



**PROPOSED REWRITE OF TITLE 23,
CHAPTER 16, UST REGULATIONS
C-3/30 Thomas Henderson, Austin Lemire-Baeten
March 30, 2022**



24th California Unified Program
Annual Training Conference
March 22, 23, 24, 29, 30, 31 - 2022

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Proposed California Code of Regulations, Title 23, Chapter 16 Rewrite

Tom Henderson
UST Leak Prevention Unit



California Water Boards

Why Rewrite?

- 💧 Document initially written when majority of systems were single-walled
- 💧 Decades of additions, deletions, and Local Guidance Letters
- 💧 Document is nuanced and complex
- 💧 Difficult to understand
- 💧 Need document usable by all stakeholders

Why Now?

- 💧 In preparation of the permanent closure of all single-walled USTs
- 💧 Large rulemaking packages take 3-4 years
 - 💧 Time allows full vetting
 - 💧 May add new, undeveloped regulations

Topics

- 💧 Regulations Background
 - 💧 Authority and history
 - 💧 Who is involved and where are we now
- 💧 Timeline
- 💧 What this process will look like
 - 💧 Critical dates everyone should know
- 💧 Proposed Changes of Interest

Rulemaking Background - Authority

- 💧 **Constitution** – Power and legitimacy from the sovereign of the people
- 💧 **Legislation** – Enacted by California State Legislature and Governor
- 💧 **Regulation** – Can not conflict with any statutes or the state or federal constitutions and Statutory delegation of rulemaking authority

“To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations.”

Rulemaking Background - History

- 💧 First UST Regulations released in 1985
- 💧 Chapter 16 regulation updates/changes made in:

1989, 1991, 1992, 1993, 1994, 1996, 1997, 1998, 2001, 2002, 2004,
2005, 2005, 2007, **2009, 2009**, 2012, 2016, 2017, 2018, 2019, 2020

- 💧 100(ish) Local Guidance letters
- 💧 1000(ish) Administrative and Technical UST Program Notifications

Rulemaking Timeline

💧 *State Water Board vetting process – began January, ends May 1, 2022*

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- ◆ *Effective date of Regulations – January 1, 2026*

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developed in accordance with voluntary consensus standards and the manufacturer's written installation instructions. The owner or operator shall certify that the underground storage tank was installed in accordance with the above requirements as required by subdivision ~~(d)~~(f) of this section.

(7) All underground storage tanks subject to flotation shall be anchored using methods specified by the manufacturer or, if none exist, shall be anchored according to the best engineering judgment.

(b) All underground storage tanks shall be equipped with a spill container ~~and an overfill prevention system as follows:~~

~~(1) The spill container shall collect that collects~~ any hazardous substances spilled during product delivery operations to prevent the hazardous substance from entering the subsurface environment. The spill container shall meet ~~all~~ of the following ~~requirements:~~

~~(A)(1)~~ If it is made of metal, the exterior wall shall be protected from galvanic corrosion.

~~(B)(2)~~ It shall have a minimum capacity of five gallons (19 liters).

~~(C)(3)~~ It shall have a drain valve which allows drainage of the collected spill into the primary container or provide a means to keep the spill container empty.

~~(2)(c) (1) The~~ All underground storage tanks that do not meet paragraph (2) below shall be equipped with overfill prevention system shall equipment that does not allow for manual override and ~~shall meet meets~~ one of the following requirements:

(A) Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; ~~or~~

(B) Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; ~~or~~

(C) Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; ~~or~~

Article 3. ~~New Underground Storage Tank Design, Construction, And Monitoring Requirements~~

§ 2630. ~~General Applicability of Article~~

- (a) ~~The requirements in this article apply to owners of new underground storage tanks. In addition, the applicable repair and upgrade requirements in Article 6 shall be complied with.~~
- (b) ~~Sections 2631 and 2632 specify design, construction, and monitoring requirements for all new underground storage tanks. Sections 2633 and 2634 specify alternate design, construction, and monitoring requirements, in lieu of those specified in sections 2631 and 2632, for underground storage tanks installed before January 1, 1997 which store only motor vehicle fuel. Underground storage tanks constructed pursuant to the requirements specified in section 2633 in lieu of those specified in section 2631 shall be monitored in accordance with section 2634.~~
- (c) ~~All new underground storage tanks, piping, and secondary containment systems shall comply with sections 2635 and 2636.~~
- (d) ~~All monitoring equipment used to satisfy the requirements of this article shall meet the requirements of section 2643(f) and shall be installed and maintained such that the equipment is capable of detecting a leak at the earliest possible opportunity. Additionally, all monitoring equipment used to satisfy the requirements of this article shall be installed, calibrated, operated, and maintained in accordance with section 2638.~~

~~Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.~~

~~Reference: Sections 25281, 25284.1, 25291 and 25292.3, Health and Safety Code; 40-CFR 280.20.~~

§ 2631. ~~Design and Construction Requirements for New Underground Storage Tanks~~

- (a) ~~All new underground storage tanks including associated piping used for the storage of hazardous substances shall have primary and secondary containment. Primary containment shall be product-tight. Secondary containment may be manufactured as an~~

Article 6: Construction, Operation, and Installation Requirements for Underground Storage Tanks

§ 2660. General Construction and Operation Standards for Underground Storage Tanks

All underground storage tanks will be constructed, operated, and maintained to manufacturer's specification and equipped with the following components:

- (a) **Corrosion Protection** - The outer surface of an underground storage tank constructed of steel shall be protected from corrosion through cathodic protection or isolation from the backfill. Cathodic protection systems shall be tested pursuant to section 2682.
- (b) **Striker Plates** - The primary containment of an underground storage tank shall have wear plates (striker plates) installed, center to center, below all accessible openings. The plates shall be made of steel or other appropriate material. The width of the plate shall be at least eight inches on each side or shall be equal to the area of the accessible opening or guide tube, whichever is larger. The thickness of the steel plate shall be at least 1/8 inch and those made of other materials shall be of sufficient thickness to provide equivalent protection. A drop tube-mounted bottom protector may fulfill this requirement.
- (c) **Spill Containment** will collect any hazardous substances spilled during product delivery operations to prevent the hazardous substance from entering the subsurface environment. The spill container shall:
 - (1) Be protected from galvanic corrosion;
 - (2) Have a minimum capacity of five gallons (19 liters); and,
 - (3) Have a means to keep the spill container empty.
 - (4) All spill containment structures shall be tested pursuant to section 2685.
- (d) **Overfill Prevention** - All underground storage tanks that do not meet paragraph (5) below shall be equipped with overfill prevention equipment that does not allow for manual override and meets one of the following requirements:
 - (1) Alert the transfer operator when the tank is at 90 percent of capacity by restricting the flow into the tank or triggering an audible and visual alarm;

Section No	Subdivision	Language	Section No	Subdivision	Language
					Monitoring Requirements for Underground Storage Tanks
2632		Monitoring and Response Plan Requirements for New Underground Storage Tanks constructed Pursuant to Section 2631	2670		Monitoring and Response Plan Requirements for Underground Storage Tanks
2632	b	Owners or operators of underground storage tanks subject to this section shall implement a monitoring program approved by the local agency and specified in the underground storage tank operating permit. The program shall include interstitial space monitoring as described in subdivision (c) and shall include the items listed in subdivision (d).	2670	a	<u>Monitoring Plan - Owners or operators of underground storage tanks shall implement a monitoring program approved by the Unified Program Agency and specified in the underground storage tank operating permit to include:</u>
			2670	a1	<u>A procedure for monitoring submitted through the "UST Tank Information/Monitoring Plan" in the California Environmental Reporting System or a local reporting portal which establishes:</u>
			2670	a1A	<u>The frequency of performing the monitoring;</u>
			2670	a1B	<u>The methods and equipment, identified by name and model, to be used for performing the monitoring;</u>
			2670	a1C	<u>The records to be maintained in accordance with Article 14;</u>
			2670	a1D	<u>The preventive maintenance schedule for the monitoring equipment. The maintenance schedule shall be in accordance with the manufacturer's instructions;</u>
			2670	a1E	<u>A description of the training necessary for the operation of both the tank system and the monitoring equipment; and,</u>
			2670	a1F	<u>The name(s) and title(s) of the person(s) responsible for performing the monitoring and/or maintaining the equipment.</u>
2643	f	Each quantitative release detection method, with the exception of manual inventory reconciliation and manual tank gauging, shall be certified to comply with the performance standard(s) specified in this section and shall be subject to limitations specified in the certification. This certification shall be obtained by the equipment manufacturer following one of the evaluation procedures in paragraphs (1) through (3) below:	2671	d	All release detection methods shall be certified to comply with the performance standard(s) specified in this section and will be subject to limitations specified in the certification. This certification will be obtained by the equipment manufacturer following one of the evaluation procedures in paragraphs (1) through (3) below:
2643	f(1)	An independent third party testing laboratory shall evaluate and approve the method using the appropriate "EPA Standard Test Procedure" for leak detection equipment in Appendix IV;	2671	d(1)	An independent third-party testing laboratory shall evaluate and approve the method using the appropriate "EPA Standard Test Procedure" for release detection equipment in Appendix IV; or,
		An independent third party testing laboratory shall evaluate and approve the method using a voluntary			An independent third-party testing laboratory shall evaluate and approve the method using a voluntary

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- 💧 Modify – examples “repair”
- 💧 Performance over prescriptive where possible

Proposed Articles

- 1 Definitions
- 2 General Provisions
- 3 Site Specific Variance
- 4 Recordkeeping
- 5 Certifications, licenses, training
- 6 Construction
- 7 Monitoring
- 8 Testing
- 9 Release Reporting
- 10 Repair and Upgrade
- 11 Closure Requirements
- 12 Permit Requirements
- 13 Corrective Action



Definitions – Article 1

Before

“Repair” means to restore to proper operating conditions ~~a tank or an~~ underground storage tank system component ~~that has caused a release of a hazardous substance from the underground storage tank system. The term “repair” also includes a tank, pipe, spill container, overfill prevention equipment, corrosion protection equipment, release detection equipment, or other underground storage tank system component~~ that ~~have~~ has ceased to function properly and caused the underground tank system to be out of compliance with this chapter.

After

“Repair” means to restore to proper operating conditions an underground storage tank system component that has ceased to function properly and caused the underground tank system to be out of compliance with this chapter.



Definitions – Article 1

New Proposed Definitions

“Buried” means covered in earthen material or otherwise concealed from visual inspection.

“Continuity” means the interstice within a zone is open allowing unobstructed liquid or vapor flow.

“Remote monitoring” means the underground storage tank release detection system is monitored by a service technician meeting the requirements of section 265X(x) from a location separate from the facility.

“Zone” means the interstitial space of underground storage tank component(s) that is monitored or tested as a single unit.



General Provisions - Article 2

The Contest

The 2620(e)

- (1) Owners and operators shall not exceed the maximum number of months established for periodic testing, inspections, and monitoring certifications to meet the requirements of Article 7 and Article 8; and shall complete the test, inspection, or monitoring during the calendar month due.
- (2) Periodic test, inspections, or monitoring certifications performed late do not change the periodic due date.



Site-Specific Variance - Article 3

- 💧 SSV may require a change to Legislation
- 💧 State Water Board notification requirement
- 💧 Clarity in SSV required before starting construction



Recordkeeping - Article 4

- 💧 Clarifies which documents go where, when and for how long
- 💧 Offsite approval language found here
- 💧 E-signature requirements



Certification, Licensing, and Training - Article 5

Former sections 2715 & 2716

§ 2653. Service Technician Licensing, Certification and Training Requirements

•Any person(s) performing the work of a service technician to include calibration, remote monitoring, testing, or repairs and maintenance that does not require excavation or concrete removal, can be performed within the sump, and does not alter the system layout of the underground storage tank components shall:

1.Possess or be employed by a person who possesses the licenses and certifications as required by the Contractors State License Board.

2.Possess or work under the direct and personal supervision of a service technician physically present at the work site with a current California UST Service Technician certificate from the International Code Council indicating the individual has passed the California UST Service Technician exam. The individual shall renew the ICC certification, by passing the California UST Service Technician exam, every 24 months; and.

3.Be trained and certified by the manufacturer of the equipment as follows:



Certification, Licensing, and Training - Article 5

Additional Proposed Changes

- 💧 Proposed language changes facility employee documentation
- 💧 Defines rolls of the service technician vs. UST installer (LG167)
- 💧 Expands UST Inspectors

§ 2654.–Inspector Certification and Training Requirements

Unified Program Agency inspectors, special inspectors, or system-independent compliance inspectors conducting underground storage tank inspections shall meet the following requirements before performing compliance inspections on underground storage tanks:



Construction, Operation, and Installation - Article 6



Article 6: → Construction, Operation, and Installation Requirements for Underground Storage Tanks¶

§ 2660. → General Construction and Operation Standards for Underground Storage Tanks¶

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 - (1) Be protected from galvanic corrosion;¶
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 - (3) Have a means to keep the spill container empty. ¶
 - (4) All spill containment structures shall be tested pursuant to section 2685.¶
- (d) **Overfill Prevention** -- All underground storage tanks that do not meet paragraph (5) below shall be equipped with overfill prevention equipment that does not allow for manual override and meets one of the following requirements:¶
 - (1) Alert the transfer operator when the tank is at 90 percent of capacity by restricting the flow into the tank or triggering an audible and visual alarm; ¶
 - (2) Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and alert the transfer operator with an audible alarm at least five minutes before the tank overfills; ¶
 - (3) Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or,¶

Construction, Operation, and Installation - Article 6

Proposed changes to Piping Requirements (pre July 1, 2003)

- Buried piping connected to underground storage tanks will have secondary containment except:
 - Vent or tank riser piping, provided the underground storage tank system is equipped with an overfill prevention system meeting the requirements specified in sections 2661(d)(2) or (3), or 2661(e)(2); or,
 - Vapor recovery piping if constructed that it cannot contain liquid-phase product; or,
 - Suction piping if the piping is designed, constructed, and installed as follows:



Construction, Operation, and Installation - Article 6

Proposed changes to Piping Requirements

- Buried connected piping will meet all of the following requirements:
 - Connected piping under normal operating conditions will be secondarily contained. All secondary containment will be sloped so that all releases will flow to a collection sump located at the low point of the underground piping.



Construction, Operation, and Installation - Article 6

Post July 1, 2003 Systems

- Underground storage tanks, including buried piping will be secondarily contained.
- The primary and secondary containment system will be approved by an independent testing organization as compatible with the specific hazardous substance stored or to be stored. Secondary containment may be manufactured as an integral part of the primary containment, or it may be constructed as a separate containment system.
- Underground storage tank interstitial will be constructed, operated and maintained in a manner that readily demonstrates continuity within a zone.



Construction, Operation, and Installation - Article 6

Possible Undeveloped Additions

- Airport Hydrant Systems
- Field Constructed Tanks



Monitoring Requirements - Article 7

Additional Proposed Changes

- ◆ Remanufactured equipment by manufacturer only
- ◆ The Unified Program Agency may implement an alternative monitoring program during release detection equipment repair or replacement, not to exceed 72 hours.
- ◆ VPH post July 2004
- ◆ A buried pressurize pipe monitored by vacuum, pressure or hydrostatic pressure is the equivalent of detecting a three gallons per hour release rate at 10 pounds per square inch within one hour with a probability of detection of at least 95 percent and a probability of false alarm no greater than five percent.



Testing, Certification and Inspection - Article 8

- All TC&I require 72-hour notification
- 60 days to repair – consistent with H&SC
- Underground storage tank interstitial will be constructed, operated and maintained in a manner that readily demonstrates continuity within a zone.
- Tank and Pipe Integrity Test requirements
 - Pre-July 1, 2003 - 0.1 gallon per hour test required
 - Post-July 1, 2003 – 0.005 gallon per hour test required



Testing, Certification and Inspection - Article 8

- Continuity testing requirement for post July 1, 2004 UST systems
- Removal of hierarchy for Secondary Containment, Overfill and Spill Containment
- Internal lining inspection not required for secondarily contained USTs



Repair and Upgrade - Article 10

Performance Based

- 💧 Manufacturer's written guidelines, a nationally recognized industry code or engineering standard
- 💧 Structural Requirement



Closure - Article 11

UST Closure Letter

The Unified Program Agency shall issue a Letter of Closure within 60 days (of?) to the underground storage tank owner and/or operator to confirm the proper closure of the underground storage tank. The Letter of Closure shall include the following:

- a. Site address or CERS tank ID;
- b. Identification of any remaining underground storage tank if applicable;
- c. Reference to the appropriate Regional Water Quality Control Board and/or Local Oversight Program if contamination was found The date of permanent closure; and
- d. The underground storage tank has been permanently close in accordance with this article.
- e. This letter will only confirm the proper closure of the underground storage tank and removal from the Unified Program Agency.



Permit, Reporting & Red Tag - Article 12

- Site Plan is “scaled diagram or as-built”
- Permit application and monitoring plan mimic CERS requirements
- Red tag language now includes State Water Board
- Adding violation classifications to regulation (Class I, II, minor)
- Submittal of test, inspection and monitoring reports to CERS
- Expanding “Significant Violation” to systems not meeting section 25291(a)(1-6)



Other Goodies

- Forms updated as part of rulemaking
- Every document/CERS/local ordinances/permits etc. must be updated





Questions?



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