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Leaking Underground Storage Tanks: Program Status and Issues

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Summary

To address a nationwide pollution problem caused by leaking underground storage tanks (USTs), Congress created a leak prevention, detection, and cleanup program in 1984. In 1986, Congress established the Leaking Underground Storage Tank (LUST) Trust Fund to help the Environmental Protection Agency (EPA) and states pay the costs of cleaning up leaking petroleum USTs where owners fail to do so, and to oversee LUST cleanup activities. Much progress has been made in the program, but challenges remain. A major issue concerns the discovery of methyl tertiary butyl ether (MTBE) at thousands of LUST sites. This gasoline additive, used to reduce air pollution from auto emissions, is very water soluble, and leaks involving MTBE are more costly to remediate. Another issue is that state resources have not met the demands of overseeing the UST regulatory program. States have long sought larger appropriations from the trust fund to support the LUST program, and some have sought more flexibility in using LUST funds. The presence of MTBE in water supplies has raised congressional interest in authorizing fund appropriations to address MTBE leaks and enforce the leak prevention program.

The 109th Congress has taken up legislation to address these issues. The Senate Environment and Public Works Committee has ordered reported S. 606, which limits the use of MTBE, and authorizes trust fund appropriations for cleaning up MTBE leaks and enforcing the UST program. The House Energy and Commerce Committee has offered an energy bill discussion draft that mirrors H.R. 6 from the 108th Congress; the draft limits MTBE use and adds new provisions to the UST program. The discussion draft also provides a products liability safe harbor for MTBE and renewable fuels, while S. 606 grants a safe harbor to renewable fuels only. This report reviews LUST and MTBE issues and legislation, and will be updated.

Background

In the 1980s, EPA determined that many of the roughly 2.2 million underground storage tanks in the United States were leaking. Many other tanks were nearing the end of their useful life expectancy and were expected to leak in the near future. Approximately

50% of the U.S. population relies on ground water for their drinking water, and states were reporting that leaking tanks were the leading source of groundwater contamination.

In 1984, Congress responded to this growing environmental and safety threat and established a leak prevention, detection, and cleanup program for USTs containing chemicals or petroleum through amendments to the Resource Conservation and Recovery Act (RCRA, 42 U.S.C. 6901 et seq.). RCRA, Subtitle I, directed EPA to establish operating requirements and technical standards for tank design and installation, leak detection, spill and overfill control, corrective action, and tank closure. The universe of regulated tanks was extremely large and diverse, and included many small businesses. Consequently, EPA phased in the tank regulations over a 10-year period (from 1988 through 1998). Strict standards for new tanks took effect in December 1988, and all tanks were required to comply with leak detection regulations by late 1993. All tanks installed before 1988 had to be upgraded (with spill, overfill, and corrosion protection), replaced, or closed by December 22, 1998.

In 1986, Congress established a response program for leaking petroleum USTs through the Superfund Amendments and Reauthorization Act (P.L. 99-499), which amended RCRA Subtitle I. This law authorized EPA and states to respond to petroleum spills and leaks, and created the Leaking Underground Storage Tank (LUST) Trust Fund to help EPA and states cover the costs of responding to leaking USTs in cases where the UST owner or operator does not clean up a site. Congress appropriates funds from the trust fund each year, and EPA and the states use these funds primarily to oversee and enforce corrective actions performed by responsible parties. EPA and the states also use the appropriated funds to conduct corrective actions where no responsible party has been identified, where a responsible party fails to comply with a cleanup order, or in the event of an emergency; and to take cost recovery actions against parties. EPA or states have been successful in getting responsible parties to perform most cleanups. In these cases, the cleanup costs typically have been paid for by a state fund (discussed below), the responsible party, and/or private insurance.

The 1986 law further directed EPA to establish financial responsibility requirements to ensure that UST owners and operators are able to cover the costs of taking corrective action and compensating third parties for injuries and property damage caused by leaking tanks. As mandated, EPA issued regulations requiring most tank owners and operators selling petroleum products to demonstrate minimum financial responsibility of $1 million. Alternatively, owners and operators may rely on state assurance funds to demonstrate financial responsibility, saving them the cost of purchasing private insurance.

State Funds. Most states established financial assurance funds. Unlike the federal LUST Trust Fund, state funds often are used to reimburse financially solvent tank owners and operators for some or all of the costs of remediating leaking tank sites. Revenues for state funds typically have been generated through gas taxes and tank fees and, collectively, these funds have provided more cleanup funds than the LUST Trust Fund. In recent years, states have collected and spent roughly $1 billion annually through their funds. In FY2004, total annual revenues for state funds reached $1.47 billion, while outstanding claims against state funds reached $1.76 billion, and in 12 states, outstanding claims exceeded fund balances. Twenty states have extended their fund's original sunset date to address the backlog of leaking tanks. Ten states have made a transition to private

insurance. (The 2004 State Financial Funds Survey results are available at [http://www.astswmo.org/Publications/summaries.htm].)

LUST Trust Fund: Funding and Uses

The LUST Trust Fund has been funded primarily through a 0.1 cent-per-gallon motor fuels tax that commenced in 1987. The tax generated roughly $150 million per year before the taxing authority expired in December 1995. Congress reinstated the LUST tax through the Taxpayer Relief Act of 1997 (P.L. 105-34) from October 1, 1997, through March 31, 2005. On March 31, 2005, the President signed H.R. 1270, extending the tax through September 2005. During FY2004, the tax generated $193 million in revenues, and the fund earned $66.7 million in interest (on an accrual basis). At the end of FY2004, the fund's net assets were $2.24 billion.

For FY2003, Congress authorized appropriations of $72.3 million from the trust fund to support the LUST program. For FY2004, the President requested $72.5 million and received nearly $76 million. For FY2005, the President again asked for $72.5 million; Congress provided $70 million in P.L. 108-447. In recent years, EPA has allocated approximately 81% (roughly $58 million) of the trust fund appropriation to the states in the form of cooperative agreements, and 4% to support LUST-eligible activities on Indian lands. EPA has used the remaining 15% for its program responsibilities.

Under cooperative agreements with EPA, the states receive grants to help cover the cost of administering the LUST program. States use most of their LUST program grants to hire staff for technical oversight of corrective actions performed by responsible parties. They typically use a much smaller portion of the LUST money they receive for cleaning up abandoned tank sites and undertaking emergency responses.

EPA uses its portion of the appropriation to oversee cooperative agreements with states, implement the LUST corrective action program on Indian lands, and support state and regional offices. EPA priorities in the LUST program include reducing the backlog of confirmed releases; promoting better and less expensive cleanups; providing assistance to Indian tribes; assisting with the cleanup of more complicated sites, especially sites contaminated with MTBE; and supporting state programs with technical assistance.

Program Status

EPA reports that since the federal underground storage tank program began, nearly 1.6 million of the roughly 2.2 million petroleum tanks subject to regulation have been closed, and, overall, the frequency and severity of leaks from UST systems have been reduced greatly. Through FY2004, 672,297 tanks remained in service and subject to UST regulations, 447,233 releases had been confirmed, 412,657 cleanups had been initiated, and 317,405 cleanups had been completed. The backlog of sites requiring remedial action dropped to 129,827 sites (a 5% decline from the FY2003 level of 136,265). During FY2004, there were 7,850 newly confirmed releases, compared to 12,000 in FY2003.[1]

Implementation and Compliance Issues. EPA estimated that, through FY2000, 89% of USTs had upgraded tank equipment to meet federal requirements.

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[1] For state-by-state information, see [http://www.epa.gov/oust/cat/camarchv.htm].

However, the Government Accountability Office (GAO) reported that, because of poor training of tank owners, operators, and other personnel, about 200,000 (29%) USTs were not being operated or maintained properly, thus increasing the risk of leaks and ground water contamination. GAO also reported that only 19 states physically inspected all their tanks every three years (the minimum EPA considers necessary for effective tank monitoring), and that, consequently, EPA and states lacked the information needed to evaluate the effectiveness of the tank program and take appropriate enforcement actions.[2]

In 2000, EPA began several initiatives to improve the effectiveness of the tank program. Under an initiative to improve compliance, EPA issued a new definition of compliance ("significant operational compliance") to place greater emphasis on the proper operation and maintenance of tank equipment and systems. Using this definition, EPA estimated that, by the end of FY2004, 23% of UST facilities were not in compliance with the 1998 release *prevention* requirements, 28% were not in compliance with the leak *detection* requirements, and 36% had not complied with the combined requirements.

EPA also has been evaluating the performance of tank regulations to determine where improvements are needed. A key concern is that, although new and upgraded tanks are much more protective than earlier tanks, some leaks are being discovered from new and upgraded tank systems. A substantial portion of these leaks may be due to operational problems. However, studies are underway to evaluate performance of different types of tanks to determine the causes of leaks, the effectiveness of leak detection systems, and actions that might be needed to better prevent and detect leaks.

Methyl Tertiary Butyl Ether (MTBE)

In the late 1990s, as states and EPA were making good progress in addressing tank leaks, another problem emerged. The gasoline additive MTBE was being detected at thousands of LUST sites and in numerous drinking water supplies, usually at low levels. Once released, MTBE moves through soil and into water more rapidly than other gasoline components, and it is more difficult and costly to remediate than conventional gasoline. Because of its mobility, MTBE is more likely to reach drinking water sources than conventional gas leaks. Although MTBE is thought to be less toxic than other gasoline components (such as benzene), even small amounts can render water undrinkable because of its strong taste and odor.

At least 42 states now require testing for MTBE in ground water at LUST sites. In a 2000 survey, 31 states reported that MTBE was found in ground water at 40% or more of LUST sites in their states; 24 states reported MTBE at 60% to 100% of sites. A 2003 update of this survey found that many sites have not been tested for MTBE, and most states do not plan to reopen previously closed LUST sites to look for MTBE.[3] A concern for water suppliers is that fewer than half the states are taking steps to ensure that MTBE is not migrating beyond the standard monitoring boundaries for LUST cleanup. Federal regulators anticipate that, as tank owners and operators comply more completely with

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[2] U.S. GAO, *Environmental Protection: Improved Inspections and Enforcement Would Better Ensure the Safety of Underground Storage Tanks*, GAO-01-464, May 2001, p. 2-6.

[3] The New England Interstate Water Pollution Control Commission's 2000 Survey of State Experiences with MTBE Contamination at LUST Sites, and the 2003 Survey of Oxygenates at LUST Sites are available at [http://www.neiwpcc.org/Index.htm?MTBE.htm~mainFrame].

UST requirements, the number of petroleum and related MTBE leaks from USTs should decline significantly. According to EPA, the number of reported new releases declined 35% from FY2003 to FY2004, as a result of improved leak detection and prevention measures.

Legislation

The 109th Congress has acted on LUST and MTBE related legislation. On March 31, the President signed H.R. 1270, extending the 0.1 cent-per-gallon motor fuels tax that finances the LUST Trust Fund until October 2005.

On March 16, 2005, the Senate Environment and Public Works Committee ordered reported S. 606, the Reliable Fuels Act, which is similar to S. 791, the committee's version of MTBE/ethanol legislation from the 108th Congress. S. 606 would authorize a one-time appropriation of $200 million from the LUST Trust Fund for cleaning up MTBE and other ether fuel releases (from USTs and other sources) that threaten human health, welfare, or the environment.[4] It also would authorize the use of LUST funds for enforcing the UST leak prevention program. S. 606 would ban MTBE as a fuel additive in four years (except in states that specifically authorize its use), mandate the use of ethanol or other renewable fuels, remove the Clean Air Act's oxygen content requirement for reformulated gasoline (which prompted the increased use of MTBE), and provide a product liability safe harbor for renewable fuels (but not for MTBE).

In February, the House Energy and Commerce Committee posted a discussion draft of a comprehensive energy bill on its website ([http://energycommerce.house.gov/]). This draft includes the LUST and MTBE provisions that were in the conference report for H.R. 6 (H.Rept. 108-375) from the 108th Congress. The draft would authorize trust fund appropriations of $200 million annually for five years for the LUST cleanup program, and another $200 million annually for five years specifically for addressing MTBE and other oxygenated fuels leaks (e.g., ethanol). It would allow EPA and states to use LUST funds to enforce the UST leak prevention program, and would authorize trust fund appropriations of $100 million annually for five years for enforcement and administration of the program. The draft also would require the use of renewable fuels, remove the oxygen content requirement for reformulated gasoline, and phase out MTBE by 2014 (except in states that authorize its use, and unless the President decided not to ban it).

The LUST provisions of the House discussion draft parallel S. 195, a LUST bill that the Senate passed in the 108th Congress. Two differences are that S. 195 authorized funds to address MTBE but not other oxygenated fuels, and S. 195 did not require that MTBE releases be from tanks to be eligible for trust fund assistance. Like S. 195, the discussion draft would allow states to use trust fund money to help tank owners pay for corrective actions in cases of economic hardship, and would prohibit cost recovery in such cases — provisions that the Administration has opposed. In a May 2003 letter to the Chairman of the House Committee on Energy and Commerce, former EPA Administrator Christine

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[4] RCRA Subtitle I currently authorizes EPA and states to undertake correction actions only when releases involve USTs and only if the action is necessary to protect human health or the environment. These limitations have become an issue in addressing MTBE releases that may come from sources other than USTs or from unknown sources, and that may not present a threat to human health or the environment but, nonetheless, render water undrinkable.

Todd Whitman commented on S. 195, noting positive aspects of the bill, but also expressing concern with some provisions. She cautioned that allowing the use of LUST funds to pay for cleanups at sites with owners or operators facing financial distress (with no threshold defined), and prohibiting cost recovery of funds used in that capacity, would run counter to the "polluter pays principle" and limit EPA's ability to recover even partial costs, as appropriate (such as from an insurance company). She also noted that EPA's cost recovery guidance allows for consideration of an owner's or operator's ability to stay in business. Another issue was that S. 195's proposed use of funds for non-UST leaks would expand the scope of the program and potentially strain EPA and states' ability to respond to UST releases.

To better prevent tank leaks, the discussion draft, like S. 195, would add several new provisions to the UST regulatory program, including requirements for operator training and tank inspections. The draft bill calls for states, within two years of enactment of the bill, to conduct, as appropriate, compliance inspections of all tanks that have not been inspected since 1998, and then to conduct inspections every three years, as appropriate. S. 195 mirrored EPA's recommended inspection frequency, and required all tanks to be inspected every two years.

The discussion draft also includes a retroactive safe harbor provision to protect manufacturers and distributors of fuels containing MTBE and renewable fuels (e.g., ethanol and biodiesel fuels) from products liability claims. This provision states that it does not affect other liability (such as liability for cleanup costs, water contamination, or negligence for spills). However, with liability ruled out for design defects, manufacturing defects, and failure to warn of hazardous products, opponents argue that primarily gas station owners would be left liable for contamination. (For further discussion, see CRS Report RS21676, *The Safe Harbor Provision for Methyl Tertiary Butyl Ether (MTBE)*, by Aaron Flynn.) This safe harbor provision is opposed by public water suppliers, many state attorneys general, the Western Coalition of Arid States, the National Association of Counties, the National Association of Towns and Townships, the National League of Cities, the National Water Resources Association, and the U.S. Conference of Mayors. These groups have expressed concern that the safe harbor provision would leave communities and states paying much of the cost for treating water supplies contaminated by MTBE or other fuels. Proponents of the provision have argued that such a safe harbor is reasonable, given that the additive has been used heavily to meet federal clean air mandates. They further have argued that the focus should be placed on preventing leaks from underground storage tanks, which are the primary source of MTBE contamination. The safe harbor provision has been contentious, and contributed to the failure of the conference report for H.R. 6 in the Senate in 2003. S. 606 in the 109th Congress includes a somewhat differently worded safe harbor provision that applies to renewable fuels only, and it is not retroactive. (For more details, see CRS Report RL32787, *MTBE in Gasoline: Clean Air and Drinking Water Issues*, by James E. McCarthy and Mary Tiemann, and CRS Report RL31912, *Renewable Fuels and MTBE: Side-by-Side Comparison of H.R. 6 and S. 2095*, by James E. McCarthy, Mary Tiemann, and Brent D. Yacobucci.)

Other bills have been introduced in the 109th Congress that aim specifically at leak prevention through stricter technological requirements: H.R. 879 and S. 439 would require secondary containment for all new tank systems and for replacement tanks and pipes located near public water systems and private wells. Relatedly, the Energy and Commerce Committee discussion draft would direct EPA to make available information on the effectiveness of alternative, possible release containment technologies.