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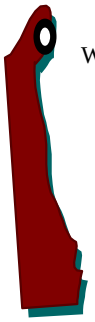
UST*FIELDS* PILOTS

DELAWARE



In November 2000, EPA's Office of Underground Storage Tanks (OUST) launched the USTfields Pilot program, which is helping states address contamination from federally-regulated underground storage tanks (USTs) at idle or abandoned commercial properties known as "brownfields." Prior to the enactment of the Small Business Liability Relief and Brownfields Revitalization Act on January 11, 2002, cleanup of petroleum contamination was generally excluded from coverage under EPA's Brownfields program. Therefore, EPA provided 10 pilot states with up to $100,000 of LUST Trust funds each to cover the costs of petroleum cleanups at Brownfields sites and has since funded 40 additional pilots. Using the pilot funds, each state is working with Brownfields communities to assess, clean up, and monitor petroleum-impacted UST sites. The cleanup of these sites removes barriers to their reuse and allows communities to return them to productive use.

Background

EPA selected the State of Delaware as one of its ten initial USTfields Pilots in 2000. As part of the pilot program, the state will work with the City of Wilmington and other localities in Delaware and with private developers to clean up and prepare a number of petroleum-contaminated sites for reuse.

Wilmington is a Brownfields Assessment pilot. The USTfields Pilot grant will supplement the Brownfields funds and will also allow the state to leverage its own Fund for the Inability to Rehabilitate Storage Tanks (FIRST Fund), which is designed to address orphaned and abandoned underground storage tank sites throughout the state. FIRST Fund was put in place by the state legislature in 1999 and implemented in March 2000. While FIRST Fund enables the state to investigate and remediate sites with no owner or with an owner unable to pay for cleanup, the federal funds help leverage the FIRST Fund by supporting remedial activities.

What follows is a description of how EPA, the State of Delaware, and the City of Wilmington and several other localities in Delaware are working together to clean up underground storage tank sites and remove barriers to their redevelopment.

Wilmington

Rolling Mill Site

The 2.75-acre Wilmington Iron Plate Rolling Mill site was addressed in collaboration with the Delaware Department of Natural Resources and Environmental Control Site Investigation and Restoration Branch ("Department").

The property had been under industrial ownership since the late 1800s but is currently vacant. Historical maps have identified both a rail line and coal yard as former uses.

There were five underground storage tanks on the site: two leaded gasoline tanks (indicated by old pumps nearby), two fuel oil tanks, and a diesel tank. The Department performed a Brownfields Preliminary Assessment for this site. The site was also determined to be eligible under the FIRST Fund program.

Accomplishments

On August 22 and 23, 2001, the five tanks and one dispenser island were removed from the facility. Soil samples were collected and analyzed for petroleum contamination. Based on the results, a petroleum release had occurred, but the concentration of residual petroleum in the soil was determined to pose no threat to human health and the environment as long as the residual contamination on-site remains undisturbed. Based on the finding that any remaining sub-surface contamination should naturally attenuate with no risk to human health or the environment, a No Further Action (NFA) letter was issued on November 13, 2001. As of May 2003, the property has a contract for sale and a residential use for the property is anticipated.

Wess Property

The Wess property in Wilmington was sold with gasoline dispensers and tanks on-site at the time of the purchase. On May 7, 1998, one 1,000-gallon used oil and two 2,000-gallon gasoline underground storage tanks were removed at the expense of the property owner. Preliminary soil sample analyses collected during the tank removals supported the need for a hydrogeologic investigation in order to characterize the extent of petroleum impacts at this facility.

On August 24, 1999, results of the limited hydrogeologic investigation confirmed that petroleum contamination was restricted to the soil but had extended down to the bedrock and reached the property boundaries. Two samples were collected off-site for plume delineation, and the results confirmed the presence of petroleum-contaminated soil east of the property.

On November 28, 2000, the Wess property was sold under the condition that the new owner was responsible for the corrective action required at the site. The new owner had also purchased additional property adjoining this site with plans to utilize both properties as a car dealership facility. The Wess property itself was specifically planned for use as an asphalt-paved parking lot. The new owner hired a contractor to further delineate the lateral and vertical extent of the soil contamination in order to select an appropriate corrective action for the property.

During building demolition activities, a 1,000-gallon heating fuel tank was discovered beneath the building. The tank was removed at the expense of the new owner on January 16, 2001, and removal samples confirmed petroleum-contaminated soil was present.

Accomplishments

An exploratory subsurface investigation was conducted at the Wess property on February 12, 2001. Based on the results, excavation with off-site disposal of contaminated soils was selected as the best option for corrective action at this site.

Corrective action was performed at the property using the USTfields Pilot grant and the FIRST Fund. Since this vacant property could not go back into active use until site remediation was completed, on May 16, 2001, 150 tons of petroleum-impacted soil was excavated from the section of the property that contained the highest concentrations of contaminants. This action was taken to ensure that the property was remediated to the cleanup goals set by the state. All overexcavated petroleum-impacted soils were loaded directly for transport to a thermal disposition facility.

The Department reviewed the file for all necessary closure documentation. A conditional NFA letter was issued for this property on June 21, 2001. With the completion of corrective action, the property owner moved forward with plans to transform it into an asphalt-paved, fenced parking lot, and the property is currently in productive commercial reuse.

Harrington

When the Town of Harrington was installing a new sewer line through a section of Farmington, a contractor detected petroleum contamination in the soil on a parcel of property that now houses a private mobile home. The contractor uncovered pipes near the contaminated soil that were thought to come from an old underground storage tank.

All construction on this portion of the sewer line halted with the discovery of the petroleum-contaminated soil. Two 4,000- gallon underground storage tanks were removed during the sewer construction in January 2001, but the contaminated soil was not cleaned up.

Accomplishments

The Department was able to determine through a title search and a discovery letter to the current owner of the property that the property was orphaned, and, as a result, was eligible for the FIRST Fund. With USTfields Pilot funds as well as FIRST Funds, a limited hydrogeologic investigation was conducted in October 2001. Based on the results of the data collected, the site was closed. The sewer construction was completed on schedule.

Challenges

In addition to the challenges associated with the actual construction of the sewer, a major challenge at this site involved coordinating with the contractor and the City of Harrington to ensure separate accounting of funds. It was necessary to distinguish between general project costs and the incremental environmental costs covered by the FIRST Fund and USTfields funds due to the presence of the soil contamination.

Odessa

The Trader's Gulf site is located in the center of the Town of Odessa at the gateway to the historic district. This site has been abandoned since the owner of the property passed away in 1995. Heirs to the property have not been identified, and the site has become an eyesore in the community. The site does not meet current zoning requirements for a service station and has a history of tank violations. There was at least one release from this station that had not been investigated. The underground storage tanks were all taken out of service by 1996 but were not closed and are not in compliance with the 1998 underground storage tank regulations.

Accomplishments

A total of eight tanks were removed from this site in October 2001. The removal activity generated a great deal of public and press attention. The Department worked with the Mayor of Odessa to keep the town and its citizens informed about the state's planned activities. The Department prepared a notice of removal activities for the Mayor that was delivered to residents surrounding the orphaned gas station. Twenty soil samples were collected during the removal activity, and the results indicated the presence of soil contamination. A hydrogeologic investigation using state funds is still pending. The property is currently for sale.

Challenges

The greatest barrier to addressing the site was convincing all the stakeholders of the benefits of using the FIRST Fund. This was eventually conveyed through outreach and communication.

The Town of Odessa further assisted the communication efforts by relaying citizen concerns about the project to the Department.

Millsboro

The Wagner property in Millsboro was operated as a gasoline station by a partnership from 1975 to 1985. The property was then sold and all the tanks were abandoned. After a long period of vacancy, the property was sold at an auction in December 1995. In November 1996, the new owner arranged and paid for the removal of five underground storage tanks from the facility. Soil samples collected at the time of removal indicated a release of petroleum product to the subsurface, which triggered a hydrogeologic investigation.

Based on the findings from the soil borings, several tons of petroleum-contaminated soils were excavated and staged on-site for bioremediation. Sample results from the monitoring wells detected dissolved petroleum chemicals of concern above Delaware's risk-based screening levels. As part of the corrective action process, the bio-piles were monitored and treated and the monitoring wells were checked quarterly. Work stopped shortly after the second round of sampling since the new owner had financed the tank removals, hydrogeologic investigation, and subsequent sampling, and could not continue with the required corrective action due to financial reasons.

Accomplishments

The Department sent a discovery letter to the owner dated June 19, 2001. Based on the results, the Wagner site was eligible for the FIRST Fund, and the state issued a Letter of Intent to Perform Site Rehabilitation under the Fund. In addition, the Department approved a work plan to sample and manage the stored soil and sample the monitoring wells prior to determining whether further corrective action would be required.

Using FIRST Fund and USTfields Pilot funds, soil samples were collected from the removed and stockpiled soil from the tank removal, and existing groundwater monitoring wells were also sampled. Eight borings were installed through each of the three bioremediation cells. Two composite samples were collected from the boring cuttings of each of the cells and the results were determined to be below Department action levels. The stockpiles were subsequently decommissioned. In addition, the four monitoring wells were also sampled and results were below action levels. Therefore, the wells were properly abandoned and a closure report was submitted. The Department closed the site in July 2002. The Department has received phone calls from prospective buyers inquiring about the property; potential redevelopment interests have included a restaurant and an antiques store.

Challenges

One of the major challenges regarding the Millsboro site was allaying prospective buyers' concerns regarding future liability related to the earlier tank release.

Smyrna

This site, a former tire service station, is located on a major road north of Smyrna and is visible to all traffic. It is overgrown and unsightly due to the lack of commercial activity. Development of the property is contingent on the cleanup of the petroleum contamination.

Six underground storage tanks were removed from this "out of service" station in 1998. Soil samples collected at the time of removal contained petroleum concentrations above Department action levels. As a result, a hydrogeologic investigation was ordered by the Department to assess the extent of contamination. The previous owner of the property has since died, and the heirs did not perform a groundwater investigation or corrective action at the site. A discovery letter was submitted to the heirs, and the project was determined to be eligible for the FIRST Fund program in August 2002.

Accomplishments

Using USTfields Pilot funds, a hydrogeologic investigation was conducted in October and November 2002. Additional soil borings were performed to delineate the soil contamination. Monitoring wells were installed to determine the groundwater gradient and the extent of groundwater contamination. Results are pending.

Challenges

Property issues unrelated to underground storage tanks were identified as the main challenge for this site. The property has several other issues such as stockpiled trash and septic problems. Once these issues are resolved, the property will be placed on the market.

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For more information about USTfields Pilots, visit EPA's Web site at www.epa.gov/oust/ustfield

Until the mid-1980s, most underground storage tanks (USTs) were made of bare steel, which is likely to corrode over time and allow a tank's contents to leak. Faulty installation or inadequate operation and maintenance can also cause tanks to leak. The greatest potential hazard from a leaking underground storage tank is that the petroleum or other hazardous substance can seep into the soil and groundwater, the source of drinking water for nearly half of all Americans. Leaking tanks can present other health and environmental risks, including the potential for fire and explosion.