



Linda S. Adams
Secretary for
Environmental Protection



Arnold Schwarzenegger
Governor

State Water Resources Control Board

Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5594
Mailing Address: P.O. Box 2231 • Sacramento, California • 95812
FAX (916) 341-5808 • Internet Address: <http://www.waterboards.ca.gov>

LG-159

ANNUAL UNDERGROUND STORAGE TANK (UST) COMPLIANCE INSPECTIONS

(Available electronically through links at http://www.waterboards.ca.gov/ust/leak_prevention/lgs.html)

This booklet contains the elements that are important when conducting an annual underground storage tank (UST) facility compliance inspection. According to Health and Safety Code (H & SC) §25288(a) local permitting agencies are required to inspect all of the UST facilities within their jurisdiction on an annual basis. The purpose of these inspections is to verify that UST systems are in compliance with design and construction standards, are monitored, tested, and operated in a safe condition in accordance with applicable state laws and regulations, and to verify functionality of leak detection equipment. This booklet discusses the main elements necessary to perform a thorough annual compliance inspection, as required by H&SC 6.7 and Title 23 of the California Code of Regulations (CCR).

This document is to be used as guidance, only. It is intended to enhance and be used with existing inspection procedures established in the agency's inspection and enforcement plan. A model inspection checklist is provided that corresponds to the items discussed in this guidance document. This detailed form is designed to break down compliance elements, which provides for a more comprehensive inspection. The checklist provides for violation type determination (See Appendix I for CalEPA guidance document) and Significant Operational Compliance (SOC) reporting.

In order to enhance violation tracking for Significant Operational Compliance (SOC) reporting purposes, this guidance identifies SOC related compliance items. The model inspection checklist identifies SOC violations and provides a tracking mechanism for "Report 6" reporting purposes.

Revised 1/16/07

State Water Resources Control Board

Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5752
 Mailing Address: P.O. Box 2231 • Sacramento, California • 95812
 FAX (916) 341-5808 • Internet Address: <http://www.waterboards.ca.gov>

TABLE OF CONTENTS

	A WORD ABOUT INSPECTIONS	Page 3
	USING THE GUIDANCE WITH THE INSPECTION CHECKLIST.	Page 3
	PRE-INSPECTION FACILITY FILE REVIEW	Page 4-5
	WHAT TO TAKE TO THE INSPECTION	Page 6
	ASK FOR CONSENT	Page 6
	ON-SITE VISUAL INSPECTION OF FACILITY	Page 7-10
	ON-SITE FACILITY FILE REVIEW	Page 11-13
	SOC and RED TAG REPORTING	Page 14
	FUNCTIONALITY OF LEAK DETECTION EQUIPMENT	Page 14-15
	COMPLIANCE INSPECTION REPORT WRITING	Page 15
	FOLLOW-UP TO AN INSPECTION	Page 16
	ENFORCEMENT	Page 16
APPENDIX	A. Sample Inspection Checklist	
	B. Significant Operational Compliance Criteria	
	C. Red Tag Criteria	
	D. Monitoring Methods for Double-walled Pressurized Piping and Under-dispenser Containment (UDC)	
	E. Response Plan Model Form	
	F. Certification of Compliance Model Form	
	G. Designated Operator Model Form	
	H. CalEPA Violation Classification Guidance	

Revised 1/16/07

ANNUAL UNDERGROUND STORAGE TANK (UST) COMPLIANCE INSPECTION

A WORD ABOUT INSPECTIONS

Inspections are one of the most important components of any regulatory program. They are the mechanism by which compliance is measured. The more thorough the inspection, the higher the degree of compliance achieved when the violations identified during the inspection are corrected. Inspectors must be thoroughly familiar with the law, the regulations, and the technical aspects of tank systems. Although not required, local agency inspectors are strongly encouraged to conduct the annual inspection at the same time as the annual monitoring system certification. This allows for a "hands-off" inspection, which is the recommended approach to inspections.

USING THE GUIDANCE DOCUMENT WITH INSPECTION CHECKLIST

Discussion items correlate to a corresponding inspection checklist. The numbers in the guidance document (noted in parentheses), correspond to the numbered item on the model inspection checklist form provided in Appendix A.

SOC Compliance Items: if an item is designated as a Significant Operational Compliance (SOC) item, it must be in compliance at the time of inspection. If the item is out of compliance and is corrected during the inspection it is considered to be out of compliance for SOC reporting purposes. Release Detection SOC compliance items are designated as (RD) and Release Prevention SOC compliance items are denoted as (RP). Recommendation: If the violation is corrected during the inspection, show the violation of the item, and then write "corrected" in the comment space.

Example:

<input checked="" type="checkbox"/> 25	Overfill Prevention mechanism present and operational according to type: Flapper valve/Audible-visual alarm/ball float. 40CFR 280.20(c)(1)(ii); 280.21(d); T23 CCR 2635(b)(2); 2631(d)(4)	RP ✓	RP	RP	RP	Corrected
--	---	------	----	----	----	-----------

Violation Type: Review the CalEPA Violation Determination guidance to appropriately identify the violation type. If you can't make a determination check the TBD column to note the violation. Provide an amended inspection or a follow-up notice, after you return to your office and make a determination.

Comments: Use the comments space on the checklist to make short notations, such as dispenser, or tank numbers, and use the larger comments section to further explain a noted violation, to record observations, to record any information regarding any samples taken, or to describe any pictures taken, etc. Record information that is important and relevant to the inspection. Be sure to identify which inspection checklist item the comment is referring to. If you see other problems that may need referrals to other agencies or other types of violations you should note them in this section.

Revised 1/16/07

THE MAIN AREAS OF CONCERN WHEN PERFORMING AN ANNUAL COMPLIANCE INSPECTION ARE DISCUSSED BELOW.

PRE-INSPECTION FACILITY FILE REVIEW – Conduct a file review before leaving the office. This will aid the agency inspector in conducting a thorough and consistent facility inspection. It is important to review the facility file prior to conducting annual compliance inspections to determine if the facility is in compliance with various items and that the owner/operator has submitted all the required documents and test results. This review allows the inspector to identify the number of tanks, the type of tank and piping construction, type of fuel, and what equipment the facility has, etc. and any compliance issues that need to be addressed during the inspection.

Documents in the facility file should include the following:

- (1) **Permit to Operate:** make sure it is current, and has not expired. The permit should be issued for the current owner, operator or other facility representative. If not, the owner or operator must either transfer the current permit, (if the ownership changed within the last 30 days) or apply for a new permit. Check 25284(b).
- (2) **Transfer of Permit:** if there has been a request to transfer the permit, check to see if it was submitted within 30 days of the ownership change, and that all of the paperwork is completed. If not, the owner/operator must apply for a new permit.
- (3) **UST forms** (Business Facility form and forms A, B and C). Check to make sure that the forms have current information and reflect true site conditions, etc. Make sure the forms are signed by the current owner/operator. If the forms are not current, new forms must be submitted with the correct/current information.
- (4) **Fees are paid.** Determine if the program fees are paid up-to-date, including the UST surcharge. Take copies of unpaid invoices to leave with the tank owner/operator.
- (5) **Financial Responsibility statement** for the current owner/operator that meets one of the acceptable mechanisms for the facility. Make sure that the items that compose the mechanism are current, such as the Chief Financial Officer letter, which is required to be updated annually.
- (6) **Monitoring Plan** for the current UST system, signed by the current owner/operator. Check for appropriate content and level of detail. Make sure that it is complete. It should adequately describe monitoring activities, equipment manufacturers and models for each piece of monitoring equipment: consoles, sensors, etc. and the types of monitoring records maintained.
- (7) **Emergency Response plan** for the current UST system, signed by the current owner/operator. Check for appropriate content and level of detail. The plan should include responses to leaks identified through monitoring and any surface spills and releases. A model form is available in Appendix E.
- (8) **Site Map/Plot Plan:** check for appropriate content and level of detail. This plan should show the location of all tanks, piping, sumps, monitoring locations, locations of sensors, consoles, etc. It should show placement on the site relative to buildings, storm drains, etc. This information may be incorporated with the Business Emergency Response Plan site map requirements.

Revised 1/16/07

- (9) **Owner/Operator Agreement:** if the operating permit is not issued to the operator, an owner/operator agreement is required to show responsibility for tank monitoring, maintenance, etc. Make sure it is current and designates responsibility for monitoring and tank system operation to the current operator. A lease agreement may satisfy this requirement.
- (10) **Certification of Compliance:** the owner is required to submit a signed statement (certification) that the owner understands and is in compliance with all applicable underground storage tank requirements. A model form is provided in Appendix F.
- (11) **Designated Operator Designation:** the owner is required to submit a signed statement identifying the Designated Operator (D.O.) for each UST facility owned. A model form is provided in Appendix G.
- (12) **Monitoring system certifications:** monitoring console, sensors. If you do not have the testing results, be sure to request the certifications you are missing during the facility inspection and note it on the inspection report.
- (13) **Spill bucket testing results.** If you do not have the latest testing results, request the test you are missing during the facility inspection and note it on the inspection report. Make sure that any failed components have been repaired and follow-up testing conducted. All components need to have achieved a passing test result.
- (14) (RD) **Leak detector annual certification.** If you do not have the testing results, request the certification you are missing during the facility inspection and note it on the inspection report. Make sure that any failed components have been repaired and follow-up testing conducted. All components need to have achieved a passing test result.
- (15) **Secondary containment testing results are current.** If you do not have the testing results, request the certification you are missing during the facility inspection and note it on the inspection report. Make sure that any failed components have been repaired and follow-up testing conducted. All components need to have achieved a passing test result.
- (16) (RD) **Piping and/or Tank integrity testing results are current.** If you do not have the testing results, request the testing result you are missing during the facility inspection and note it on the inspection report. Make sure that any failed components have been repaired and follow-up testing conducted. All components need to have achieved a passing test result.
- (17) **ELD test results.** If the facility is required to conduct ELD testing, either because new tanks have been installed, or has been notified by the SWRCB that it must perform ELD testing because they are within 1000 feet of a public drinking water well (and they do not have a valid Request for Reconsideration), check to see if passing test results have been submitted. If the testing was done, but, all components did not pass, additional work at the site is indicated (such as repairs/replacement), and a re-test is required. This process must continue until a passing result has been achieved.
- (18) (RP) **Corrosion Protection certifications,** if applicable, are available and show that the corrosion protection is adequate. Corrosion systems must be certified every three years to ensure that they are protecting the tank and tank components. Testing is required to be

Revised 1/16/07

performed by a corrosion specialist. Ensure that the results indicate that the system is working properly, and providing adequate corrosion protection.

(19) (RP) **Tank lining recertification results**, if applicable, are available and the lining has been demonstrated to meet the required performance standards. An inspection must be conducted by a “coatings expert” or “special inspector”, ten years after the initial interior tank lining of a repaired or upgraded tank, and every 5 years, thereafter. Written certification of the inspection must be provided to the local agency within 30 days of the inspection and must include all items in CCR 2663(h).

NOTE: If you believe that some of the documents that will be needed for the inspection are not maintained at the facility, you may wish to contact the tank operator in advance to request that these items become available on-site at the time of the inspection.

WHAT TO TAKE TO THE INSPECTION. –It may be helpful to the inspector to have the following items available during the inspection:

- ✓ **The facility file:** Take the facility file with you to the inspection in order to verify and compare information at the facility. If you have done a thorough file review prior to the inspection you may not use it, but, it is better to have it, just in case.
- ✓ **Inspection forms/checklists, comment forms, violation summary forms:** The State Water Board strongly encourages the local agencies to develop a thorough UST facility compliance inspection checklist as a basis for the inspection. (A model form is provided in Appendix A.)The checklist is used, along with comments, pictures, samples, etc. to thoroughly detail any violations noted during the inspection.
- ✓ **Intrinsically safe flashlight with a bright beam, inspection mirror:** these will aid the inspector when looking into sumps and dispenser pans.
- ✓ **Additional blank reporting forms** (Forms A & B, Monitoring/Response Plan forms, Plot Plan, etc.)
- ✓ **Copy of law/regulations:** just in case you need to look up a particular code section/requirement. A copy of LG-113 may be very helpful when looking at monitoring equipment.
- ✓ **Sampling Equipment:** if you think you may take samples, be sure to have appropriate sampling containers, gloves, chain of custody forms, labels, indelible ink pens, ice chest, etc.
- ✓ **Camera:** taking pictures is a good way to document violations during an inspection.

ASK FOR CONSENT: before beginning the on-site inspection, ask permission from the owner/operator to conduct the inspection and to take pictures, and/or collect samples.

△ Note in your inspection report that permission was granted and by whom. This may be important if this inspection becomes part of an enforcement action.

Revised 1/16/07

ON-SITE VISUAL INSPECTION OF THE FACILITY

This is one of the most important items for the inspector. Local agency inspectors must visually inspect all accessible components of an UST system. This is performed to verify that the UST system and leak detection/monitoring equipment is functional and in good working order, and to verify there has not been a release of substance at the facility being inspected. Special tools and equipment may be needed in order to access portions of the UST system, so it is useful to have a qualified technician (ICC Certified and equipment-specific training certified, etc.) onsite during your inspection. A space is provided on the inspection form to document that the service technician has the required certifications.

The general overall appearance of a facility may be an indicator of the compliance status of the facility. Check for signs of drips, leakage from the dispenser and fill areas, and evidence of surface spills not cleaned up.

Tank/Piping Components, Monitoring and Monitoring Equipment:

Components of an UST system that need to be visually inspected include the following:

- (20) **Tank Systems meet current construction standards:** determine that the construction of the tank system is up-to-date for all the required components. Check for UDC's, spill buckets, any newly required components, etc.
- (21) (RP) **Hazardous Substance Tanks have secondary containment.** Check to make sure that hazardous substance tanks have secondary containment.

NOTE: See **FUNCTIONALITY OF LEAK DETECTION MONITORING EQUIPMENT** section (below) for additional information regarding the following items. You may wish to review specific monitoring checklists to determine compliance with these measures.

- (22) **Electronic Monitoring System has audible and visual alarm in operating condition:** check to ensure that the monitoring console is turned on and the panel shows all functions normal; check the panel for burned-out lights; check audible and visual alarm for operability; determine if the on-site personnel can hear the audible alarm.
- (23) **Monitoring Console programmed appropriately:** Ask for the programming set-up of the system. Check to make sure that the programming is setup to meet the monitoring requirements.

Example: If the ATG is used for single-walled tank testing or the electronic line leak detector connected to the monitoring panel conducts a periodic (monthly.2 or annual .1) pipeline test, check that the programming is appropriate for the method. Reference LG113 to see that the testing criteria are being met.

- (24) (RD) **Tanks in Temporary Closure meet leak detection and closure requirements.** Leak detection monitoring of a tank system in temporary closure may be modified, however, corrosion protection systems must stay operational. The owner/operator is required to inspect the temporarily closed system every three months to ensure that the closure measures are still in place: locked caps, power service disconnected, if appropriate, etc. These inspections should be noted in the monitoring records for the facility.

Revised 1/16/07

(25) (RP) **Overflow Prevention mechanism:** each tank must have an overflow prevention device, unless it has been waived by the local agency according to certain criteria. Make sure that this device is present and functional. If it is connected to an external audible and visual alarm, make sure that it can be seen and heard by the delivery truck driver. If a drop-tube shut-off type, ask that it be removed, and demonstrated to operate at the required level, and that the necessary components are operational, (i.e. external alarm, shutoff is set at appropriate level). If a ball-float device is used to meet the overflow prevention requirements, please note that more than one ball-float may be required. Ball-floats are required at each tank top opening, except for the fill and automatic tank gauge openings. Check for ball-float proper level setting. (See LG-150-1.)

(26) (RP) **Spill Prevention device is present and functional:** make sure this device is in good condition (check for cracks, splits, etc.) and that the drain valve works correctly. It is required to have a minimum capacity of five gallons. If the spill bucket is located within a sump, check the sump for the presence of liquid.

(27) **Piping and Piping Penetrations:** make sure that the piping and piping penetration boots are not split, cracked or peeling. In order for the piping to perform properly, it must be in good condition. Check these items in the turbine and UDC sumps.

(28) **Sumps, Fill Buckets, UDC's, free from liquid and debris:** these items should be kept clean and free from liquid. All liquid removed from these should be treated as a hazardous waste, unless tested. Check turbines for signs of leaking. Also, check vent/vapor piping transition sumps.

(29) **Vents:** check the area around the vents for signs of spills, signs of leaking.

(30) (RD) **Release Detection Method meets performance standards:** each leak detection method has performance standards that it is required to meet in order for it to be used, and any equipment used to perform the monitoring is required to meet the performance standard of the monitoring option. Monitoring equipment must be third-party certified that it meets the performance standards. See LG-113 to determine if the monitoring equipment has been third-party approved.

Example: A tank system is being monitored monthly using an ATG that performs a leak test at .2gph leak rate. For the leak detection method to meet performance standards, the ATG must be certified to meet the .2gph leak rate (by a third party) and must be able to be performed according to the standards of the method (correct wait periods for fuel delivery, amount of fuel in tank, etc.). Some methods are required to meet a performance standard of 95% probability of detecting a release with a 5% probability of a false alarm.

(31) (RD) **Interstitial monitoring conducted properly.** Determine the type of interstitial monitoring system used: wet or dry. If it is a wet system, ask to see the brine reservoir and a demonstration to show that the sensor will alarm properly. For a dry system, ensure that there is a sensor in the annular space of the tank. Make sure that it operates properly and that it triggers the alarm. Check sensor wiring for cracks or swelling and signs of moisture. For vapor systems, ensure that loss of pressure will trigger the alarm.

(32) (RD) **Sensors are correct for the type of system:** check to make sure that the sensors are correct for the type of system. Some sensors are not certified to be used in certain

Revised 1/16/07

atmospheres. Check LG113 to see that the sensors are suitable for the conditions where they are being used.

- (33) (RD) **Sensors are in the correct position:** check to ensure that all sensors are at the optimum location for detecting a leak at the earliest possible moment. In a piping sump, they should be located on the piping penetration side of tank crown. For the annular space sensors, check to make sure that the cable is long enough to be in the correct position at the tank bottom to monitor the tank, etc. Raising sensors is considered a serious violation.
- (34) (RD) **SIR and Biennial .1 tank testing performed properly.** This monitoring option requires daily stick or ATG readings of the amount of fuel in the tank and daily pump readings or amount of fuel sold for the day. Logs are required to be kept and this information is sent to a SIR company for analysis. Ask to see the daily logs, and the monthly SIR reports. Ensure that the .1 tank integrity test has been performed every three years, and that it has been conducted properly.
- (35) (RD) **Non-passing SIR results reported and investigated properly.** Ensure that the appropriate follow-up occurs for any reports that are inconclusive, or show a fail.
- (36) (RD) **ATG Monthly .2gph test performed properly.** Certain criteria must be met to consider this test valid for the month, such as it must be performed after delivery or when the product in the tank is within 10% of the highest operating level of the previous month. Each ATG may have specific criteria that must be met for this test to be valid, such as a specific tank size, product tested, wait times between delivery and testing, etc. See LG-113 to ensure that the ATG is listed for use in California, and to determine that specific criteria have been met for the ATG. Check the testing printout to determine if the test is valid based on some of the required parameters. Ask the owner/operator to provide logs, etc. to demonstrate this, if the information is not on the printout.
- (37) **ATG generates a hard copy printout.** Check to see if the ATG printout has all of the required data.
- (38) (RD) **Weekly manual tank gauging performed properly.** Ask to see the manual tank gauging records. Determine that the tank is of the proper size to use this method, and that all of the testing parameters are met. (See T23 Section 2645.) If the owner/operator cannot demonstrate this, consider the results to be invalid.
- (39) **Tank Integrity test performed, if necessary.** If any of the manual tank gauging results did not meet the standards after a second round of gauging, determine that a tank integrity test was conducted and that passing results were achieved.
- (40) (RD) **Vadose or Groundwater monitoring system is installed and monitored properly.** Ensure that the conditions at the site meet all appropriate parameters of the method used, and that the monitoring is performed properly as outlined in the regulations. (See T23 Sections 2647 and/or 2648.) The owner/operator should be able to demonstrate that the criteria are met.

Revised 1/16/07

(41) **Vaulted Tank Exemption and weekly visual monitoring logs.**

Tanks in vaults that have been exempted under the Health and Safety Code must be monitored weekly by the owner/operator and a log of those inspections must be kept. Check to see that the tanks continue to meet the exemption criteria and that a weekly inspection is made and recorded in an inspection log.

(42) **DW piping has continuous monitoring system that activates an audible and visual alarm or stops the flow of product at the dispenser when a leak is detected.** Ensure that these systems activate an audible and visual alarm, or shut off the flow to the dispenser. Ensure that the sensors used are correct for the application.

(43) **DW pressurized piping annual .1 gph integrity test performed.** Unless the continuous monitoring system shuts down the pump or stops the flow of product at the dispenser when a leak is detected in the UDC and the monitoring system is fail-safe and shuts down the pump when a leak is detected for piping not in the UDC, an annual piping test must be performed. Determine if the integrity test is necessary, and if so, that the test is being performed and that all test results are passing. Ensure that the testing criteria are being met. Records should be able to reflect this.

(44) **In lieu of the annual tightness test** for DW piping, the continuous monitoring system for all product piping outside the dispenser is required to be fail-safe and able to shut down the pump when a leak is detected. Auto shutdown or flow restriction must occur when a leak is detected in the UDC. Have the service technician demonstrate this.

(45) (RD) **Line Leak Detectors:** must be installed on DW pressurized piping and must meet certain criteria for the type of piping. Identify the type of piping and determine that the leak detector meets the criteria shown. Make sure it is rated for the type of piping used. Some leak detectors should only be used on rigid piping, while others may be suitable for flexible piping. (See LG-113.)

(46)(RD) **In lieu of LLD for DW emergency generator,** the continuous monitoring system activates an audible and visual alarm, system is checked daily, and logs are kept.

(47)(RD) **SW pressurized systems annual .1 gph line integrity test or a monthly .2 gph line integrity test is performed properly.** For the line integrity test, certain criteria must be met for the test to be valid. Ensure that the criteria are being met. Records should be able to reflect this. Ensure that each monthly or annual test is a pass.

(48)(RD) **SW suction systems .1 gph line integrity test is performed every three years and is conducted within allowable time frames.**

Check to see that there is a passing test result within the last three years, if applicable, and that it was conducted within the timeframe allowed.

(49)(RD) **SW gravity flow piping biennial .1 gph integrity test or overflow tank integrity test is conducted within allowable time frames.** Integrity tests are required to be completed every two years. If the piping cannot be isolated from the tank, then the tank and piping must be tested. Check to see that the tests are conducted within the allowable time frames, and that a passing test result has been achieved.

Revised 1/16/07

(50)(RD) **SW conventional suction inspections conducted for presence of air in the pipeline. Daily monitoring records are kept.** For these systems the owner/operator is required to monitor for air in the pipeline by observing the suction pumping system. Checks are made for the following: any skipping or jumping of the cost/quantity display wheels during operation; signs that the suction pump is operating, but no fuel is being delivered; signs that the pump over-speeds when first turned on, but then slows down when liquid is pumped; and rattling sounds in the suction pump and erratic flow indicating an air and liquid mixture. Logs must be kept indicating that this inspection has occurred. Ask to see the inspection logs, which are required to be maintained at the facility.

(51)(RD) **Safe suction piping meets the requirements.** There is no monitoring required for piping that is safe suction, however, these systems must meet all of the following requirements: the below-grade piping operates at less than atmospheric pressure; the below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released (gravity-flow piping); no valves or pumps are installed below-grade in the suction line and only one check valve is located directly below and as close as practical to the suction pump; and an inspection method is provided which readily demonstrates compliance with these provisions. Ensure that all of these requirements are met.

(52)(RD) **Line Leak detectors installed, annually tested and operational on SW piping pressurized system:** ensure that a line leak detector is installed and operational, and shuts down the pump when a leak occurs and when the LLD fails or is disconnected. Check the facility records to ensure that the leak detector is tested on an annual basis and that passing results are achieved. *

(53) **Line Leak detectors installed, annually tested and operational on SW emergency generator:** ensure that a line leak detector is installed and operational and is connected to an audible and visible alarm; shutdown is not required. Check the facility records to ensure that the leak detector is tested on an annual basis and that passing results are achieved. *

* If the LLD test is conducted during the inspection, the technician should be able to demonstrate a 3 gph leak rate which activates the audible and visual alarm, and auto-shutdown, if set up.

(54) **UDC is continuously monitored and either shuts down the flow of product to the dispenser or activates an audible and visual alarm.** Make sure that these systems meet one of the options. If the UDC has a chain-shear valve assembly, check for operability, obstructions, and signs of tampering. Check to make sure that the shear-valve is in the proper location in relationship to the grade and properly anchored. If sensors in the bottom of the UDC are used for monitoring, ask for a demonstration of alarm activation.

(55) (RP) **All metal tank and piping components have corrosion protection, or are isolated from the backfill.** Ensure that all components of the tank system meet the stated criteria. Records are required be available for the life of the tank to demonstrate that the criteria are met.

(56) (RP) **Corrosion Protection System turned on and functioning.** Check the impressed current rectifier to make sure that the power is on, and showing the proper readings for the system compared to the required operating ranges.

(57)(RP) **Impressed Current system checked every 60 days.** Ask to see the log for the impressed current system. Entries should be made every 60 days, and be within the allowed parameters for the system.

ON-SITE PAPERWORK - CCR section 2712(b) requires certain monitoring paperwork to be kept on-site at the UST facility and be available during an inspection for review to determine if the facility is in compliance. Some monitoring and maintenance records may not be on-site, but at a corporate office. If this is the case, request copies of the documents; they are required to be available within 36 hours of the request. Records should be complete and up-to-date and applicable to the current owner/operator. Check to see that the version that you have in your file is the same as they have in theirs.

The documents the local agency inspectors should review include:

(58) **Permit to Operate and conditions:** The permit is required to be located on-site. Verify that the facility is being operated in accordance with the conditions specified in the UST operating permit, that the monitoring designated on the permit is being performed.

(59) **Monitoring and response plans:** These must be located on-site. Ensure that they are the same as those located in your file. Review the information contained in the monitoring and emergency response plans with the facility's owner/operator. Discuss any issues or questions you had when you conducted the pre-inspection file review. Make sure that the plan is up-to-date with any new monitoring and testing requirements.

The facility's monitoring and emergency response plans should be updated with any change(s) related to the facility's UST system. Make sure that they are appropriate for the monitoring activities taking place at the facility and that they address all aspects of the monitoring program for the tank system.

If the monitoring plan designates that the monitoring is conducted a certain way and certain monitoring forms will be used, check to see if these records are available and the monitoring is being conducted as stated. The owner/operator should have an understanding of the monitoring system and use of the recording forms/logs, etc. for the monitoring being conducted.

If the emergency response plan states that certain records are to be maintained or protocols followed or certain supplies are on hand, ascertain that this is occurring and that the supplies are available. Ascertain if there is a procedure in place for reporting an unauthorized release.

(60) **Site map/plot plan:** verify that it accurately depicts location of tanks, piping, dispensers, sensors, monitoring console, etc. and should be labeled to match the designations assigned to them in the monitoring console. (i.e. Tank 1 on the map should be Tank 1 in the monitoring console.) Update this if necessary.

(61) (RD) **Monitoring Records:** check to make sure that any required monitoring records are available, up-to-date and are appropriate for the monitoring method. If the method requires more than one type of record or log to be maintained as part of the monitoring method, make sure that all are being kept appropriately. For instance, if SIR is being conducted there should

Revised 1/16/07

be fuel delivery records, daily tank stick (or ATG) reading records, daily sale records, tank precision test records, and monthly SIR reports..

- (62) **All monitoring/testing records/documents:** determine that monitoring records and documents are being retained for the required timeframes. Monitoring records must be kept for 3 years; cathodic protection records for 6 1/2 years; and written performance claims for release detection systems and the calibration and maintenance records must be kept for 5 years. Records of repairs, lining, and upgrades must be available for the remaining life of the tank system.
- (63) **Equipment maintenance records:** records of calibration, repair and maintenance are required to be kept for tank and piping system components. Ask to see these records. Review for types of maintenance being conducted. Unusual items may indicate a problem that needs further investigation.
- (64) **Alarm history reports and/or alarm log:** review for any alarm activity. If a recordable alarm is indicated, check to see if the appropriate follow-up actions occurred. Check to see if alarms are being recorded in an alarm log if all alarms are not maintained in the alarm history. Any follow-up actions should be documented. Alarm history records should cover a period of the last three years.
- (65) **Visual observation records:** available and up-to-date; ask to see visual inspection records. If problems were identified, check to see if appropriate follow-up actions occurred. Visual observation of the facility is important for early detection of any problems. Items to inspect include the sumps, fills, UDC's, vents, and pump action of suction pumps, etc. The date, time, and result of the inspection should be recorded, and if any follow-up actions occurred.
- (66) **Designated UST operator monthly reports:** these reports must be completed each month. Check that they are complete and that any identified problems have been corrected by the facility owner/operator.
- (67) **Employee training records:** Review the training records. Determine that the training is appropriate for the operation of the UST system according to the systems best management practices, the employees role with regard to the monitoring equipment, the employees role with regard to spills and overfills, and contacts in case of emergency or monitoring equipment alarms. Determine that at least one employee per shift has been trained. The training records should depict who was trained, the date the training took place, and the topics covered. For employees hired after July 1, 2005, date of hire must be included in the records. Determine if the training is up-to-date. New employees must be trained within 30 days of hire.
- (68) (RD) **Unauthorized releases are recorded and reported within allowable timeframes.**

A release from the primary containment, that is cleaned up within 8 hours and does not escape from the secondary containment, is required to be recorded on the operators monitoring reports.

Releases that escape from the primary containment (for SW systems) or secondary containment (for DW systems) must be reported within 24 hours of the release.

Revised 1/16/07

The following conditions are required to be recorded and/or reported:

- (a) Any unauthorized release recorded or reported that the owner or operator is unable to clean-up or is still under investigation after 8 hours of detection.
- (b) The discovery by owners and operators or others of released regulated substances, at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).
- (c) Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced.
- (d) Monitoring results from a release detection method that indicate a release may have occurred, unless:
 - (1) The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or
 - (2) In the case of inventory control, a second month of data does not confirm the initial result.
- (e) Spills or overfill of a hazardous substance.

Ask to see Leak and Spill Logs or other method used to record leaks and spills.

SOC AND RED TAG REPORTING

For ease in completing portions of Report 6, check the appropriate box for the SOC Release Detection (RD) and SOC Release Prevention (RP) portions of the checklist.

If a RED TAG was issued to the facility as a result of the inspection, record a Yes for this item and provide the number of the Red Tag, and check the reason for the red tag. Enter this information into your database for retrieval when completing Report 6.

FUNCTIONALITY OF LEAK DETECTION MONITORING EQUIPMENT – An UST system’s leak detection monitoring equipment needs to be tested and certified annually by a qualified “service technician”, to confirm that it is functioning properly. A Service Technician must meet the CCR, Title 23, Section (i)(1) requirements, and be trained by the manufacturer of the monitoring equipment he/she is certifying, and must, also, hold an International Code Council (ICC) certification.

If you are conducting an inspection during the monitoring equipment certification, ask the technician for the following (otherwise review the most recently completed annual monitoring system certification report to verify that the leak detection system is functional, and observe as much of the tank system as possible by having tank sump covers removed, looking into dispenser sumps, etc.):

Revised 1/16/07

System Setup: this report will tell you how the monitoring console is set up: alarm settings, monitoring thresholds, sensor types, alarm identifiers, etc.

Alarm history report: review in order to determine any past alarm conditions. There may be more than one type of alarm history report. If there is, be sure to get all of them. If an alarm was activated, there should be a history of corresponding alarms stored in the monitoring panel. Storage capacity varies among monitoring systems, so the alarm history may show several alarm events. Ask the owner/operator for the alarm history log sheet for review. This should contain any alarms that may have occurred prior to those shown on the alarm history, as these records need to be kept for a minimum of three years. Check for sensor alarms, probe out alarms, overflow alarms, etc.

ATG /Electronic Line Leak Detector Testing data: if the facility conducts annual (.1 gph) or monthly (.2 gph), tank or piping tests via the ATG or the electronic line leak detector, ask for the latest test results or a history of the testing. (Compare with the owner/operator records.) Make sure that the conditions present during the test meet the criteria for the test method (see LG-113). Example: the test method may require that the tank be filled to a certain level before testing. California law requires that the tank be filled to within 10% of the highest operating level of the previous month for the current test (T23, section 2643(b)(1)). Make sure that the test is performed according to all of the criteria. If you are unable to determine from the test results printout or the owner/operator records that the test was performed according to established criteria, then the test could be ruled invalid. It is important that the records reflect that the test was conducted according to both the requirements of the law, and the parameters of the testing method.

Parameters to look at include: size of tank, fuel level during test, wait time between fuel delivery and testing, wait time between dispensing and testing, duration of test for test threshold, etc.

VPH Monitoring: These systems must be annually certified for functional operability. Some may need to be tested for operational safety per manufacturer's requirements and some may have individual components that must be tested, such as a differential pressure switch or vacuum flow controller (see LG-113).

These systems are designed to monitor zones. Be sure that the area designated in the system setup (monitoring console) is the correct area of the tank system being monitored. Have the technician demonstrate that each zone is monitored, and that the entire length of the zone is monitored.

COMPLIANCE INSPECTION REPORT WRITING – Local agency inspectors are required to prepare a compliance report detailing their findings in accordance to H&SC 6.7, Section 25288(b). It is very important to reference the appropriate statutory/regulatory citation when you are writing your compliance report.

Use your inspection report checklist as a basis for your inspection report to make sure an item is not missed. It is important to indicate on the report what items were inspected to ensure that inspections are consistent and to profile the inspection. Identify the violation using the inspection report. For each item that is identified as a violation, determine the severity of the violation by referring to your inspection and enforcement plan and other guidance material (Appendix H).

Revised 1/16/07

Elaborate on items in the comments section of the report that need a more detailed explanation of the violation and/or as a means for describing what is expected in order to correct the violation.

Report Writing:

For each violation found:

- Describe what is observed and how/why the situation is a violation. Cite code sections. Any checklist items should be further explained in a narrative format on the inspection report or in the comments section of the checklist. Fully describe the situation or circumstances of the violation.
- Take pictures or obtain samples for supporting documentation to your inspection report, if appropriate. This may be critical if any enforcement action occurs. Be sure to adhere to any chain-of-custody protocols for any samples obtained.
- Provide an Inspection Summary and/or Summary of Violations to the owner/operator or facility representative at the end of the inspection that includes
 - a clear description of the violation,
 - a written statement describing what is required to correct the violation,
 - a time frame for violation correction, usually 30 to 60 days. Shorter time periods may be used for serious violations.

This may be attached to, or be a part of a Notice of Violation or Notice to Comply, depending on your agencies protocols.

- Review the report with the facility representative, and answer any questions they may have.
- Have the facility representative sign that they have received a copy of the inspection report.

FOLLOW-UP TO AN INSPECTION

Make sure that you have provided the facility owner/operator with any forms and guidance that they may need to complete, or that may help them to become compliant. If they had questions during the inspection, which you could not answer at that time, be sure to get back to them with answers.

ENFORCEMENT

Enforcement programs are essential to inspection programs. The CUPA or other implementing agency should have a written enforcement program that outlines procedures to follow for different types of violations. The goal of enforcement is to provide a mechanism for violation correction. Enforcement may be informal or formal, depending on the severity of the violation and the compliance history of the owner/operator.

Some agencies may use a Notice to Comply or a Notice of Violation as an enforcement tool for minor violations. A self-certification of correction may be submitted by the owner/operator to show return to compliance, or the inspector may conduct a re-inspection to ensure compliance. Some may use a combination of both. Formal enforcement mechanisms for more severe violations include AEO's, Red Tags, permit revocation and referrals to the District Attorney. Regardless of the enforcement type, be sure to track the date by which violations are to be corrected, and the date the violations are corrected. Also, track any penalty assessments and any penalty amounts collected.