

# Implementation of UST Provisions of the Energy Policy Act 2005 and Status of Prevention Programs

## California

September 2014



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## Introduction

The U.S. Environmental Protection Agency (USEPA) Region 9 has sought contractor support to develop a more comprehensive understanding of California's implementation of underground storage tank (UST) provisions of the Energy Policy Act (EPAct) of 2005, California's Leak Prevention Program and identify additional ways to support its states and territory programs. In September 2013, Booz Allen Hamilton (Booz Allen) was contracted to perform an evaluation of compliance with and implementation of the EPAct 2005 UST provisions by reviewing records, procedures, and regulations. Further, USEPA requested Booz Allen to conduct UST field inspection evaluations by observing state/territory facility inspections.

To evaluate California's implementation of EPAct UST provision, Booz Allen performed an offsite programmatic review by assessing documents available through program websites. After the offsite programmatic review, an onsite review was conducted to gather additional information via the program database, policy guidance documentation, and interviews. The location and dates of the onsite review and the individuals participating during the interview portion of the onsite review are identified below. Additionally, names of inspectors under observance while conducting UST inspections are provided for each county visited.

Aspects of California's Leak Prevention Program that go beyond the specific requirements set forth by the EPAct were also included in this report. Information such as the UST data management systems, methods for calculating Significant Operational Compliance (SOC) rates, and Unified Program Agency evaluations provide a comprehensive summary of California's UST program.

### **Sacramento, CA (February 18-21, 2014)**

California Environmental Protection Agency (February 18)

Jim Bohon – Assistant Secretary, Local Program Coordination & Emergency Response

John Paine – UPA Program Manager

State Water Resources Control Board (February 18, 19, and 21)

Laura Fisher – UST Leak Prevention Unit Supervisor

Kim Sellards – UST Enforcement Unit Supervisor

Diana Romero – UST Cleanup Fund, Claims Eligibility Unit Supervisor

Dan Firth – California Environmental Reporting System Project Manager (Contractor)

Sacramento County Environmental Management Department (February 20 and 21, 2014)

Marie Woodin – Chief

Elise Rothschild – Deputy Chief

Chris Pace – UST Program Manager

Douglas Osborn – Inspector under observance

### **Fresno, CA (February 24, 2014)**

Fresno County Public Health Environmental Health Division

Harry Yee – UST Program Lead

Steven Rhode – Enforcement Lead

Sukhdeep Sidhul – Inspector

Ted Piarcy – Inspector

John Bell – Inspector under observance

### **Salinas, CA (February 25 and 26, 2014)**

County of Monterey Department of Health Division of Environmental Health

Bruce Weldon – Supervising Hazardous Materials Specialist  
Cory Welch – Inspector under observance

Multiple regulatory and guidance documents were reviewed including publicly available materials from state and local regulatory agency websites. Follow-up onsite reviews attempted to eliminate data gaps through personal interviews, review of agency internal guidance and procedural documents, reviewing UST database systems, and observance of UST compliance inspections. Interview participants were asked a broad range of questions relative to their knowledge of UST program structure, UST permitting, repair, maintenance, replacement/closure processes, UST universe trends, UST enforcement procedures, Significant Operational Compliance (SOC), financial responsibility (FR), UST inspection procedures, inspector training resources, UST data base management, and biofuel issues. Information obtained during onsite interviews was cross-referenced with agency documents to assess the reliability of sources and consistent application of UST program components. Key reference documents included the California State Water Resources Control Board (State Water Board) UST Program Guidance Documents, Annual and Semi-annual Reports of UST Performance Measures, Envision Connect Certified Unified Program Agency (CUPA) Database Management Systems, California Health and Safety Code Division 20 Chapter 6.1-6.77 regulations, California Code of Regulations Title 23, Division 3, Chapter 16, as well as notes taken during the onsite review.

#### **Key California Regulations**

California Health and Safety Codes (CAL HSC)  
California Code of Regulations (CCR)

- CAL. HSC. CODE § 25290.1 – Defines the secondary containment regulations.
- CAL. HSC. CODE § 25292.3 – Defines the delivery prohibition regulations.
- CCR Title 23, Division 3, Chapter 16 § 2715 – Defines operator training requirements.
- CCR Title 23, Division 3, Chapter 16 § 2636– Defines tightness testing requirements.
- CAL. HSC. CODE § 25292.2 – Defines FR requirements of owners and operators.

During the field inspection evaluations, Booz Allen observed inspectors performing UST system annual compliance inspections, which provided insight into the application and reliability of the agency UST compliance program. Booz Allen also completed a review of reports from randomly selected UST facilities within California. These reports were reviewed to determine their consistency with inspection reports prepared during the inspections observed February 18, through 27, 2014.

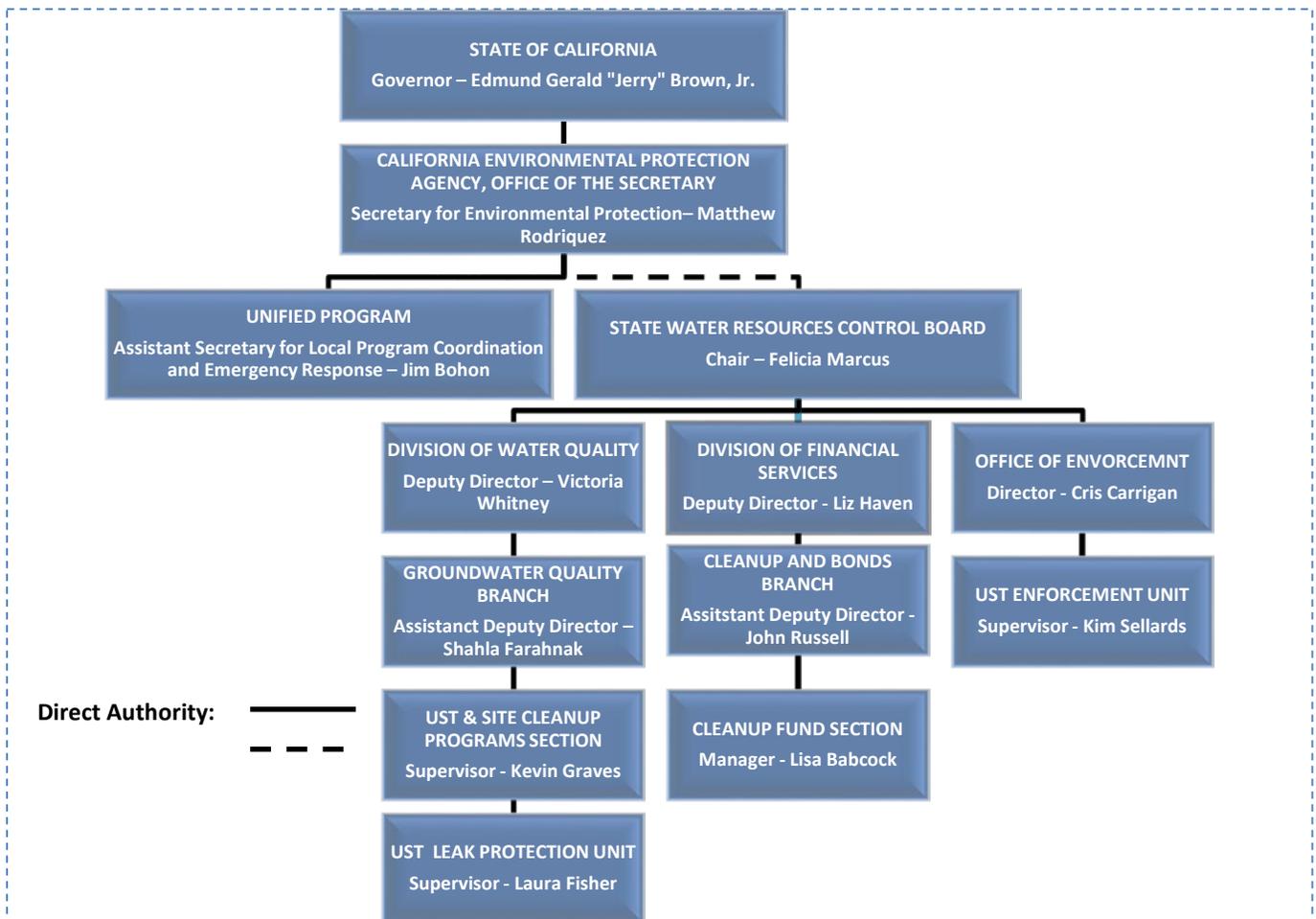
### **Program Description**

The State Water Board (SWB) is the California state agency tasked with implementing compliance with UST regulations and, including, the provisions of the EPAct. The UST Program is one of six components incorporated into the state’s broader Unified Program, overseen by CalEPA, which “consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs.”<sup>1</sup> The Unified Program was created in 1991.<sup>2</sup> Under the administrative oversight of CalEPA, the SWB sets UST policies and standards. Eighty-three Certified Unified Program Agencies (CUPAs) implement those standards, and CalEPA oversees the performance of the CUPAs through a regular evaluation process.

UST inspections and the majority of UST enforcement actions are executed by the local jurisdictional CUPA, or by an associated Participating Agency (PA) overseen by the CUPA.<sup>3</sup> The CUPAs and PAs are distinguished from one another in that CUPAs are responsible for implementing and enforcing all six components of the Unified Program within their local jurisdiction, while a PA may lead one or more specific components within a narrower jurisdiction and reports to the CUPA. For example, Los Angeles County Fire Department is the CUPA responsible for the Unified Program. The Los Angeles City Fire Department is a PA that has an agreement with Los Angeles County to implement certain elements (including USTs) of the Unified Program within the City of Los Angeles. In

California, there are currently 83 CUPAs and 32 PAs implementing UST compliance and enforcement. Not all CUPAs utilize PAs. Each UPA and PA is thoroughly evaluated by CalEPA before being granted CUPA authority through a Unified Program Agency permit. The CUPA and PA are also required to undergo a periodic performance evaluation. CUPAs evaluate the PA performance annually and include the results of their review in the UPA performance evaluation conducted by CalEPA every three years. A comprehensive list of the 83 CUPAs and 32 PAs is provided in Attachment A-1. It should be noted that none of the CUPAs visited for the purpose of this review utilize PA agreements. Therefore, no PAs participated in this programmatic review. For further description of the program organization, refer to Figure 1: California UST Program Organizational Chart. Detailed organizational charts for each CUPA visited are provided as Attachment A-2. For the purpose of this report and from this point forward, all CUPA and PA will mutually be referred to as Unified Program Agency (UPA).

**Figure 1: California UST Program Organizational Chart**



Source: CalEPA, SWB. 2012 (November). Organization Chart, State Water Resources Control Board. [http://www.waterboards.ca.gov/about\\_us/org\\_charts/](http://www.waterboards.ca.gov/about_us/org_charts/). Accessed: March 10, 2014.

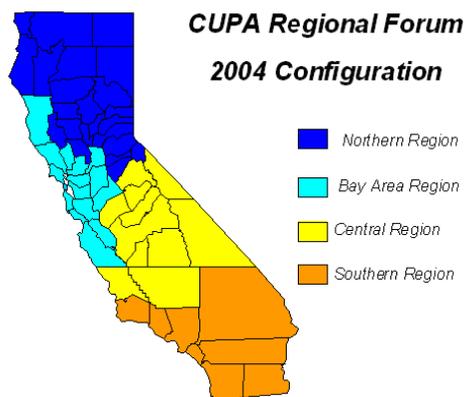
The UPA UST program evaluation occurs every three years and is overseen by CalEPA and the SWB as part of the larger Unified Program evaluations. During the UST program evaluation, SWB assesses each UPA on its ability to provide permitting, enforcement, and conduct compliance inspections of the local UST universe. The SWB assessment results are provided to CalEPA for inclusion in the larger Unified Program UPA evaluation led by CalEPA. The evaluation score designations, which are assigned to UPAs at the end of the evaluation, are somewhat subjective in the ratings that are applied. Each UPA is awarded a designation of “Meets” or “Exceeds” All Program Requirements, “Satisfactory but Improvements Needed,” or “Unsatisfactory.” These designations

are based on an in-depth review process, but may not provide consistency for the public to understand the score of a local UPA. For example, two UPA may both be designated as “Satisfactory but Improvements Needed”, however those areas where improvement is recommended may be different components of the program. Therefore, to assist in the public in interpretation of UPA evaluations, all UPA evaluations are posted to the CalEPA website.<sup>4</sup> During the onsite review, CalEPA indicated a UPA Evaluation Program Guidance document is available on the CalEPA website.<sup>5</sup> However, CalEPA reported the guidance is currently undergoing an update. CalEPA also publishes *The CUPA Compendium of Performance Standards* that provides specific UPA requirements reviewed during the UPA evaluation. Additionally, UPAs are required to conduct a self-evaluation each year and submit the audit report to CalEPA and the SWB for review.

SWB is responsible for the development and communication of state requirements, standards, and procedures, and development of UPA guidance for consistent program implementation. The SWB is also responsible for compiling pertinent UST compliance and enforcement data reported by UPAs and transmitting the data as statewide reports to CalEPA and USEPA Region 9.

The CUPA Forum Board is a statewide not-for-profit organization of UPAs that acts as a cooperative partner of CalEPA and SWB.<sup>6</sup> The CUPA Forum Board provides leadership and coordination amongst the UPAs; asserting a collective voice on behalf of the UPAs to identify and address statewide issues regarding the six elements of the Unified Program, which includes USTs. The CUPA Forum Board is organized into four regions: Northern Region, Bay Area Region, Central Region, and Southern Region (refer to Figure 2: CUPA Regional Configuration).

**Figure 2: CUPA Regional Configuration**



Source: UPA Forum. 2014. Map of Regional Forum. <http://calUPA.net/forum/regional/map.asp>. Accessed: March 17, 2014.

Booz Allen reviewed UST documentation at the following UPAs: Sacramento County Environmental Management Division (Sacramento CUPA), Fresno County Department of Public Health Division of Environmental Health (Fresno CUPA), and Monterey County Health Department (Monterey CUPA). A summary of the California UST program universe is presented below in Table 1 (refer to Figure 1: California UST Program Organizational Chart). UST universe data is constantly being updated by UPAs and private industries as information is entered into the California Environmental Reporting System (CERS), which is the database used to manage UST information. The data entered by private industry is required to be reviewed and “accepted” by the respective UPA before it is visible in the CERS database and integrated into the reporting data set. Therefore, data presented in Table 1 should not be considered complete for the state of California, as it only represents a snapshot in time and does not include private industry data that has been entered but not “accepted” by the UPAs. Additional details regarding CERS are discussed in the UST Database section.

**Table 1: Program Summary – California**

	Total Number			
	California	Sacramento CUPA	Fresno CUPA	Monterey CUPA
UST Universe	39,020 <sup>1</sup>	1,364 <sup>2</sup>	1,107 <sup>3</sup>	575 <sup>4</sup>
Active UST Facilities	14,249 <sup>1</sup>	474 <sup>2</sup>	421 <sup>3</sup>	227 <sup>4</sup>

	Total Number			
	California	Sacramento CUPA	Fresno CUPA	Monterey CUPA
Inspections FY 2013 <sup>5</sup>	13,772	479	438	253
Inspectors <sup>6</sup>	N/A	5	4	8
Inspection Cycle <sup>6</sup>	12 Months	12 Months	12 Months	12 Months
Red Tags FY2013 <sup>5</sup>	143	0	0	0
SOC RD <sup>5</sup>	72%	91%	91%	96%
SOC RP <sup>5</sup>	86%	87%	73%	94%
SOC Both <sup>5</sup>	66%	82%	68%	91%

Sources:

1. CalEPA. 2014 (February). California Environmental Reporting System. Presentation given February 18, 2014, by Dan Firth, CERS Coordinator.
2. Sacramento Environmental Management Division. 2014. Decade Software, Envision Connect, Active Tank Data Export. Accessed February 18, 2014.
3. Fresno County Environmental Health. 2014. Decade Software, Envision, Storage Tank Dispatch Center UST Export. Accessed February 20, 2014.
4. Monterey County Environmental Health Department. 2014. Monterey UST Database Query Result Report. Provided by Bruce Welden. March 05, 2014.
5. CalEPA, SWB. 2013 (Dec.). Report 6 Results, July 2012-June 2013.
6. Booz Allen Hamilton. 2014 (February). California EPA Act Onsite Review Interviews with SWB, Sacramento CUPA, Fresno CUPA, and Monterey CUPA.

## Permitting

### Key Findings:

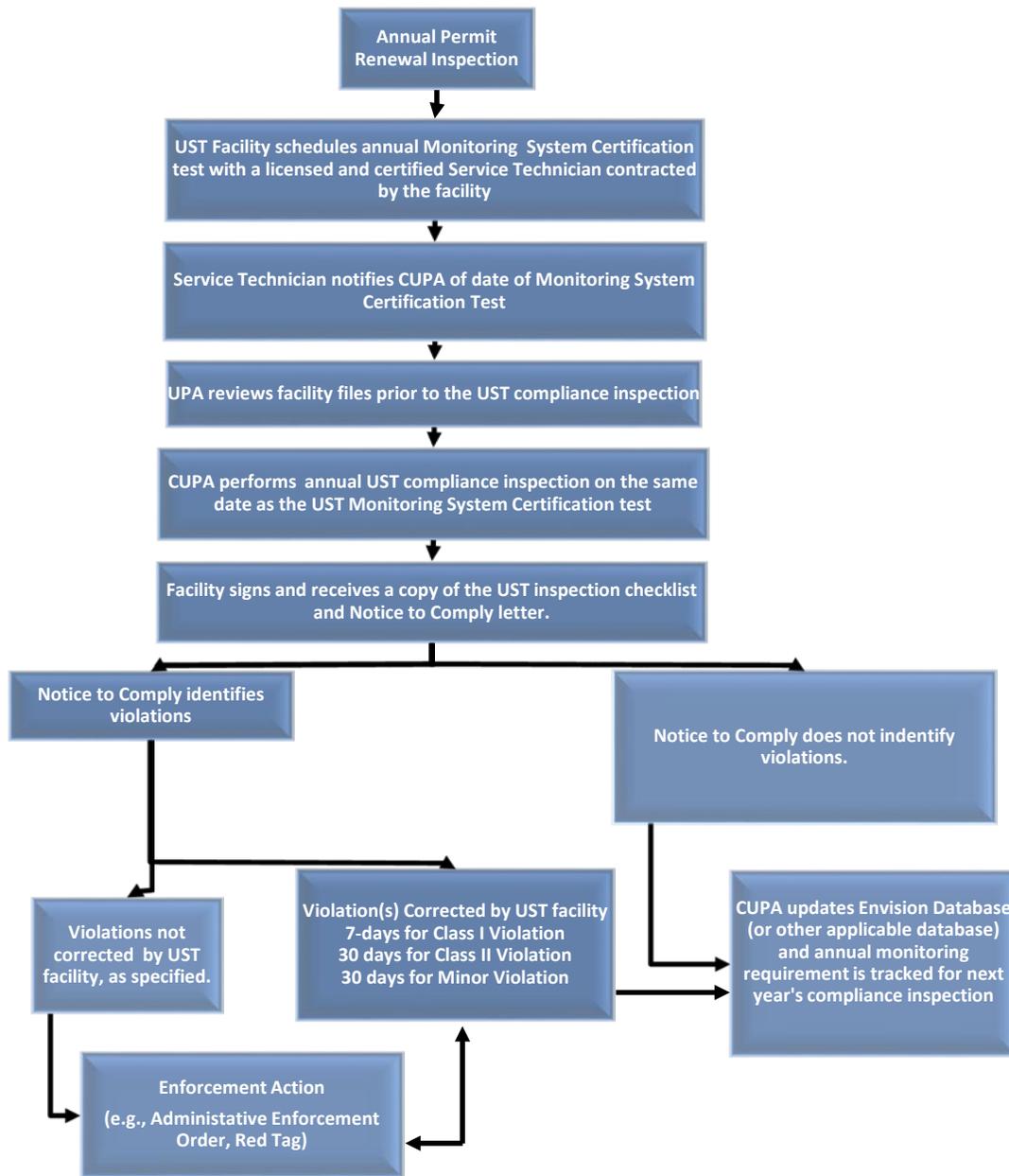
- UPAs issue all Unified Program UST permits.
- Consolidated Permits are universally issued for a period of one year.
- UST Closure requires the collection of soil samples to ensure that previously stored substances have not been released into the environment.
- USTs must be closed either through the removal of the tank from the ground and transport of the UST to a licensed Treatment, Storage, and Disposal Facility (TSDF) as hazardous waste; clean closed in place and not removed from the ground; or cleaned and certified as nonhazardous waste and disposed as such.
- The majority of UPAs issue annual UST operating permits, however, some UPA jurisdictions issue a three-year operating permit separate from the consolidated permit.

The UPAs issue all Unified Program UST permits. Different permits are required for the installation, upgrade, repair, and renewal of a UST system. These apply specifically to petroleum USTs, and are not the standard procedure for other hazardous material UST permits issued within the state. Therefore, the reference to USTs in this section pertains only to petroleum USTs.

Any facility seeking to obtain a UST permit to operate a UST must first contact the California Board of Equalization (BOE) to initiate a BOE tracking number. The BOE tracking number serves as a tracking mechanism for the UST facility to verify payment into the state clean-up fund. The payments take the form of a mill tax applied to each gallon of fuel dispensed into the UST. After the BOE tracking number is initiated, the BOE will contact the UPA for the facility’s respective jurisdiction. The UPA will then take the lead in assisting the facility with the process of applying for and obtaining a UST permit. The UPA is responsible for reviewing the installation/modification permit application, issuing UST operating permits, and collecting fees associated with these permits. In California, most UPAs issue annual consolidated UST operating permits. The SWB reported that a one-year operation permit is preferred because the process of inspecting and either approving or denying the annual permit is less burdensome than revoking a long-term permit, such as a three-year permit. However, some UPA jurisdictions do issue three-year permits.

Each of the CUPAs visited utilize the consolidated permit. As part of the permit requirements, any UST covered by the permit must be inspected and in compliance in order for the permit to be granted or renewed. For installation of a new UST, the applicant completes a permit application for submittal to the local jurisdictional UPA or PA. The agency enters the applicant's information into its tracking database (i.e., Envision database) and assigns a facility identification number to the facility. The application is reviewed for errors or omissions. If plans are approved, the local jurisdictional UPA, or PA sends an invoice for the permit fees and the applicant provides payment. UST installation permits are not approved until all construction is complete. A UST inspector visits the facility at predetermined intervals to perform inspections of the UST system installation progress. Upon the completion of UST installation, a final inspection is performed, which includes testing of leak detection and secondary containment. The process for permitting UST upgrades and repairs is similar (refer to Figure 3: Annual Permit Renewal Inspection). For a detailed list of documents and permit actions required by Sacramento County Environmental Management Division, Fresno County Department of Community Health, Environmental Health, and Monterey Department of Health Division of Environmental Health, refer to Attachment A-2: Permitting.

**Figure 3: Representative Process for Annual Permit Renewal Inspection**



Sources:

1. Fresno County Environmental Health. 2011 (September). Inspection and Enforcement Program Plan.
2. CalEPA, SWB. 2006 (July). Violation Classification Guidance for Unified Program Agencies.

Instances may arise when the UPA inspector is not able to be present during the annual monitoring certification due to scheduling conflicts or other circumstances. When this occurs, the annual compliance inspection is performed separately in accordance with Local Guidance letter #159, and includes review of the most recent annual monitoring certification records. Furthermore, the annual monitoring certification and the annual compliance inspections are identical inspections as far as the components of the UST system that are assessed.

### UST Closure

The permanent closure of a UST requires the facility to complete and submit a permit application to the local UPA for review, similar to the process for installing, repairing, or replacing a UST system. A permit will not be granted until the facility submits the associated permit fees.

The UST removal permit application includes protocols for the facility to collect soil samples as a means to verify whether hazardous constituents have been released from the UST. The soil sample locations and numbers are reviewed and approved by the UPA. Soil samples are collected by the UST facility, typically by a contracted third party, and the samples are analyzed by a state licensed laboratory. Results of the soil samples are provided to the UPA for review. If hazardous constituents are reported in the soil sample results at concentrations exceeding screening values, then additional soil removal may be required until soil sample results are below screening values.

Three options are available to UST facilities looking to permanently close a UST. The first option is to remove the UST from the ground and transport the UST to a licensed Treatment, Storage, and Disposal Facility (TSDF) as hazardous waste. This process involves the following steps:

1. Coordinate closure event with the UPA. The tank and sump removal and sampling activities must be witnessed by a representative from the local agency that also will conduct a removal inspection.
2. Remove the soil around the UST.
3. Clean the interior of the UST using proper decontamination procedures, such as triple rinsing the tank. Ensure that all residual liquids, solids, or sludges removed from the UST are manifested and transported offsite for proper disposal. Forward a copy of the hazardous waste manifest to the UPA.
4. Purge USTs of vapors by displacement using an inert gas.
  - a. Introduce dry ice or the corresponding weight of carbon dioxide (CO<sub>2</sub>) at the rate of 15 pounds per 1,000-gallon tank capacity at least four hours prior to the removal inspection. Introduce CO<sub>2</sub> into the bottom of each tank and allow it to permeate upward through the tank.
  - b. Tanks shall not be removed from the ground until contractor tests and certifies that the oxygen (O<sub>2</sub>) level is below 10 percent (%) or the LEL results do not exceed 5%.
5. Remove the UST from the ground and transport it offsite for disposal as hazardous waste.

The second option applies to USTs that will be clean closed in place, and not removed from the ground. When pursuing this option, UST facilities are required to:

1. Coordinate closure event with the UPA, whenever possible. The UPA may provide oversight of the UST clean closure and will conduct a removal inspection.
2. Clean the interior of the UST using proper decontamination procedures, such as triple rinsing the tank. Ensure that all residual liquids, solids, or sludges removed from the UST are manifested and transported offsite for proper disposal. Forward a copy of the hazardous waste manifest to the UPA.
3. Purge USTs of vapors by displacement, using an inert gas.
  - a. The interior of the tank must read no greater than 5% of the lower explosive limit (LEL) on a properly calibrated combustible gas meter.
  - b. The contractor shall certify on the Environmental Health and Safety (EHS) inspection form that the cleaning process was properly conducted and the LEL results did not exceed 5%.
4. Once approved by a representative of EHS, introduce dry ice or the corresponding weight of CO<sub>2</sub> at the rate of 15 pounds per 1,000-gallon tank capacity.
  - a. Introduce CO<sub>2</sub> into the bottom of each tank and allow it to permeate upward through the tank.
5. Visually inspect the UST and cover it with clean soil.

The third option is to remove the UST from the ground, clean the UST, and dispose of the UST as solid waste or recycle the tank (if metal). When pursuing this option, UST facilities are required to:

1. Coordinate closure event with the UPA. The tank and sump removal and sampling activities must be witnessed by a representative from the local agency who will also conduct a removal inspection.
2. Remove the soil around the UST.
3. Clean the interior of the UST using proper decontamination procedures, such as triple rinsing the tank. Ensure that all residual liquids, solids, or sludges removed from the UST are manifested and transported offsite for proper disposal. Forward a copy of the hazardous waste manifest to the UPA.
4. Purge USTs of vapors by displacement using an inert gas.
  - a. Introduce dry ice or the corresponding weight of carbon dioxide (CO<sub>2</sub>) at the rate of 15 pounds per 1,000-gallon tank capacity at least four hours prior to the removal inspection. Introduce CO<sub>2</sub> into the bottom of each tank and allow it to permeate upward through the tank.
  - b. Tanks shall not be removed from the ground until contractor tests and certifies that the oxygen (O<sub>2</sub>) level is below 10 percent (%) or the LEL results do not exceed 5%.
5. Remove UST from the ground.
  - a. Clean and rinse the UST.
  - b. Provide confirmatory sample results to demonstrate the UST is clean of all residue.
  - c. Receive certification from UPA as documentation of UST being clean and eligible for solid waste disposal or recycling.
6. Dispose of the certified clean UST at a licensed landfill or recycling facility.

In addition to the steps above, the closure of a UST also requires the UST facility to collect soil samples from the soil beneath the UST, piping, and dispenser. All associated piping is removed and the trenches are inspected by the UPA during the removal inspection. The UPA receives results of soil samples and UST removal report within 30 days of UST removal. When soil sample results demonstrate no contamination is present (i.e., concentrations less than screening levels), the UPA provides final approval of the UST closure and the UST removal permit is closed. When soil sample results demonstrate contamination is present, the SWB advises UPAs to forward sampling results to the appropriate LUST cleanup agency—this may be a local agency or the appropriate Regional Water Quality Control Board.

## Significant Operational Compliance

### Key Findings:

- A statewide database, called California Environmental Reporting System (CERS), is in the development phase and will automatically derive SOC numbers based on UPA data entry.
- All UPAs should be using an electronic inspection form by mid-2015.
- All SOC applicable violations are included in rate calculation, regardless if the violation was resolved during the inspection.

SOC is a performance measure term used by USEPA and states since 2002 to measure compliance of federally regulated USTs. In May 2011, the SWB published Local Guidance (LG) Letter 164-2, *Reporting of Significant Operational Compliance*. The guidance letter is provided to the UPAs with explicit instructions for reporting SOC data to the SWB, as well as establishing a matrix for determining compliance with SOC categories.<sup>7</sup> The letter also identifies the schedule and format to report the semi-annual SOC numbers, identified as Report 6. The information required to be submitted in Report 6 is also listed in Title 23, California Code of Regulations (CCR), Section 2713(c) and in Title 27, CCR, Section 15290 (b). The Report 6 form is contained in the Appendix to Title 27, CCR. The SOC reporting statistics are determined using the following formula:

- $\frac{\#INSP - (\# \text{ Not SOC,RP Only})}{\#INSP} * 100 = \text{SOC Percentage for release prevention}$
- $\frac{\#INSP - (\# \text{ Not SOC,LD only})}{\#INSP} * 100 = \text{SOC Percentage for leak detection}$
- $\frac{\#INSP - (\# \text{ Not SOC,Both RP \& LD})}{\#INSP} * 100 = \text{SOC Percentage for release prevention and leak detection}$

### Significant Operational Compliance (SOC) Defined

Significant operational compliance generally means that the UST systems at a facility have the proper equipment/procedures in place, and are being properly operated and maintained in order to prevent and detect releases.

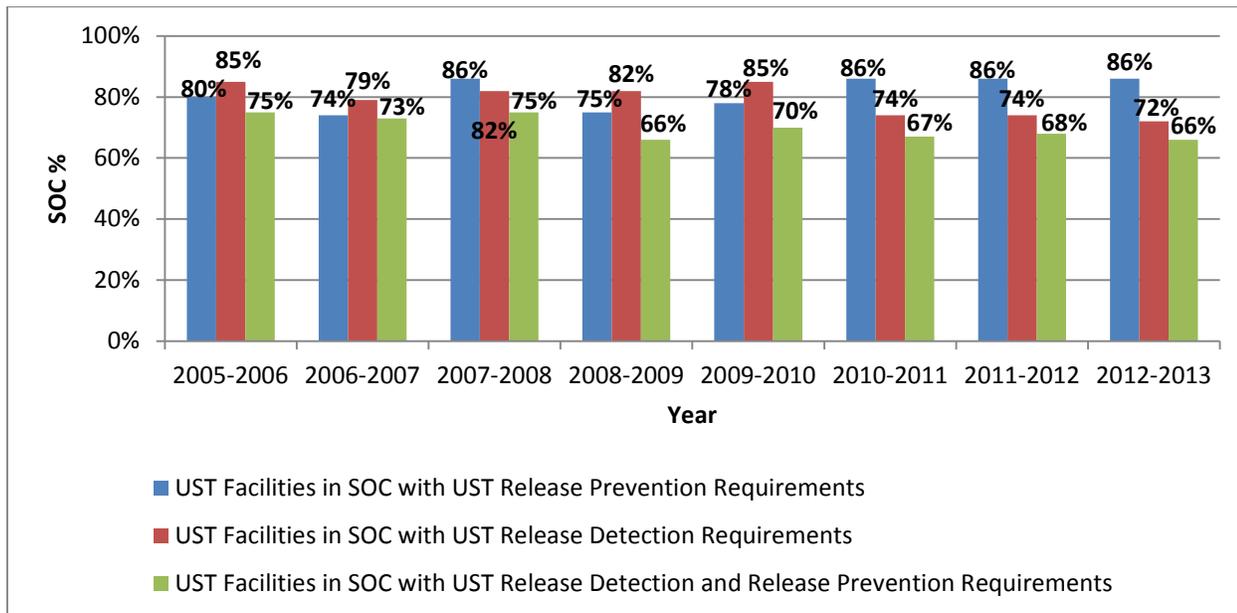
Source: USEPA OUST,  
<http://www.epa.gov/oust/cat/PMDefinitions.pdf>.

Release Prevention SOC statistics range between 66% and 86% (refer to Figure 4: SOC Compliance 2005 through 2013 – California). State reports do not clearly identify potential factors contributing to the low reported SOC rates and do not reflect the actual ongoing compliance status (i.e., prospective data) of the state’s UST Universe, and instead reflect compliance for the period of time between UST inspections (i.e., retrospective data). SWB explained the low SOC rates are likely to be a result of highly trained inspectors and robust UST requirements. As well as the overlap of the California Air Resources Board requirements to control vapor emissions using existing UST program equipment, which can create unintended compliance issues for UST operators. In California, whenever possible, all violations are corrected immediately after being identified during UST inspections. However, the violation is still marked on the inspections sheet. Therefore, any violations associated with SOC calculations will influence the overall SOC rate, even if the violations are not “active” at the time the inspection ends.

Another potential contributing factor to the low reported SOC rates in California is the number of local government regulations and codes applicable to USTs. The UPAs have traditionally relied upon local government regulations and codes to establish UPA-specific UST violation criteria. Each UPA would use their own list of violation codes for UST inspections, and it is possible that UPA-specific violations may have inappropriately caused a UST facility to be categorized as non-SOC. All three CUPAs visited during the onsite review stated that the local violations codes do not always translate easily to SOC violations (just as state codes do not always

translate to SOC violations), allowing for some differences in interpretation among UPAs. The SWB recognized this issue and published the guidance document *Violation Classification Guidance for Unified Program Agencies* in July 2006.<sup>8</sup> The guidance document defines the severity of violations as minor, Class I, and Class II, and defines certain terms, such as recalcitrant violator, chronic, significant threat, and economic benefit. Though this guidance document did not identify specific SOC violations, it established a framework for statewide consistency of violation interpretations.

**Figure 4: SOC Compliance 2005 through 2013 – California**



Sources:

1. *Semiannual Report of UST Performance Measures End of Fiscal Year 2013 (October 1, 2012 – September 30, 2013)*, Environmental Protection Agency, Page: 10, December 2013. <http://www.epa.gov/oust/cat/ca-13-34.pdf>.
2. *Semiannual Report of UST Performance Measures End of Fiscal Year 2012 (October 1, 2011 – September 30, 2012)*, Environmental Protection Agency, Page: 10, December 2012. <http://www.epa.gov/oust/cat/ca-12-34.pdf>.
3. *Semiannual Report of UST Performance Measures End of Fiscal Year 2011 (October 1, 2010 September 30, 2011)*, Environmental Protection Agency, Page: 10, November 2011, [http://www.epa.gov/oust/cat/ca\\_11\\_34.pdf](http://www.epa.gov/oust/cat/ca_11_34.pdf).
4. *Semiannual Report Of UST Performance Measures End Of Fiscal Year 2010 – As Of September 30, 2010*, Environmental Protection Agency, Page: 10, November 2010, [http://www.epa.gov/oust/cat/ca\\_10\\_34.pdf](http://www.epa.gov/oust/cat/ca_10_34.pdf).
5. *Semi-Annual Report Of UST Performance Measures End Of Fiscal Year 2009 – As Of September 30, 2009*, Environmental Protection Agency, Page: 10, December 2009, [http://www.epa.gov/oust/cat/ca\\_09\\_34.pdf](http://www.epa.gov/oust/cat/ca_09_34.pdf).
6. *FY 2008 End-of-Year Activity Report, UST Compliance Measures for End-of-Year FY 2008 (as of 9/30/08)*, Environmental Protection Agency, Page: 8, November 10, 2008. [http://www.epa.gov/oust/cat/ca\\_08\\_34.pdf](http://www.epa.gov/oust/cat/ca_08_34.pdf).
7. *FY 2007 End-of-Year Activity Report, UST Compliance Measures for End-of-Year FY 2007 (as of 9/30/07)*, Environmental Protection Agency, Page: 11, December 5, 2007. [http://www.epa.gov/oust/cat/ca\\_07\\_34.pdf](http://www.epa.gov/oust/cat/ca_07_34.pdf).
8. *FY 2006 End-of-Year Activity Report, UST Compliance Measures for End-of-Year FY 2006 (as of 9/30/06)*, Environmental Protection Agency, Page: 13, November 14, 2006. [http://www.epa.gov/oust/cat/ca\\_06\\_34.pdf](http://www.epa.gov/oust/cat/ca_06_34.pdf).

California maintains a robust set of UST design, construction, and operational requirements. The extent of the requirements, by itself, may have a negative impact on the state’s reported SOC numbers. For example, vacuum, pressure, or hydrostatic (VPH) monitoring is much more sensitive than other interstitial monitoring methods. Since 2004, VPH monitoring is a requirement for new USTs systems installed in California. The SWB reports that the sensitive nature of the VPH monitoring results in more frequent alarm conditions than the traditional passive monitoring systems. If the facility does not maintain a record of all the alarm conditions and documentation of the action taken to correct the alarm, the facility will be found in violation during their annual inspection. The violation would correlate to being a SOC release detection violation and therefore negatively affect SOC rates.

The statewide database, CERS, is in the development phase and is designed to automatically derive SOC numbers based on inspector input. Currently, each UPA is finalizing their local database to incorporate the 108 UST violation codes identified by SWB.<sup>9</sup> The 108 violation codes include particular violations associated with SOC release prevention and SOC release detection criteria. Ideally, once CERS is operational, inspectors will collect inspection data using an electronic form that automatically integrates the data into CERS. The SWB could then generate SOC numbers based on the violations reported in the electronic inspection form.

## Underground Storage Tank Universe

### Key Findings:

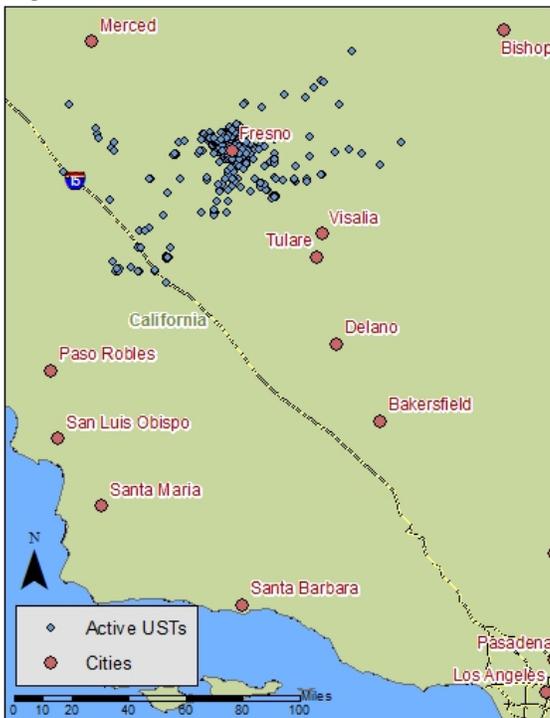
- The SWRCB oversees 14,249 active UST facilities that comprise 39,020 active UST systems.
- On a semi-annual basis, the SWRCB requires UPAs to submit up-to-date information on the size and SOC status of their local UST universes.
- Individual UPA data bases like the Envision Databases used by Sacramento and Fresno UPAs are utilized to track and archive compliance data pertaining to USTs.

The California UST universe is tracked at the local level by UPAs, with real-time data currently not available to the SWB or CalEPA. The total number of active facilities and active USTs operating in California can only be determined by contacting each UPA. However, the recently developed CERS database has the capability to track this information, and it promises to allow SWB, CalEPA and USEPA Region 9 to view both site-specific and program-wide UST data—in real time—once the database is fully populated. On a semi-annual basis, the SWB requires UPAs to submit up-to-date information on the size and SOC status of their local UST universes. These reports, also known as Report 6, are submitted to SWB and aggregated into a single report of the state’s UST universe.

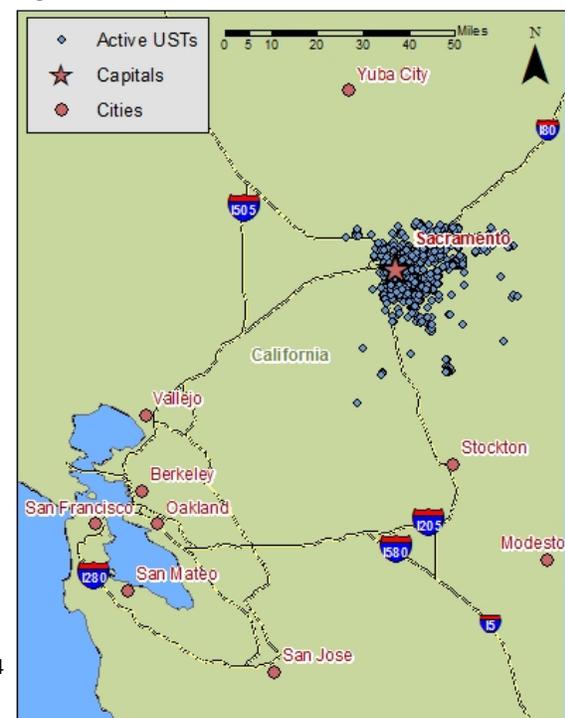
California protects the location of hazardous materials stored onsite and, therefore, UST location data is safeguarded by UPAs. However, UST locations by address and by latitude and longitude are stored in each UPA database. The Sacramento CUPA and the Fresno CUPA Envision databases were queried for UST locations, (refer to Figure 5: UST Distribution - Fresno CUPA and Figure 6: UST Distribution - Sacramento CUPA). Booz Allen was denied access to the Monterey CUPA database during the onsite review due to the county’s strict IT security policies.

An alternate database, GeoTracker, is available for public access. GeoTracker was first populated approximately 10 years ago to identify USTs within 1,000 feet of a drinking water well. Currently, GeoTracker is more actively used to identify unauthorized releases and to track cleanup cases throughout the state of California. Additional discussion of GeoTracker is presented below, in the UST Data base section.

**Figure 5: UST Distribution - Fresno CUPA**



**Figure 6: UST Distribution - Sacramento CUPA**



Source: Fresno CUPA database, accessed February 25, 2014.

Source: Sacramento CUPA database, accessed February 24, 2014.

A summary of active USTs is presented in Table 2: UST Universe Database Results, and presents results of database queries from CERS, SWB Report 6, Sacramento CUPA, Fresno CUPA, and Monterey CUPA. Table 3 presents the most recent public data published by SWB and provided by UPAs for the applicable data fields. In addition to the release data presented in Table 3, SWB published data in a 1999 report, *Advisory Panel Report on The Leak History of New and Upgraded UST System*, identifies the majority of releases (78%) originate from single-wall tanks.

**Table 2: UST Universe Database Results**

	SWB <sup>1</sup>	Sacramento CUPA <sup>2</sup>	Fresno CUPA <sup>3</sup>	Monterey CUPA <sup>4</sup>
Active UST Facilities	14,249	473	393	222
Active UST Systems	39,020	1,364	1,107	575
Temporarily closed	N/A	15	41	N/A
Permanently Closed	N/A	166	6,244	N/A
Single-walled Tanks	N/A	135	185	115
Single-walled Piping	N/A	N/A	54	29
Double-walled Tanks	N/A	869	1,040	460
Double-walled Piping	N/A	N/A	1,016	546
Government Owned Tanks	N/A	N/A	N/A	N/A
Oldest Tank	N/A	1958	1993	N/A
Biofuel USTs	N/A	23	N/A	3

\* Data is not yet completely loaded into CERS.. Totals reflect current available dataset, as of March 17, 2014.

N/A – Not available in database.

Sources:

1. CalEPA. 2014. *California Electronic Reporting System (CERS)*. Access March 17, 2014.
2. Sacramento Environmental Management Division. 2014. *Decade Software, Envision Connect, Active Tank Data Export*. Accessed February 18, 2014.
3. Fresno County Environmental Health. 2014. *Decade Software, Envision, Storage Tank Dispatch Center UST Export*. Accessed February 20, 2014.
4. Monterey County Environmental Health Department. 2014. *Monterey UST Database Query Result Report*. Provided by Bruce Welden. March 05, 2014.

**Table 3: Summary Information for Release Sources and Causes**

Release Source			Release Cause (# = Number, % = Percent of total number)																	
			Spill		Overfill		Phys/ Mec Damage <sup>4</sup>		Corrosion		Install Problem		Leak Detect Failure		Other <sup>5</sup>		Unknown		No Cause Reported	
#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Tank	28	30	1	4	0	0	0	0	11	39	0	0	0	0	1	4	15	54	0	0
Piping	15	16	0	0	0	0	0	0	4	27	0	0	0	0	0	0	11	73	0	0
Dispenser	4	4	1	25	0	0	0	0	0	0	0	0	0	1	25	2	50	0	0	
STP Area <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Prob	1	1	0	0	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other <sup>3</sup>	46	49	0	0	1	2	2	4	0	0	0	0	0	2	4	31	67	10	22	
<b>TOTAL</b>	<b>94<sup>1</sup></b>	<b>100</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>15</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>59</b>	<b>63</b>	<b>10</b>	<b>11</b>

1. There were 94 confirmed releases (report ran 10/4/13). 101 of the confirmed releases contained known source data collected using the SWB’s GeoTracker database. The SWB had 6,758 Active Cases as of September 30, 2013. 3,749 (55.5 percent) active cases were managed by nine Regional Water Quality Control Boards as the lead agency and 3,009 (44.5 percent) by the local agencies.

2. STP = Submersible Turbine Pump.

3. Other sources include fill riser, vent/vapor piping, and spill bucket identified in GeoTracker.

4. Physical/Mechanical damage cause includes Mechanical Equipment Failure and Structural Failure.

5. Other cause includes loose component identified in GeoTracker.

Source: CalEPA, SWB. 2013 (December). *Public Record Summary Information for Underground Storage Tanks*.

[http://www.SWB.ca.gov/water\\_issues/programs/ust/leak\\_prevention/public\\_record\\_sum\\_info.shtml](http://www.SWB.ca.gov/water_issues/programs/ust/leak_prevention/public_record_sum_info.shtml).

## UST Database

### Key Findings:

- California is currently compiling UST data into a single server-based data management system (i.e., CERS).
- According to the SWRCB, Envision software is the preferred database management software among UPAs, accounting for at least 75% of the database management software used by UPAs.
- The SWRCB developed approximately 108 violation codes that underwent several iterations of development, review, and approval, resulting in 37 specific violations used to determine SOC rates.

California currently utilizes several databases containing UST information: GeoTracker, CERS, and those managed by local UPAs, such as Envision®. A summary of each of these tools is described below.

### GeoTracker

GeoTracker is the SWB Internet-accessible database system used to track and archive compliance data from authorized or unauthorized discharges of waste to land, including unauthorized releases from USTs. The GeoTracker system combines relational databases, online compliance reporting features, a geographical information system (GIS) interface, and other features, such as standard reports and serves as a tool for tracking spills, cleanup actions, and facility history. SWB reported GeoTracker was a one-time upload of UST facility locations to identify UST facilities within 1,000 feet of a drinking water well. These facilities would then need to incorporate enhanced leak detection requirements.

### CERS Database

California is currently compiling UST data into a single server-based data management system (i.e., CERS). CERS is the central database management system for the state's entire Unified Program. Therefore, UST data management is only one of six programs migrating from local data management to a state-controlled system. Within CERS, CalEPA and SWB have designed the state's UST Universe database to track compliance, monitoring, and enforcement. The migration of relevant data requires UPAs and private industries to enter facility data through either the CERS website or, in some jurisdictions, through local UPA portals. Despite the best efforts of the CalEPA and SWB, not all UST data has been incorporated into CERS, and therefore, CERS does not provide an accurate accounting of the state's UST Universe at this time. CalEPA and the SWB anticipate data to be complete by the end of 2014.

Prior to the launch of CERS, UPAs had been responsible for developing and maintaining their own databases to track UST universe parameters identified as relevant to their programs. In recent years, many UPAs have ceased using computer-based document processing software in favor of the server-based Envision software suite developed by Decade. Envision and the latest iteration of the software, EnvisionConnect, is a longstanding public and environmental health data management software suite.<sup>10</sup> The software can be customized to generate specific data reports and communicate between government agencies, like UPAs, SWB, and emergency responders. According to the SWB, Envision software is the preferred database management software among UPAs, accounting for at least 75% of the database management software used by UPAs. One of the benefits for a UPA to use Envision is that it can "map" to CERS. This means old and new data from each individual UPA's Envision database is transmitted directly to CERS and integrated into the larger CERS dataset. The accuracy and completeness of the UPA data is wholly dependent on the robustness of their existing data tracking fields.

Envision software is still being rolled out throughout the state by the UPAs. This means data for all six Unified Programs is still being entered or modified in the local UPA Envision databases, resulting in a wide spectrum of

progress across UPAs for integrating data into CERS. For instance, Sacramento CUPA has integrated nearly all of their UST data into EnvisionConnect, while the Monterey CUPA has not begun to enter any of their UST data into EnvisionConnect. The Monterey CUPA reported its preference is to focus efforts on incorporating data from the other five Unified Programs into CERS and address the UST component of CERS after the SWB has finalized forthcoming guidance on data field mapping. Currently, the SWB is working to finalize legal authority of violation codes. Definitions within California Health and Safety Code (H&SC) Title 23, which assist in defining the 108 violation codes in CERS, however, the state does not recognize all the implied definitions of the violation terms. As a final step, SWB is required to petition CalEPA to modify codes to include the appropriate context of the violation.

According to SWB, the UST component of the CERS database is the most complex and contains the largest set of unique data fields. The SWB acknowledges the slow pace to incorporate UPA data into CERS. Several variables were identified by SWB and the three CUPAs visited during the onsite review as contributing to the slow transition to CERS. The SWB has defined specific “required” fields, which do not always correlate to fields historically tracked by UPAs within their preexisting databases (e.g., Envision, Envision Connect, MS Access, Oracle, SQL, etc.) that predate the requirement to manage UST data in CERS. These CERS required fields must be associated with UPA data, forcing UPAs to redesign their data collection processes, including development of new UST inspection forms. Additionally, some UST universe information incorporated into CERS, such as tank construction details, may or may not be an existing part of a UPA’s database. These UPAs are therefore not able to provide complete datasets when they do incorporate UST data into CERS.

Beyond the difference between UPA data management and CERS, there are also political considerations that have slowed the transition to CERS. The SWB developed 108 violation codes that underwent several iterations of development, review, and approval by state officials. This required existing definitions of UST terms to be modified and approved through the Office of the Secretary; a slow process. Additionally, now that the 108 violation codes are finalized in CERS, they have been associated with SOC reporting, resulting in 37 specific violations used to determine SOC rates. The UPAs have traditionally used local ordinances and codes to define violation codes. The SWB is requiring all UPAs to either modify their local violation codes, or associate the local codes to one of the 108 SWB violation codes. The primary challenge with this translation of violation codes is that SOC violations have not typically been identified by UPAs because local ordinances do not account for SOC data during their rulemaking process. Therefore, congruency between violation codes has not been consistent. All three CUPAs visited during the onsite review expressed that this process is more difficult than it appears because modifying local violation codes requires local government cooperation and changes to inspection checklists.

The CERS database has several advantages, including streamlined records management and data analysis. Once CERS is fully developed, agencies anticipate utilizing CERS for targeted enforcement and analysis of statewide compliance data. UPAs will be able to populate CERS via electronic forms and will no longer be required to develop annual summary reports. However, several inspectors from the CUPAs visited voiced concerns that electronic forms might reduce the level of interaction between a facility and inspectors. Inspectors further worried that preparations for facility inspections would require more time, data would be incomplete, and lengthy electronic forms would compromise efficient facility inspections.

The future completion of CERS and integration of all UPA data and all facility data is moving toward completion by mid-2015. At that time, SWB will require all UPAs and PAs to complete UST inspections using electronic forms (EnvisionConnect Remote).<sup>11</sup> As of January 1, 2014, only the Sacramento CUPA EnvisionConnect database is mature enough to begin the transition to electronic forms. Sacramento CUPA provide screen shots of the electronic UST inspection checklist and these are shown in Attachment A-3.

## Envision Databases

EnvisionConnect and Envision are the most popular UPA data management platforms because of their multi-function capabilities, including workflow tracking and exporting information into CERS. For instance, California requires annual monitoring certification for all UST systems. EnvisionConnect will automatically generate a courtesy notification letter reminding the facility that their certification testing is due based on the date the certification was last confirmed within the EnvisionConnect dataset. EnvisionConnect also can track enforcement actions and notify UPA inspectors of expired timelines for UST facilities to correct violations. Furthermore, UST facilities have, or will have, the capability to directly upload documents, such as monitoring certifications, into EnvisionConnect, instead of submitting them via email or fax. This is expected to save valuable time for UPA resources.

The Envision software is also capable of supporting add-on data management systems such as Filenet. Filenet is a scanned document repository system that provides digital images of documentation (e.g., inspection forms, correspondence letters, UST system test results), and associates these images to the specific UST facility. The Filenet system is linked to Envision so that a complete and accurate picture of the facility can be accessed from a single location.

## EPAct Status

The EPAct was the first major legislative effort since the adoption of Federal UST rules in 1988 to enhance state UST rules on a nationwide level. The UST provisions of the EPAct define funding grant guidelines to improve existing UST regulations. California implemented many provisions of the EPAct prior to its passage. A summary of the provisions, grant milestone dates and a timeline of when California amended state regulations is listed below, (refer to Table 4: EPAct Status at a Glance). A summary of California’s implementation of the EPAct is described in the following sections.

**Table 4: EPAct Status at a Glance**

EPAct Grant Milestone Dates	EPAct Grant Guidelines	California Rule Adoption Date
<b>EPAct Provision - Secondary Containment</b>		
Adopted regulation by 02/08/2007	<ul style="list-style-type: none"> <li>Requires states and territories to develop secondary containment requirements (if not selecting the Financial Responsibility and Installer Certification option).</li> <li>Requires that new or replaced tanks and piping within 1,000 feet of an existing community water system, or an existing potable drinking water well, be secondarily contained (this includes interstitial monitoring).</li> <li>Requires that new dispenser systems within 1,000 feet of an existing community water system, or an existing potable drinking water well, have under dispenser spill containment.</li> <li>Does not apply to repairs meant to restore a tank, pipe, or dispenser to operating condition.</li> </ul>	1998 <sup>2</sup> / 2000, 2001/ 2003
<b>EPAct Provision - Inspecting</b>		
Inspected older USTs by 08/08/2007 Completed first inspection cycle by 08/08/2010	<ul style="list-style-type: none"> <li>Requires states and territories to inspect all UST systems that have not been inspected since 12/22/1998.</li> <li>Requires states and territories to complete first three-year inspection cycle.</li> </ul>	1984
<b>EPAct Provision - Delivery Prohibition</b>		
Adopted regulation by 08/08 2007	Requires that states and territories develop delivery prohibition requirements, including criteria for determining, identifying, and reclassifying eligible UST systems ineligibility; providing notice to UST owners and operators and fuel suppliers; and determining the specific geographic areas subject to the requirements.	2004
<b>EPAct Provision - Operator Training</b>		
Adopted regulation by 08/08/2009 Implemented by 08/08/2012	<ul style="list-style-type: none"> <li>Requires that states and territories develop state-specific training requirements consistent with EPA's guidelines.</li> <li>Requires that states and territories require state-specific training requirements for all three classes of operators.</li> </ul>	2005
<b>EPAct Provision - Public Record</b>		
Begin gathering data 10/01/2007 Make data available to public 12/31/2008	Requires states and territories to maintain, update (at least annually), and make available to the public, a record of USTs regulated under this subtitle. The public record shall include (to the maximum extent practicable for each year) the number, sources, and causes of underground storage tank releases; the record of compliance by underground storage tanks in the state with Subtitle I or approved state program; and data on equipment failures.	2005
<b>Meets</b>		<b>Partially Meets</b>
		<b>Not Met</b>

Sources:

- 2005 Energy Policy Act (EPAct), Certification of Status Implementing EPAct Requirements as of April 29, 2013.
- CalEPA, SWB. 2004 (May). Summary of Training Requirements for Underground Storage Tank (UST) Professionals (CCR. Title 23, Chapter 16).
- CAL HSC. 1998. Chapter 6.7, Underground Storage of Hazardous Substances [25284].
- CAL HSC. 2005 (August). Design and Construction Requirements for Underground Storage Tanks Installed on or After July 1, 2004. [25290.1].
- CalEPA, SWB. 2009 (May). Instruction for Affixing Red Tags and Red Bags.
- CAL HSC. 2000. H&S Division 20, chapter 6.7, [ 25288(a)].
- CalEPA, SWB. 2013 (December). Public Record Summary Information for Underground Storage Tanks. [http://www.SWB.ca.gov/water\\_issues/programs/ust/leak\\_prevention/public\\_record\\_sum\\_info.shtml](http://www.SWB.ca.gov/water_issues/programs/ust/leak_prevention/public_record_sum_info.shtml).

## Interstitial Status

### Key Findings:

- In 1998, California implemented rules requiring new UST installations to be double-walled systems.
- Since July 2004, California has required all new UST systems to utilize vacuum, pressure, or hydrostatic (VPH) interstitial monitoring.
- As of January 1, 2000, all new USTs were required to be constructed with under dispenser containment (UDC).

In 1998, California implemented rules requiring new UST installations to be double-walled systems.<sup>12</sup> The requirement was not retroactive, allowing existing single-walled systems to remain in place. Since the introduction of the double-wall requirement, many single-walled systems have been removed or replaced by double-walled systems. Additionally, many single-walled systems have been reinforced with an interior lining. These tanks are still considered single-wall tanks. During the onsite review, SWB estimated the number of single-walled USTs remaining in California to be 10% of the UST universe, equivalent to roughly 3,900 USTs. Figure 7: Sacramento, Fresno, and Monterey CUPA Single-Wall/Double-Wall Tank Numbers (2013) provides a breakdown of each type of tank for the three CUPAs visited during the onsite review.

Building upon the 1998 double-wall requirement for new USTs systems, California required all new UST systems to utilize VPH interstitial monitoring since July 2004.<sup>13</sup> These systems are engineered to be liquid and vapor tight and continuously monitor both primary and secondary containment of USTs and their associated piping.

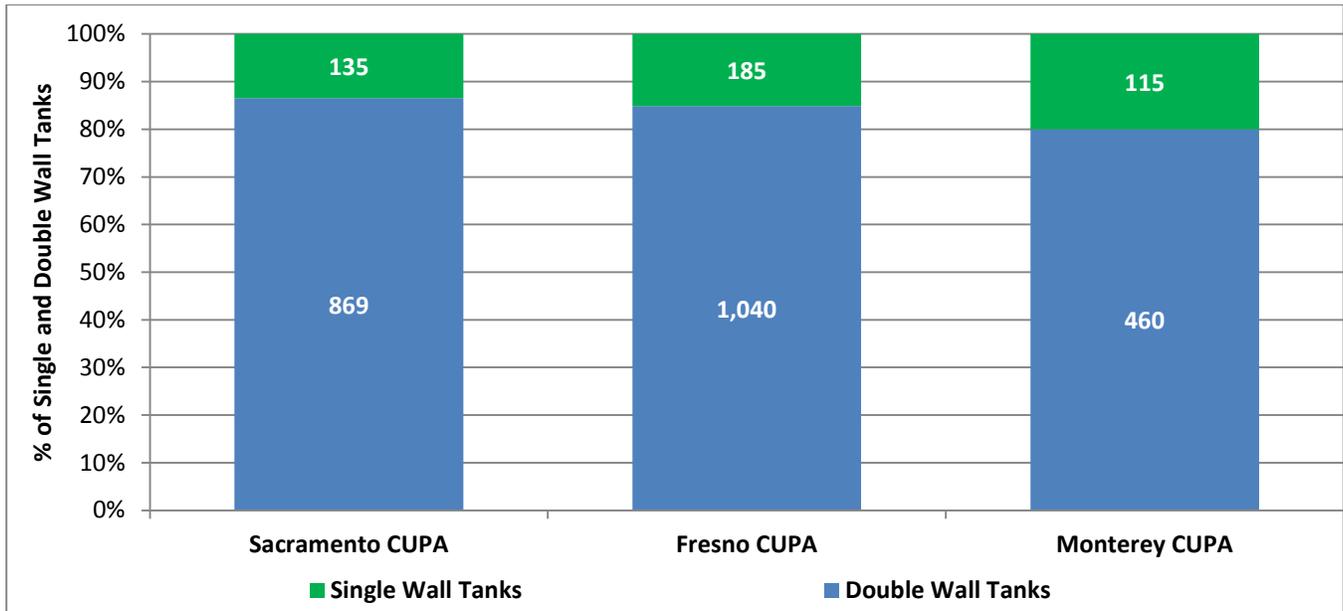
The VPH rule, similar to the 1998 double-wall rule, does not apply to existing systems. Therefore, VPH systems only account for approximately one-third of all USTs systems in California, or roughly 13,000 UST systems. VPH systems are expensive to install, and due to their sensitive nature, may require more frequent maintenance and financial resources. However, no new releases have been documented from VPH UST systems, to date. During the onsite review, the SWB and CUPAs reported that the UST facility Designated Operator must spend more time responding to alarm conditions due to the sensitivity of VPH monitoring. SWB indicated the elevated alarms may also be a result of poor installation or cheap components. The additional alarm conditions may influence a facility's ability to operate in SOC because the facility is required to maintain the records of the alarm conditions throughout the year and document the actions taken to correct the alarm conditions. The records are reviewed as part of the facility's annual inspection, and deficient record keeping is recorded as a violation associated with the release detection SOC category.

Under dispenser containment (UDC) is required in California for all UST systems installed after January 1, 2000. This rule also requires all USTs installed after July 1, 1987, and located within 1,000 feet of a public water supply to have UDC by July 1, 2001, and then to all other existing sites by December 31, 2003. The SWB relies on the GeoTracker database to determine if a UST system may be located within 1,000 feet of a public water supply well.

### Hydrostatic Monitoring Defined

According to California H&SC Title 23, Section 2611 defines Hydrostatic Monitoring "as a "leak detection method that continuously monitors the liquid level within a liquid-filled interstitial space of an underground storage tank. The term includes only those release detection systems that are capable of detecting a breach in the primary or secondary containment of the underground storage tank component(s) being monitored before the hazardous substance stored is released to the environment. To accomplish this, the liquid in the interstitial space shall be maintained at a pressure greater than the operating pressure found within the component(s) being monitored. This pressure may be achieved, for example, by adequately elevating the liquid reservoir or by pressurizing the liquid-filled interstice. Hydrostatic monitoring methods shall meet the requirements of section 2643, subdivision (f)."

**Figure 7: Sacramento, Fresno, and Monterey CUPA Single-Wall/Double-Wall Tank Numbers (2013)**



Source:

1. Sacramento Environmental Management Division. 2014. Decade Software, Envision Connect, Active Tank Data Export. Accessed February 18, 2014.
2. Fresno County Environmental Health. 2014. Decade Software, Envision, Storage Tank Dispatch Center UST Export. Accessed February 20, 2014.
3. Monterey County Environmental Health Department. 2014. Monterey UST Database Query Result Report. Provided by Bruce Welden. March 05, 2014.

## Inspection Program

### Key Findings:

- UST inspections in California are largely performed by UPAs, with the exception of two counties, Imperial and Trinity, in which the State Department of Toxic Substances Control (DTSC) implements the unified program.
- Whenever possible, the UPA UST inspection coincides with the annual monitoring system certification.
- Noncompliant facilities are provided an opportunity to correct the violations; however, the violations are still documented for SOC rate calculations.
- The SWRCB reported the UST inspection forms will be transitioned (mid-2015) to an electronic form.
- California UST inspectors are provided regular access to training and continuing education.
- UST inspectors in California averaged roughly 10 years of experience in performing UST compliance inspections, with the least experienced inspectors having at least five years' experience.

UST inspections in the state of California are largely performed by UPAs. There are two counties, Imperial and Trinity, in which the DTSC implements the Unified Program, including the UST Program. DTSC, like the SWB, falls within the umbrella of CalEPA. In all other instances the jurisdictional UPA or PA is completely responsible for scheduling and conducting UST inspections.

UPAs are required to inspect all UST facilities within their jurisdiction at least once a year.<sup>14</sup> The annual inspection serves as a compliance inspection to determine if the UST facility is being operated and maintained properly and in accordance with laws and regulations. Often times the UPA issues an operating permit following the annual compliance inspection (only compliant systems are issued an operating permit). In addition to the annual permit requirement, all UST systems are required to receive annual monitoring system certification. Whenever possible, the UPA coincides with the annual monitoring system certification. This is done in order to provide the inspector access to underground areas as required by the inspection. Correcting deficiencies identified by the inspector can be completed at the time of the inspection, but only the UST facility's licensed and certified Service Technician is allowed to make the repairs. Therefore, the facility is able to reduce operating costs by completing the two inspections at the same time and only needing the Service Technician onsite for one event. As previously noted, non-compliant facilities are provided an opportunity to correct the violations, however, the violation is still documented for SOC rate calculations. Upon the inspector's concurrence that the UST system is fully compliant, an operating permit can be issued to the facility.

### Statewide UPA UST Inspection Process

The UPA inspection process is summarized here as a general approach. It is important to note that although each UPA and each inspector may have variations to the process the information reviewed and the tasks performed during the inspection are consistent throughout the state. Below is an outline of the general UST inspection process; the annual permitting renewal process is represented in Figure 7: Annual Permit Renewal Inspection.

#### Pre-Inspection File Review

- Review the Permit to Operate and check the expiration date.
- Review the Permit Conditions.
- Determine if the UST Monitoring/Emergency Response Plan is current.
- Determine if the Unified Program Consolidated Forms have been submitted.
- Review the most recent inspection report.
- Review the most recent testing records.
- Determine if the fees are current by checking local database (e.g., Envision).

- Review tank records.
- Using GeoTracker, determine if the facility is located within 1000 feet of a drinking water well.

### Inspection Procedures

- Obtain an "Underground Storage Tank Official Inspection Report" and "Inspection Report Continuation Page" in case the inspector needs more space to write.
- Check all of the items indicated on the "Underground Storage Tank Official Inspection Report," and note any violations on the report as indicated. Note if a re-inspection will be required.
- Determine if the Permit to Operate conditions are accurate for the system as it currently exists.
- Obtain a signature from the operator and give a copy of the report to the operator.
- Give a copy of the inspection report to the service contractor if requested.

### Post-Inspection Follow-Up

- Update the tank records in the UPA database. Determine if the tank records are complete and accurate. If the records are not complete and accurate, add the appropriate information. If the records are complete, update the "deadline dates" to indicate future due dates for monitoring the system.
- If the owner is different from the operator, send a copy of the inspection report to the owner.
- If the facility is not in sufficient compliance with the Permit Conditions, a re-inspection may be scheduled.
- If the Permit to Operate has expired, or will be expiring soon, issue a new Permit to Operate if the facility is in sufficient compliance and the fees have been paid.
- If the Permit Conditions are not accurate, issue a new Permit to Operate if the site is in sufficient compliance and the fees have been paid.

When a facility is found to be out of compliance and a correction cannot be made while the inspector is onsite, the facility is granted 30 days to correct minor violations and seven days to correct significant violations (e.g., Class I and significant/recurrent Class II). Depending on the severity of the violation, the UPA will offer two options to the facility for providing documentation of the deficiency correction. For minor violations, the facility is often allowed to independently make the corrections, collect photo documentation of the correction, and submit the photographs to the UPA with a description of the actions taken to correct the deficiencies. The UPA inspector will review the information and make a determination of whether the action is satisfactory. For major violations, the UPA will visually inspect the correction. All three UPAs visited prefer that the facility send electronic documentation of the corrected deficiency. Other than a follow-up inspection at facilities demonstrating major violations with their UST system, there is no other "risk-based" prioritization of inspecting UST facilities. The UPAs reported that they do not have the inspector staff to perform numerous follow-up inspections without affecting their ability to annually inspect UST systems within their jurisdiction. Additionally, Sacramento and Fresno CUPAs reported their inspectors are knowledgeable of their UST universe and are aware of sites with a history of repeated violations.

Each UPA has the authority to develop a specific UST inspection form. Inspection forms are based on SWB guidance but consider local laws, codes, and ordinances. Therefore, variability exists among UPA inspection forms, particularly for violations. SWB reported UST inspection forms will be transitioned (mid-2015) to an electronic form. As of January 1, 2014, only the Sacramento CUPA has the ability to use the electronic form due to their advanced database integration with CERS. The same electronic inspection form will eventually be used by all UPAs and correlate to a single library of 108 violation codes. Approximately 37 of the 108 violation codes correlate to SOC violations. The standardization of violation codes and SOC entries will greatly assist SWB in tracking and reporting SOC data.

California UST inspectors are provided regular access to training and continuing education. Each inspector receives 24 hours of new hire training titled Basic Inspector Academy, led by CalEPA. Additionally, each UST inspector must be certified by the International Code Council (ICC) as a “California UST Inspector” by passing an exam. The state requires the certified inspector to participate in 16 hours every two years of continuing education units (CEUs). If an inspector is not able to meet the CEU requirement, they can re-take the ICC exam every two years. The annual California UPA Conference is a primary venue for UST inspectors to earn CEUs, and the UPA Forum Board provides technical training modules to UST inspectors so they can remain up to date on changing regulations and UST system components. All three CUPAs visited contended that the quality of UST inspections is fairly consistent across the state due to the stringent training, certification, and continuing education requirements for inspectors. For all three CUPAs visited, inspectors averaged roughly 10 years of experience performing UST compliance inspections, with the least experienced inspectors having at least five years’ experience. Table 5: CUPA Inspector Information provides a summary of inspector resources for the three CUPAs visited during the onsite reviews.

**Table 5: CUPA Inspector Information**

CUPA	Number of Inspectors	Average Years’ Experience	Qualifications and Training	Inspector to UST Ratio	Average Annual UST Inspections per Inspector
Sacramento County	5	10	ICC certification and 24 hours CEUs per year	5 to 1,364	272.8
Fresno County	4	9.25	ICC certification and 16 hours CEUs per year	4 to 1,107	221.4
Monterey County	8	10	ICC certification and 16 hours CEUs per year	8 to 575	71.9

*Source: Booz Allen Hamilton. 2014 (February). California EPAAct Onsite Review Interviews with , Sacramento CUPA, Fresno CUPA, and Monterey CUPA.*

Monterey County inspectors perform fewer inspections than their counterparts at the other CUPAs visited because they perform inspections of all Unified Program components while inspecting a facility. Monterey CUPA does this because it provides inspectors a broader range of general expertise without limiting the inspector’s knowledge of UST system compliance. Additionally, Monterey CUPA serves as one of the primary HazMat Emergency Responders. This additional responsibility also requires a greater understanding of environmental compliance regulations.

## Inspection Observations

**Key Findings:**

- The use of tablet computers by Sacramento CUPA significantly reduces time at the end of the inspection previously needed to enter UST facility and inspection data into the CUPA’s database.
- None of the California observed inspectors used photography to document UST inspections.

In order to establish a more comprehensive understanding of the inspection program across California UPAs, inspections performed by the Sacramento, Fresno, and Monterey Counties, Booz Allen contractor to USEPA Mr. Joe King, observed inspections between February 18, and 27, 2014 (refer to Table 6: California UST Inspectors Observed).

Mr. King observed one inspection per day, which included three in Sacramento County, three in Fresno County, and two in Monterey County. All inspectors followed roughly the same inspection procedures:

- Inspections in California are set up in conjunction with required annual monitoring re-certifications. The owner/operator is responsible for arranging a licensed and certified service technician to test and certify the operability of each tank’s monitoring system. The service technician is required to notify the county of the pending re-certification, prompting the UPA to schedule the inspection.
- Reviewed previous inspection reports and other documents on file prior to conducting the inspection. This includes identifying whether financial responsibility requirements were met and are up to date. Information regarding UST facilities across California is stored in a web-based system known as CERS. Owners/operators have access to the system and can upload current tank registration information, financial responsibility letter, test results, and employee certifications.
- Introduced himself/herself to the manager of the facility and explained the purpose of the inspection.
- Reviewed credentials of the Designated Operator (DO) and facility employees.
- The service technician, on behalf of the facility owner, opened all the tank top covers. The contractor tested all sensors, tank probes (if an audible alarm is used), line leak detectors, emergency stops, and the fail-safe as part of the monitoring system re-certification. The service technician also hydrostatically tested the fill spill buckets. The inspector observed these tests.
- Visually inspected the STP sump for accumulated liquids, cracks, holes, and seals. The inspectors’ verbal descriptions of what they observed (i.e., confirmation of open Schrader valves or boots pulled back to allow flow into the sump), did not always indicate a close visual inspection of the secondary containment piping configuration. The line leak detectors are confirmed for fuel compatibility, and all fittings and pipes are visually inspected for leaks.
- Examined dispensers for fitting leaks and UDCs for accumulated liquid.
- The contractor printed out test results (if applicable), alarm history, and system setup for inspector review.
- If steel tanks were present, the cathodic protection rectifier and associated records were reviewed.
- Twelve months of DO inspection records are reviewed, including alarm resolutions, maintenance, and automatic tank gauge (ATG) test results. ATG setup programming was reviewed if applicable. The findings either are written up on a carbon copy form or documented electronically using a tablet computer. A copy of the inspection checklist is provided to the facility manager. In Sacramento County, inspectors provide a printout from the tablet.

**Table 6: California UST Inspectors Observed**

Inspector	UPA Organization
Brion McGinness	Sacramento County
Douglas Osborn	Sacramento County
Jonathan Pollack	Sacramento County
Ted Piearcy	Fresno County
Sukhdeep Sidhu	Fresno County
Cory Welch	Monterey County

The California system of inspections allows UST facility contractors (e.g., service technicians) to perform monitoring recertification during the UPA UST inspection, which provides a more robust and consistent inspection process across the state. Testing performed onsite by the contractors allows the inspector to confirm functionality of all monitoring system components and that the spill bucket is tight, rather than only being able to review test results. The contractor can also correct issues as they are identified. For example, at one facility, a float was observed to be missing on the tank probe, and it was fixed immediately. The inspector noted the deficiency, but identified that it was resolved during the inspection and that no further action was necessary.

The use of tablet computers by Sacramento County significantly reduces time at the end of the inspection previously needed to enter UST facility and inspection data into the UPA database. All information captured on the tablet system was automatically synchronized with the database system when the inspector returned to the office. None of the California inspectors observed during the onsite review documented UST inspection observations using photography. In addition, UST location information, such as latitude and longitude was not kept on file for the tank facilities.

## Inspection Report Evaluation

### Key Findings:

- A review of the randomly selected reports showed an overall consistency with how inspections are currently reported.
- All forms were appropriately filled out, indicating that inspections were thoroughly completed.

The most recent inspection reports were requested from five randomly selected UST facilities from each UPA visited. These reports were reviewed to determine their consistency with inspection reports prepared during the inspections observed between February 18 and 27, 2014.

A review of the randomly selected reports showed an overall consistency with how inspections are currently reported. The randomly selected reports showed minor or no violations. The forms used by Sacramento County have changed, but capture mostly the same information as the other UPAs included in this evaluation. The inspection forms have a checklist that shows all of the items examined during the inspection. All forms were appropriately filled out, indicating that inspections were thoroughly completed.

## Biofuels Procedures for Compatibility Review

**Key Findings:**

- Biofuels are available to consumers in California, although not widely available.
- Currently, no UST systems have been rated by Underwriter Laboratories (UL) or other quality control research organizations for management of biofuels.

Biofuels are not widely available to consumers in California. SWB believes the lack of widespread availability of biofuel in California is due to low consumer demand. The three CUPAs visited expressed the same belief and explained very few biofuel stations within their jurisdictions. Additionally, an upward trending of non-traditional fuel types more popular with consumers which consists of a blended fuel mixture, that is marketed as a high quality fuel containing fuel additives and resulting in more efficient fuel combustion than E85 or E87.

The SWB is concerned about compatibility issues for UST systems storing biofuel. California has worked with National Workgroup of Leak Detection Evaluations and Leak Detection Manufacturers to create lists of leak prevention equipment compatible with certain biofuels, which is referenced when reviewing UST permit proposals for biofuel tank systems. Additionally, not all UST components have been rated by UL or other quality control research organizations for compatibility of biofuels. Therefore, SWB only allows manufacturers of UST components to provide a self-certification of compatibility for biofuels. Regulations require that a UST be approved by an independent testing organization and that a UST owner/operator use system components made of, and lined with, materials that are compatible with the hazardous substances stored in the UST. Since biofuels have been in use a relatively short period, the potential weaknesses of managing biofuels compatibility have not yet been fully realized. However, SWB believes because of its proactive approach to release prevention, the risk for releases caused by biofuel incompatibility is lower than other state UST programs because of more stringent leak detection and containment technologies being mandated over the years.

When a biofuel UST system is installed, the facility plans and UST system specifications are submitted to the UPA for review as part of the UST installation application. The UPA then reviews the biofuel UST construction plans to be certain that UST system components are compatible with the proposed biofuel. If components have not been tested and approved by UL or another quality control research organization, the application must include a certification letter from the equipment manufacturer that its equipment is compatible with the proposed biofuel.<sup>15</sup> SWRCB's interest in installing biofuel UST systems peaked after the federal and state governments ceased providing grant money for the installation of biofuel USTs.

## Enforcement

### Key Findings:

- The vast majority of enforcement cases are initiated by the UPA and completed within the local UPA's jurisdiction.
- The SWRCB, takes a lead role in enforcement cases that apply to operators with UST systems across multiple jurisdictions.
- Violations are classified into Minor Violations, Class I Violations and Class II Violation.
- The UST enforcement actions are categorized as informal and formal. Informal enforcement actions include Notices to Comply and Notices of Violations. Formal enforcement actions include red tag delivery prohibition or Administrative Enforcement Orders (AEO)s.

Both the SWB and the UPAs have the authority to pursue enforcement actions, and they operate in tandem to address different types of situations. Due to the role of the UPA as the purveyor of compliance inspections, the vast majority of enforcement cases are initiated by the UPA and completed within the local UPA's jurisdiction. The SWB, on the other hand, takes a lead role in enforcement cases that apply to operators with UST systems across multiple jurisdictions. Limitations of UPA UST inspectors are primarily based on local politics. Of the three CUPAs in this assessment, each CUPA utilized a slightly different enforcement process. The enforcement mechanism selected is, at times, a result of pressure to pursue informal enforcement over formal enforcement. Many times, the availability of legal counsel is critical to pursuing AEOs against recalcitrant facilities.

The process for determining which violations warrant an enforcement action is outlined in SWB guidance.<sup>16</sup> The SWB has also drafted 108 violation codes that correspond to UPA violations within CERS. In addition to the SWB guidance, each UPA will develop its own enforcement guidance, providing enforcement actions appropriate for the violation category.<sup>17</sup>

The SWB has defined the specific violation categories, listed below (refer to Table 7: Examples of UST Violation Classifications).<sup>18</sup>

1. **Class I Violation** – deviation from the requirements, or any regulation, standard, requirement, or permit, or interim status document condition adopted.
  - a. The deviation represents a significant threat to human health or safety or the environment because of one or more of the following:
    - i. Volume of hazardous waste.
    - ii. Relative hazardousness of the waste.
    - iii. Proximity of the population risk.
  - b. The deviation is significant enough that it could result in failure to accomplish any of the following:
    - i. Ensure the hazardous waste is destined for and delivered to, an authorized hazardous waste facility;
    - ii. Prevent releases of hazardous waste or constituents to the environment during the active or post closure period of the facility operation;
    - iii. Ensure the early detection of releases of hazardous waste or constituents;
    - iv. Ensure adequate financial resources in the case of releases of hazardous waste or constituents;
    - v. Ensure adequate financial resources in the case of releases of hazardous waste or constituents;
    - vi. Ensure adequate financial resources to pay for facility closure;
    - vii. Perform emergency cleanup operations of, or other corrective actions for releases.

2. **Class II Violation** – deviation from the requirements specified in Chapter 6.5 of Division 20 of the H&SC, or regulations, permit or interim status document conditions standards, or requirements adopted pursuant to that chapter, that is not a Class I violation. Or Class I violations that are chronic or committed by a recalcitrant violator.
3. **Minor Violation** – failure of person to comply with any requirement or condition of any applicable law, regulation, permit, information request, order, variance, or other requirement, whether procedural or substantive, or the unified program agency is authorized to implement or enforce. A minor violation does not include the following:
  - a. Violation that results in injury to person or property or that presents a significant threat to human health or the environment;
  - b. Knowing willful or intentional violation;
  - c. Chronic violation or committed by a recalcitrant violator;
  - d. Violation resulting in emergency response from the public safety agency;
  - e. Class I violation provided in H&SC Section 25117.6;
  - f. Class II violation committed by a chronic or recalcitrant violator as provided in H&SC Section 25117.6; and/or
  - g. Violation that hinders the ability of the unified program agency to determine compliance with any other applicable local, state, or federal rule regulation, information request, order, variance, permit, or other requirement.

**Table 7: Examples of UST Violation Classifications**

Class I	Class II	Minor
Tampering with monitoring equipment.	Failure to document a recordable release.	Failure to update or submit complete tank and facility forms.
Failure to repair non-functional monitoring equipment.	Mechanical monitoring device within the under dispenser containment is not operational.	No maintenance and monitoring records onsite.
Failure to report unauthorized release.	A device to remove liquid from the spill bucket is not available/functional.	Training records are not onsite, but employees were aware of the requirements.
Failure to repair secondary containment.	Timely repairs were not made following a failed secondary containment test.	One of 12 monthly inspections is not maintained onsite.
Failure to complete/pass secondary containment testing.	Owner/Operator did not designate an ICC certified UST operator.	-
Failure to properly close a UST.	Owner/Operator does not have monthly inspection records and all attachments.	-

Source: CalEPA, SWB. 2006 (July). Violation Classification Guidance for Unified Program Agencies.

UPA enforcement actions are based specifically on the classification and frequency of the violation. Minor violations compel the UPA to issue the facility a Notice to Comply (NOC). The NOC is a component of the UPA inspection form. Following each UST Inspection, the inspection checklist is submitted to the facility with the NOC (if appropriate, the NOC will note any observed violations). The NOC requires the facility to correct the minor violation and provide the UPA documentation of the correction. If the facility does this, the violation is cleared and the facility is in compliance. In the event the facility is not able to correct the violation within 35 days, a Notice of Violation (NOV) will be issued, replacing the NOC. If the facility still does not correct the violation after

receiving the NOV, the UPA may elect to perform another more comprehensive inspection of the entire UST system to determine if a larger compliance problem exists.

When a facility is determined to be out of compliance or refuses to correct the NOV for the minor violation, the original minor violation is upgraded to a Class II violation. Class II Violations are also communicated to the facility through a NOV letter. The facility is provided a specific timeframe for correcting the Class II Violation. If the facility does not make the correction as specified by the UPA, the Class II Violation is then escalated to a Class I Violation. Class I Violations are the most serious category of UST violations. When a Class I Violation is identified by the UPA, the UPA must also determine if there is an imminent threat to human health or the environment. If there is an imminent threat, the UPA will often issue an Immediate Corrective Action Order, and possibly a red tag. If there is not an imminent threat, the UPA will provide a less immediate schedule for corrective action, allowing the facility a reasonable amount of time to correct the Class I Violation. In the event the facility does not correct the Class I Violation, the UPA then has the option to proceed with legal actions. Each UPA consults first with the County District Attorney to determine when an AEO is necessary, and what legal actions the AEO may contain.

UST enforcement actions are categorized as informal and formal. Informal enforcement actions include NOC and NOV. These enforcement actions are generally a result of a single UST compliance inspection, but may also result from a facility not completing annual monitoring certification, or not providing other documentation as requested by the UPA. Formal enforcement actions include delivery prohibition and/or AEOs.

### **SWB Enforcement Overview**

The SWB Enforcement Program is separate from the SWB UST Compliance Program. The Office of Enforcement is typically responsible for multijurisdictional enforcement cases, often recommended by UPAs, and may handle precedent-setting cases or cases exhibiting gross negligence. The SWB is able to use in-house counsel to develop enforcement cases. Once the case is established and the appropriate enforcement action is chosen, the SWB may leverage the facilities local district attorney's office or begin coordination with the California District Attorney. The initial enforcement action developed by SWB presented to the district attorney for review may be accepted by either the local district attorney or the California District Attorney, who is not obligated to accept the enforcement case. It is the responsibility of SWB to effectively identify the legal framework for the enforcement case. In the event the enforcement case is approved by the California District Attorney, an AEO may be issued to the facility. The AEO is a binding enforcement order that requires the facility to correct the UST compliance deficiencies identified in the order. Often, the AEO imposes a financial penalty on the facility as well. The financial penalty can range from \$500 a day per violation, to \$5,000 per day per violation.<sup>19</sup>

## Delivery Prohibition

### Key Findings:

- Each UPA is granted discretion for their preferred enforcement action.
- Sacramento CUPA reported delivery prohibition is effective, but not the preferred method.
- Fresno CUPA reported they prefer to delivery prohibition enforcement over AEOs.
- The Monterey CUPA will pursue delivery prohibition when the facility is a repeat violator.

An enforcement tool available to SWB and UPAs is delivery prohibition. Delivery prohibitions are issued to facilities where operators have failed to comply with significant violations and/or pose an imminent threat to human health and the environment. SWB provides guidance for which violations may warrant the use of delivery prohibition. When a red tag is applied to a UST system, the violation(s) associated with the red tag must be corrected and associated documentation submitted to the UPA, (refer to Figure 8: SWB Red Tag Example). A flow chart for application and removal of a red tag is provided in Attachment A-4.<sup>20</sup>

Figure 4: SWRCB Red Tag Example



Source: Booz Allen Hamilton February 2014.

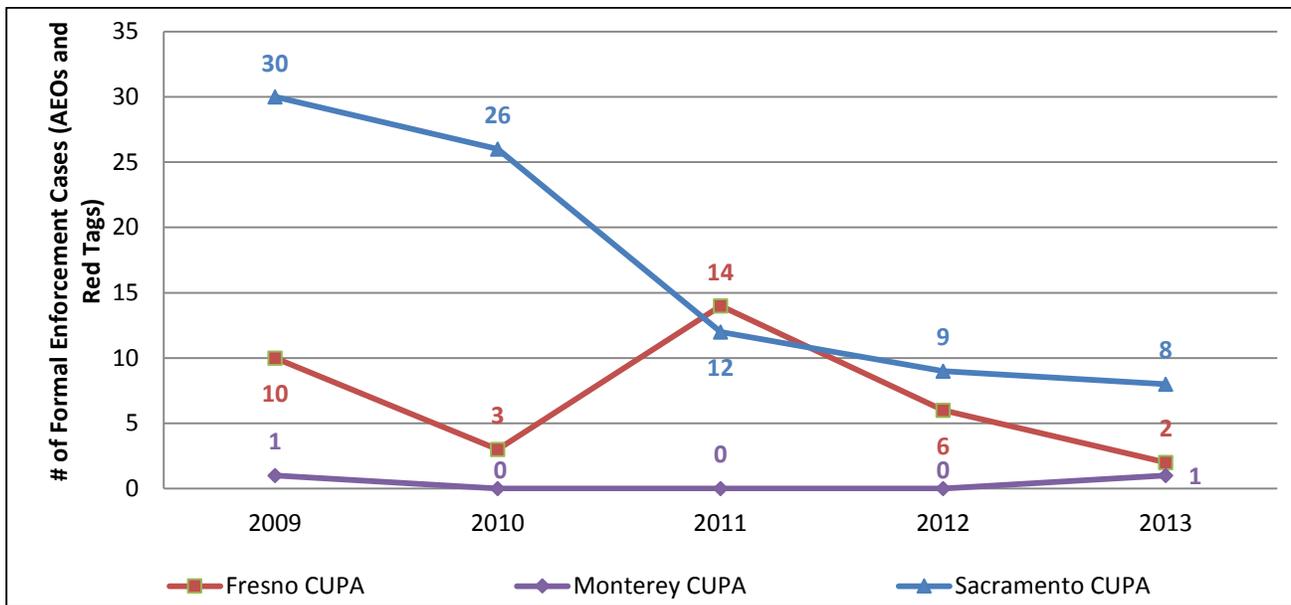
Each UPA is granted discretion for its preferred enforcement actions and local political environment. The Sacramento CUPA, one of the three CUPAs visited during the onsite review, maintains a proactive enforcement program. The CUPA reported its preferred method of enforcement is AEOs. This is because AEOs carry a larger financial penalty, and Sacramento CUPA believe facilities are more responsive to AEO financial penalties than red tags. When a facility is identified as potentially requiring an enforcement action, the UST inspector reviews the violations and justification for enforcement with the UST Program Manager. The Program Manager provides input and final approval of proceeding with the enforcement action. The review assists the Sacramento CUPA in managing a consistent enforcement program. Common violations that may initiate an AEO include leaks from the UST system, failure to complete annual monitoring certification within 90 days of the deadline, and tampering with UST monitoring equipment. In the event the AEO does not compel the UST facility to comply with UST regulations, Sacramento CUPA will then issue a red tag to the facility, halting the delivery of new fuel. Sacramento CUPA reported that red tags are effective, but not the preferred method.

The Fresno CUPA enforcement proceedings closely mirror SWB guidance for violations and the associated enforcement action. Due to local politics, the Fresno CUPA reported the majority of its enforcement actions are informal. Instead of AEOs and red tags, the Fresno CUPA will first attempt to resolve most UST compliance issues through a NOC or a NOV. When the informal enforcement actions do not compel the facility to correct violations, the Fresno CUPA may choose to escalate the case to formal enforcement actions. When this decision is made, Fresno reported they prefer to pursue delivery prohibition over AEOs. This is largely due to the control the CUPA retains over the red tag process versus the AEO process. Fresno CUPA reported, AEOs are reviewed by legal counsel who determine whether the AEO is pursued and may not include the CUPA in the final discussions. The Fresno CUPA also reported the decision to pursue enforcement may be clouded by local politics and the

desire to appease local constituents. Based on the Fresno CUPAs experience, red tags are the most effective formal enforcement tool and typically are issued within seven days of the facility receiving notice that they are eligible for red tag enforcement.

The Monterey CUPA uses a graduated enforcement process that adheres closely to SWB guidance. However, the Monterey CUPA also reported that it does not pursue formal enforcement regularly. The Monterey CUPA estimates they initiate one or two new formal enforcement cases each year. After the initial violation is identified during the UST inspection, a letter is sent to the facility notifying them of a 30-day period to correct the deficiency. The Monterey CUPA reported a high success rate with NOV letters, and most deficiencies are corrected by facilities after the NOV is received. However, in circumstances when the deficiency is not corrected in the 30-day period, or more typically, when the facility is a repeat violator and adamant about not correcting deficiencies, the Monterey CUPA will pursue delivery prohibition. When a red tag is issued, the Monterey CUPA reported the violation is typically corrected within seven days. In the very rare event the facility still does not correct the deficiency after the red tag is applied, the Monterey CUPA will pursue an AEO. Monterey reported they have a high success rate of prosecuting AEOs when the enforcement action is taken. The success was attributed to the local Monterey County District Attorney’s office, which is proactive in prosecuting enforcement cases; additionally, the community understands that their primary drinking water source is groundwater, which can be destroyed by unrestricted environmental contamination.

**Figure 5: Total Enforcement Cases – Sacramento, Fresno, and Monterey CUPAs (2009 – 2013)**



Sources:

1. Sacramento Environmental Management Division. 2014. Decade Software, Envision Connect, Active Tank Data Export. Accessed February 18, 2014.
2. Fresno County Environmental Health. 2014. Decade Software, Envision, Storage Tank Dispatch Center UST Export. Accessed February 20, 2014.
3. Monterey County Environmental Health Department. 2014. Monterey UST Database Query Result Report. Provided by Bruce Welden. March 05, 2014.

## Operator Training Status

### Key Findings:

- California requirements for operator training were developed independently of the EAct.
- Each type of “operator” must possess a particular type of ICC certification, which requires the operator to pass a standardized test, and be renewed every two years either by taking the ICC test or by maintaining at least 16 hours of continuing education units per year.
- Designated Operators (DOs) are recognized as EAct Class A/B Operators, and provide on-the-job training to the EAct Class C operators, called facility employees in California.
- Training records are reviewed by inspectors during an inspection. Records reviewed pertain to the DO, service technician, and UST facility employee (commonly called Class C operator) training.

California requirements for operator training were developed independently and prior to the EAct. As the second state in the nation with operator training rules, California training requirements are maintained for multiple stakeholders involved with UST compliance. Each type of “operator” must possess a particular type of ICC certification, requiring the operator to pass a standardized test. The ICC license must be renewed every two years by taking the ICC test or by maintaining at least 16 hours of continuing education units per year.

California requires facilities to identify DOs and to disclose to the UPA in a statement the name and licenses/certifications of their DO. DOs in California are recognized as EAct Class A/B Operators, who are responsible for maintenance and operation of the UST system, and are required to possess a license from the ICC. Designated Operators (DO) do not have the option to complete continuing education and must complete the ICC test to maintain their ICC certification. Additionally, the DO provides on-the-job training to the EAct Class C operators, called facility employees, who are regular employees of the UST facility. Facility employees are present at the facility day-to-day and have responsibility for addressing emergencies, such as spills and releases. A facility employee receives on-the-job training to manage such emergencies.

Similar to the DO training and certification program, California imposes a licensing and training program for service technicians. A “Service Technician” is often contracted by the UST facility owner to perform repairs and physical maintenance to the UST system. The Service Technician must possess an ICC license, manufacturer training for the UST system they maintain, as well as a Tank Testers License or appropriate Contractors State License Board (CSLB) License. At a UST facility, the Service Technician is the only party permitted to repair the UST system and perform annual monitoring testing

In addition to the training requirements placed on facility personnel, training and licensing is also required for UST installation contractors, cathodic protection testers, corrosion specialists, and UST inspectors. The task(s) each of these professionals is permitted to perform by the SWB is determined by the level of training received.

Each UPA and the inspectors observed reported the recertification requirement to be very beneficial to their knowledge of UST systems. The continuing education requirement is an incentive for inspectors to participate in pertinent training sessions rather than retake the ICC test. California does not endorse specific training programs for preparing for the ICC test. However, SWB does provide links to online resources, which may be helpful in preparing for the ICC exam. Compliance with training and certification requirements is determined during the annual UST system inspection by reviewing training records. Records include the DO, service technician, and UST facility employee (commonly called Class C operator) training certifications.<sup>21</sup>

**UST Training Certification Requirements****UST Owner**

- Submit a signed statement to the local agency stating that he/she understands and is in compliance with all applicable UST requirements; and notify the local agency of the Designated UST Operator for each facility owned.

**UST Designated Operator (DO)**

- Possess a current “California UST System Operator” certification issued by the ICC. Certification must be renewed every 24 months.
- Provide annual on-the-job training for facility employee(s). Facility employees must complete initial training within 30 days of the date of hire.
- Perform monthly visual inspections and record results on an inspection report, which must be provided to the owner/operator.

**UST Facility Employee**

- Must be trained by a DO “on the job” and onsite. Must know:
  - The operation of the UST system in a manner consistent with the facility’s best management practices.
  - The facility employee’s role with regard to the monitoring equipment as specified in the facility’s monitoring plan.
  - The facility employee’s role with regard to spills and overfills as specified in the facility’s response plan.
  - The name of the contact person(s) for emergencies and monitoring equipment alarms.

**UST Service Technician**

- Secondary Containment Testing
  - Possess a current Tank Testers License or appropriate Contractors State License Board (CSLB) License.
  - Obtain training and certification through the developer of the testing equipment or test method being used, or through the manufacturer of the secondary containment component being tested. Recertification is required at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.
  - Possess or work under the direct and personal supervision of an individual physically present at the facility that possesses a current “California UST Service Technician” certification issued by the ICC. Certification must be renewed every 24 months.
- Annual Monitoring Equipment Certification
  - Possess a current Tank Testers License or appropriate CSLB license.
  - Obtain training and certification from the monitoring equipment manufacturer and be recertified at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.
  - Possess or work under the direct and personal supervision of an individual physically present at the facility that possesses a current “California UST Service Technician” certification issued by the ICC. Certification must be renewed every 24 months.
  - Obtain or work under the direct and personal supervision of an individual physically present at the facility that has obtained a certificate(s) of training from the manufacturer(s) of the UST system component(s) being installed. Recertification is required at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.

- Possess or work under the direct and personal supervision of an individual physically present at the facility that possesses a current “UST Installation/Retrofitting” certification issued by the ICC. Certification must be renewed every 24 months.

**UST Inspector**

- Possess a current ICC “California UST Inspector” certification.
- Certification must be renewed every 24 months, by either passing the “ICC California UST Inspector” exam or satisfying equivalent criteria as approved by the State Water Resources Control Board UST Program Manager.
- UST inspectors must possess a current ICC “California UST Inspector” certification within 180 days from the date of hire.

**Cathodic Protection Tester**

- Possess a current certificate from the National Association of Corrosion Engineers (NACE) or the ICC, demonstrating education, and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried or submerged metallic piping and UST systems. NACE requires recertification every three years, while ICC requires recertification every two years.

**Corrosion Specialist**

- Possess a current certificate from NACE as a corrosion specialist, or be a registered professional engineer with a current certificate or license requiring education and experience in corrosion control of buried or submerged metallic piping and UST systems.

## Public Record Status

### Key Findings:

- Semi-annual reports are made available for public review on the SWRCB website.
- The SWRCB and each UPA provide the public access to inspection reports, program files, and other requested materials.
- UPAs and the SWRCB provide copies of program guidance documents, applications, fee schedules and other forms on their respective websites.

California provides public access to its UST records through a variety of methods. Semi-annual reports from the UPAs provide up-to-date information about their local UST universes. These reports, submitted to SWB, are aggregated into a single report on the state's UST Universe. The report is made available for public review on the SWB website and satisfies the requirement of the 2005 EPA Act.<sup>22</sup>

The SWB and each UPA provide the public access to inspection reports, program files, and other requested materials. The process to request access to the file materials requires the interested party to contact the UPA directly and submit a file review request form. The UPA retrieves hard copies of the files and schedules a time for the interested party to return to the UPA's office and review the files onsite. More recently, as the UPAs develop more sophisticated electronic databases, facility files are becoming available online and do not require any coordination with the UPA for the interested party to gain access. Two of the three UPAs visited during the onsite review maintain a publicly accessible database, in addition to their internal EnvisionConnect database. The public database does not contain UST location information, a California requirement to protect the facility from vandalism, theft, or other criminal/terrorist activities.

- Sacramento: <http://www.emdpublicrecords.saccounty.net/>
- Fresno: <http://www.fresnohealthinspections.org/>

In addition to providing historic facility records, UPAs and the SWB provide copies of program guidance documents, applications, fee schedules and other forms on their respective websites. The program documents are made available online for easy access to interested parties, such as current and potential UST facilities, UST operators, and the general public. The URL for accessing the documents is provided below for each agency visited during the onsite review.

- SWB: [http://www.SWB.ca.gov/water\\_issues/programs/ust/](http://www.SWB.ca.gov/water_issues/programs/ust/)
- Sacramento CUPA: <http://www.emd.saccounty.net/EnvComp/HM/UST.html>
- Fresno CUPA: <http://www.co.fresno.ca.us/DivisionPage.aspx?id=980>
- Monterey CUPA: <http://www.mtyhd.org/index.php/hd-news-and-events/hd-eh-news/hd-hazmat-news/item/underground-storage-tank-ust-program>.

Further expanding the electronic availability of information, CERS will be a portal for viewing existing UST universe data, compliance statistics, SOC data, and images of historic inspection reports and compliance documentation. The portal for public access is currently not available online and the estimated date of opening the public portal is unknown.

## Financial Responsibility

### Key Findings:

- The state of California requires all UST facilities to demonstrate Financial Responsibility (FR).
- In 1989, California passed the Barry Keene Underground Storage Tank Cleanup Fund Act, establishing the California State Fund (SF) as a mechanism of financial responsibility for UST systems.
- The SF has been scheduled to sunset in 2016. However, the California Legislature has drafted an extension to avoid the SF sunset, which is now awaiting the Governor's signature.
- The SF is only available for petroleum UST facilities and does not apply to other hazardous materials USTs.

The state of California requires all UST facilities to demonstrate FR. At the time the facility applies for a UST Operators Permit, a facility must submit a Certificate of Financial Responsibility, consisting of two documents.<sup>23</sup> One document is the Chief Financial Officer (CFO) Letter. The CFO Letter is a signed acknowledgement of a facility's net worth and ability to pay for investigation and cleanup following a spill or release from a UST system. The second document is the actual Certificate of Financial Responsibility. On this form, the facility identifies two mechanisms of coverage. One mechanism is the CFO Letter. The second mechanism may be private insurance, or the more common method of the California State Fund (SF). In addition to those mechanisms, the UST facility also has the option to utilize a financial test of self-insurance, a guarantee, a surety bond, or letter of credit. If choosing the SF (by far the most popular FR mechanism), the facility self-attests it will qualify for the SF in the event of a spill or release from a UST system.

The Certificate of Financial Responsibility includes other pertinent information, such as total dollar amount of FR and coverage limitations. In the rare event a facility chooses private insurance instead of the SF as the FR mechanism, the insurance documentation is submitted to the CUPA with the UST Operators Permit application. Private insurance is used so rarely that the SWRCB only employs one person to review the insurance coverage. All three UPAs visited during the onsite review indicated their inspectors currently do not possess the necessary knowledge and experience to assess private insurance coverage for UST systems. Therefore, in most cases the UPA needs assistance from SWB with reviewing the insurance documents for complying with FR requirements. When this occurs, the UPA will contact the SWB for assistance. Due to the availability of the SF, private insurance is reported to be mostly limited to larger corporate chain UST operators with multiple UST facilities across the United States and with the financial resources to insure or self-insure those assets.

When a release occurs and the responsible facility applies to use SF resources, the SWRCB Division of Financial Assistance reviews the application. During the review, each facility is assessed based on the financial resources of the UST owner and the number of employees. The facilities are ranked as priority A, B, C, or D. For a Priority B facility, the financial resources or the number of employees is the determining factor (refer to Table 8: State Fund Criteria and Deductible Information for details of each priority level).

### **The California State Fund**

In 1989, California passed the Barry Keene Underground Storage Tank Cleanup Fund Act, establishing the State Fund (SF) as a mechanism of financial responsibility for UST systems. In 1991, the California board of Equalization (BOE) began assessing a fee for each gallon of gas deposited and managed by each UST at a regulated UST facility in the form of a mill-tax. For each gallon of fuel delivered to a UST facility a fee of \$0.14 per gallon is paid to the Board of Equalization. Regardless of whether or not a UST facility claims private insurance or SF, each UST facility is still assessed the fee. For facilities participating in the SF, the fee is deposited in the SF and demonstrates the UST facility's ability to participate in the SF for investigation and cleanup. In the event a facility must utilize SF, the facility must also meet six criteria.

1. Owner of UST;
2. Release was unauthorized and the release has been confirmed by the CUPA;
3. Owner of the UST is the responsible party for cleanup;
4. Facility and UST system are in compliance with all permits;
5. Facility demonstrates proof of FR (e.g., Certificate of FR and CFO Letter); and
6. UST systems installed after 1991 must show they have paid all storage and maintenance fees to the Board of Equalization.

**Table 8: State Fund Criteria and Deductible Information**

Priority Level	Owner Type	Number of Employees	Annual Gross Receipts (3 year average)	Maximum Funding	Basic Deductible*
A	Residential	N/A	N/A	\$1.5 million per occurrence	\$0
B	Small Business and Government	≤100	≤ \$14 million		\$5,000
C	Large Business and Government	<500	N/A		\$5,000
D	All Others	>500	N/A		\$10,000

*\*There are instances when a deductible could be up to four times higher based on specific circumstances. Source: CalEPA, SWB. 2008 (June). UST Cleanup Fund: Frequently Asked Questions.*

## Conclusion

California has developed a reputation for advancing leak detection and leak prevention requirements that, in many instances, predated federal UST regulations. As such, many of the EPA provisions were already implemented in California. California has invested greatly in database management/public records access and inspector resources/training. The ICC license requirement for all UST inspectors, designated operators, and service technicians provides a consistent foundation of UST knowledge throughout the state. The additional requirement of continuing education goes further and provides an ongoing need for inspectors and other UST professionals to participate in formal and informal training sessions ensuring UST knowledge remains current.

California attributes its lower rate of new releases to a state requirement that all new UST systems installed be double-walled and monitored using VPH technology. In most cases, new releases occur from single-walled systems. The SWB reported they are unaware of a release occurring from any VPH system. California's annual facility inspection cycle combined with an annual monitoring system certification requires a comprehensive compliance audit each year. However, a result of UPAs facilitating facility inspections, data collection for compliance tracking purposes is decentralized. To overcome this limitation, the SWB is developing a database to unify all the UPA datasets into one warehouse. California's inspection form combines functional compliance, SOC, and enforcement actions into one document.

The CERS database, though still under development, will ultimately be the central database for the entirety of California's UST universe. Currently, CERS does not include a complete dataset as UPAs and general industry continues to populate the database. Therefore, state level agencies do not have a comprehensive understanding of the state's UST universe. Until finalized, each UPA will continue to maintain their preexisting database and integrate old and new data into CERS as quickly as possible to meet the upcoming deadlines for CERS completion by mid-2015.

During the onsite review, several incentive and disincentives for compliance were identified. Incentives for facilities to maintain compliant UST systems include financial penalty actions, delivery prohibition, and loss of income, DO monthly inspections, annual inspections, enhanced leak detection, and strict vapor recovery rules. A major disincentive for UST compliance is the costs of UST system maintenance (e.g., contracted Service Technician and annual monitoring certification costs) or UST system upgrades. The VPH systems are more expensive to install and operate than the traditional double walled systems, but they provide great value in preventing and detecting potential releases from UST systems. However, even with less sophisticated monitoring equipment available, many UST facilities are not investing financial resources into the cost of repairs and component replacement, other than what is required to maintain an active operating permit. The SF was also reported as a potential disincentive. The availability of money for investigation and cleanup may encourage facilities to take risks rather than meeting California's UST standards. When utilizing the SF, depending on the financial resources of the facility, a deductible as low as \$5,000 may be the most the facility will pay for access to the \$1.5 million dollar cap placed on a single UST release event.

Biofuels are not in high demand in California. To encourage the use of biofuels, the Federal and State Government initiated a grant program for facilities to install and upgrade systems to new biofuel systems. Challenges facing biofuel UST systems are largely related to compatibility. SWB accepts self-certification from UST component manufacturers stating which biofuels are compatible with particular UST components. The SWB maintains lists of UST components compatible with particular biofuels and requires any biofuel UST to abide by the compatibility standards. A second compatibility concern expressed by SWB is whether leak detection equipment designed for traditional UST systems is capable of detecting biofuel with the federally required degree of accuracy (95%).

Strengths	Opportunities
<ul style="list-style-type: none"> <li>• Implemented UST EPCRA provisions prior to 2005.</li> <li>• Double-walled UST systems are monitored using VPH technology attribute to few new releases.</li> <li>• Informal and formal regulatory and enforcement tools to encourage compliance.</li> <li>• Streamlined comprehensive inspections.</li> <li>• Electronic inspection checklists enhance efficiency.</li> <li>• UST inspectors have, on average, 10 years of experience and receive on-going training.</li> </ul>	<ul style="list-style-type: none"> <li>• Include photo documentation during inspections.</li> <li>• Maintain facility/inspector interaction despite more centralized data management.</li> <li>• Evaluate the need to standardize use of enforcement tools.</li> <li>• Utilize a consolidated permit in all local jurisdictions.</li> <li>• Support development of inspector knowledge regarding biofuel compatibility.</li> </ul>

## Recommendations

Based on the programmatic evaluation and observed inspections, the following recommendations are offered for USEPA Region 9 consideration.

- USEPA should recommend all California UPAs utilize a data management system that easily exports data to CERS, in order to support a streamlined data management approach.
- USEPA should recommend California UPAs utilize photo documentation during inspections.
- USEPA should recommend California agencies identify strategies for maintaining facility/inspector interaction despite a centralized data management system.
- USEPA should recommend California evaluate the need to standardize the use of enforcement tools throughout the state.
- USEPA should encourage California to accelerate the data integration into CERS by supporting UPA data validation.

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## Attachments

### Attachment A: Supporting Documentation

A-1 List of CUPAs and Pas

A-2 Permitting

A-3 Organizational Charts for Sacramento, Fresno, and Monterey CUPAs

A-4 Sacramento CUPA Electronic UST Checklist Screen Shots

A-5 Red Tag Flow Chart

### Attachment B: CERS Database Fields

## Attachment A-1: List of CUPAs and PAs

Alameda County Environmental Health	CUPA	1131 Harbor Parkway, Suite 240	Alameda, CA 94502-6577
Alpine County Health Department	CUPA	75-B Diamond Valley Road	Markleeville, CA 96120
Amador County Environmental Health	CUPA	810 Court Street	Jackson, CA 95642
Anaheim City Fire Department	CUPA	201 South Anaheim Boulevard, Suite 300	Anaheim, CA 92805
Bakersfield City Fire Department	CUPA	2010 H Street	Bakersfield, CA 93301
Berkeley City Toxics Management Division	CUPA	2118 Milvia Street, Suite 300	Berkeley, CA 94704
Butte County Environmental Health	CUPA	202 Mira Loma Drive	Oroville, CA 95965
Calaveras County Environmental Health	CUPA	Government Center, 891 Mountain Ranch Road	San Andreas, CA 95249
Colusa County Health and Human Services	CUPA	124 East Webster Street	Colusa, CA 95932
Contra Costa County Health Services Department	CUPA	4585 Pacheco Blvd	Martinez, CA 94553
Del Norte Environmental Health Division	CUPA	981 H Street	Crescent City, CA 95531
El Dorado County Environmental Management	CUPA	2850 Fairlane Court, Bldg C	Placerville, CA 95667-4100
El Segundo City Fire Department	CUPA	314 Main Street	El Segundo, CA 90245
Fremont City Fire Department	CUPA	P.O. Box 5006	Fremont, CA 94537-5006
Fresno County Department of Public Health	CUPA	1221 Fulton Mall, Third Floor	Fresno, CA 93775
Gilroy City Fire Department	CUPA	7351 Rosanna Street	Gilroy, CA 95020-6141
Glendale City Fire Department	CUPA	780 Flower Street	Glendale, CA 91201
Glenn County Air Pollution Control District	CUPA	720 North Colusa Street	Willows, CA 95988
Hayward City Fire Department	CUPA	777 B Street	Hayward, CA 94541
Healdsburg/Sebastopol JPA	CUPA	601 Healdsburg Avenue	Healdsburg, CA 95448
Humboldt County Division of Environmental Health	CUPA	100 H Street, Suite 100	Eureka, CA 95501
Imperial –County (See State DTSC)	CUPA	627 Wake Avenue	El Centro, CA 92243
Inyo County Department of Environmental Health Services	CUPA	P. O. Box 427(Mail)	Independence, CA 93526
Kern County Environmental Health Services Department	CUPA	2700 M Street, Suite 300	Bakersfield, CA 93301- 2370
Kings County Environmental Health	CUPA	330 Campus Drive	Hanford, CA 93230
Lake County Environmental Health	CUPA	922 Bevins Court	Lakeport, CA 95453
Lassen County Environmental Health	CUPA	1445 Paul Bunyan Road	Susanville, CA 96130
Livermore-Pleasanton FD	CUPA	3560 Nevada Street	Pleasanton, CA 94566
Long Beach Environmental Heath	CUPA	2525 Grand Avenue	Long Beach, CA 90815
Los Angeles City Fire Department	CUPA	200 North Main Street, Room 1780	Los Angeles, CA 90012
Los Angeles County Fire Department	CUPA	5825 Rickenbacker Road	Commerce, CA 90040-3027
Madera County Environmental Health	CUPA	2037 W. Cleveland Avenue, MS-E	Madera, CA 93637
Marin County Dept of Public Works, Waste Mgmt, CUPA	CUPA	899 Northgate Drive, Suite 100	San Rafael, CA 94903
Mariposa County Public Health Department	CUPA	5100 Bullion Street	Mariposa, CA 95338
Mendocino County Environmental Health	CUPA	501 Low Gap Road	Ukiah, CA 95482
Merced County Environmental Health	CUPA	260 East 15th Street	Merced, CA 95341

Modoc County Environmental Health	CUPA	202 West Fourth Street	Alturas, CA 96101
Mono County Health Department	CUPA	PO Box 476	Bridgeport, CA 93517
Monterey County Health Department	CUPA	1270 Natividad Road	Salinas, CA 93906
Napa County Department of Environmental Management	CUPA	1195 Third Street, Suite 210	Napa, CA 94559
Nevada County Environmental Health	CUPA	950 Maidu Avenue	Nevada City, CA 95959
Oakland City Fire Department	CUPA	1605 Martin Luther King Jr Way	Oakland, CA 94612
Orange County Environmental Health	CUPA	1241 East Dyer Road, Suite 120	Santa Ana, CA 92705
Oxnard City CUPA	CUPA	360 West Second Street	Oxnard, CA 93030
Petaluma City Fire Department	CUPA	11 English Street	Petaluma, CA 94952
Placer County Environmental Health	CUPA	3091 County Center Drive	Auburn, CA 95603
Plumas County Environmental Health	CUPA	270 County Hospital Road, Suite 127	Quincy, CA 95971
Riverside County Department of Environmental Health	CUPA	4065 County Circle Drive, Room 104	Riverside, CA 92503
Roseville City Fire Department	CUPA	401 Oak Street, Suite 402	Roseville, CA 95678
Sacramento County Environmental Management Department	CUPA	10590 Armstrong Avenue, Suite A	Sacramento, CA 95655
San Benito County Health Department	CUPA	1111 San Felipe Road, Suite 101	Hollister, CA 95023
San Bernardino County Fire Department	CUPA	620 South E Street	San Bernardino, CA 92415-0153
San Diego County Department of Environmental Health	CUPA	PO Box 129261	San Diego, CA 92112-9261
San Francisco City & County Public Health Department	CUPA	1390 Market Street, Room 210	San Francisco, CA 94102
San Joaquin County Environmental Health	CUPA	1868 East Hazelton Avenue	Stockton, CA 95205-6232
San Leandro City	CUPA	835 East 14th Street	San Leandro, CA 94577
San Luis Obispo County Environmental Health	CUPA	2156 Sierra Way	San Luis Obispo, CA 93406
San Mateo County Environmental Health	CUPA	2000 Alameda de las Pulgas, Suite 100	San Mateo, CA 94403
Santa Barbara County Environmental Health Services	CUPA	225 Camino del Remedio	Santa Barbara, CA 93110
Santa Clara City Fire Department	CUPA	1675 Lincoln Street	Santa Clara, CA 95050
Santa Clara County Environmental Health	CUPA	1555 Berger Drive, Suite 300	San Jose, CA 95112-2716
Santa Cruz County Environmental Health	CUPA	701 Ocean Boulevard, Suite 312	Santa Cruz, CA 95060
Santa Fe Springs Fire-Rescue	CUPA	11300 Greenstone Avenue	Santa Fe Springs, CA 90670
Santa Monica Fire Department	CUPA	333 Olympic Drive 2nd Floor	Santa Monica, CA 90401
Santa Rosa City Fire Department	CUPA	2373 Circadian Way	Santa Rosa, CA 95407
Shasta County Environmental Health	CUPA	1855 Placer Street, Suite 201	Redding, CA 96001
Sierra County Human Services Department	CUPA	202 Front Street PO BOX 7	Loyalton, CA 96118
Siskiyou County Community Development	CUPA	806 South Main Street	Yreka, CA 96097
Solano County Environmental Health	CUPA	675 Texas Street, Suite 5500	Fairfield, CA 94533
Sonoma County Fire & Emergency Services Department	CUPA	2300 County Center Drive, Suite 221-A	Santa Rosa, CA 95403
Stanislaus County Environmental Resources	CUPA	3800 Cornucopia Way, Suite C	Modesto, CA 95358
State Department of Toxic Substances	CUPA	Acts as the CUPA in Imperial and Trinity Counties	

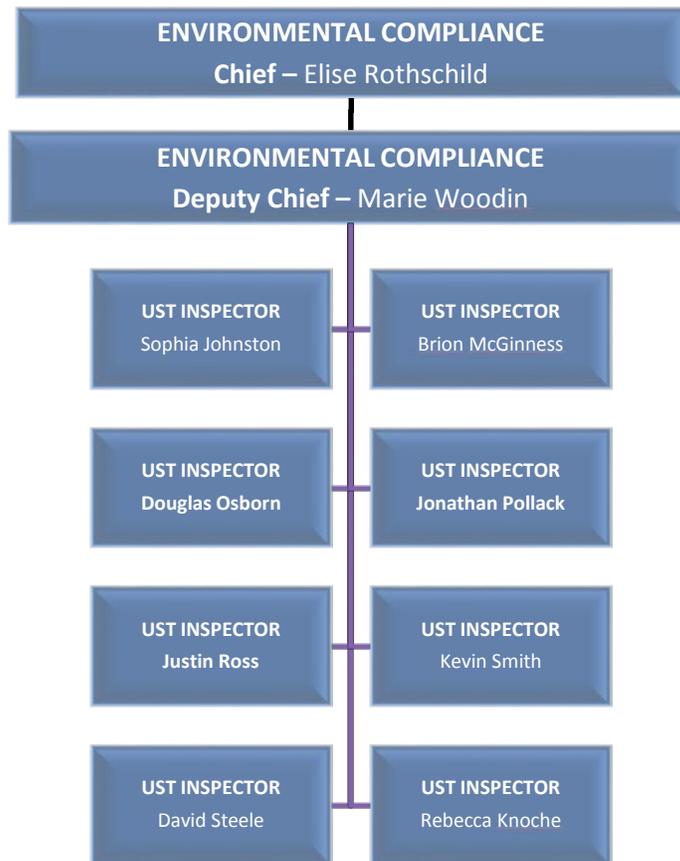
Control (DTSC)			
Sunnyvale Department of Public Safety	CUPA	505 W. Olive Ave, Suite 150	Sunnyvale, CA 94086
Sutter County Environmental Health	CUPA	1130 Civic Center Boulevard	Yuba City, CA 95993
Tehama County Environmental Health	CUPA	633 Washington Street, Room 36	Red Bluff, CA 96080
Trinity County (See State DTSC)	CUPA	8800 Cal Center Drive	Sacramento, CA 95826
Tulare County Environmental Health	CUPA	5957 South Mooney Boulevard	Visalia, CA 93277
Tuolumne County Environmental Health	CUPA	2 South Green Street	Sonora, CA 95370
Union City Environmental Programs	CUPA	34009 Alvarado-Niles Road	Union City, CA 94587
Ventura County Environmental Health	CUPA	800 South Victoria Avenue	Ventura, CA 93009
Vernon Health & Environmental Control Department	CUPA	4305 Santa Fe Avenue	Vernon, CA 90058
Victorville City Fire Department	CUPA	P.O. Box 5001	Victorville, CA 92393-5001
Yolo County Environmental Health	CUPA	137 N. Cottonwood Street, Suite 2400	Woodland, CA 95695
Yuba County Environmental Health Department	CUPA	915 8th Street, Suite 123	Marysville, CA 95901
Alhambra Fire Department	PA	301 North First Street	Alhambra, CA 91801
Burbank Fire Department	PA	311 East Orange Grove Avenue	Burbank, CA 91502
Compton Fire Department	PA	201 South Acacia Avenue	Compton, CA 90220
Corona Fire Department	PA	400 S Vicentia Aveune #215	Corona, CA 92882
Costa Mesa Fire Department	PA	2803 Royal Palm Drive	Costa Mesa, CA 92626
Culver City Fire Department	PA	9770 Culver Blvd	Culver City, CA 90232
Downey Fire Department	PA	11111 Brookshire Avenue	Downey, CA 90241
Fountain Valley Fire	PA	10200 Slater Avenue	Fountain Valley, CA 92708
Fullerton City Fire Department	PA	312 East Commonwealth	Fullerton, CA 92632
Garden Grove City Fire	PA	11301 Acacia Parkway	Garden Grove, CA 92840
Huntington Beach Fire Department	PA	2000 Main Street	Huntington Beach, CA 92648
Los Angeles County Agricultural Commissioner/Weights and Measures	PA	12300 Lower Azusa Road	Arcadia, CA 91006
Los Angeles County Department of Public Works	PA	900 South Fremont Avenue	Alhambra, CA 91803
Los Angeles County Fire Department (La Habra)	PA	5825 Rickenbacker Road	Commerce, CA 90040-3027
Milpitas City Fire Department	PA	455 East Calaveras Boulevard	Milpitas, CA 95035
Monrovia Fire Department	PA	141 East Lemon Avenue	Monrovia, CA 91016
Mountain View Fire Department	PA	1000 Villa Street	Mountain View, CA 94041
Newport Beach City Fire Department	PA	3300 Newport Boulevard	Newport Beach, CA 92659
Orange City Fire Department	PA	176 South Grand Street	Orange, CA 95866
Palo Alto City Fire Department	PA	250 Hamilton Avenue	Palo Alto, CA 94301
Pasadena Fire Department	PA	215 N Marengo Ave #195	Pasadena, CA 91001-1530
Redondo Beach Fire Department	PA	401 South Broadway	Redondo Beach, CA 90277
Riverside City Fire Department	PA	3900 Main Street,3rd Floor	Riverside, CA 92522
San Luis Obispo City Fire Department	PA	2160 Santa Barbara Avenue	San Luis Obispo, CA 93401
Santa Clara County Fire Department	PA	14700 Winchester Boulevard	Los Gatos, CA 95032
Santa Paula Fire Department	PA	970 E Ventura St	Santa Paula, CA 93060

Torrance Fire Department	PA	3031 Torrance Boulevard	Torrance, CA 90501
Ventura City Fire Department	PA	1425 Dowell Drive	Ventura, CA 93003

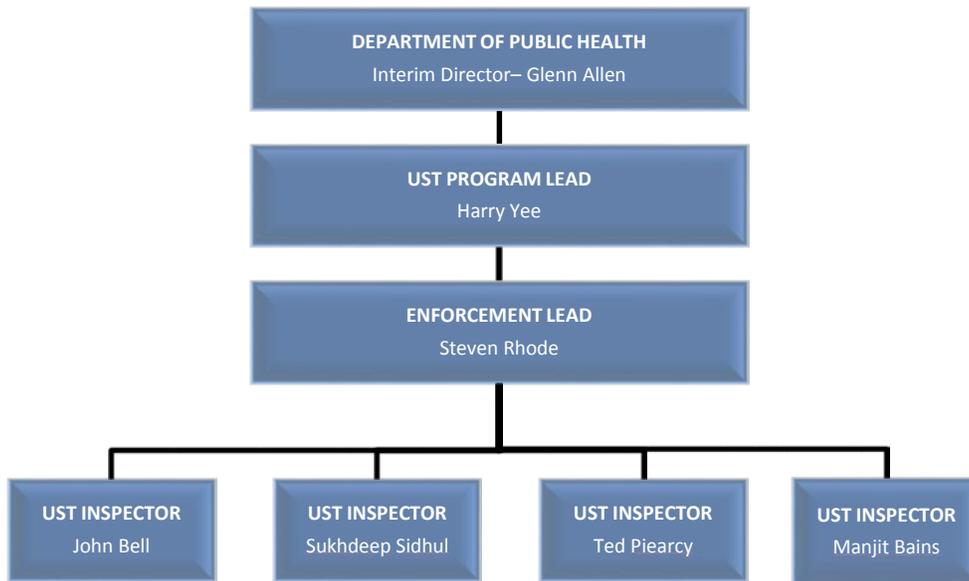
Source: CalEPA SWB. 2014. Unified Program Regulator Directory. <http://cersapps.calepa.ca.gov/public/directory/>. Accessed: March 31, 2014.

## Attachment A-2: CUPA Organization Charts

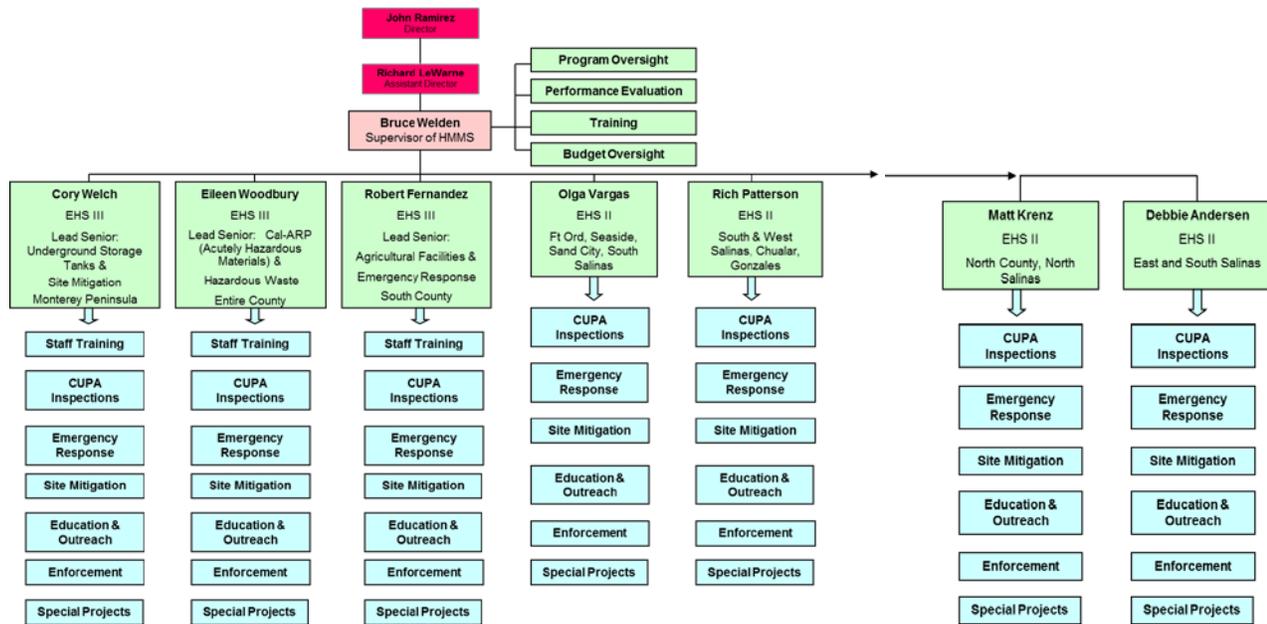
### Sacramento CUPA Organizational Chart



## Fresno CUPA Organizational Chart



# Monterey CUPA Organizational Chart



## Attachment A-3: Permitting

### Exhibit 1: Sacramento UST Permit Action & Required Documentation

#### Common Permit Actions/Documentation Required

(UST installation, upgrade, repair or installation or modification for cathodic protection)

- Plan submittal/review
- Sacramento County Consolidated Application for a Permit to Install, Upgrade or Repair a UST
- Business Owner/Operator Identification
- UST – Facility Form
- UST – Tank Form 1 & 2 (one per tank)
- Payment to Sacramento County EMD for appropriate fees
- UST Written Monitoring Plan form

#### Additional Permit Action/Documentation Required

(UST installation, upgrade, repair or installation or modification for cathodic protection)

##### UST Installation

- Three (3) copies of drawings showing all components, including manufacturer and model numbers
- UST installation form, Certificate of Compliance
- Hazardous Materials Plan
- Certificate of Financial Responsibility
- Work plan for ELD
- Well installation applications for any observation wells in the UST excavation, if applicable

##### UST Upgrade

- Three (3) copies of drawings showing all components, including manufacturer and model numbers

##### UST Repair

- No additional action/documentation is required

##### Installation or Modification of Cathodic Protection

- Sacramento County UST Cathodic Protection Addendum

*Source: Sacramento County Environmental Management Division. 2012 (February). Permit Application Package for Installation, Upgrade or Repair of UST Systems.*

**Exhibit 2: Fresno UST Permit Action & Required Documentation**UST Installation

- a. Permit application shall be obtained in person by the tank owner or the owner's representative. The permit application requires the following information:
  - Name, address, and license number of all contractors working on the project
  - Name, address, and phone number of the site/tank owner
  - Tank size and product to be stored
  - Current copies of valid contractor Worker's Compensation Insurance, contractor's licenses, and a contractor Statement of Qualifications on file with the Fresno County Department of Community Health.
- b. Permit fee payment and three (3) sets of plans shall be submitted along with the completed permit application including the following:
  - Scaled site plan, including all tanks, piping runs and existing structures
  - A complete equipment list which includes manufacturer name and model number
  - Tanks construction features (e.g., steel double wall tank)
  - Interstitial monitoring method
  - Corrosion protection method
  - UST excavation backfill material specifications
  - Overfill and overspill protection methods.
- c. Required Inspections:
  - Tank Installation inspection.
  - Primary piping testing for tightness hydrostatically at 150 percent of design operating pressure or pneumatically at 110 percent of design operating pressure. The pressure shall be maintained for a minimum of 30 minutes and all joints shall be soap tested.
- d. Secondary Piping:
  - Secondary vent, and if applicable, vapor recovery piping shall be tested for tightness hydrostatically or pneumatically at 3-5 psi. The pressure shall be maintained for a minimum of 30 minutes all joints shall be soap tested. A pneumatic test on the complete tank and product delivery system shall be conducted. The pressure shall be 3-5 psi and shall be maintained for a minimum of 30 minutes and all unused openings and risers at the tank shall be soap tested.
- e. Final Inspection:
  - Presence of overfill protection shall be verified.
  - All monitoring equipment shall be tested.
  - The following documents shall be submitted and reviewed:
    - Unified Program Consolidated Forms (Formerly SWB Forms A, B, and C)
    - Passing tank, line, and if applicable line leak detector tests
    - UST Monitoring/Emergency Response Plan
    - Evidence of Financial Responsibility.

*Source: Fresno County Environmental Health. 2011 (September). Inspection and Enforcement Program Plan.*

**Exhibit 3: Monterey UST Permit Action & Required Documentation**UST Installation or Repair

- a. Complete and submit UST repair or installation permit application including the following:
  - Operating Permit Application
  - Facility Information Form
  - Operating Permit Application
  - Tank Information Form
  - Underground Storage Tanks Certification of Installation/ Modification Form.
- b. Obtain any additional permits from the Local Building Department, Fire Department, and the Monterey Bay Unified Air Pollution Control District.
- c. Contractors performing UST work must submit:
  - Contractor License
  - Site Safety Plan
  - International Code Certified (ICC) Certificate
  - Manufacturers Certifications
  - Proof of Workers Compensation Coverage.
- d. Monterey CUPA conducts review of the UST repair and installation application.
- e. Upon approval of the UST repair or installation application, work may begin at the site.
- f. After installation, facility submits the following items to the CUPA for final review and approval:
  - UST Monitoring Plan
  - Financial Responsibility Form
  - Designated Operator Form
  - Underground Storage Tanks Certification of Installation/ Modification Form
  - Site Map
  - Hazardous Material Owner Operator Form
  - Business Activities Form
  - Business Response Plan
  - Hazardous Materials and Chemicals Form.
- g. UST Operating Permit issued to facility.

*Source: Monterey County Environmental Health Department. 2009 (August). Underground Storage Tank Construction/Repair Permit Application.*

# Attachment A-4: Sacramento CUPA Electronic UST Inspection Checklist Screenshots

County of Sacramento • Environmental Management Department • Environmental Compliance Division  
 10590 Armstrong Avenue, Suite A • Mather, CA 95655 • Voice (9am – 5pm): 916/875-8550 • FAX: 916/875-8513 • On the Web: <http://www.emd.saccounty.net>

## Checklist Summary of Violations for Underground Storage Tanks

### For All Tank & Piping Systems (Page 1 of 3)

(Emergency Generator, Single-Walled & Vaulted Also Require Checklist Addendum for Less Common Systems)

FACILITY ID#:		SPECIALIST:	INSPECTION DATE:	
DBA/FACILITY NAME:			ADDRESS:	

**ALL UNDERGROUND**

**TANK & PIPING SYSTEMS**

**INSTRUCTIONS:**

1. Priority Corrective Action violations must be corrected within 14 days; all other violations must be corrected within 30 days, 23 CCR 2712(f), (unless otherwise noted on the Notice To Comply).
2. Proof of correction must be received by EMD within 19 days for Priority Corrective Action violations and within 35 days for all other violations (unless otherwise noted on the Notice To Comply). Complete and submit the Return To Compliance Statement on the back of this checklist.

Facility status is evaluated for each item on this Checklist as follows:  
 C= Compliance V= Violation NA= Not Applicable RV= Repeat Violation

Violation Code	Authority	Requirement	Facility Status			
			C	V	NA	RV
<b>General Permit Provisions, Recordkeeping &amp; Document Submittal</b>						
U125	CHSC 25284(a) & 23CCR 2712(i)	UST has a current Permit to operate and permit is maintained on-site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U127	23CCR 2711	Adequate completion / submission of UST Facility Form and UST Tank Form(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U128	CHSC 25286(c)(9), & 25299.41	UST Facility Form shall include the State Board of Equalization (BOE) UST Storage Fee Account Number issued to the tank owner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U132	23CCR 2632, 2634 or 2641 & 2712(i)	Adequate completion / submission of UST written monitoring plan and UST response plan for unauthorized releases with copies of both plans on-site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U133	23CCR 2711(a)(11)	Adequate completion / submission of financial responsibility documents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U134	23CCR 2712(b)	Written records for monitoring and maintenance kept on site 3 years; 5 years for equipment calibration/maintenance and written performance claims; 6 ½ years for cathodic protection system maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U135	23CCR 2715	Adequate completion / submission of owner statement indicating UST compliance and designated operator.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U136	23CCR 2715	Designated operator is certified to perform monthly visual inspections and train facility employees in proper operation and maintenance. UST owner or operator shall maintain accurate records of inspections on-site for 12 months.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Release Reporting Requirements</b>						
U140	23CCR 2650, 2651, 2652	Owner / operator has properly notified EMD of any unauthorized release and / or any activities that may result in an unauthorized release.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U141	23CCR 2650, 2651, 2652	Owner / operator has properly recorded any unauthorized release and / or any activities that may result in an unauthorized release.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Tank System</b>						
U150	CHSC 25286 & 23CCR 2661	Repairs, upgrades and/or changes to the UST system (including monitoring system) have been properly reported, recorded (e.g. EMD Approval / Permit) and tested.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U151	CHSC 25291(a) or 23CCR 2662(b)	USTs and product pipe have secondary containment except for USTs containing motor vehicle fuel (MVF), installed before 1/1/84; MVF pipe, installed before 7/1/87; and MVF safe suction pipe, vent pipe, and vapor recovery pipe, installed before 7/1/03.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U152	23CCR 2635(b)	Tank has approved methods of spill containment (spill bucket has minimum capacity of 5 gallons with a means to empty and corrosion protection).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U153	23CCR 2635(b)	Tank has an approved method of overflow prevention (e.g. flapper valves).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U154	23CCR 2636(g)	UST system is equipped with an approved method of under dispenser containment (UDC) that is continuously monitored.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U155	23CCR 2630(d) & 2641(a)	Secondary containment system is equipped with a monitoring device capable of detecting a hazardous substance leak from the primary containment at the earliest possible opportunity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U156	CHSC 25291(e)	Facility contains means for the owner or operator to properly remove water from secondary containment system. Water removed from secondary containment is analyzed and disposed of properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U157	23CCR 2632	Annular space continuously monitored and connected to an audible and visual alarm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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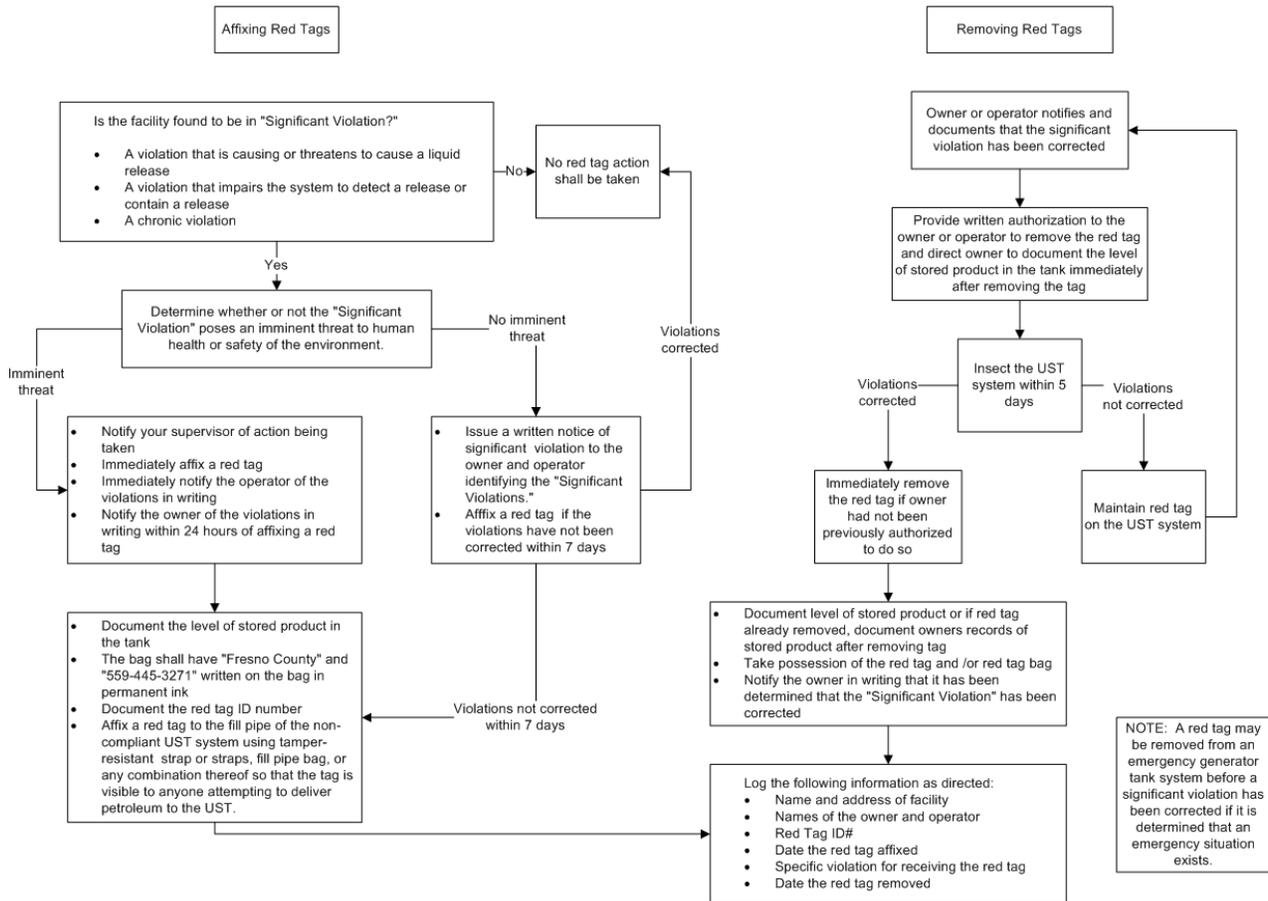
<b>Checklist Summary of Violations for Underground Storage Tanks</b> <b>For All Tank &amp; Piping Systems</b> <span style="float: right;">(Page 2 of 3)</span>						
(Emergency Generator, Single-Walled & Vaulted Also Require Checklist Addendum for Less Common Systems)						
FACILITY ID#:		SPECIALIST:		INSPECTION DATE:		
DBA/FACILITY NAME:			ADDRESS:			
<b>ALL UNDERGROUND</b>  <b>TANK &amp; PIPING SYSTEMS</b>		<b>INSTRUCTIONS:</b> 1. Priority Corrective Action violations must be corrected within 14 days; all other violations must be corrected within 30 days, 23 CCR 2712(f), (unless otherwise noted on the Notice To Comply). 3. Proof of correction must be received by EMD within 19 days for Priority Corrective Action violations and within 35 days for all other violations (unless otherwise noted on the Notice To Comply). Complete and submit the <u>Return To Compliance Statement</u> on the back of this checklist.  Facility status is evaluated for each item on this Checklist as follows: C= Compliance V= Violation NA= Not Applicable RV= Repeat Violation				
Violation Code	Authority	Requirement	Facility Status			
			C	V	NA	RV
<b>Piping Systems</b>						
<b>All Pressurized Piping</b>						
U160	23CCR 2636(f)(2) & 2643(c)(1)	Pressurized piping is equipped with a line leak detector that is certified by a licensed / certified contractor every 12 months with test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Double-walled Pressurized Piping</b>						
<b>Option 1: Continuous monitoring + automatic shut-off feature</b>						
U161	23CCR 2636(f)	Piping has all of the following: 1. Under dispenser containment and a continuous monitoring system that either shuts down the turbine <b>or</b> stops flow at the dispenser <b>AND</b> shuts down the turbine if a leak is detected. 2. A fail-safe mechanism for piping outside of the under dispenser containment. 3. A line leak detector as of November 9 <sup>th</sup> , 2004.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Option 2: Continuous monitoring + audible / visual alarm feature</b>						
U162	23CCR 2636(f)	Piping has all of the following: 1. Under dispenser containment and a continuous monitoring system that activates an audible / visual alarm <b>or</b> stops the flow at the dispenser. 2. A line leak detector. 3. An annual 0.1 gph line tightness test. Test results sent to EMD within 30 days of test date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Double-walled Suction &amp; Gravity Piping</b>						
U163	23CCR 2636(f)	Secondary containment for piping, including under dispenser containment, has a continuous monitoring system that activates an audible/visual alarm <b>OR</b> stops the flow of product at the dispenser when a leak is detected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Single-walled Pressurized Piping</b>						
U164	23CCR 2643(c)	Piping has a line leak detector (LLD) capable of detecting a 3.0 gph leak at 10 psi within one hour. The LLD shall restrict or shut off the flow of product or trigger a visual and audible alarm. LLD performs 0.2 gph release detection test monthly <b>or</b> an annual 0.1 gph test is conducted. LLD test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Single-walled Conventional Suction &amp; Gravity Piping</b>						
U165	23CCR 2643(d)	Any single-walled conventional piping is tested every three years to ensure a 0.1 gph release detection threshold. Test results submitted to EMD within 30 days. Piping monitored daily, monthly for Emergency Generators, for presence of air due to leaks (e.g. pump skipping/overspeeding or erratic flow) with written records of such kept on site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U166	CCR 2643(e)	Any single-walled gravity flow piping (excluding vertical drops) is tested every two years with a 0.1 gph release detection threshold at a pressure designated by the equipment manufacturer. Test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Safe Suction Piping</b>						
U167	23CCR 2636(a)(3) & 2641(b)	Single-walled or double-walled safe / European suction is sloped so that the contents of the piping drain back into the storage tanks and only one check valve is located directly below the suction pump. Construction can be verified. Such piping is exempt from monitoring requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Checklist Summary of Violations for Underground Storage Tanks For All Tank & Piping Systems <span style="float: right;">(Page 3 of 3)</span> (Emergency Generator, Single-Walled & Vaulted Also Require Checklist Addendum for Less Common Systems)						
FACILITY ID#:		SPECIALIST:		INSPECTION DATE:		
DBA/FACILITY NAME:			ADDRESS:			
<b>ALL UNDERGROUND</b>  <b>TANK &amp; PIPING SYSTEMS</b>		<b>INSTRUCTIONS:</b> 1. Priority Corrective Action violations must be corrected within 14 days; all other violations must be corrected within 30 days, 23 CCR 2712(f), (unless otherwise noted on the Notice To Comply). 2. Proof of correction must be received by EMD within 19 days for Priority Corrective Action violations and within 35 days for all other violations (unless otherwise noted on the Notice To Comply). Complete and submit the <u>Return To Compliance Statement</u> on the back of this checklist.				
Facility status is evaluated for each item on this Checklist as follows: C= Compliance V= Violation NA= Not Applicable RV= Repeat Violation						
Violation Code	Authority	Requirement	Facility Status			
			C	V	NA	RV
Testing and Certifications						
Monitoring System Certification						
U170	23CCR 2638	Monitoring equipment is certified by a licensed / certified contractor as operable and is maintained in accordance with manufacturer's instructions every 12 months. Test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary Containment Testing						
U171	23CCR 2637	Secondary Containment test initially conducted by 12/31/02 or within 6 months of installation and every 36 months thereafter. Test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhanced Leak Detection Testing						
U172	23CCR 2640	Tanks systems having any single-walled component located within 1,000 feet of a public drinking water well has a program of enhanced leak detection or monitoring.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
U173	23CCR 2644.1	Tank systems having any single-walled component located within 1,000 feet of a public drinking water well performs enhanced leak detection every three years after initial implementation. Test results for system submitted to EMD within 60 days of test date.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
U174	CHSC 25292.5	Double-walled tank systems installed before July 1, 2003 located within 1000 feet of any public drinking water well has a one time program of enhanced leak detection or monitoring prior to January 1, 2005.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodic Protection Systems						
U175	23CCR 2635(a)(2) & 2660	System is cathodically protected and tested by cathodic protection tester within 6 months of installation and every 3 years thereafter and impressed current system inspected every 60 days. Test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Bucket Testing						
U176	CHSC 25284.2	Spill buckets tested every 12 months. Test results submitted to EMD within 30 days of test date.	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Observations / Recommendations						
OBS/REC	None	Any comments entered with this code are observations or recommendations only and are not violations. Such information is educational or suggested preventative practice but is not currently required.				

## Attachment A-5: Fresno County Red Tag Issue and Removal Flow Chart

### Red Tag Procedures



## Attachment B: CERS Database Fields

### UST Facility Information Fields

Field Name	Database Feature
<b>Subsection: Facility Information Header</b>	
CERS ID	Data Entry Field
Facility ID	Data Entry Field
Facility Name	Data Entry Field
Facility Street Address	Data Entry Field
Facility City	Data Entry Field
Facility Zip Code	Data Entry Field
<b>Subsection: General UST Facility Permit Info</b>	
Type of Action	Data Entry Field
UST Facility Type	Data Entry Field
BOE Number	Data Entry Field
Permit Holder Notification Information	Data Entry Field
Total Number of USTs	Data Entry Field
Indian or Trust Land	Data Entry Field
Supervisor of Division, Section, or Office	Data Entry Field
<b>Subsection: Property Owner</b>	
Name	Data Entry Field
Phone	Data Entry Field
Mailing Address	Data Entry Field
City	Drop Down List
State	Drop Down List
Zip Code	Drop Down List
Country	Drop Down List
<b>Subsection: Tank Owner</b>	
Name	Data Entry Field
Phone	Data Entry Field
Mailing Address	Data Entry Field
City	Drop Down List
State	Drop Down List
Zip Code	Drop Down List
Country	Drop Down List

Field Name	Database Feature
Type	Drop Down List
<b>Subsection: Tank Operator</b>	
Name	Drop Down List
Phone	Data Entry Field
Mailing Address	Data Entry Field
City	Drop Down List
State	Drop Down List
ZIP Code	Drop Down List
Country	Drop Down List
<b>Subsection: Petroleum UST Financial Responsibility Mechanism(s)</b>	
Self Insured	Data Entry Field
Guarantee	Data Entry Field
Insurance	Data Entry Field
Surety Bond	Data Entry Field
Letter of Credidation	Data Entry Field
Exemption	Data Entry Field
Fund and CFO Letter	Data Entry Field
Fund and CD	Data Entry Field
Government Mechanism	Data Entry Field
Other	Drop Down List
Other Description	Data Entry Field
<b>Subsection: Certification/Applicant Information</b>	
Date Certified	Data Entry Field
Applicant Name	Data Entry Field
Applicant Title	Data Entry Field
Applicant Phone	Data Entry Field
<b>Subsection: Submittal/Acceptance Information</b>	
Date Submitted to CERS	Data Entry Field
Date Accepted by Regulator	Data Entry Field
<b>Subsection: Regulator Information</b>	
Regulator Name	Drop Down List
Regulator Type	Drop Down List

**UST Tank and Monitoring Plan Information Fields**

Field Name	Database Feature
<b>Subsection: Facility Information and Location</b>	
CERS ID	Data Entry Field
Facility ID	Data Entry Field
Facility Name	Data Entry Field
Facility Street Address	Data Entry Field
Facility City	Drop Down List
Facility ZIP Code	Drop Down List
<b>Subsection: General UST Tank Permit Info</b>	
Type of Action	Data Entry Field
Tank ID #	Data Entry Field
Tank Manufacturer	Data Entry Field
Tank Configuration	Data Entry Field
Tank Capacity In Gallons	Data Entry Field
Date UST System Installed	Data Entry Field
Date UST Permanently Closed	Data Entry Field
Date Existing UST Discovered	Data Entry Field
Number of Compartments in the Unit	Data Entry Field
Additional Description	Data Entry Field
<b>Subsection: Tank Use and Contents</b>	
Tank Use	Data Entry Field
Specify Other Tank Use	Data Entry Field
Tank Contents	Data Entry Field
Specify Other Petroleum	Data Entry Field
Specify Other Non-Petroleum	Data Entry Field
<b>Subsection: Tank Construction</b>	
Type of Tank	Drop Down List
Tank Primary Containment Construction	Data Entry Field
Other Primary Containment Construction	Data Entry Field
Tank Secondary Containment Construction	Data Entry Field
Other Secondary Containment Construction	Data Entry Field
<b>Subsection: Tank Overfill Prevention</b>	
Audible/Visual Alarms	Data Entry Field
Ball Float	Data Entry Field

Field Name	Database Feature
Fill Tube Shut-Off Valve	Data Entry Field
Exempt	Data Entry Field
<b>Subsection: Product/Waste Piping Construction</b>	
Piping Construction	Data Entry Field
Piping System Type	Data Entry Field
Primary Containment Construction	Data Entry Field
Other Primary Containment	Data Entry Field
Secondary Containment	Data Entry Field
Other Secondary Containment	Data Entry Field
Piping/Turbine Containment	Data Entry Field
<b>Subsection: Vent Piping Construction</b>	
Primary Containment Construction	Data Entry Field
Other Primary Containment	Data Entry Field
Secondary Containment	Data Entry Field
Other Secondary Containment	Data Entry Field
<b>Subsection: Vent Piping Transition Sumps</b>	
Vent Piping Transition Sumps	Data Entry Field
<b>Subsection: Vapor Recovery (VR) Piping Construction</b>	
Primary Containment Construction	Data Entry Field
Other Primary Containment Construction	Data Entry Field
Secondary Containment	Data Entry Field
Other Secondary Containment	Data Entry Field
<b>Subsection: Riser/Fill Piping Construction</b>	
Primary Containment Construction	Data Entry Field
Other Primary Containment Construction	Data Entry Field
Secondary Containment	Data Entry Field
Other Secondary Containment	Data Entry Field
<b>Subsection: Fill Components Installed</b>	
Spill Bucket Installed	Data Entry Field
Striker Plate/Bottom Protector	Data Entry Field
Containment Sump	Data Entry Field
<b>Subsection: Under Dispenser Component</b>	
Construction Type	Data Entry Field
Construction Material	Data Entry Field

Field Name	Database Feature
Other Construction Material	Data Entry Field
<b>Subsection: Corrosion Prevention</b>	
Sacrificial Anode	Data Entry Field
Impressed Current	Data Entry Field
Isolation	Data Entry Field
<b>Subsection: UST Tank Certification / Applicant Information</b>	
Date Certified	Data Entry Field
Applicant Name	Data Entry Field
Applicant Title	Data Entry Field
<b>Subsection: Equipment Testing and Preventive Maintenance</b>	
Monitoring Equipment Serviced	Data Entry Field
Other Frequency of Monitoring Equipment Service	Data Entry Field
Site Plot Plan Submitted	Data Entry Field
<b>Subsection: Continuous Electronic Tank Monitoring</b>	
Continuous Electronic Tank Monitoring	Data Entry Field
Tank Secondary Containment System	Data Entry Field
Electronic Monitor Panel Manufacturer	Data Entry Field
Electronic Monitor Panel Model #	Data Entry Field
Leak Sensor Manufacturer	Data Entry Field
Leak Sensor Model #	Data Entry Field
<b>Subsection: Automatic Tank Gauging</b>	
Automatic Tank Gauging	Data Entry Field
ATG Panel Manufacturer	Data Entry Field
ATG Model #	Data Entry Field
In-Tank Probe Manufacturer	Data Entry Field
In-tank Probe Model #	Data Entry Field
Tank Leak Test Frequency	Data Entry Field
Other Leak Test Frequency	Data Entry Field
Programmed Tank Tests	Data Entry Field
Other Programmed Tests	Data Entry Field
<b>Subsection: Monthly Statistical Inventory Reconciliation</b>	
Monthly Statistical Inventory Reconciliation	Data Entry Field
<b>Subsection: Weekly Manual Tank Gauge</b>	
Weekly Manual Tank Gauge	Data Entry Field

Field Name	Database Feature
Tank Gauging Test Period	Data Entry Field
<b>Subsection: Tank Integrity Testing</b>	
Tank Integrity Testing	Data Entry Field
Tank Integrity Testing Frequency	Data Entry Field
Other Tank Integrity Testing Frequency	Data Entry Field
<b>Subsection: Other Tank Monitoring</b>	
Other Monitoring	Data Entry Field
Specify Other Monitoring	Data Entry Field
<b>Subsection: Continuous Monitoring of Piping Secondary Containment</b>	
Continuous Monitoring of Piping Secondary Containment	Data Entry Field
Piping Secondary Containment	Data Entry Field
Panel Manufacturer	Data Entry Field
Panel Model #	Data Entry Field
Leak Sensor Manufacturer	Data Entry Field
Leak Sensor Model #	Data Entry Field
Leak Alarm Triggers Automatic Pump Shutdown	Data Entry Field
Failure/Disconnect Triggers Pump Shutdown	Data Entry Field
<b>Subsection: Mechanical Line Leak Detector Performs 3 GPH Leak Test</b>	
Mechanical Line Leak Detector Performs 3 GPH Leak Test	Data Entry Field
MLLD Manufacturer	Data Entry Field
MLLD Model #	Data Entry Field
<b>Subsection: Electronic Line Leak Detector Performs 3 GPH Leak Test</b>	
Electronic Line Leak Detector Performs 3 GPH Leak Test	Data Entry Field
ELLD Manufacturer	Data Entry Field
ELLD Model #	Data Entry Field
ELLD Programmed In-Line Testing	Data Entry Field
ELLD Triggers Automatic Pump Shutdown	Data Entry Field
ELLD Failure/Disconnect Triggers Automatic Shutdown	Data Entry Field
<b>Subsection: Pipeline Integrity Testing</b>	
Pipeline Integrity Testing	Data Entry Field
Pipeline Integrity Testing Frequency	Data Entry Field
Other Pipeline Integrity Testing Frequency	Data Entry Field

Field Name	Database Feature
<b>Subsection: Visual Pipeline Monitoring</b>	
Visual Pipeline Monitoring	Data Entry Field
Visual Pipeline Monitoring Frequency	Data Entry Field
<b>Subsection: Suction Piping Meets Exemption Criteria</b>	
Suction Piping Meets Exemption Criteria	Data Entry Field
<b>Subsection: No Regulated Piping Per Health and Safety Code, Division 20, Chapter 6.7 Is Connected To The Tank System</b>	
No Regulated Piping Per Health and Safety Code, Division 20, Chapter 6.7 Is Connected To The Tank System	Data Entry Field
<b>Subsection: Other Pipeline Monitoring</b>	
Other Pipeline Monitoring	Data Entry Field
Other Pipeline Monitoring Description	Data Entry Field
<b>Subsection: Under Dispenser Containment (UDC) Monitoring</b>	
UDC Monitoring	Data Entry Field
Other UDC Monitoring	Data Entry Field
UDC Panel Manufacturer	Data Entry Field
UDC Panel Model #	Data Entry Field
UDC Leak Sensor Manufacturer	Data Entry Field
UDC Leak Sensor Model #	Data Entry Field
Detection of Leak into UDC Triggers Audible and Visual Alarms	Data Entry Field
UDC Leak Alarm Triggers Automatic Pump Shutdown	Data Entry Field
Failure/Disconnection of UDC Monitoring System Triggers Automatic Pump Shutdown	Data Entry Field
UDC Monitoring Stops Flow of Product at Dispenser	Data Entry Field
UDC Construction	Data Entry Field
UDC Secondary Containment Monitoring	Data Entry Field
Leak Within Secondary Containment of UDC Causes Audible and Visual Alarms	Data Entry Field
<b>Subsection: Periodic System Testing</b>	
ELD Testing	Data Entry Field
Secondary Containment Testing	Data Entry Field
Spill Bucket Testing	Data Entry Field
<b>Subsection: Record Keeping</b>	
Alarm Logs	Data Entry Field
Visual Inspection Records	Data Entry Field

Field Name	Database Feature
Tank Integrity Testing Results	Data Entry Field
SIR Testing Results	Data Entry Field
Tank Gauging Results	Data Entry Field
ATG Testing Results	Data Entry Field
Corrosion Protection Logs	Data Entry Field
Equipment Maintenance and Calibration Records	Data Entry Field
<b>Subsection: Training</b>	
Personnel with UST Monitoring Responsibilities are Familiar with Training Documents	Data Entry Field
UST Monitoring Plan	Data Entry Field
Operating Manuals	Data Entry Field
CA UST Regulations	Data Entry Field
CA UST Law	Data Entry Field
SWB Handbook for Tank Owners - Manual and SIR	Data Entry Field
SWB Publication: Understanding Automatic Tank Gauging Systems	Data Entry Field
Other Training Documents	Data Entry Field
Other Training Documents Description	Data Entry Field
Designated Operator Training	Data Entry Field
<b>Subsection: Comments and Additional Information</b>	
Comments and Additional Information	Data Entry Field
<b>Subsection: Personnel Responsibilities</b>	
Name of First Person Having Responsibility	Data Entry Field
Title of First Person Having Responsibility	Data Entry Field
Name of Second Person Having Responsibility	Data Entry Field
Title of Second Person Having Responsibility	Data Entry Field
<b>Subsection: UST Monitoring Plan Certification / Applicant Information</b>	
Signature Representation	Data Entry Field
Signature Date	Data Entry Field
Applicant Name	Data Entry Field
Applicant Title	Data Entry Field
<b>Subsection: Submittal / Acceptance Information</b>	
Date Submitted to CERS	Data Entry Field
Date Accepted by Regulator	Data Entry Field
<b>Subsection: Submittal / Acceptance Information</b>	

Field Name	Database Feature
Regulator Name	Drop Down List
Regulator Type	Drop Down List

**UST Certification of Installation and Modification Fields**

Field Name	Database Feature
<b>Subsection: Facility Identification and Location</b>	
CERS ID	
Facility ID	Data Entry Field
Facility Name	Data Entry Field
Facility Street Address	Data Entry Field
Facility City	Drop Down List
Facility Zip Code	Drop Down List
<b>Subsection: UST Certification Project Type</b>	
Tank Installation / Replacement	Data Entry Field
Piping Installation / Replacement	Data Entry Field
Sump Installation / Replacement	Data Entry Field
Under Dispenser Containment Installation / Replacement	Data Entry Field
Other	Data Entry Field
<b>Subsection: Work Authorized Under Permit</b>	
Work Authorized Under Permit (Number or Date)	Data Entry Field
Description of Work Being Certified	Data Entry Field
<b>Subsection: Contractor Information</b>	
Name of Contractor Who Performed Installation/ Modification	Data Entry Field
Contractor's License Number	Data Entry Field
Contractor's ICC Certification Number	Data Entry Field
<b>Subsection: Certification / Applicant Information</b>	
Date Certified	Drop Down List
Certifier's Name	Data Entry Field
Certifier's Title	Data Entry Field
Phone Number	Data Entry Field
Name of Certifier's Employer	Data Entry Field
Certifier's Relationship to Tank Owner	Data Entry Field

Field Name	Database Feature
<b>Subsection: Submittal / Acceptance Information</b>	
Date Submitted to CERS	Data Entry Field
Date Acceptedby Regulator	Data Entry Field
<b>Subsection: Submittal / Acceptance Information</b>	
Regulator Name	Drop Down List
Regulator Type	Drop Down List

- 
- <sup>1</sup> California Environmental Protection Agency. January 28, 2014. Unified Program Home. <http://www.calepa.ca.gov/cupa/>. Accessed: 3/5/2014.
- <sup>2</sup> California Health and Safety Code, Chapter 6.11. 1996 (January). Unified Hazardous Waste and Hazardous Waste and Hazardous Materials Management Regulatory Program [25404-25404.9].
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