



UST QUARTERLY



A Newsletter of the Kentucky Underground Storage Tank Program

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For more information, comments or story suggestions, please contact the editor of the UST Quarterly, Virginia Lewis. She can be reached at Virginia.Lewis@ky.gov or 502-564-5981, ext. 4024.

To report a release or suspected release call the ERT hotline.
1-800-928-2380

UST Operator Training *Kentucky plans to go Internet-based*

Training for UST operators is coming to Kentucky as the result of federal legislation passed in 2005.

Regulation development to implement UST operator training in Kentucky is underway. In the meantime, the Kentucky Division of Waste Management is creating an Internet-based operator-training program called TOOLS (Tank Operator Online Learning System) that is modeled closely on the Montana TankHelper program. TOOLS is still under development, but the plan is to include a series of PowerPoint-based lessons with audio narration. The program intends to provide UST facility-specific training based on information contained in the state UST database and a UST facility-specific compliance management plan.

Operators must successfully complete an exam as part of the combination Class A/B operator training. The TOOLS program will provide the names of operators who complete the training and the UST site(s) with which they are associated to the Kentucky UST database so that compliance with the UST operator training requirements can be easily tracked.



By Aug. 8, 2012, all UST operators must be trained.

For more information on UST operator training in Kentucky, contact Stephen Kent at Stephen.kent@ky.gov or 502-564-5981, ext. 4776.

Legislative Background and Requirements

Title XV, Section B of the Energy Policy Act of 2005 amended Subtitle I of the Solid Waste Disposal Act, the original legislation that created the underground storage tank (UST) program. The UST provisions of the Energy Policy Act focus on preventing releases and direct EPA to help states comply with new UST requirements. Section 1524 of the Energy Policy Act of 2005 states that EPA, in coordination with states, must develop training guidelines for three distinct classes of operators who operate and maintain federally regulated underground storage tank systems. States receiving funding under Subtitle I shall develop state-specific training requirements consistent with EPA's guidelines.

The state-specific training requirements must:

- Be developed in cooperation with tank owners and operators;
- Take into consideration training programs implemented by owners and operators; and
- Be appropriately communicated to tank owners and operators.

EPA Grant Guidelines for States

On Aug. 8, 2007, EPA published final grant guidelines for operator training in the Federal Register. The grant guidelines can be viewed online at <http://www.epa.gov/oust/fedlaws/optraing.htm>.

Upcoming Deadline for States

By Aug. 8, 2012, states must ensure all three classes of operators are trained according to state-specific training requirements.

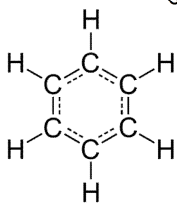
Visit our website today at <http://waste.ky.gov/ust>.

Benzene: Health Effects

As owners, operators and contractors, you and your staff are likely subjected to industry health risks due to exposure to the products that are stored in USTs. When gasoline releases from USTs into environmental media (soil, groundwater and air), neighbors, residents and children are potentially exposed and subjected to these health risks over time, too. One of the primary constituents in gasoline that poses concern is benzene.

What is benzene?

Benzene, also known as benzol, was first discovered and isolated from coal tar in the 1800s. It is a natural part of crude oil and gasoline. As a common additive to gasoline, benzene increases the octane rating of fuels and reduces motor knocking.



Benzene is a colorless liquid with a sweet odor. It evaporates into air very quickly and dissolves slightly in water. Benzene is highly flammable.

Most people can begin to smell benzene in air at approximately 60 parts of benzene per million parts of air (ppm) and recognize it as benzene at 100 ppm. Most people can begin to taste benzene in water at 0.5–4.5 ppm. One part per million is approximately equal to one drop in 40 gallons.

Is benzene harmful?

Yes. The Department of Health and Human Services (DHHS) has determined that benzene is a known carcinogen (cancer causing agent). The International Agency for Research on Cancer (IARC) and the EPA have determined that benzene is carcinogenic to humans. Benzene is a Group A carcinogen (a known human carcinogen) under EPA's present classification system.

The carcinogenic effects of benzene are realized over long-term exposures to certain concentrations. The EPA has set the maximum permissible level of benzene in drinking water (i.e., tap water) at 5 parts benzene per billion parts of water (5 ppb).

The Occupational Safety and Health Administration (OSHA) has set limits of 1 part benzene per million parts of workplace air (1 ppm) for 8 hour shifts and 40 hour work weeks.

The complete Public Health Statement for Benzene can be found on the ATSDR website at <http://www.atsdr.cdc.gov/PHS/PHS.asp?id=37&tid=14>.

How can benzene affect your health?

People can be exposed to benzene by breathing, eating or drinking the substance, or by skin contact. According to the Agency for Toxic Substances and Disease Registry (ATSDR), brief exposure to very high levels of benzene in air can result in death. Lower levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating foods or drinking liquids containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, coma, and death.



Benzene causes problems in the blood. People who breathe benzene for long periods may experience harmful effects in the tissues that form blood cells, especially the bone marrow. These effects can disrupt normal blood production and cause a decrease in important blood components. A decrease in red blood cells can lead to anemia. Reduction in other components in the blood can cause excessive bleeding. Excessive exposure to benzene can be harmful to the immune system, increasing the chance for infection and perhaps lowering the body's defense against cancer.

Can benzene cause leukemia?

Yes. Long-term exposure to benzene can cause cancer of the blood-forming organs. This condition is called leukemia. Exposure to benzene has been associated with development of a particular type of leukemia called acute myeloid leukemia (AML).

How can benzene affect children?

Children can be affected by benzene exposure in the same ways as adults. In fact, children are more susceptible to benzene's health effects due to their size. Benzene can also pass from the mother's blood to a fetus.

What is the bottom line?

We must do all that we can to prevent and clean up UST leaks. Benzene and other chemicals stored in USTs are harmful and are not meant to escape. Prevention and cleanup of UST leaks are important to the health of Kentuckians. We must work together to effectively accomplish these goals.

The Energy and Environment Cabinet does not discriminate on the basis of race, color, national origin, sex, age, sexual orientation, gender identity, religion, disability, ancestry or veteran's status and provides, on request, reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in all services, programs and activities. To request materials in an alternative format, contact the Underground Storage Tank Branch, 200 Fair Oaks Lane, 2nd Floor, Frankfort, KY 40601 or call 502-564-5981, ext. 4024. Persons with hearing and speech impairments can contact the agency by using the Kentucky Relay Service, a toll-free telecommunication device for the deaf (TDD). For voice to TDD, call 800-648-6057. For TDD to voice, call 800-648-6056.

Visit our website today at <http://waste.ky.gov/ust>.

How can UST releases be prevented?

Part of the regulations for UST systems requires them to be protected from spills, overfills, and corrosion. This is a four-part series on what you can do to help prevent UST releases.

PART 4 of 4 : It Takes More Than Equipment

It takes more than proper equipment to be in compliance and have a safe site. Even the best equipment must be properly operated and maintained consistently over time. Failure to do so can lead to new releases which can pose clear health hazards, be very costly and time consuming. According to the federal government, preventing just one new release can save \$125,000, the estimated average cost to clean up a contaminated site. As for the potential health hazards and associated risks a release might pose to a community ... that is an unknown liability.

To help get owners and operators on track with the components of your system and how to maintain them, the USTB has been issuing site-specific notifications to all owners of active and temporarily closed USTs. This information outlines

the specific components of your tank system(s) and what compliance tests are required on those components by law.

There were 341 releases in Kentucky that were documented in the last public record reporting period (10-1-2009 through 9/30/2010). We clearly need to work together to reduce that number. Be smart and do your part.

Remember these keys covered in previous issues:

- ◆ Proper spill protection,
- ◆ Proper overfill protection,
- ◆ Proper corrosion protection, and
- ◆ Proper operation and maintenance of all of the above.



Let's all do our part to *cease to release* in Kentucky.

Likeable Links - EPA Online Sampling Resources



A crucial part of cleanup actions is accurately and carefully measuring progress toward remedial goals by monitoring sites, taking samples, and analyzing data. The U.S. Environmental Protection Agency (EPA) offers information on proper sampling procedures on their website.

<http://www.epa.gov/oust/cat/MONITOR.HTM>

This link is also posted on the Contractor Resources page of the USTB website at <http://waste.ky.gov/ust/contractorresources>. Please note: Sampling work in Kentucky must be in compliance with Kentucky regulations where they may differ.

Talk to Us

Tell us what you think. Let us know if there is something you would like to see in the UST Quarterly. Help us help you.

Let us know if you can convert from a paper to electronic subscription. This publication is best viewed electronically and is e-mailed on a quarterly basis. If you received a paper copy, please contact us to request future issues via e-mail.

Contact: Virginia Lewis E-mail: Virginia.Lewis@ky.gov Phone: 502-564-5981, ext. 4024

Planning Around Furlough Days and State Holidays

To help you better plan working with us, we are providing this information to you on upcoming furlough days and state holidays.

State employees will be furloughed a total of six days from July 2010 through June 2011—a budget balancing measure. For more information on furloughs, visit <http://personnel.ky.gov/furlough>.

More information on state holidays can be found at <http://personnel.ky.gov/stemp/holiday>.

Furlough Days and State Holidays

Dec. 23-24, 2010—State holidays, Christmas
 Dec. 30-31, 2010—State holidays, New Year's
 Jan. 17, 2011—State holiday, Martin Luther King, Jr.'s Birthday
 March 2011—One furlough day to be determined
 April 22, 2011 (one-half day)—State holiday, Good Friday
 April 2011—One furlough day to be determined
 May 27, 2011—Furlough day

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**Underground Storage Tank Branch
200 Fair Oaks Lane
Frankfort, KY 40601**



**Important
program
information
is enclosed!**



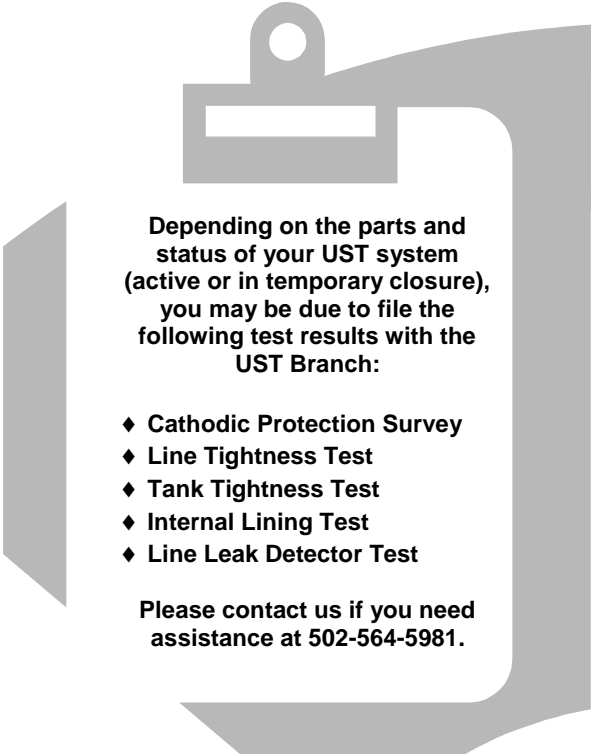
Happy holidays from the Kentucky Underground Storage Tank Branch.

EPA Proposes Guidance for Underground Storage Tanks

WASHINGTON - As part of its commitment to help ensure that biofuels, such as ethanol and biodiesel, are safely stored in underground storage tanks (USTs), the U.S. Environmental Protection Agency (EPA) released draft guidance for UST owners and operators who wish to store these fuels. EPA is requesting comments on the proposed guidance that clarifies how a UST owner or operator can comply with the federal compatibility requirement for UST systems storing gasoline containing greater than 10 percent ethanol, and diesel containing a percent of biodiesel yet to be determined.

After reviewing comments, EPA intends to issue the final guidance in early 2011.

More information on the guidance can be found on EPA website at <http://www.epa.gov/oust> or by contacting Andrea Barbery (barbery.andrea@epa.gov) of EPA's Office of Underground Storage Tanks.



Depending on the parts and status of your UST system (active or in temporary closure), you may be due to file the following test results with the UST Branch:

- ◆ **Cathodic Protection Survey**
- ◆ **Line Tightness Test**
- ◆ **Tank Tightness Test**
- ◆ **Internal Lining Test**
- ◆ **Line Leak Detector Test**

Please contact us if you need assistance at 502-564-5981.

Visit our website today at <http://waste.ky.gov/ust>.