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**COUNTY OF MENDOCINO**  
**DEPARTMENT OF PUBLIC HEALTH**  
**DIVISION OF ENVIRONMENTAL HEALTH**  
**Certified Unified Program Agency (CUPA)**  
Underground Storage Tank (UST) Program

## UST System – Construction Conditions July 2003 – July 2004

Regulations regarding the installation of new underground storage tanks are found in the *California Code of Regulations; Title 23, Division 3, Chapter 16, Article 3* effective May 14, 2001 as revised.

New UST system construction design, installation, and testing standards are found in the installation instructions provided by the manufacturer. The Environmental Health Division (DEH) requires submissions of the **installation instructions** and of the **independent testing organization's approval** (UL, etc.) for all components used to construct the primary containment system including any integral secondary containment system per {CCR 2631(b)}. In lieu of the above "**3<sup>rd</sup> Party**" (UL, etc.) approval, for non-integral containment systems and other components, provide copies of the approved/stamped plans and specifications (including construction procedures) by a California Registered Engineer with experience and training in UST construction, per {CCR 2631(d)}.

All new primary and secondary containment systems shall be **compatible** with the products stored, "**product tight**" for both liquid and vapor {H&S Code 25290.1(a), (c)(1)&(2)}, and **prevent water intrusion** {CCR 2631(d)(5), 2635(c)(2)&(7), and H&SC 25290.1(c)(3)}. The secondary containment system shall be **continuously monitored** for the detection of a release from the primary containment {CCR 2636(f)}.

After the permit has been issued, the installation inspections may be scheduled. Usually a minimum of **(3) field inspections** will be conducted. To avoid any delay in construction, it is important to **coordinate** the proposed inspection dates with your field inspector at least **5 days prior** to each anticipated inspection.

### Inspections to be conducted by DEH or an approved "special inspector":

#### Inspection #1:

A **UST Arrival and Placement Inspection** will be conducted on the day the UST arrives at the construction site for placement into the excavation. DEH will inspect the condition of the UST, observe the holiday test (on coated steel tanks), and record the gauge readings of the pressure or vacuum maintained during tank transportation. DEH may observe the anchoring of tanks subject to floatation.

Before installation, the **tank** shall be tested on site in one of the following three (3) ways\*:

1. According to the manufacturer's written guidelines; or
2. By applying not less than 3 pounds per square inch (psi) nor more than 5 psi air pressure to both the primary and secondary containment systems; or
3. By applying a 5.3 inch Hg vacuum test to the interstitial space for a minimum of 30 minutes. (Some manufacturers do not recommend the use of pressure for testing the interstitial/annular space.)

*\*In cases where the tank is transported while maintaining a pressure or vacuum test condition on either the primary or secondary containment system, refrain from opening any pressure release valve or removing any tank access plug until the tank has been inspected by DEH, placed into the excavation, and backfilled.*

#### Inspection #2:

A **Piping & Secondary Containment Test Inspection** will be conducted before these components are covered with backfill. {*Minimum slope of all UST System pipe will be 1/8 inch per foot fall toward the tank per CCR 2631(d)(5)& 2636(c)(1).*}

A **Piping Tightness Test** will be conducted on all new **primary\*** and **secondary\*\*** piping in accordance with the manufacturer's written guidelines per {CCR 2636(e)}.

*\*Primary pressurized piping shall be tested per CCR 2636(e) using hydrostatic pressure set at 150 percent of the design operating pressure or pneumatic pressure set at 110 percent of the designed operating pressure for 30 minutes. If either the hydrostatic or pneumatic pressure is lower than 40 psi, then a minimum pressure of 40 psi shall be maintained throughout the test. All joints shall be **soap tested** during these pressure tests.*

*\*\*Piping Secondary Containment Systems which have no manufacturer testing guidelines must use a test method specified in an industry code or*

engineering standard or a method/protocol approved by a California Registered Engineer as required in CCR 2637(a)(2). {Continuously monitored hydrostatic or vacuum systems are exempt as per CCR 2637(a)(6).}

**Secondary Containment Tightness Tests** will be conducted on all **containment collection sumps**. These sumps include the **pipng** sumps, **tank/turbine** sumps, **Under Dispenser Containment (UDC)** pans/sumps, fuel delivery **spill containment** buckets/sumps, and other containment collection devices or components in accordance with the *manufacturer's guidelines* {CCR 2636(e) and 2637(a)(2)}, an *industry code or engineering standard*, a *method approved by a California Registered Engineer* {CCR 2631(d)}, or by performing a **"Lake Test"**\*\*\*\* or other **(equivalent)** test which meets the approval of this agency {CCR 2635(a)(4)}. {Continuously monitored hydrostatic or vacuum systems are exempt as per CCR 2637(a)(6).}

\*\*\*{If a "Lake Test" is to be performed, the level of the test fluid shall be set and marked at a level two (2) inches above either the highest sump penetration boot (including electrical conduit penetrations) or the highest manufactured sump seam, whichever of these is the highest.}

Additional secondary containment system tests must be performed (under permit through this office) 6 months later and every 3 years thereafter per {CCR 2637}.

During this inspection, the "one time" test for vapor tightness {H&SC 25290.1(j)} utilizing an approved **Enhanced Leak Detection (ELD) Test** method may be performed. *No UST System may be put into service before passing an ELD test. (If the ELD test is to be performed at a time other than one of the 3 scheduled inspections an additional permit and fee will be applied.)*

### **Inspection #3:**

A **Leak Detection System (LDS) "Start Up" Test Inspection** will be conducted on the UST Leak Detection Monitoring System, Sensors, and Probes prior to the approval of the UST System Construction. The **audible** and **visual alarm** capabilities for the entire leak detection system will be tested by placing the sensors located in the secondary containment into an alarm condition and then clearing the alarm condition. For pressurized piping systems (unless approved otherwise), the continuous electronic monitoring system will provide **"fail-safe" shut down** for each pressurized product pumping systems upon **leak detection, system failure, or electrical failure**. The **overflow prevention** probe and/or devices will also be inspected and tested at this time.

### **Prior to placing the new UST System into service, submit the following to DEH:**

- A copy of the successful **ELD, Tank Integrity Test**.
- An (8 1/2" x 11") "As-Built" site drawing showing the location, orientation, and identification of buildings, tanks, and tank appurtenances including piping per {CCR 2632(d)(1)(D) and 2635 (c)(8)}. *(The drawing shall include a legend which identifies site access routes, utility shut-offs, the UST-LDS control panel along with each specific alarm annunciator and the specific detector/sensor and probe location associated with each annunciator, etc.)*
- A Revised **Written Monitoring Procedure (WMP)** and **Containment Response Plans (CRP)**.
- Proof of **Financial Responsibility**.
- **Certification** of Installation/Upgrade **Form "C"** per {CCR 2635(d) and 2636(c)(2)}, and revised **Tank Form "B"** (if necessary).

### **Note the following Important Additional Requirement before Beginning Operation:**

A new **CUPA-UST "Operating Permit"** must be issued when a new owner buys an existing UST facility or when a new UST site is constructed. An application and the fee for an "Operating Permit" should be submitted to DEH well before the final construction inspection to prevent a delay in the operation of your new UST. **Final Approval** of the new construction is required before a new UST-CUPA "Operating Permit" may be issued.

DEH looks forward to working with you on your new UST construction project. Give us a call if you have questions or want further clarification.