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ASSESSING UNDERGROUND STORAGE TANKS FOR EARTHQUAKE DAMAGE

Guidance for Tank Owners, Operators and Service Providers

Following an 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. While it is important to assess all UST systems for damage, older systems with single wall piping and fiberglass tanks may be particularly susceptible to damage from an earthquake. The Washington Department of Ecology has recently published a list of recommended actions for underground storage tank owners and operators to detect earthquake damage. Below is the list of steps you should take to assess UST systems for damage in the event of an earthquake.

1. Walk around the site and look for obvious signs that a tank system is compromised. If you smell gasoline you should immediately close the site, block it off to traffic and turn off the electricity to the system. Tank owners should not try to locate the leak. Instead they should contact the local fire department or their service provider.
2. If you have an automatic tank gauge or alarm system (Veeder Root, Ronan, Ustman or a similar system) check to see if any of the system components are in an alarm mode. Perform an alarm check to confirm that the alarms are working and run an inventory check to determine if there are any unusual results. If you find that any of these situations exist, do not operate the system. Call your service provider for a more thorough examination and any repairs.
 - 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 you find distortion or product in the spill buckets, do not operate the system. Contact your service provider for a more thorough examination and to repair the system.
 - b. Manway covers should be examined for distortion of the ring. If you can, remove the cover to examine the rubber seal between the ring and the cover for any damage.
 - c. Look in the sump, if it contains product or there is a strong smell of product, immediately discontinue use of the system, turn off the electricity and notify the fire department. If you have a steel manhole cover and ring, do not replace the cover as this may create sparks. Block off the area, and notify your service provider as above. Do not try and pump the product out of the sump.
 - d. Remove the covers on your dispensers. Look for any indication of product under the pumps or in the sumps. If you find free product, see leaking seals or find an unusual smell, do not use the system. Turn off the electricity and immediately notify the fire department and your service provider. Do not allow access to the pump island by persons or vehicles.
3. If you don't find obvious signs of compromise, examine all tank 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 you find distortion or product in the spill buckets, do not operate the system. Contact your service provider for a more thorough examination and to repair the system.
 - b. Manway covers should be examined for distortion of the ring. If you can, remove the cover to examine the rubber seal between the ring and the cover for any damage.
 - c. Look in the sump, if it contains product or there is a strong smell of product, immediately discontinue use of the system, turn off the electricity and notify the fire department. If you have a steel manhole cover and ring, do not replace the cover as this may create sparks. Block off the area, and notify your service provider as above. Do not try and pump the product out of the sump.
 - d. Remove the covers on your dispensers. Look for any indication of product under the pumps or in the sumps. If you find free product, see leaking seals or find an unusual smell, do not use the system. Turn off the electricity and immediately notify the fire department and your service provider. Do not allow access to the pump island by persons or vehicles.
4. If you have completed all of the above and do not find any signs of leaks or broken equipment, attempt to operate each of your dispensers in turn. If the dispensers do not

operate, or operate slowly or erratically, call your service provider to check the system. (Failure of the dispensers to operate can indicate a leak in the piping. Continuing to operate them can cause harm to your system.)

5. If you have performed all of the above checks and are confident that your system is functional, we recommend that you have tightness tests performed on your lines and tanks as soon as possible after an earthquake. This is especially important if you have an older system, or if you are using single wall piping or fiberglass tanks.

If you have questions or need assistance call the UST HELPLINE at 1-800-742-7878, toll-free in Oregon, or call your [DEQ regional office](#). We recommend that you have an emergency plan for earthquakes, floods and other natural disasters. In the event of an emergency call your local fire department and the Oregon Emergency Response System at 1-800-452-0311 (in Oregon).

For more information about the UST program, please [contact us](#) at tanks.info@deq.state.or.us

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DEQ Online is the official web site for the Oregon Department of Environmental Quality.