SB-989 SECONDARY CONTAINMENT TESTING - (POLICY)

BAKERSFIELD FIRE DEPARTMENT
Prevention Services
2101 H Street
Bakersfield, CA 93301
Phone: 661-326-3979 ● Fax: 661-852-2171

Secondary containment systems installed on or after January 1, 2001 shall be tested installation, six (6) months after installation, and every 36 months thereafter. Secondary containment systems installed prior to January 1, 2001 shall be tested by January 1, 2003 and every 36 months thereafter. Secondary containment testing shall be conducted as follows:

By December 31, 2002, the owner or operator of any secondary containment system that the owner or operator determines cannot be tested in accordance with this section shall replace the secondary containment system with a system that can be tested in accordance with this section. As an alternative, the owner or operator may submit a proposal and work plan for enhanced leak detection to the local agency by July 1, 2002; complete the program of enhanced leak detection by December 31, 2002; and replace the secondary containment system with a system that can be tested in accordance with this section by July 1, 2005. The local agency shall review the proposed program of enhanced leak detection within 45 days of submittal or re-submittal.

Periodic testing of secondary containment systems shall be conducted using a test procedure that demonstrates that the system was tested upon installation. For example, if the secondary containment system was tested upon installation by using a test method that applied a pressure of 5psi, then the periodic test must be conducted using a method that tests the system at an equivalent pressure. These tests shall be performed in accordance with manufacturer's guidelines or standards. If there are no manufacturer's guidelines or standards, secondary containment systems must be tested using an applicable method specified in an industry code or engineering standard. If there are no applicable manufacturers guidelines, industry codes, or engineering standards a test method approved by a state registered professional engineer shall used.

Secondary containment testing shall be performed by either a licensed tank tester, licensed tank installer, or any person meeting the requirements.

Underground storage tank owners and operators shall submit a copy of the test report to the local agency within 30 days of the completion of the test.

Owners and operators of underground storage tanks must notify the local agency at least 48 hours prior to conducting the test, unless this notification requirement is waived by the local agency.

Secondary containment systems where the continuous monitoring automatically monitors both primary and secondary containment, such as systems that are hydrostatically monitored or under constant vacuum, are exempt from periodic secondary containment testing.

All monitoring equipment used to satisfy the requirements of this article shall be installed, calibrated, operated and maintained in accordance with manufacturer's instructions, and certified every 12 months for operability, proper operating condition, and proper calibration. Written records shall be maintained as required. On or after January 1, 2002 the following shall also apply:

Persons performing installation, repair, maintenance, calibration, or annual certification of monitoring equipment shall meet the following requirements:

Possess a current Class "A" General Engineering Contractor License, C-10 Electrical Contractor License, C-34 Pipeline Contractor License, C-36 Plumbing Contractor License, or C-61 (D40) Limited Specialty Service Station Equipment and Maintenance Contractor License issued by the Contractors State License Board

Be trained and certified by the manufacturer of the monitoring equipment; and,

Be re-certified by the manufacturer by completion of a manufacturer's refresher course. Additionally, this certification shall be renewed at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.

Individuals employed by persons performing installation, repair, maintenance, calibration or annual certification of monitoring equipment for the purpose of conducting this work shall meet the requirements.

Annual monitoring equipment certification shall be made on a "Monitoring System Certification" form.

UST owners and operators shall submit a completed "Monitoring System Certification" form to the local agency within 30 days after completion of the inspection.

The UST owner or operator shall notify the local agency at least 48 hours prior to conducting the installation, repair, replacement, calibration for certification of monitoring equipment unless the notification requirement is waived by the local agency.

A person conducting UST monitoring equipment certification shall affix a tag/sticker on each monitoring equipment component that is being certified, repaired or replaced. The tag/sticker shall be placed in a readily visible location and shall include the date the UST component was certified, repaired or replaced and the contractor's license number.

SB-989 SECONDARY CONTAINMENT TESTING - (PROCEDURES)

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The secondary containment systems to be tested include:
UST annular space
Secondary Containment Piping / ELD
Under-Dispenser Containment, turbine sumps and over-spill buckets.

The following describes the scope of work for each inspection/test:

I. CONTRACTOR QUALIFICATIONS

Before the contractor can start work:

a. Contractor must have certification from manufacturer of secondary equipment/ components. The equipment at all facilities for which manufacturer certification for testing is required include:

   1. Xerxes, Owens Corning, Modern Welding and Joor UST's

   2. Ameron and AO Smith piping.

b. Contractor must have proof of HAZWOPR training for employees.

c. Contractor must have supplied current OSHA logs to West Coast Retail Business Unit.

A pre-test inspection will be performed. The goal of the inspection is to confirm the facility can be tested, identify components that obviously will not pass the testing, identify tools required to complete testing, and prepare the facility for testing.

1. Clean sumps, spill buckets and UDC with pressure washer/steam cleaner and transfer generated liquid and debris into labeled drums for disposal.

2. Inspect turbine sumps and overfill buckets to ensure penetration fittings are installed and the bolts are tight, there are not obvious cracks or holes in the sump/bucket, plugs are installed and tied in electrical conduit and j-boxes, test boots are present and can be secured and the sump/bucket is free of debris and liquid and the overfill drain valve is sealing properly.

3. Inspect the under dispenser containment (UDC) sumps to ensure penetration fittings are installed and the bolts are tight, there are no obvious cracks or holes in the sumps. Plugs are installed and tied in electrical conduit and j-boxes, test boots are present and can be secured and sump is free of debris and liquid.

4. Document repairs made on work acknowledgment form and forwarded to Bakersfield Fire Department, Office of Prevention Services.

The station may remain operating during the inspection and cleaning/repairs as long as the safety of workers, employees, and public is not jeopardized.

II. CONTRACTOR TESTING OF SECONDARY CONTAINMENT

The work area will be barricaded and workers will wear high visibility vests. The sumps, UDC and spill buckets will be cleaned. Assume confined space entry will be required. Testing will be conducted as follows:

a. UST annular space testing

   1. Remove annular sensor.

   2. Apply a vacuum between 10" and 15" of Hg column (in accordance with manufacturer specifications). Disconnect vacuum pump. The vacuum equipment must be equipped with an operational vacuum regulator to ensure the tank is not over-evacuated.

3. Wait 10 minutes to allow system to come to equilibrium. Record equilibrium vacuum.
4. Allow for a 60 minute test during which the vacuum is not to fall more than 20" Hg column. Record final vacuum reading. If the vacuum fell less than 2", certify the tank secondary on Exhibit B.
5. If the vacuum cannot be applied successfully, tighten all bung connections and reapply vacuum.
6. If vacuum still cannot be applied, notify the Bakersfield Fire Department, Office of Prevention Services immediately for further action.

Follow UST annular space testing, release vacuum, replace annular sensors and seal test riser.

b. Secondary Piping Testing

1. Attach and tighten test boots in turbine and UDC sumps.
2. For AO Smith and Ameron piping apply 5 psig. (For other piping follow manufacturer specifications.) Record starting pressure and time. (Exhibit B.)
3. Disconnect pressure tank.
4. Allow for a 60 minute test during which the pressure may drop to 4.8 psig. Record final pressure and time on form. If the final pressure exceeds 4.799 psig, certify piping on form.
5. If piping will not hold pressure, trouble-shoot, repair and re-start test.
6. If pressure still cannot be held, notify the Bakersfield Fire Department, Office of Prevention Services immediately for further action.
7. Document all repairs.

After testing, release pressure on the lines. Leave the test boots attached for sump testing.

c. Turbine Sumps (Site may operate during testing)

1. Each sump will be filled with water to 2" above the highest penetration unless the electrical conduit is below that level*.

   To avoid potentially getting water into the electrical conduit the sump will only be filled to the bottom of the J-box. However, at a minimum the sump will be filled with water to 2" above the primary piping.

2. A calibrated, third party approved, testing probe, capable of measuring water level fluctuation between 0.01" and 0.001", will be installed in the sump.
3. The water level fluctuation will be measured for 12 minutes. Water level measurements will be recorded at least every 3 minutes.
4. If after 12 minutes, the water level has decreased less than 0.002" the test is passing.
5. Certify the sump.
6. If the water level fluctuates more than 0.002" in 12 minutes the test may be extended to 30 minutes.
7. If after 30 minutes, the water level has decreased less than 0.005" the test is passing. Certify the sump.
8. If the water level decreased more 0.005", locate and repair leaks and retest.
9. If repairs can not be made so the sump will pass test, notify the Bakersfield Fire Department, Office of Prevention Services immediately for further action.
10. Document all repairs on the work acknowledgment form.
11. Remove water from sump. The water will either be transferred to labeled 55 gallon drums for later offsite disposal or pumped directly into a vacuum truck and hauled offsite for disposal. In either event the water will be properly manifested and disposed.

12. Pull back secondary containment piping test boots and return liquid sensors to the lowest point in the sump on the product side.

13. Replace and seal the sump lids.

d. Overfill bucket testing (Site may operate during testing)

1. Fill overfill bucket to within 3 inches from the top with water.

2. Install the test probe described in sump section.

3. The water level fluctuation will be will be measured for 12 minutes. Water level measurements will be recorded at least every 3 minutes.

4. If after 12 minutes the water level has decreased less than 0.002" the test is passing.

5. Certify the sump on form Exhibit B.

6. If the water level decreased more than 0.002", locate and repair leaks.

7. After completing repairs, retest and certify.

8. If the spill bucket can not be repaired to pass the test, notify the Bakersfield Fire Department, Office of Prevention Services immediately.

9. After testing remove water from spill bucket, replace the drop tube and fill cap, and replace the fill lid.

10. Handle water as described in the previous section.

e. UDC testing (Site may operate during testing)

1. Fill UDC with water to approximately 2" above the highest penetration.

2. A calibrated, third party approved, testing probe, capable of measuring water level fluctuation between 0.01" and 0.001", will be installed in the sump.

3. The water level fluctuation will be measured for 12 minutes. Water level measurements will be recorded at least every 3 minutes.

4. If after 12 minutes, the water level has decreased less than 0.002" the test is passing.

5. Certify the UDC on form Exhibit B.

6. If the water level fluctuates more than 0.002" in 12 minutes the test may be extended to 30 minutes.

7. If after 30 minutes, the water level has decreased less than 0.005" the test is passing. Certify the UDC on form Exhibit B.

8. If the water level decreased more 0.005", locate and repair leaks and retest.

9. If repairs can not be made so the UDC will pass the test, notify the Bakersfield Fire Department, Office of Prevention Services immediately for further action.

10. Document all repairs on the work acknowledgment form.

11. Remove water from UDC. The water will either be transferred to labeled 55 gallon drums for later offsite disposal or pumped directly into a vacuum truck and hauled off-site for disposal. In either event the water will be properly manifested and disposed.

12. Return liquid sensors to the lowest point in the UDC.

Upon completion of testing, all leak monitoring equipment must be replaced and confirmed operational. Waste disposal must be handled by tester.

UNDERGROUND STORAGE TANKS

SECONDARY SYSTEM CERTIFICATION FORM

BAKERSFIELD FIRE DEPARTMENT
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FACILITY ADDRESS	FACILITY ID	DATE

UST ANNULAR SPACE	TANK 1	TANK 2	TANK 3	TANK 4
START TIME				
INITIAL PRESSURE				
END TIME				
FINAL PRESSURE				
CERTIFICATION (Signature)				

SECONDARY PIPING	LINE 1	LINE 2	LINE 3	LINE 4
START TIME				
INITIAL PRESSURE				
END TIME				
FINAL PRESSURE				
CERTIFICATION (Signature)				

FACILITY ADDRESS	FACILITY ADDRESS	FACILITY ID	FACILITY ADDRESS	FACILITY ID	DATE		FAC

TURBINE SUMPS	SUMP 1	SUMP 2	SUMP 3	SUMP 4
START TIME				
INITIAL HEIGHT OF WATER				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
CERTIFICATION (Signature)				

OVERFILL BUCKETS	OVERFILL 1	OVERFILL 2	OVERFILL 3	OVERFILL 4
START TIME				
INITIAL HEIGHT OF WATER				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
CERTIFICATION (Signature)				

FACILITY ADDRESS	FACILITY ID	DATE

UDC TESTING	DISPENSER 1	DISPENSER 2	DISPENSER 3	DISPENSER 4
START TIME				
INITIAL HEIGHT OF WATER				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
CERTIFICATION (Signature)				

	DISPENSER 5	DISPENSER 6	DISPENSER 7	DISPENSER 8
START TIME				
INITIAL HEIGHT OF WATER				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
CERTIFICATION (Signature)				

FACILITY ADDRESS	FACILITY ID	DATE

UDC TESTING	DISPENSER	DISPENSER	DISPENSER	DISPENSER
START TIME				
INITIAL HEIGHT OF WATER				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
CERTIFICATION (Signature)				

	DISPENSER	DISPENSER	DISPENSER	DISPENSER
START TIME				
INITIAL HEIGHT OF WATER				
TIME				
WATER HEIGHT				
TIME				
WATER HEIGHT				
CERTIFICATION (Signature)				