

U.S. EPA Underground Storage Tank Program: the New Millennium, MTBE, and the Future

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When Congress amended the Resource Conservation and Recovery Act of 1976 (RCRA)² in 1984, it created the statutory authority for the federal regulation of underground storage tanks (USTs). These amendments, known as the Hazardous and Solid Waste Amendments of 1984 (HSWA), added an additional subtitle to RCRA specifically devoted to the federal regulation of USTs.³ Subtitle I provided the U.S. Environmental Protection Agency (U.S. EPA) with the authority to promulgate regulations governing the operation of USTs.⁴ HSWA also banned the installation of unprotected bare steel tanks and piping beginning in 1985.⁵ The core regulations implementing the federal program were published on September 23, 1988.⁶

The federal UST program created minimum standards for the operation of USTs. The 1988 U.S. EPA regulations set minimum standards for new USTs (those installed on or after December 22, 1988) and for existing USTs (those installed before December 22, 1988).⁷ When installed, new USTs were required to meet requirements concerning notification; installation; protection from spills, overfills, and corrosion; release detection monitoring; corrective action; record keeping; and financial responsibility.⁸ Owners and/or operators of existing USTs were given up to 5 years to meet release detection requirements for their USTs depending on the age of their tank and up to 10 years to meet upgrade requirements for those USTs which involve protections to eliminate spills, overfills, and corrosion (the December 22, 1998 deadline requirements).⁹

More specifically, owners and/or operators of USTs installed before December 22, 1988

were required to meet one of three standards by December 22, 1998: 1) they had to replace the UST with a tank meeting the new tank performance standards; 2) they had to upgrade the existing UST to meet the standards for protection from spills, overfills, and corrosion; or 3) they had to properly close the UST according to federal requirements.¹⁰

At the time of promulgation of the rules, U.S. EPA anticipated that the phase-in of the release detection and upgrade requirements would result in tanks being closed.¹¹ When the program began, about 2.2 million USTs were in operation nationwide. As of September 30, 2002, U.S. EPA estimates that about 697,966 active Federally regulated USTs exist (23,906 in Illinois) at over 269,000 sites nationwide.¹² The vast majority of these USTs, 673,000, contain petroleum and 1,525,402 tanks have been closed since the beginning of the federal UST program.¹³

Since the inception of the federal program, one of its primary goals has been to ensure that USTs do not endanger human health and the environment. A major program goal has been to protect the nation's groundwater from releases from USTs containing petroleum or designated hazardous substances. From the beginning, releases from USTs were viewed as a serious threat to the nation's drinking water supplies.¹⁴

Partly as a result of this concern, Congress amended Subtitle I through the creation of the Leaking Underground Storage Tank (LUST) Trust Fund in 1986.¹⁵ The LUST Trust Fund is financed by a 0.1 cent federal tax on each gallon of motor fuel sold nationwide. Monies in the Trust Fund are used to oversee owner and/or operator corrective actions to address petroleum releases from USTs and to carry out fund financed corrective actions. Approximately 85 percent of the LUST Trust Fund money is distributed to state programs through cooperative agreements entered into with state agencies. Through federal fiscal year 2002, Congress has appropriated approximately \$1.1 billion for LUST Trust Fund corrective action activities since the Trust

Fund's was created.¹⁶ Currently, this money may only be used for response activities after a petroleum release has occurred.

As of October 2002, approximately 422,000 UST petroleum releases (21,113 in Illinois) have been confirmed since the LUST Trust Fund's creation. Roughly 277,000 of these have been cleaned up (11,929 in Illinois) with over 145,000 cleanups yet to be completed (9,184 in Illinois).¹⁷

Over the last five years, the importance of preventing releases has come to the fore partly as a result of increasing problems related to Methyl tertiary-butyl ether (MTBE). MTBE is "a volatile organic compound that has been used since the late 1970s as an octane enhancer and to promote more complete burning of gasoline, thereby reducing carbon monoxide and ozone levels."¹⁸ MTBE has been used extensively as a fuel additive for reformulated gasoline, oxygenated fuel, and premium grades of unleaded gasoline as a means of improving air quality.¹⁹ Unfortunately, MTBE is highly soluble in water. If it reaches groundwater, it spreads more quickly than other petroleum constituents and its physical characteristics cause it to separate out from the immediate petroleum plume at a release site. Because of this, it complicates the clean up of petroleum release sites and makes corrective action activities much more costly.²⁰

Many states and the federal government either have established or are developing standards for MTBE in groundwater. U.S. EPA is studying both the potential health effects and the occurrence of MTBE in groundwater.²¹ In addition, U.S. EPA has placed MTBE on a list of contaminants for which it may eventually set health-based standards under the Safe Drinking Water Act.²² In Illinois, MTBE will become an indicator contaminant for all releases of petroleum.²³ In addition, remediation objectives for soil and groundwater have already been adopted in Illinois.²⁴

Partially because of the increased complexity and cost of MTBE situations, one of the four main priorities of the UST program is to improve compliance rates with the standard operating and release detection requirements with a view to preventing releases before they occur and to finding them more quickly to minimize the impact of releases that may occur.²⁵ In furtherance of this effort, U.S. EPA prepared a plan for Congress setting forth what will be needed in terms of manpower and funding for ensuring appropriate compliance rates for USTs.²⁶ This plan provides a sense of what may be required to ensure that operating tanks do not continue to have releases in the future.

In addition, efforts were underway in the last Congressional session which would, among other things, substantially restructure the LUST Trust Fund to allow it to be used for compliance, inspection, and enforcement activities on the state level as well as corrective action.²⁷ It would have required that every federally regulated UST be inspected, in effect, every other year. The proposed legislation also provided for funding of state programs for operator training. It explicitly provided for funding of releases of MTBE regardless of whether or not it came from an underground storage tank. Finally, it would have provided authority on the federal level to limit delivery of product to USTs which are not in compliance with the UST requirements. It remains to be seen whether these changes will be reconsidered in the new Congressional session though given state budgetary issues it is quite possible that at least some of the restrictions on the use of LUST Trust Fund monies may be amended.²⁸

Conclusion

U.S. EPA and its state partners have made tremendous strides in the last fifteen years in addressing serious problems resulting from leaking petroleum underground storage tanks. While substantial numbers of clean ups have been completed; much work remains to be done and this

work has been complicated by MTBE. Because of the extent of the remaining problems, Congress has considered providing additional authorities to U.S. EPA and states in the last session. These deliberations are likely to continue given the extent of the work remaining to be done. In any event, U.S. EPA and states will continue to be addressing substantial numbers of LUSTs at least for the next five years, if not substantially longer.²⁹

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2. 42 U.S.C. § 6901 *et seq.*
3. 42 U.S.C. §§ 6991-6991h.
4. 42 U.S.C. § 6991b.
5. 42 U.S.C. § 6991b(g).
6. Originally published at 53 Federal Register 37082 (September 23, 1988). Since codified at 40 C.F.R. Part 280.
7. 40 C.F.R. Part 280, Subpart B.
8. 40 C.F.R. § 280.20.
9. 40 C.F.R. §§ 280.21 and 40.
10. 40 C.F.R. § 280.21.
11. 53 Fed.Reg. 37131.
12. See, www.epa.gov/swerust1/overview.htm.
13. See, www.epa.gov/swerust1/cat/ca_023_4.pdf.
14. 53 Fed.Reg. 37088.
15. 42 U.S.C. § 6991b(h).

16. Further information may be obtained at U.S. EPA, Office of Underground Storage Tank's web page: www.epa.gov/swerust1/ltfacts.htm.
17. See, Underground Storage Tank Cleanup Goals, Memo from Cliff Rothenstein (OUST Director) to EPA UST/LUST Regional Division Directors, Regions 1-10, October 1, 2002, available at www.epa.gov/swerust1/index.htm.
18. See, 2001 Annual Report, Leaking Underground Storage Tank Program, Illinois Environmental Protection Agency, April 2002, p. 5, available at www.epa.state.il.us/land/lust/annual-report/2001/index.html.
19. See, www.epa.gov/swerust1/mtbe/index.htm.
20. *Id.*
21. *Id.*
22. See, www.epa.gov/safewater/ccl/cclfs.html.
23. See, 2001 Annual Report, Leaking Underground Storage Tank Program, at p. 5.
24. *Id.* Also, 35 Il. Adm. Subtitle G.
25. See, www.epa.gov/swerust1/priorits.htm.
26. **Report to Congress on a Compliance Plan for the Underground Storage Tank Program**, (EPA-510-R-00-001), June 2000.
27. S.1850, 107th Congress, Introduced on December 19, 2001.
28. Senator Chafee(R.I.) introduced the Underground Storage Tank Compliance Act of 2003(S.195) on January 17, 2003.
29. Underground Storage Tank Cleanup Goals, October 1, 2002, available at www.epa.gov/swerust1/index.htm.