



Assessing Underground Storage Tanks for Earthquake Damage

Following a substantial earthquake it is important to examine all underground storage tank (UST) systems for damage. A damaged or improperly operating UST system can pose a significant risk to human health, safety, and the environment. Below is a list of initial steps to assess UST systems for damage in the event of a substantial earthquake.

1. Walk around the site and look for obvious signs that the UST system is compromised. If you smell strong odors of gasoline and/or diesel immediately close the site, block it off to traffic, and turn off the electricity to the UST system. Immediately contact a UST Service Technician for further investigation and any necessary repairs. If emergency assistance is needed, immediately contact the local public safety agency.
2. Observe the UST leak detection console to determine if leak detection components are in an alarm mode (i.e. automatic tank gauge, interstitial sensor, line leak detector). UST owners/operators should contact their UST Service Technician to perform an alarm check to confirm that the alarm program is working properly, and to run an inventory check to determine if there are any unusual results. If alarm conditions are present or unusual inventory is reported do not operate the UST system, as a more thorough examination and repairs are needed by a UST Service Technician.
3. If there are no obvious signs the UST system has been compromised examine all UST system access points.
 - (a) Spill bucket covers should be removed and the spill buckets examined for distortion to determine if the seal between the bucket and the drop tube, or the bucket and the surrounding pavement has been affected. If distortion or product in the spill buckets is found, do not operate the system. Contact a UST Service Technician to provide a more thorough examination and repair the UST system if necessary.
 - (b) Manway covers should be examined for distortion. If you can, remove the cover to examine the rubber seal between the ring and the cover for any damage. If distortion is found, do not operate the system. Contact a UST Service Technician to provide a more thorough examination and repair the UST system if necessary.
 - (c) Look in the tank top sumps, if sumps contain gasoline or diesel product or there is an unusually strong smell of product, immediately discontinue use and turn off the electricity to the UST System. If you have a steel



Assessing Underground Storage Tanks for Earthquake Damage

manhole cover and ring, do not replace the cover as this may create sparks. Block off the area and do not allow access to persons or vehicles. Contact a UST Service Technician to provide a more thorough examination and repair the system if necessary.

- (d) Remove dispenser covers and look for any indication of gasoline or diesel product under the pumps or in the under-dispenser containment. If you find gasoline or diesel product, see leaking seals, or find an unusually strong smell of product, do not use the UST system. Turn off the electricity to the UST System and do not allow access to the pump island by persons or vehicles. Contact a UST Service Technician to provide a more thorough examination and repair the system if necessary.
4. After the steps identified above have been completed and no signs of leaks or broken equipment are found, attempt to operate each dispenser independently. If the dispensers do not operate, or operate slowly or erratically, call a UST Service Technician immediately to investigate further and perform necessary repairs. (Failure of the dispensers to operate can indicate a leak in the piping, which is a hazard to public health, safety, and the environment.)
5. If any product releases are found that reach the environment, increase the hazard of fire or explosion, or cause deterioration of the secondary containment, the California Health and Safety Code Section 25295 and the California Code of Regulations, Title 23, Article 5, section 2650 requires you to report the incident to the local regulatory agency.
6. After an earthquake, once all of the above checks are performed, we recommend that you have tank and line tightness testing, secondary containment testing, and spill bucket testing performed as soon as possible. This is especially important if you have an older UST system, fiberglass components, or single wall components.

Questions concerning this publication should be directed to Laura Fisher, Chief of the UST Leak Prevention Unit at (916) 341-5870 (laura.fisher@waterboards.ca.gov) or UST Leak Prevention staff Cory Hootman at (916) 341-5668 (cory.hootman@waterboards.ca.gov). You may also contact your local permitting agency for more information on assessing UST system earthquake damage. A list of local permitting agencies can be found at <http://cersapps.calepa.ca.gov/Public/Directory/>.