sandia currently samples three groundwater monitoring wells (two at the Fuel Oil spill site on a semi-annual basis and one at the Navy Landfill on an annual basis). The latest results of the annual sampling event at the Navy Landfill revealed 0.88 ug/L of tetrachloride. No water samples were taken at the Fuel Oil Spill Site due to dry well conditions. An annual environmental report is produced by Sandia National Labs to provide a summary of environmental management performance and compliance efforts at its facilities. This report can be accessed at

www.sandia.gov/news/publications/environmental/index.html.

Site 9: Hexcel Corporation

Priority 3A1

Contamination was discovered at this former Superfund site in 1983. The site was contaminated with methylene chloride, methyl ethyl ketone (MEK), acetone, and fuel hydrocarbons originating from two spills. In that initial year, the underground storage tank where one of the leaks occurred was removed. A solvent recovery well was installed to extract the contaminants from the second spill in response to the RWQCB's Cleanup and Abatement Orders No. 83-003 and No 93-111. Quarterly groundwater sampling was initiated after the removal and continued until 1993. This site was listed as a Superfund site in 1988 and was removed from the National Priorities List in 1994. Thirteen geotechnical borings were drilled in April 2004 to assess the site conditions after a leaking fuel tank was excavated. Some contamination was detected and further investigation

was required. The investigation was initially being overseen by ACEH but they transferred the oversight to the RWQCB.

Following the July 12, 2006 water board meeting, the RWQCB rescinded order 83-003 and 93-111, which had required additional groundwater sampling and remediation using in-situ air injection and extraction techniques. The basis of this rescission states the site has been fully characterized and because October 2004 levels of acetone, benzene and MEK were below Environmental Screening Levels (ESL), even though. PCE and vinyl chloride were detected at levels of 33 ppb and 750 ppb respectively, above ESL. The RWQCB believes these exceedances will be reduced to acceptable levels by natural attenuation before such time as the groundwater may be needed for water supply purposes. A deed restriction was recorded restricting the installation of groundwater wells and use of the property. All monitoring wells have been properly destroyed and a case closure letter was issued on June 5, 2008.

SITE 11: Intel Fabrication Plant 3

Priority 2A3

Intel owned and operated a semiconductor manufacturing plant at this location from 1972 to 1995. The VOC contamination is thought to have originated from a basement storage area. It is suspected that the VOCs leaked through a sump in the concrete floor. Groundwater monitoring began in 1982. In 1983, limited source removal was conducted of the subsurface soil. In 1986, a groundwater extraction and treatment system was put in place onsite. In 2000, additional source area remediation of soil and groundwater was begun to further reduce the contamination at the site. Groundwater extraction was discontinued in May 2000 after the additional remedial action began and a monitoring and contingency plan was prepared for the site. In 2003, Intel voluntarily implemented an Enhanced In-situ Bioremediation project in the A-zone area in the northwestern portion of the site. In December 2004, the Order to Amend Final Cleanup Requirements was adopted by the RWQCB. The amendment states that Intel is still responsible for site cleanup now that Mines Road, LLC has acquired the property. Enhanced In-situ Bioremediation continues at the site. The consultant reported a 99% reduction of VOCs in this area from 2003 to 2005. In 2005, Intel expanded these remediation measures into the B-zone area, also located in the northwest portion of the site. The extent of the plume has been defined and active remediation continues. Annual Technical Reports are provided to Zone 7 every year.

SITE 137: Busick Gearing

Priority 3A3

This site at 6341 Scarlett Court in Dublin consists of three buildings located within a light industrial/commercial area. The site was originally occupied by a metal fabrication company and then by a company that manufactured printed circuit boards. Building 2, located in the southern part of the site, had a sump that was used to collect excess fluids from the various manufacturing processes. Various VOCs leaked from this sump into the underlying soil, then migrated to the groundwater. The sump and contaminated soil were excavated in 1991 at the

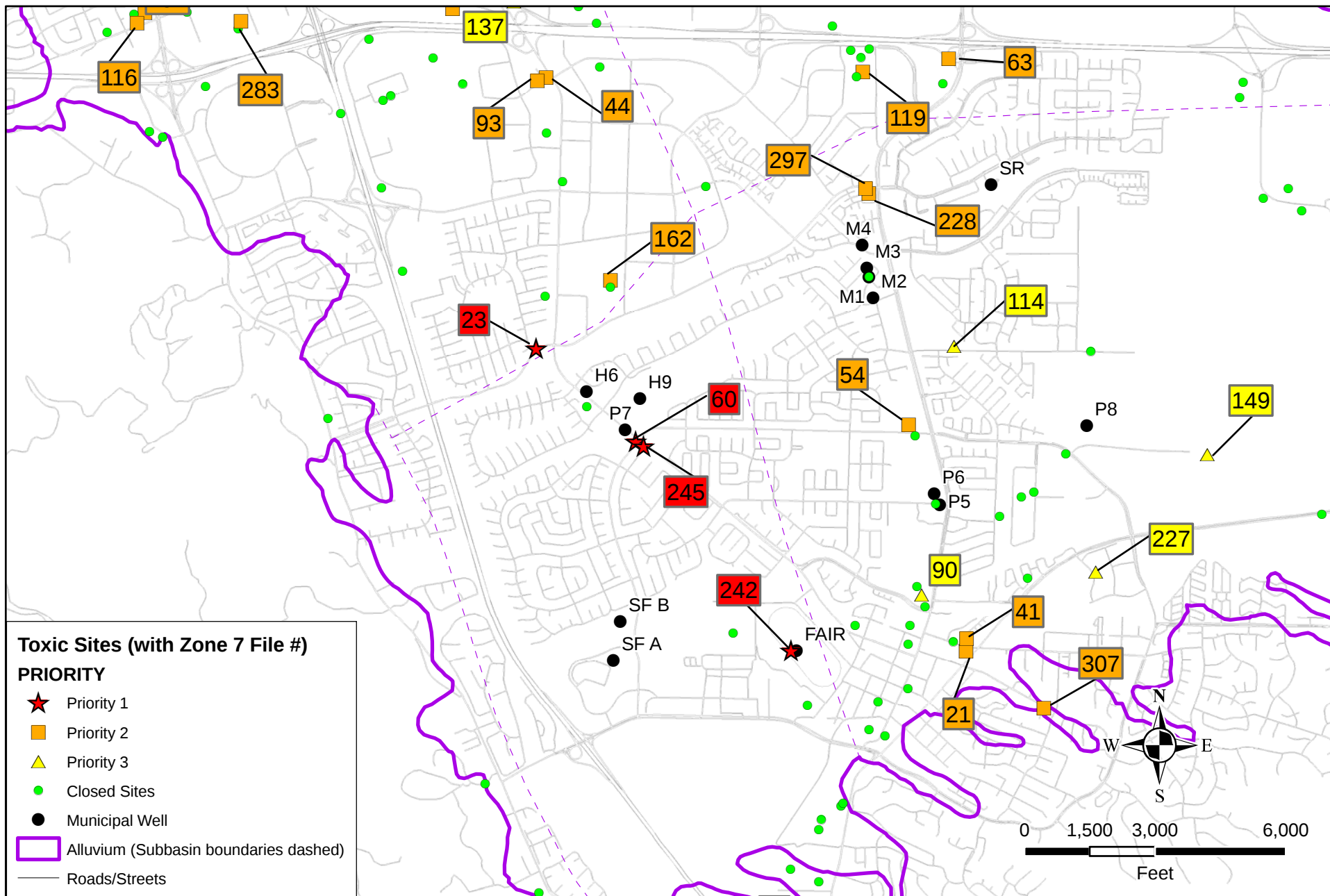
request of ACEH and grab soil samples were taken at 3 feet bgs. Elevated levels of Freon, TCE, PCE, and total xylenes were detected. Soil was then excavated to a depth of 6 feet to achieve source removal, however, there is a dissolved TCE plume that extends well off-site toward the Main Groundwater Basin. The CPT/grab groundwater data collected in 2006 indicate that TCE exceeding 200 ppb extends across Interstate 580 to the south. This exceeds the MCL for TCE of 5 ppb. A revised work plan for additional investigation to further delineate the extent of contamination, including 14 grab groundwater samples, was approved by the RWQCB in February 2007. The results of the investigation were submitted in a technical report in June 2008. The RWQCB stated that the investigation did not include TCE data in the deep aquifer nor did it address the full extent of the plume.

The RP and their consultant have been meeting frequently with the RWQCB to determine an economical remedial strategy. The current thinking for the initial remedial action involves in situ remediation in the source area. RWQCB has maintained Zone 7's involvement in determining a reasonable timeframe for restoration of groundwater beneficial uses. While this site is outside Zone 7's Main Groundwater Basin and does not affect any domestic supply wells, it is currently a low priority site. If the TCE plume migrates further south it is possible that our municipal wells will be threatened, and making this a high priority case.

SITE 290: Kinder Morgan Pipeline Leak Priority 3A3

On June 15, 2006 residents of Dublin in close proximity to the South San Ramon Creek complained about a gasoline odor. A subsequent investigation by crews from Dublin Public Works and Kinder Morgan revealed that a leak of approximately 200 gallons of refined petroleum had been released from a pipeline along the Iron Horse Trail in Dublin located midway between Acosta and Amador Valley Blvd. The city of Dublin oversaw the emergency clean-up and the RWQCB is the lead agency for the remaining investigation and cleanup. As part of this investigation and cleanup 21 temporary wells were sampled during the fourth quarter of 2006. The concentrations of TPHg and BETX have remained steady or decreased in all but one well, Pit-1. On August 27, 2007, the consultant submitted a Comprehensive Site Status Report and Request for Closure letter report which was denied by the RWQCB. RWQCB then required a work plan for additional investigation to determine the extent of contamination and establish quarterly monitoring of all existing monitoring wells at the site, commencing with the first quarter of 2009. Discrete groundwater samples during the 1st quarter of 2009 revealed significant residual concentrations of total petroleum hydrocarbons and BTEX compounds in groundwater at three pits excavated as part of the interim cleanup action. It was later found that the monitoring wells onsite were improperly permitted and therefore need to be destroyed. The RWQCB issued a letter on October 22, 2009, requiring a revised Work Plan that addresses the data gaps in soil contamination assessment, and the vertical and lateral extent of groundwater contamination and a plan to properly destroy all non-permitted wells at the site.

FIGURES AND TABLES



ZONE 7 WATER AGENCY
100 North Canyons Parkway, Livermore, CA

DRAWN: CD/TR

REVIEWED: CD/MK

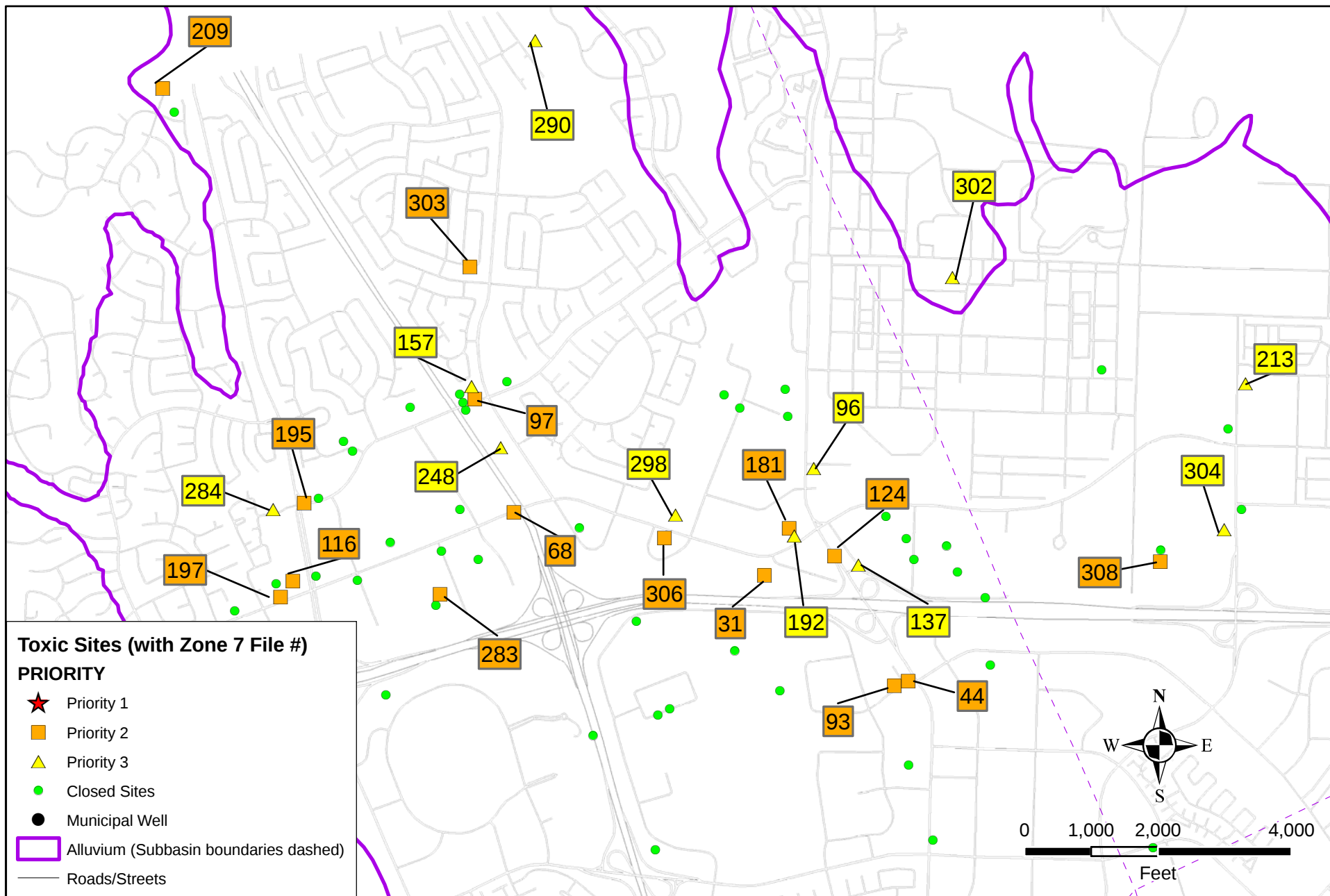
File: E:\Toxics\
Toxics - Pleasanton.mxd

Toxic Site Surveillance Pleasanton Area Sites

Scale: 1" = 3000'

Date: Feb 2010

FIGURE 2



ZONE 7 WATER AGENCY
100 North Canyons Parkway, Livermore, CA

DRAWN: CD/TR

REVIEWED: CD/MK

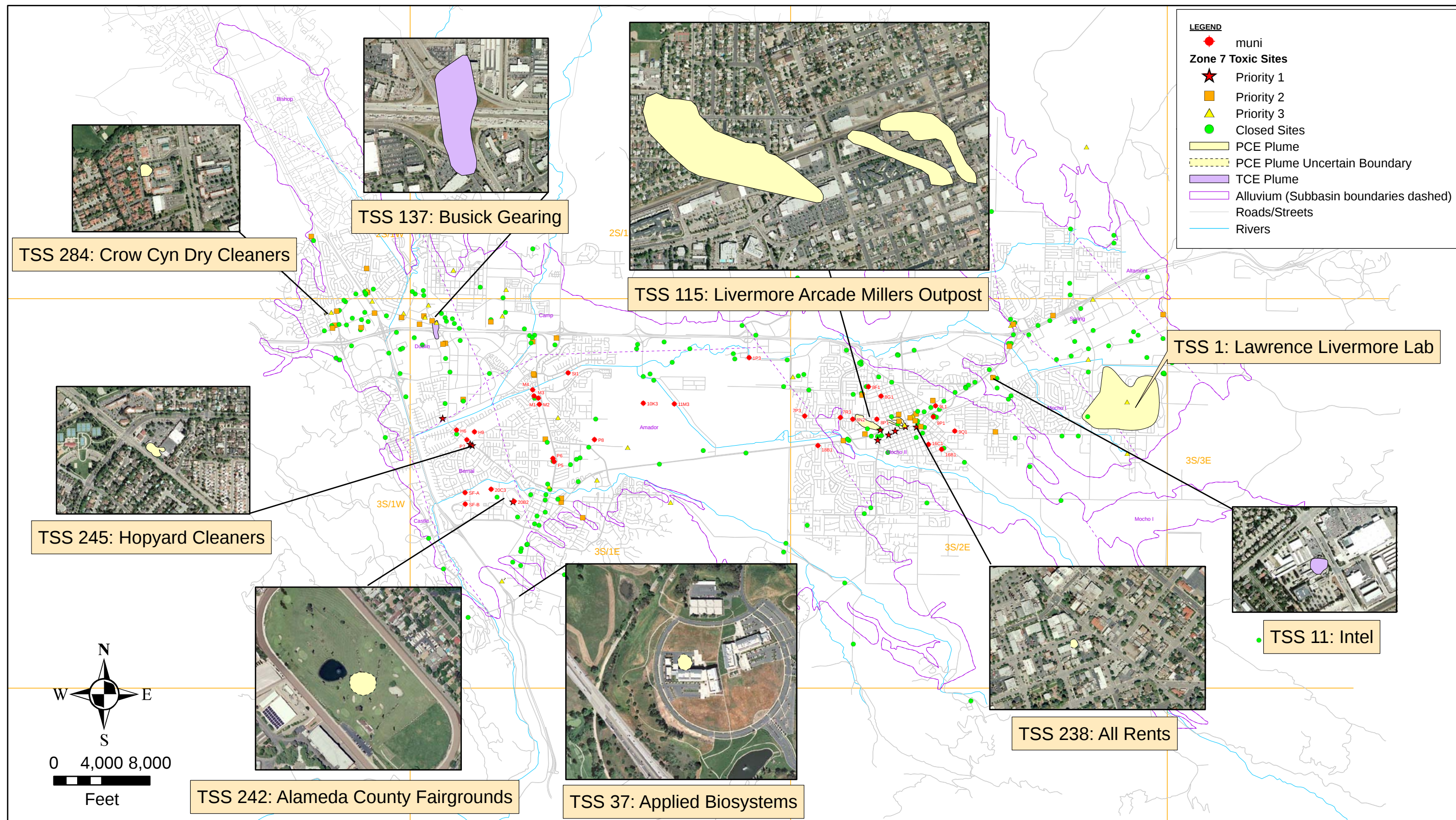
File: E:\Toxics\
Toxics - Dublin.mxd

**Toxic Site Surveillance
Dublin Area Sites
(North of Main Basin)**

Scale: 1" = 2000'

Date: Feb 2010

FIGURE 3



ZONE 7 WATER AGENCY
100 North Canyons Parkway
Livermore, CA

DRAWN: CD

REVIEWED: MK

FILE: E:\TOXIC\Toxics VOC Plumes.mxd

SCALE: VARIES

DATE: Feb 2010

Figure 4
Volatile Organic Compound (VOC)
Groundwater Contamination Plumes
Livermore Valley

TABLE 1

The structure of the attached table is as follows:

Z7 ID - Zone 7 designation corresponds to file number in Toxic Sites Surveillance Files and the location on the site maps.

Owner

Site Name – Indicates a site name if different from the Owner Name.

Site Address

City

Chemical – The chemical of concern at the site. Generic terms of pet=petroleum, org=organics, metals are used where specific chemicals have not been identified.

Concentration ug/l - The most recent concentration in groundwater in micrograms per liter (parts per billion) An “X” is used to represent a known detection where specific concentrations are not known.

Priority – The first number of 0-3 indicates the whether the site is closed (0), high priority (1), moderate priority (2), or low priority (3).

Status – The status code is based on the RWQCB ranking of progress at a site, see Attachment B for descriptions. Zone 7 uses these additional codes to represent status: CL= Closed, NR=further investigation not required, A= active, IN= inactive, No= no known remediation to have occurred, ReO=reopened.

Notes – Highlights current activities or concerns at a site.

ATTACHMENT A

Table 1 - Active Sites Summary

Z7 ID	OWNER	SITE NAME	ADDRESS	CITY	PRIORITY	STATUS	LEAD AGENCY	NOTES
1	Lawrence Livermore National Laboratory		7000 East Avenue	Livermore	3A1	8	ACEH	
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					PET			
					ORG			
					RAD			
					TCE	620		
5	Sandia National Laboratory		7011 East Avenue	Livermore	3A3	8	RWQCB	PCE = ND; Carbontetrachloride = 0.88 ppb and Trichlormethane = 0.53 ppb at Landfill No wells sampled at Fuel Site due to insuff water samples
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					TPHd	ND		
					NO3	26		
					CCL4	0.95		
					CR(IV)	ND		
11	Intel	Intel Livermore Fabrication Plant 3	250 North Mines Road	Livermore	2A3	5C	RWQCB	The Monitoring Well Installation & Sampling report indicate that A and B zones contain TCE above 100 ppb. The two new wells (MW-22A & MW-23B) will be added to the semi-annual sampling schedule. Additional work will be proposed if VOC concentrations increase.
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					TCE	800		
					1,2-DCE	210		
					VC	23		
					TCE	410		
21	Shell Oil	First Street Shell	4226 First Street	Pleasanto	2A3	5R	ACEH	SVE and Air Sparging System is acceptable. System Installation and Startup Report due 12/14/09
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					TPHg	6,300		
					MTBE	14,000		
					BENZ	50		

<i>Z7 ID</i>	<i>OWNER</i>	<i>SITE NAME</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>PRIORITY</i>	<i>STATUS</i>	<i>LEAD AGENCY</i>	<i>NOTES</i>
22	Chevron Environmental Management	former Texaco/Chevron #21-1253	930 Springtown Boulevard	Livermore	3A1	5C	ACEH	Collection of GW monitoring data for 1 year to access current GW conditions is acceptable. Pilot Test WP or Draft CAP due 08/19/10
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	10,000		
					BENZ	11		
					MTBE	<20		
23	Shell Oil (Equilon)	South Hop Shell	3790 Hopyard Road	Pleasanto	1A1	7	ACEH	GWE system has been decommissioned and discharge permit has been discontinued. ACEH requested soil boring and pilot testing work plan by 03/16/2010 to address increasing concentrations of MTBE in source area.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	590		
					MTBE	73		
					TBA	1700		
					BENZ	2.5		
31	Ozzie Davis Pontiac Toyota	Dublin Toyota Pontiac	6450 Dublin Court	Dublin	2A4	5C	ACEH	Contamination extends beyond I-580 approx 500' downgradient from source area. MTBE and TBA detected at max conc of 0.30 mg/kg and 3.5 mg/kg resp. Soil and Water Investigation WP due 02/01/2010
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	<500		
					MTBE	10000		
					BENZ	<0.0050		
33	Republic Services (Formerly Browning-Ferris Industries)	Vasco Road Landfill	4001 North Vasco Road	Livermore	3	5	RWQCB	2008 3rd QMR on file. 2008 Summer-Fall SemiAnnual Report and Oct 07 to Sept 08 Self Monitoring Report on file
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TDS	1,400		
					TPH	NA		

<i>Z7 ID</i>	<i>OWNER</i>	<i>SITE NAME</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>PRIORITY</i>	<i>STATUS</i>	<i>LEAD AGENCY</i>	<i>NOTES</i>
36	Richmond Lox/ Salinas Reinforcement	Reinforcing INC	355 South Vasco Road	Livermore	3	7	RWQCB	The site is experiencing rebounding concentrations of VOCs despite the potassium permanganat injections. The RP's consultant is working with RWQCB and Zone 7 to possibly revise the Work Plan and determine a reasonable time for beneficial use.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TCE	670		
					TPHg	NA		
					BENZ	NA		
37	Applied Biosystems (formerly Kaiser Aluminum & Chemical)	Applied Biosystems	6001 (formerly 6177) Sunol Boulevard	Pleasanto	3	8	DTSC	Well GEI-2S had detections of PCE at 27 ppb, TCE at .65 ppb and 1,1-DCE at 6 ppb according to the 2008 Annual Report. Concentrations have been showing a decreasing trend. DTSC maintains oversite.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					PCE	42		
					TCE	0.81		
					1,1-DCE	16		
40	Pleasanton Garbage Service	Old Pleasanton Landfill	2512 Vineyard Avenue and Pietronave Lane	Pleasanto	3	ReO	UNK	3/26/04 permit 24035 for installation of soil vapor monitoring point. 5/21/03 permit application filed for 5 additional landfill gas extraction wells
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					ORG			
41	Unocal (Tosco), #7376	First Pleas Unocal, #7376	4191 First Street	Pleasanto	2A3	5C	ACEH	Feasibility Study and Well Installation Report due 05/14/2010 FS and WP propose SVE, GW Extraction and installation of SVE and monitoring wells
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	5700		
					BENZ	7.5		
					TPHg	860		

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44	Shell Oil (Equilon)	North Hop Shell	5251 Hopyard Road	Pleasanto	2B2	7	ACEH	ACEH feels the extraction well for batch extraction is not controlling the contamination migration. The interim remediation action plan proposes to install a GWE system connected to S-2, EW-1 and a newly proposed well, EW-2. The addition of Magnesium Sulfate thru infiltration for enhance biodegradation is acceptable. Results to be submitted in upcoming quarter report		
									CHEMICAL	CONCENTRATION ug/l
									MTBE	120
									TBA	1700
									BENZ	150
54	Shell Oil		1801 Santa Rita Road	Pleasanto	2	3B	RWQCB	2009 2nd QMR show an increase in concentrations from previous quarter. Site was changed from quarterly to semi-annual monitoring. Awaiting next semi annual event to observe seasonal fluctuation.		
									CHEMICAL	CONCENTRATION ug/l
									BENZ	1280
									TPHd	15000
60	Exxon	former Steve's Exxon, #7-3399	2991 Hopyard Road	Pleasanto	1A2	5R	ACEH	GWE system operating. 7.536 lbs TPH removed 0.0812 lbs benzene removed 4.904 lbs MTBE removed		
									CHEMICAL	CONCENTRATION ug/l
									MTBE	1500
									TPHg	780
									BENZ	3.4
62	Balagi Angle	Desert Petroleum/B&C Mini Mart/ B&C Mini Mart	2008 First Street	Livermore	1A2	7	ACEH	Concentrations of BTEX and MTBE have declined and show shrinking or stable plume due to NA. Hydrocarbon concentrations at the source also appear to be declining even with seasonal fluctuations. No free product. CAP proposes ozone sparging and SVE as a remedial approach. DPE will be used as a contingency plan.		
									CHEMICAL	CONCENTRATION ug/l
									MTBE	380
									BENZ	440
									TPHg	4800

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63	Shell Oil	Pimlico Shell	6750 Santa Rita Road and Pimlico Drive	Pleasanto	2	3B	ACEH	2009 2nd QMR on file. Site reduced from quarterly to semi-annual monitoring.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	990		
					TBA	<400		
					TPHg	730		
68	Chevron	Chevron, #9-2582 (Dublin Auto Wash)	7240 Dublin Boulevard	Dublin	2B3	5C	ACEH	Short term dual phase extration system is the preferred method of remediation. SemiAnnual monitoring continues
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	5400		
					BENZ	390		
					TPHg	8900		
84	Livermore Redevelopment Agency	Arrow Rentals	187 North L Street	Livermore	2A4	5R	ACEH	Corrective Action Plan Schedule Extension was requested. ACEH is reviewing the case for an extension deadline. ACEH has suspended groundwater monitoring until installation and startup of planned remediation system
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	32000		
					TPHd	470		
					MTBE	<500		
					BENZ	2100		
90	Mobil Oil	former Mobil 04-H6J	1024 Main Street	Pleasanto	3A2	8	ACEH	A detailed well survey report is required prior to closure review. Detailed Well Survey Report due 01/29/2010
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	3.7		
					TPHg	1400		
					MTBE	<0.5		

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93	Chevron	Chevron, #9-0917	5280 Hopyard Road	Pleasanto	2B3	7	ACEH	SubSlab Installation and Soil Vapor Sampling Report due 12/17/09
					<u><i>CHEMICAL</i></u>	<u><i>CONCENTRATION ug/l</i></u>		
					TPHg	8000		
					MTBE	9		
					BENZ	40		
96	G&G International Holding Co.	Bay Counties Petroleum	6310 Houston Place	Dublin	3	5C	ACEH	RP claims the no further work be performed until their financial position improves. ACEH states corrective action is not contingent upon fund reimbursement and issued a Notice to Comply for Pilot Test Reporting and regular monitoring reports.
					<u><i>CHEMICAL</i></u>	<u><i>CONCENTRATION ug/l</i></u>		
					MTBE	38		
					TPHd	300		
97	BP (Mobil Oil)	BP Oil Co, #11116	7197 Village Parkway	Dublin	2A4	8	ACEH	Need copy of closure letter.
					<u><i>CHEMICAL</i></u>	<u><i>CONCENTRATION ug/l</i></u>		
					MTBE	508		
					BENZ	<0.5		
99	Arco	Arco, #6113	785 East Stanley Boulevard	Livermore	2B4	5C	ACEH	Replacement monitoring well installation report due 12/31/09
					<u><i>CHEMICAL</i></u>	<u><i>CONCENTRATION ug/l</i></u>		
					TPHg	4700		
					MTBE	2900		
					BENZ	65		

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111	Arco	Arco, #00771	899 Rincon Avenue	Livermore	2	8	ACEH	WP for angled soil borings was approved on 05/15/09. Construction is contingent upon access agreement negotiations.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	190		
					BENZ	1200		
					TPHg	13000		
114	Joseph Callahan	Heller Seasonings INC	2000 Oakland Avenue	Pleasanto	3	1	UNK	Fire dept. says building demoed, residential area now. No other info from AC or RB. Site is shown as open in Geotracker. Follow up with ACEH on status.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	33		
115	LASC/MOSC (Livermore Arcade)	Livermore Arcade (Miller's Outpost)	South P Street and 1332 RAILROAD	Livermore	1A2	5R	RWQCB	An interim report was submitted that describes the shallow extent of contamination. The deeper extent has not be defined. T&R confirms that CWS-14 contamination is due to LASC/MOSC plume. Addendum to report will follow with CWS-14 aquifer test results and possible remediation recommendations.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					PCE	83		
					TCE	5.7		
116	Chevron	Rich's Chevron Service	7007 San Ramon Road	Dublin	2B5	5C	ACEH	Soil and Water Investigation Report & FS/CAP due 12/02/2009
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	0.9		
					BENZ	930		
					TPHg	17000		

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119	East Bay BMW	BMW	3830 Old Santa Rita Road	Pleasanto	2	3B	RWQCB	According to Geotracker, site is still open. RWQCB is determining if they are the lead agency then issuing directive letter to RP to initiate investigation/cleanup.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPH			
124	Dublin Rock and Ready Mix/Estate of Michael Dolan	Dolan Property	6393 Scarlett Court	Dublin	2A4	5C	ACEH	As of 03/04/08 TPHg was detected at 180 ppb and benzene at 2 ppb and MTBE at 57 ppb. Further active remedial efforts do not appear warranted at this time. Case qualifies for closure. Case summary Report was submitted January 2009. Awaiting response from ACEH.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	32		
					BENZ	1000		
					TPHg	14000		
128	Livermore Valley Unified School District	Laidlaw Transport	2900 or 2908 Ladd Avenue	Livermore	2B5	5C	ACEH	July 2008 letter from ACEH states the site is in non-compliance and failure to submit monitoring data by August 15, 2008 will result in ineligibility of reimbursement from UST fund for investigation costs. No data has been received to date.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	<1300		
					BENZ	8500		
					TPHg	72000		
137	Busick Air Conditioning	Busick Gearing Properties	6341 Scarlett Court	Dublin	3A3	5C	RWQCB	The RP's consultant is working with RWQCB and Zone 7 to possibly revise the Work Plan and determine a reasonable time for beneficial use.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TCE	5200		
					PCE	120		

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149	Kaiser Sand and Gravel	Hanson Aggregates	3000 Busch Road	Pleasanto	3A1	5R	ACEH	ACEH case RO0002858 is closed as of 09/26/07. Residual TPHd remains in soil at conc up to 210,000 ppb RO0002952 and RO0002941 are still open. Case closure will not be conducted until facility closure, investigation and cleanup are complete for all areas of concern.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	ND		
					TPHd	50		
157	Arco	Teutsch Enterprises, Inc Arco	7249 Village Parkway	Dublin	3A1	7	ACEH	2009 3rd QMR show MTBE, TBA and BTEX levels within historic ranges. Sampling frequency reduced to semi-annual basis.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	47		
					BENZ	1.5		
					TPHg	340		
162	Nova Mechanical (See 4430 Willow Rd.)	GTE MobilNet	4440 Willow Road	Pleasanto	2	0	RWQCB	No records in file-Case is shown as closed on Geotracker. Awaiting copy of closure letter from RWQCB. CD -03/09/09
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	11		
181	Unocal (Tosco) #6419	Unocal, #6419	6401 Dublin Boulevard	Dublin	2A4	3B	ACEH	Offsite investigation is needed to delineate the extent of the plume. During the 4th quarter of 2009 the RP will prepare a WP the proposed installation of additional monitoring wells.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	1600		
					BENZ	ND		
					TPHg	680		

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191	Ultramar/Tesoro No. 67076	Former Beacon, #3604	1619 First Street	Livermore	1A2	5C	ACEH	3 additional deep GW will be installed in the 4th quarter to determine the lateral extent of contamination. City of Livermore Noise permits are being obtained to intall and run source area remediation system
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	31000		
					MTBE	17000		
					BENZ	5400		
192	BP Oil	Fred's auto BP Oil, #11120	6400 Dublin Boulevard	Dublin	3C	8	ACEH	Site closure requested. ACEH requested additional information to evaluate closure
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	21		
193	BP Oil	BP Oil, #11128	4707 First Street	Livermore	2A1	3B		Supplemental Site Assessment reports needed at ACEH along with other reports that are relavent to the case.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPH			
195	Unocal (Tosco)	Unocal, #7176	7850 Amador Valley Boulevard	Dublin	2A4	8	ACEH	ACEH has reviewed the case and identified some data gaps that need to be addressed prior to case closure consideration. Soil and Groundwater Investigation Report due 02/15/2010
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHd	1200		
					TPHg	2200		
					MTBE	2.8		
					BENZ	<0.50		

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197	Shell Oil (Equilon)	Shell-Branded Service Station	11989 Dublin Boulevard	Dublin	2A4	5C	ACEH	2009 1st quarter GWMR: Plume remains stable and well defined.
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					TPHg	2000		
					BENZ	<0.5		
					MTBE	1.3		
					TBA	750		
200	Alameda County	Livermore Agricultural Office (Alameda Co. Corp Yard and Ag Commission Field	2376 and 2418 Railroad Avenue	Livermore	2B1	7	RWQCB	*Only one report on file showing asbestos investigation 1997, SLIC CASE
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					4,4-DDT			
					Asbestos			
					TPH			
209	Shell Oil	SHELL #13-5244	8999 San Ramon Rd.	Dublin	2A	5C	ACEH	Proposal to install 10 monitoring wells and destroy 3 gw monitoring wells to further delineate is approved. New wells must be monitored on a quarterly basis for one year. Well Installation and Destruction Report due 04/05/2010
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					TPHd	82		
					TPHg	dry		
					TBA	540		
					MTBE	1.3		
212	GE Nuclear Energy	Vallecitos Nuclear Center	6705 Vallecitos Road	Sunol	3	ongoing	RWQCB	Latest report on file 3/2000, monitoring of effluent
					<u>CHEMICAL</u>	<u>CONCENTRATION ug/l</u>		
					RAD			
					TDS			

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213	Camp Parks	Parks Reserve Forces Training Area (PRFTA)	5th Street, multiple locations	Dublin	3C	8	RWQCB	DTSC determined that no further action is needed therefore the Army is seeking official site closure.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					PCE	8.3		
					Metals	NA		
225	Arco	Springtown Gas/Arco	909 Bluebell Drive	Livermore	2B5	5R	ACEH	Interim Remedial Action Work Plan proposes hydrogen peroxide as oxidizer to be applied for groundwater and soil remediation. Awaiting response from ACEH
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TBA			
					MTBE	3		
					TPHg			
					BENZ	<0.5		
					TPHd			
226	Manwel Shuwyahat	Livermore Gas and Minimart	160 Holmes Street	Livermore	1A2	5C	ACEH	UST Cleanup Fund is still in a financial crisis and has significantly delayed reimbursement payments to claimants. The RP has limited tested to TPHg, BTEX, and MTBE Work Plan for Pilot Scale Vapor Extraction System has been deferred until after the reimbursement check has been received.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHd	2,300		
					BENZ	11,000		
					MTBE	1,500,000		
					TBA	11,000		
					TPHg	210,000		
227	Can-Am Plumbing Inc.	CAN AM PLUMBING	151 Wyoming Street	Pleasanto	3	5C	ACEH	2009 2nd QMR on file. Continued monitoring and sampling will continue to further evaluate groundwater quality trends and plume stability.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	ND		
					MTBE	16000		

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228	Exxon	Exxon, # 7-3567 (Valero #3827)	3192 Santa Rita Road	Pleasanto	2	5C	ACEH	2009 3rd QMR on file
						<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>	
						BENZ	<.5	
						TPHg	50.7	
						TBA	870	
						xylene	.5	
						TPHd	185	
						MTBE	57	
231	Unocal #4186	Unocal #4186	1771 First Street	Livermore	1A2	7	ACEH	RP discussed proposed remedial improvements in relation to effectiveness of TBA remediation. WP for ozone sparge upgrade was due 05/11/09. Still not received to date. ACEH has issued a notice to comply
						<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>	
						BENZ	29	
						MTBE	180	
						TPHg	1400	
232	Groth Brothers Oldsmobile		59 South L Street	Livermore	3A1	8	ACEH	Several USTs obtained case closure. T0600101656 case is closed as of 11/5/2009 with oil and grease remaining in soil up to 1,100 ppm. Remaining environmental issues are being tracked as SL0600147081
						<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>	
						BENZ	<0.5	
						MTBE	<5	
						TPH		
238	All Rents		2247 Second St	Livermore	1A2	5C	UNK	Permit # 20034, RWQCB informed of site
						<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>	
						1,2-DCE		
						TCE		
						PCE	430	

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241	Culligan Soft Water Service	Culligan	2252 Railroad Avenue	Livermore	3	1	RWQCB	High concentrations of salt in closed sewer line
<i>CHEMICAL</i> <i>CONCENTRATION ug/l</i> alt Brine Rinse Water								
242	Alameda County Fairgrounds	Fairground Main Well (3S/1E 20B 2)	4501 Pleasanton Avenue	Pleasanton	1A1	1		RWQCB informed of site. Not yet a formal case.
<i>CHEMICAL</i> <i>CONCENTRATION ug/l</i> PCE16								
243	Sai La Family Limited Trust	Clean N Press Dry Cleaners	1108 East Stanley Blvd	Livermore	2B1	3B	RWQCB	Monitoring well VS-2 of Kmart had PCE 10ppb, listed wrong in report as VS-3. Probably from LASC plume.
<i>CHEMICAL</i> <i>CONCENTRATION ug/l</i> PCEND								
245	Ms. Clare Leung	Hopyard Cleaners	2771 Hopyard Road	Pleasanton	1A1	5C	RWQCB	Enhance InSitu Bioremediation WP includes injecting a durable carbon substrate in focused intervals in the A Zone, installing and monitoring 2 monitoring wells downgradient of pilot study area to assess performance and using existing MW-02 as and extraction well to recirculate injectate. Report summarizing pilot study pre-design field activities due 02/01/2010 Report documenting results of implementation of EISB WP due 03/01/2011
<i>CHEMICAL</i> <i>CONCENTRATION ug/l</i> 1,2-DCE5900 TCE450 PCE1600								

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248	Mr. Roger Woodward/Mr. Kewal Singh	Corwood Carwash	6973 Village Parkway	Dublin	3	8	ACEH	Site is noncompliant because it has not been claimed in the SWRCB's Geotracker database and no data or workplan has been submitted. Site may become ineligible for UST Program Funding.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	310		
					MTBE	1800		
249	San Francisco Water District	Sunol Pump Station/Maintenance Yard	505 Paloma Way	Sunol	3	5C	ACEH	In July 2008, ACEH issued a directive letter requiring submittal of monitoring data and work plan. Failure to submit the documents by 08/15/08 will result in ineligibility of reimbursement from UST funds. No information or documents have been received to date.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					BENZ	ND		
					MTBE	ND		
250	Murray Kelsoe	Sunol Tree Gas	3004 Andrade Road	Sunol	1A1	5C	ACEH	Kkan Petroleum has taken over operation of GWE system.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHd	110		
					TPHg	17000		
					MTBE	190		
254	Mission Valley Rock & Asphalt	Mission Valley Rock & Asphalt	7999 Athenour Way	Sunol	2A	5C	ACEH	Air injection system was started in April 2009 and continues to run. Highest concentrations of hydrocarbons are found in deep onsite monitoring wells.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHd	13,000		
					TPHg	210,000		
					BENZ	1,900		
					MTBE	110		

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259	City of Livermore	Miller Square Park/Performing Arts Theater	2259 First Street	Livermore	2B2	3A		Revised WP due 01/10/10.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	18,000		
					BENZ	140		
					TPHd	42,000		
260	Mike Madden	V&G Muffler	21 South Livermore Ave	Livermore	2A1	1		Received data report as part of drilling permit 6/27/03
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					XYL	3630		
					TOLU	5100		
					TPHd	67000		
					TPHg	22000		
264	Livermore Redevelopment Agency/Signature Properties	Railroad Ave- Livermore Site	1934 - 1950 Railroad Avenue at North L Street	Livermore	2A4	1	ACEH	3/7/05 Letter from ACEH doesn't think enough investigation has been done to rule out the PCE coming from onsite source. More invest by 6/7/05. Site is adjacent to Arrow Rentals. MTBE under site may be from B&C Mini Mart. Spoke to DD at ACEH. She transferred case to Reg Board. Awaiting latest info from Reg Board
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					MTBE	280		
					BENZ	130		
					TPHg	1200		
					PCE	30		
283	Safeways	Former Quest Laboratory	6511 Golden Gate Dr	Dublin	2	3B	ACEH	2009 4th QMR reports that TPH has been detected below reporting limits for the last 3 quarters. The relatively flat groundwater gradient indicates that groundwater is migrating at a slow rate. No further action is requested.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	5100		
					TPHd	64000		
					TPHmo	350		

<i>Z7 ID</i>	<i>OWNER</i>	<i>SITE NAME</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>PRIORITY</i>	<i>STATUS</i>	<i>LEAD AGENCY</i>	<i>NOTES</i>
284	Gabriel Chiu	Former Crow Canyon Dry Cleaner	7272 or 7242 San Ramon Road	Dublin	3	1	ACEH	Interim Remedial Action Report and Revised Draft Fact Sheet are overdue. Notice to comply will be issued by ACEH.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TCE	3		
					PCE	22		
285	Chevron	Chevron Sunol Pipeline	2793 Calaveras Road	Sunol	3A3	1	ACEH	ACEH approves of passive soil vapor sampling in the hillside area as the first phase of investigation. Passive soil vapor sampling report due 02/08/2010.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					TPHg	57000		
286	Thomas Robinson	East Avenue Services (Rotten Robbie No 64)	4186 East Avenue	Livermore	2A2	3A	ACEH	5 USTs, product lines and dispensers were removed from site. 10 soil samples collected from native soil beneath USTs and 5 samples from native soil beneath product lines. 3 monitoring wells were installed and 3 soil samples from each well were analyzed.
					<i>CHEMICAL</i>	<i>CONCENTRATION ug/l</i>		
					Toluene	55		
					Ethylbenzene	4,100		
					Xylene	1,900		
					BENZ	1200		
					TPHg	19000		
					MTBE	1900		

Z7 ID	OWNER	SITE NAME	ADDRESS	CITY	PRIORITY	STATUS	LEAD AGENCY	NOTES
290	Kinder-Morgan Energy Partners, L.P.	Dublin-Iron Horse Trail Release	Iron Horse Trail	Dublin	3A3	5C	RWQCB	22 borings in 16 locations. Shallow Zone - TPHg conc of 4700 ppb in B-26, TPHd conc of 120 ppb in B-20 and B-26, benzene conc of 350 ppb in B-12 Deep Zone - TPHg conc of 760 ppb in B-26, benzene conc of 45 ppb in B-3. WP with scope of work for addl investigation to follow.
					CHEMICAL	CONCENTRATION ug/l		
					TPHg	4700		
					Benzene	6400		
					MTBE	<100		
					toluene	17000		
					ethyl benzene	1600		
291	Country Club Cleaners	Perciva/Metro Valley Cleaners	224 Rickenbacker Circle	Livermore	3A2	3A	ACEH	Installation, operation and maintenance of SVE for interim remediation of VOCs in soil beneath the site is acceptable. Remediation System Startup Repor is due 04/29/10
					CHEMICAL	CONCENTRATION ug/l		
					PCE	450		
292	CW Roen	Former K&S Heavy Equipment	495 North Greenville Rd.	Livermore	2A4	3A	ACEH	LPFD transferred to ACEH. Soil Contamination
					CHEMICAL	CONCENTRATION ug/l		
					al Extractable Mate			
297	City of Pleasanton	Pleasanton Fire Station #3	3200 Santa Rita Road	Pleasanto	2A4	5C	ACEH	NFA has been requested by the RP and they have addressed the technical comments made by ACEH prior to closure assessment. Awaiting response from ACEH.
					CHEMICAL	CONCENTRATION ug/l		
					TPHd	12000000		

Z7 ID	OWNER	SITE NAME	ADDRESS	CITY	PRIORITY	STATUS	LEAD AGENCY	NOTES
298	Chevron	Former Chevron Records Facility	6400 Sierra Ct	Dublin	3A2	1	RWQCB	WP site assessment in progress. Tech report due 12/15/09.
299	TDW Construction	Nica Metals	101 Greenville Rd	Livermore	3A2	3A	ACEH	Site is non-compliant RP met with with ACEH in November 2009 to discuss development of the case
300	Atlantic Richfield Company	ARCO #0498	286 South Livermore Ave	Livermore	2A4	3A	ACEH	WP to further understand the hydrogeology and further define the extent of impacted soil and groundwater was submitted in August 2009. Awaiting ACEH review.
302	Federal Corrections Institution Dublin	FCI Dublin	5701 8th St	Dublin	3A1	1		An extension for submittal of the Soil and Groundwater Investigation Report to 08/29/09 was granted, however the report has not been submitted to date. ACEH to issue notice to comply.

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303	Zone 7 Water Agency	J Line Gasoline Spill	Brighton Drive and Village Parkway	Dublin	2A4	3A	RWQCB	Groundwater ESL for drinking water still exceeded in one location after recent application of MicroBlaze. RWQCB requires follow up sampling after April 15, 2010. A tech report is due 05/30/2010. Site may be considered for closure if appropriate ESL levels are achieved.
304	Denis Brown	Shell #16-5112	4895 Hacienda Drive	Dublin	3A3	3A	ACEH	Installation of 6 monitoring wells across the site is approved as an initial phase of site investigation. Site Investigation Report due 04/15/2010
305	Caltrans	I-580 EB Shoulder	I-580 EB between First St and Vasco Rd	Livermore	2A4	3A	ACEH	Site Investigation Report due 01/26/2010
306	City of Dublin	City of Dublin Civic Center	100 Civic Plaza	Dublin	2A4	1	ACEH	Notice of Responsibility sent to City of Dublin. Awaiting submittal of Soil and Water Investigation Work Plan

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307	City of Pleasanton Public Works	City of Pleasanton Theater Parking Lot	0 Kottinger Drive	Pleasanton	2A4	1	ACEH	Awaiting Supplementary Site Investigation Report. It was due on 08/10/09. ACEH to issue notice to comply.
308	Stockbridge/BHV Emerald Place Land Co	Green on Park Place	5411 Martinelli Way	Dublin	2A4	1	ACEH	Over-excavation soil and water sampling conducted was on October 14, 2009. Report is forthcoming.

ATTACHMENT B

RWQCB PRIORITY RANKING SYSTEM (For Leaking Underground Storage Tanks)

Note: Zone 7 uses a “0” to represent a closed site.

Priority 1 — High Priority Sites

[Zone 7 Uses These Rankings as They Appear]

- A. Current Drinking Water Source — Impacted or Likely Impacted Through Future Migration
 - 1. Currently Used municipal or domestic well impacted (i.e., drinking water wells where MCLs are exceeded)
 - 2. Currently used municipal or domestic well threatened (e.g., release site within 2000 ft of currently used well and/or possible vertical conduit exists to deep zone if deep zone currently used as drinking water source for the threatened well.
 - 3. Currently used identified regional “soil source aquifer” impacted (i.e., MCLs exceeded at any aquifer point)
 - 4. Other currently used municipal or domestic aquifer impacted
 - 5. Currently used aquifer threatened by future migration (i.e., lateral pollutant transport or vertical movement through conduit)
- B. Known Health/Safety/Environmental Impacts Requiring Prompt Action
 - 1. Vapors at explosive levels in confined space (i.e., sewers or basements)
 - 2. Vapors detected above human health safe levels at/near human receptors
 - 3. Free product in soil/gw
 - 4. SW/Aquatic/Environment impacted (sheen or habitat covered)
 - 5. Soil quality levels exceed human health safe levels and exposure likely given existing site conditions
- C. Administrative or Enforcement Need Requires Prompt Action
 - 1. 2004 Funding available through “letter of commitment”
 - 2. Enforcement action follow-up is necessary
 - 3. Closure request received from RP
 - 4. Public/RP/Political concerns require expeditious efforts

Priority 2 — Moderate Priority Sites

[Zone 7 ranks sites outside the main groundwater basin as Priority 2 or Priority 3. Where “Potential” is used by RWQCB, “Potential or Known” is substituted in Zone 7's ranking system]

- A. Water Resource Other than Currently Used Drinking Water Is or May Be Impacted
 - 1. Existing beneficial use (other than municipal or domestic drinking water) impacted (e.g., agriculture, cooling water)

2. Potential source of drinking water (defined by SWRCB Policy 88-63) significantly impacted with high probability of future use determined
 3. Existing beneficial use threatened (requires pollutant migration study and re-prioritize)
 4. Soil contamination currently exists (requires additional investigation of GW/SW and/or soil to review threat and re-prioritize)
- B. Other Health/Safety/Environmental Impacts Exists or Is Unknown (Requires Additional Investigation (GW/SW), and/or Health or Ecological Risk Assessment)
1. Potential vapors at explosive levels in confined space
 2. Potential vapors above human health safe levels with receptors
 3. Potential free product at site
 4. Potential for migration to aquatic habitats or surface water
 5. Potential human exposure to soil above safe level

Priority 3 — Low Priority Sites

- A. Minor or No Potential Water Resource Impact Exists
1. No designated beneficial uses of the water which is impacted
 2. Potential source of drinking water (defined by SWRCB Policy 88-63) with limited or minor impacts
 3. Potential source of drinking water (defined by SWRCB Policy 88-63) impacted where low probability of future use is determined
- B. Low Potential Health/Safety/Environmental Impact Exists After Investigation and, if necessary, a Health or Ecological Risk Assessment Completed and Accepted by Lead Agency
1. Soil only cases with residual contaminated soil left in place (with or without follow-up verification monitoring)
 2. Soil only cases where full cleanup to background levels is achieved
- C. Slated for Closure *[This ranking was created by Zone 7]*

STATUS CODES

- 1 Leak Confirmed: A lab report received confirming a leak/spill from a tank.
- 3A Preliminary Site Assessment Workplan Submitted: A workplan and implementation schedule has been submitted to determine if the groundwater has been or will be impacted. This plan includes the installation of monitoring wells.
- 3B Preliminary Site Assessment Underway: Implementation of workplan. This phase of work involves determining if groundwater has been impacted. Work performed during this phase includes the installation of up to three monitoring wells in order to determine the specific gradient. At least one well should be placed within 10' of the suspected point of discharge in a verified downgradient location. Other work performed during this phase may include soil borings, soil gas surveys, additional excavation and interim remediation measures. The case would move to status 5 when the work exceeds that which was required for gradient definition and initial groundwater verification (usually the installation of more than three wells).
- 5C Pollution Characterization Underway: this phase of work involves the definition of the boundaries of the contaminated plume. In order to be a 5C the responsible party must be taking steps to further define that lateral and vertical extent of contamination in the soil and groundwater. This phase is characterized by the installation of additional monitoring wells and/or borings, aquifer tests, soil gas surveys, continual groundwater gradient determination and monitoring, and an assessment of all impacts on surface and groundwater.
- 5R Remediation workplan (Corrective Action Plan) Submitted: a proposal and implementation schedule evaluation long term remediation options have been submitted. The proposal should include a feasibility study, i.e., a remediation plan based on the consideration of a few options.
- 7 Remediation Underway: Implementation of the corrective action plan, i.e., actual remediation begins. Usually requires regulatory agency approval.
- 8 Post Remediation Monitoring Begun: Periodic groundwater or other monitoring at the site as necessary in order to verify and/or evaluate the effectiveness of remedial activities.