

Related Program Successes

Multi-Site Agreements

Pennsylvania's Multi-Site Agreements (MSAs) expand the Land Recycling Program process to help organizations owning more than one contaminated site or brownfield property in Pennsylvania to remediate their land in an efficient and financially sensible manner. Instead of remediating one property at a time, MSAs use the same model/approach to remediate multiple properties under one plan.

Many of these properties have a long history of ownership contributing to environmental contamination, obligating current owners to clean up the properties. These situations can present multi-site owners with the threat of liability and, in some cases, the potential for extremely high and unplanned cleanup costs.

By entering into a voluntary MSA with DEP, organizations can approach site cleanup systematically and proactively — assessing, ranking and pursuing remediations in a manner that makes sense for their bottom line and the environment.

“Multi-Site Agreements are the most efficient means for a property owner to address contamination at multiple sites,” Deputy Secretary Denise Chamberlain said. “By providing a flexible framework to assess properties, the owner may prioritize sites by risk and provide for a cleaner, safer environment in a cost-effective and timely manner. All of this can occur while continuing to supply the owner with uniform cleanup standards and relief from liability.”

Similar to Land Recycling Program benefits, MSAs offer standard cleanup guidelines, liability protection, environmental protection and end results that equal a positive financial outcome for partnering organizations.

Organizations work with DEP to establish and follow an agreed upon plan using DEP's clear, risk-based cleanup standards. By establishing predictable cleanup milestones and eliminating the risk of unexpected enforcement orders and costly lawsuits, MSAs reduce multi-site owners' liability. This liability relief allows organizations to direct their resources where they most need them — investments for their business, instead of legal fees and penalties.

In addition, remediation efforts under MSAs are final, giving confidence to organizations that future regulations or community pressures will not create costly surprises.



Redevelopment efforts at the Philadelphia Naval Complex, former Naval Shipyard, have resulted in about 31 new companies and 4,000 employees on site.

By following the plan in an approved MSA, organizations can structure cleanup costs over several years and plan expenditures over time. This planned approach allows them to control costs by predicting staff and financial resources. Offering financial benefits, MSA remediation efforts create new opportunities for economic development as site reuse leads to job creation and future business growth in Pennsylvania.

The cleanup work conducted under MSAs also helps enhance public health and environmental protection throughout the Commonwealth, creating healthier and safer communities.

DEP continues to solicit voluntary agreements with organizations owning multiple sites in Pennsylvania interested in a cooperative relationship with DEP, based on a predictable, financially sound, results-oriented process.

U.S. Army, Air Force, Navy and Defense Logistics Agency CMSA

The Cooperative Multi-Site Agreement (CMSA) between DEP and the U.S. Army, Air Force, Navy and Defense Logistics Agency is the first of its kind in the country. Through this agreement, signed July 17, 1998, at Willow Grove Naval Air Station, DEP and the military agreed to evaluate and clean up all contaminated military sites in Pennsylvania. The cooperative effort will assess and eliminate environmental and public health risks at more than 1,000 military sites in Pennsylvania over the next 12 years — 10 years earlier than the military originally planned. This collaborative effort will accelerate the rate and decrease the cost of remediating these military installations.

CMSA's flexibility is reflected in the cleanup of the Freemansburg USMA Range in Freemansburg, Northampton County. The site was originally scheduled for assessment and remediation in 2003. Using the CMSA, DEP and the military accelerated the cleanup timeline by four years due to prospective tenant interest in the site. Thanks to efforts under the Lehigh Valley Land Recycling Initiative and the CMSA, a tire distributor now occupies the property.

By striking a ground-breaking Multi-Site Agreement, DEP and the military are leading the way in open, voluntary partnerships that incorporate flexibility into

Innovative Technology Assists Land Remediation

As part of the CMSA, the military is using innovative technologies to clean up Pennsylvania's military sites. The type of technology used varies with each site and its specific cleanup activities. Some examples include:

Philadelphia Naval Shipyard site: The Navy, EPA and the Conshohocken Region agreed to use an innovative risk assessment using risk ratio in the cleanup process. Additionally, the Navy used a site characterization and analysis penetrometer system SCAPS technology — a mobile, self-contained, soil-penetrating device connected to a mass spectrometer to delineate possible contaminated areas on the base and to map the extent of a possible BTEX plume. This unit allowed the Navy to delineate the entire area in a fraction of the time of conventional well-drilling methods and also permitted rough quantification of the vertical and horizontal extent of contamination layers.

Warminster NAWC site: The Navy completed seismic imaging at this site for two- and three-dimensional pictures of groundwater and soil layers.

Harrisburg International Airport/Air National Guard site: The Air National Guard has approved and is testing an innovative technology pilot test, solvated electron dechlorination of PCB-contaminated soils. This technology uses a mixture of anhydrous ammonia and liquid sodium to chemically breakdown and neutralize chlorinated solvents and PCBs to form non-hazardous compounds. This demonstration technology has been operational since early July 2000, and has successfully treated many cubic yards of contaminated soils during test runs in the reactor vessel.

Other sites under the CMSA also have explored innovative technology cleanup activities. Where these technologies have been feasible, successful and cost-effective, they have been applied. DEP and the military strive for technologies that will allow more accurate site characterizations and a more precise delineation of contaminants. The successful implementation of these technologies has saved time and money, and maintained environmental integrity.

environmental cleanups. DEP and the military are realizing environmentally sound and cost-effective site cleanups by setting standards for remediation instead of mandating procedures.

The CMSA serves as a national model for the military's reengineered cleanup initiative and is being integrated into the National Military Strategy. In fact, the CMSA is such a powerful environmental management tool that the U.S. Department of Defense has adopted the process as one of its top 10 priorities for implementation nationwide.

In addition, DEP is proud that the CMSA has garnered interest across the country by other states eager

to replicate DEP's model agreement with the military. While some states pursue CMSAs with the military, Pennsylvania remains the only state with a fully executed agreement.

For more information on the Cooperative Multi-Site Agreement process followed by DEP and the military, look for an upcoming annual report disseminated through DEP showcasing this agreement.

Penn Fuel Gas, Inc. MSA

The sites outlined in this agreement, executed in March 1996, are former manufactured gas plants (MPG) which processed coal to produce gas for lighting and heating. Environmental assessment work has started at all 20 facilities in the agreement with Penn Fuel Gas Inc., and North Penn Gas Company, owned by Penn Fuel Gas. Pennsylvania Power and Light Electric Utilities Corporation (PPL) acquired Penn Fuel Gas in 1997, while the multi-site agreement was underway. Honoring the agreement, PPL has assessed three facilities, and about 5,000 tons of contaminated soil have been removed to prepare the properties for reuse. The agreement also covers the plugging of about 340 abandoned gas wells. As of August 2000, about 100 wells have been plugged.

One property, located in Lewisburg, Union County, will likely be turned over to the local municipality for use as a small riverfront park. At another site, the Borough of Shippensburg, Cumberland County, acquired a property adjacent to a former MGP, not recognizing the former use of the property.

Upon PPL's assessment of its own property, it realized that tar storage and tar separators existed on the borough's property. PPL offered to clean the property to statewide health standards as well as restore an on-site wetland. About 3,000 tons of contaminated soil were removed from the facility. Restoration efforts are not completed, but a portion of the property is refurbished through the Shippensburg Little League for

use as a community athletic field where local youth play Little League baseball and softball.

PPL Electric Utilities Corporation (PPL) MSA

This MSA has been successful for PPL, since the agreement was finalized in 1995. The MSA outlines more than 178 sites to be assessed, and remediated if necessary. The agreement has accelerated the assessment and cleanup schedules for the various sites including power poles, electrical substations, MPGs and formerly used power-generating stations. As of the date of this report, 72 of the 178 sites have been remediated.

“Our multi-site agreement has proven to be a good business decision,” PPL Senior Environmental Engineer Craig Shamory said. “With our multi-year plan, we can better forecast resource requirements and cost effectively reduce the environmental liability associated with our sites. This kind of planned approach facilitates partnerships with local communities, that directly benefit from our land recycling activities and find new and innovative uses for the reclaimed sites.”

Thanks to land recycling efforts under the Penn Fuel Gas, Inc. MSA, Tyler Sherman and Michael Dunsmore compete in a baseball game on a remediated athletic field in Shippensburg, Cumberland County.



Related Program Successes

Buyer/Seller Agreements

Entering into a purchase agreement of a former industrial site may raise uncertainty for potential buyers. Liability for prior use and contamination may hinder the process. Buyer/Seller Agreements facilitated by DEP minimize the risks.

Buyer/Seller Agreements offer a solution to buyers who are not responsible for contaminating the properties of interest. In these cases, sellers agree to clean up sites in order to sell the land. Once sites are assessed and remediated according to Land Recycling Program standards, sellers receive relief from liability. This relief is transferred to buyers, thereby freeing the new landowners of former contamination and cleanup obligations. DEP usually acts as a third party in these agreements and extends written relief to buyers early with a covenant not to sue, and frees new landowners from liability from any previously documented site contamination.

Lenders also receive assurances from Buyer/Seller Agreements.

Buyer/Seller Agreements offer flexibility to both parties. The agreements allow properties to be transferred to buyers prior to remediation completion. DEP uses environmental assessment reports to help parties clearly understand the nature and extent of the site contamination. Sellers establish a plan for remediation according to one or more Land Recycling Program cleanup standards. Deadlines are set according to the guidelines offered by the Land Recycling Program.

Lenders also receive assurances from Buyer/Seller Agreements. The assessment and remediation plan provides certainty to the terms of the transaction. Lenders understand that early protection is provided to the buyer, and also are assured the cleanup will occur according to a certain time schedule.

During July 1999–June 2000, 10 new Buyer/Seller Agreements were signed, bringing the grand total of signed agreements to 65. The Buyer/Seller Agreements are quickly negotiated, in contrast to the time necessary to negotiate an EPA Prospective Purchaser Agreement. The total of EPA Prospective Purchaser Agreements executed in Pennsylvania represent 20 percent of the national total of Prospective Purchaser Agreements signed by EPA.

Buyer/Seller Agreements allow properties to be transferred to buyers prior to remediation completion.

Related Program Successes

Key Sites Initiative

Pennsylvania's rich industrial history has left many communities with scars from the past. A unique partnership has been forged to target key communities in need of an economic boost — the Key Sites Initiative.

The Key Sites Initiative coordinates the knowledge and resources from the Land Recycling Program, the Hazardous Sites Cleanup Program, the Department of Community and Economic Development (DCED), and local economic development agencies. A community may leverage the Key Sites Initiative to recycle sites with the greatest potential for reuse in their area.

In 1998, DEP, along with local economic development agencies, established four main criteria for qualifying eligible projects. The four criteria are:

- Sites with an environmental threat;
- Sites where investors have expressed interest, but are concerned about unknown liabilities;
- Sites with a prospective occupant willing to share the cost of cleanup; and
- Sites owned (or with potential ownership) by an economic development agency.

Once a site is approved for assistance, the Hazardous Sites Cleanup Act (HSCA) assigns state-funded contractors to conduct environmental site assessments. A HSCA contractor then prepares a work plan using the standards prescribed by the Land Recycling Program. As a result, uncertainty from the threat of site contamination is minimized and the cost of remediation is clearly defined. The site assessment and work plan facilitate the voluntary cleanup of these abandoned industrial properties in prime locations.

The Key Sites Initiative complements the Industrial Sites Reuse Program (ISRP) administered by DCED. This grant and low-interest loan program offers aid to municipal and local authorities, non-profit economic development agencies and similar organizations interested in conducting environmental assessments of industrial sites located in distressed areas.

Any community wishing to apply for Key Sites Initiative assistance needs to submit a Letter of Intent to DCED requesting consideration as a Key Sites project. The following communities are part of the program:



A community may leverage the Key Sites Initiative to recycle sites with the greatest potential for reuse in their area.

Allegheny County — Swissvale Auto Surplus Parts
Southwest Region

The Swissvale Auto Surplus Parts site is located in a residential/light industrial setting in Swissvale. A cement block building centered on the property contained metal scrap and debris remaining from a metal recycling facility that was in operation, from the 1940s until 1984. Oils containing PCBs were burned in an on-site incinerator to produce heat for the buildings. EPA conducted an emergency action that included removing the most highly contaminated soil, drumming PCB waste and the incinerator building. At the end of the emergency action, EPA left the lingering scrap and debris containing PCBs in the remaining building. The site was abandoned, burdening the local community.

DEP conducted a prompt interim response to remove the PCB contaminated building, its contents and contaminated soil. The response was completed in December 1999, at a cost of about \$600,000. DEP entered into an agreement with the potential responsible parties who contributed about \$118,700 as their share of the cleanup costs. The residential statewide health standard was attained in February 2000, and the site is slated to be part of the Allegheny County Port Authority's east busway.

Armstrong County — AMCO
Southwest Region

This Key Site consists of a large industrial building and about seven acres of land along the Allegheny River. The facility was part of Pittsburgh Plate Glass's (PPG) Ford City No. 5 Works, until 1981. PPG transferred the property to the Middle Armstrong County Area Development Organization Inc. (MACADO), in December 1981. In this same month, MACADO leased the facility to AMCO, which operated a machine shop and foundry at the site for about six years, then filed for bankruptcy and abandoned the facility. The Borough of Ford City then signed a sales agreement with MACADO to acquire the property.

When AMCO abandoned the facility, several 55-gallon drums of lubricants, solvents, acids, and various sizes of containers of paints, coatings, epoxy and flammable liquid were found. Additionally, large machine floor sumps containing hazardous cutting oils were discovered. All of these hazardous substances posed a potential human health and environmental risk. DEP conducted a response under the Key Sites Initiative, beginning June 1998, and completed in August 1998. The response included a site characterization and disposal of all abandoned hazardous substances. The results of the site characterization showed that the property was not significantly contaminated.

The Greater Ford City Community Development Corporation is planning future development at the site. The cornerstone will be the Heritage and Technology Park, including the Industrial Heritage Museum. This is the first reclamation project to convert land to green-space along the Allegheny River in Armstrong County.



Ford City, Armstrong County, awaits a new multi-purpose complex along the Allegheny River.



Bucks County — Corell Steel

Southeast Region

The Corell Steel site is located in an Enterprise Zone in Bristol Township. Previously used for steel manufacturing, the Bucks County Redevelopment Authority is working with DEP to facilitate the reuse of the property. Waste slag and abandoned storage tanks remain on site. Groundwater below the site is reported to be contaminated with TCE. PCB-contaminated soils were identified and removed prior to DEP involvement. DEP initiated work on the property after the Redevelopment Authority acquired the title in December 1998.

DEP has conducted the fieldwork for a baseline remedial investigation and prepared a baseline environmental report for use by the Redevelopment Authority. The draft baseline environmental report was submitted to DEP in June 1999. The second round of groundwater sampling was performed in June 1999. The results revealed no significant contamination. Upon receiving clear title to the property, the Redevelopment Authority of Bucks County will implement a remedial plan for the site. The plan calls for demolition of some structures, and removal of USTs and associated contaminated soils. After completion, the county hopes to negotiate the sale of the property.

Erie County — Cohen/A-1 Auto

Northwest Region

This Key Site comprises about 32 acres of residential, industrial and undeveloped land in Erie. The site consists of a six-acre parcel that formerly operated as the A-1 Auto Body facility, a two-acre parcel known as the Gerald Cohen property, and other residential and undeveloped land. Illegal dumping of tires and debris continues to occur in the area of the proposed industrial park.

In spring 1999 DEP completed an investigation of the site on behalf of the Greater Erie Industrial Development Corporation, which is interested in redeveloping in the area. A Phase II sampling event in summer 1999 was contingent on the findings noted in the investigation and revealed the presence of two areas of lead contamination. One of these areas appears to correspond to an area where EPA had conducted removal activities from 1992–1995. EPA's activities included the removal and appropriate disposal

of contaminated soils, tires, asbestos-containing materials, hazardous wastes and hazardous materials. The Greater Erie Industrial Development Corporation has been provided with a copy of the site investigation report and will evaluate its plans for potential site redevelopment. The site is located in an enterprise zone.

Erie County — Erie Resistor

Northwest Region

The Erie Resistor site located in Erie is owned by Modern Industries. During the summer and fall 1998, DEP conducted a Phase I environmental assessment of the site. DEP's Office of Chief Counsel investigators conducted interviews of the former employees. The Phase I environmental assessment report was completed in November 1998. Because the report did not identify any serious environmental threats posed by the site to the workers, the public or the environment, DEP anticipates no further investigation or action is warranted at the site.

Lehigh County — Bridgeworks Industrial

Northeast Region

In the early 1900s, the Bridgeworks Industrial site located in Allentown, served as a brick factory and a PPL substation. Mack Trucks, Inc., purchased the property in 1929, and used the five-acre parcel as an employee parking lot. In 1988, the Allentown Economic Development Corporation (AEDC) purchased the site for redevelopment. The site soils are contaminated with naphthalene, benzene and metals. The groundwater is contaminated with naphthalene, benzene, ethylbenzene, xylenes and metals. The sources of these contaminants are unknown, but are being investigated. Numerous studies were conducted at this site, including a baseline soil characterization and a preliminary groundwater investigation, which was completed by an AEDC consultant. A comprehensive assessment to identify remediation requirements was conducted in March 1998. Work conducted included the installation of five monitoring wells. Transportation and disposal of the investigation-derived wastes took place in April 1999. A final baseline environmental report was issued in June 1999, followed by a Special Industrial Area consent decree negotiated with AEDC.

Montgomery County — Macoby Creek

Southeast Region

The Macoby Creek site, which is owned by Upper Hanover Township Industrial Development Authority, is located in Upper Hanover Township. Upper Hanover Township has expressed interest in acquiring the property. Although the site is located in a residential area, it has been used for industrial purposes since the 1950s. From the mid-1950s to mid-1980s, an electroplating company and a mechanical contractor used the site. A deteriorating building now occupies the property, which has been vacant since 1993.

Waste solvents and paint waste were left inside when operations ceased. A cement holding tank contains sediment high in metals, most notably, cadmium. Evidence of waste lagoons and contaminated soils exist. Solvent contamination is present in the groundwater at the site and in Macoby Creek downstream of the site. A UST also remains on site. DEP has completed two rounds of groundwater sampling since the site investigation began in January 1999. A third round of groundwater and surface water samples was conducted in March 2000. A request for contractual services was submitted and Baker Environmental contractor was assigned to complete the site characterization. Baker submitted a draft scope of services, work plan and cost proposal to which DEP provided comments in June 2000.

Northampton County — BRW Realty, Inc.

Northeast Region

The BRW Realty, Inc., site in Bangor Borough is an abandoned property owned by Northampton County where textile manufacturing, dyeing and finishing businesses operated from 1941 until 1986. Although the textile operations involved several other parcels and buildings, the site occupies about three acres of land. This property includes several deteriorated, fire-damaged buildings. A Phase I site assessment, in October 1996, found leaking underground fuel tanks, transformer areas, dye pits and sumps, and former wastewater discharge points that may have impacted soils, groundwater or creek sediments. The assessment report also identified suspect asbestos pipe insulation. The county hired a contractor under the Industrial Sites Reuse Program to perform a Phase II site assessment. This work was completed and a report submitted to DEP in August 1998. A supplemental report

was submitted in October 1998, for additional site assessment work. These reports describe and document the soil and groundwater contamination at the site. USTs remain at the site but cannot be removed until the building is demolished.

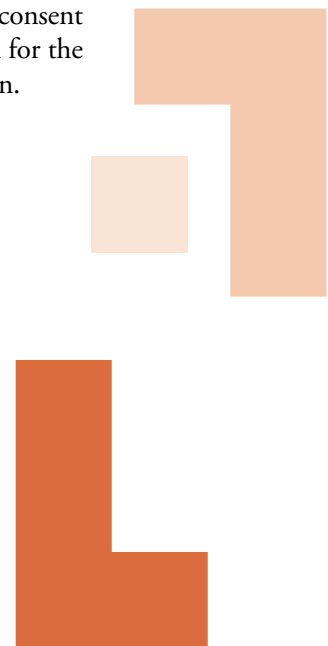
BRW Realty, Inc., acquired the property from Northampton County in May 1999, and submitted a Notice of Intent to Remediate that same month. A Special Industrial Area consent order and agreement between DEP and BRW Realty, Inc., is being negotiated. The BRW Realty, Inc., site is highlighted in this year's showcase sites.

Northampton County — Easton Roundhouse

Northeast Region

The Easton Roundhouse site is a three-acre vacant lot in Easton that was formerly occupied by a railroad roundhouse in which maintenance activities were conducted. In 1987, a fire destroyed the structure and now the site is covered by small trees, brush and a large amount of fill including concrete debris and timbers. Previous investigations at the site revealed the presence of petroleum contamination. A site investigation was conducted and a final BER was received in April 1999 and approved in October 1999, authorizing about \$75,600 for the project. A surface soil sampling in November 1999, confirmed lead contamination above Act 2 non-residential direct contact level.

A Special Industrial Area consent decree is being negotiated for the site with the city of Easton.



Related Program Successes

Keystone Opportunity Zones (KOZ) Initiative

Pennsylvania continues to demonstrate its commitment to the welfare of its local businesses and communities through the enactment of special programs. The Commonwealth created legislation to revitalize economically depressed rural and urban communities that were, at one time, the driving force behind the state's economic growth.

This legislation, called the Keystone Opportunity Zones (KOZ) Initiative, encourages the renewal of these destitute areas by offering a powerful incentive — no state taxes. Gov. Tom Ridge's introduction of the KOZ in 1998 made Pennsylvania the second state to offer the market-based incentive of tax abatement, positioning the Commonwealth as a leader in helping its communities attract new businesses and jobs.

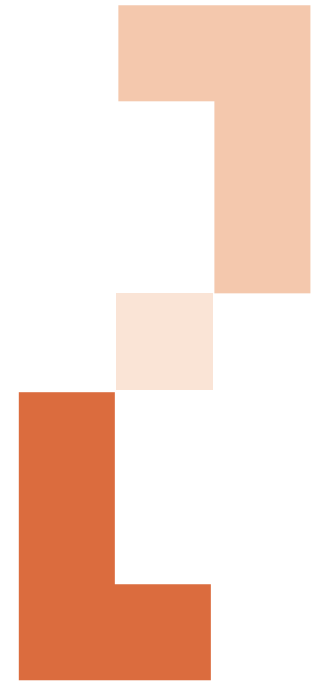
For a community to qualify as a KOZ, it must meet the following requirements:

- Provide evidence of adverse economic and socioeconomic conditions;
- Establish a binding public commitment by all taxing bodies;
- Demonstrate ties to regional, community and economic development activities;
- Outline viable reform objectives of regulations;
- Implement educational improvements and crime reduction measurements; and
- Obtain public and private commitment of resources.

Each KOZ also is allowed a maximum of 12 sub-zones (contiguous with each other) and can be no larger than 5,000 acres.

Under the KOZ initiative, tax-relief status is granted for a 12-year duration to ensure the greatest investment opportunities and to establish a foundation for economic growth.

Through private and residential reinvestment and commitment, the KOZ Initiative fosters community and economic development in various regions of the state creating opportunities to focus on: 1) business attraction/retention strategies, 2) educational improvement, 3) crime prevention, 4) housing reinvestment and 5) improved quality of life.



The Keystone Opportunity Zones (KOZ) Initiative, encourages the renewal of these destitute areas by offering a powerful incentive — no taxes.

The Land Recycling Program is an added opportunity in KOZs where former industrial sites are found. Projects receiving assistance through the Industrial Sites Reuse Program administered by DCED — a grant and low-interest loan program offering aid to municipal and local authorities, non-profit economic development agencies and similar organizations that want to conduct environmental assessments of industrial sites located in distressed areas — receive special KOZ consideration.

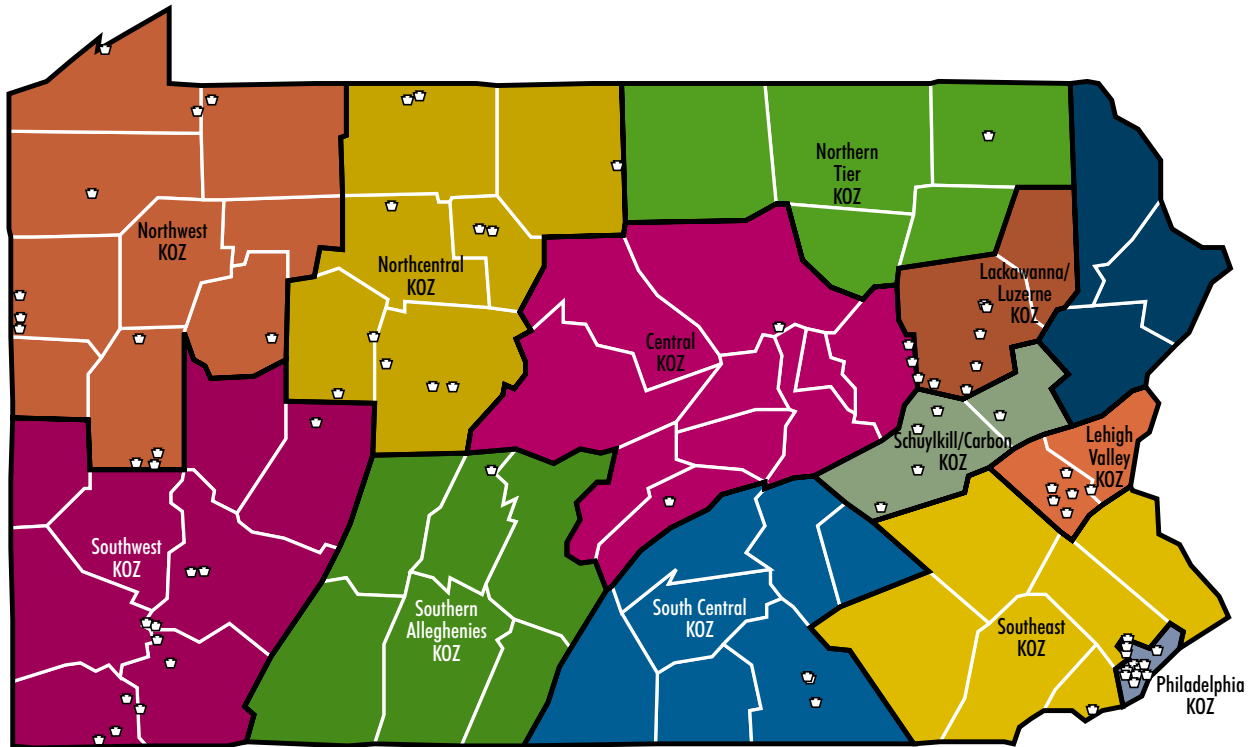
The KOZ Initiative marked its first anniversary on Feb. 25, 2000, and has 85 projects underway with about \$150 million in public and private funding. These efforts have helped create more than 4,600 new jobs and retain about 2,900 jobs. For more information about the initiative, visit www.dced.state.pa.us.

KOZ Initiative efforts have helped create more than

4,600 new jobs

and retain about

2,900 jobs



□ Keystone Opportunity Zone Project

more than

27,000 acres in 54 counties

offer KOZ opportunities

Related Program Successes


Hazardous Sites Cleanup Program

The Hazardous Sites Cleanup Program was established to provide DEP with a means of protecting human health and the environment for all Pennsylvanians. The Hazardous Sites Cleanup Act (HSCA), signed in 1988, grants the department authority to conduct site investigations and assessments, provides for the cleanup of sites releasing or threatening the release of hazardous substances or contaminants into the environment, requires the replacement of water supplies contaminated by these substances and other appropriate response actions, and calls for recovery costs from parties responsible for conducting the responses.

Additionally, HSCA establishes a fund to provide DEP with the financial resources needed to plan and implement a timely and effective response to the release of hazardous substances and contaminants. HSCA also authorizes the department to participate in the investigation, assessment and clean up of sites under the federal Superfund Act to the full extent provided by that act.

Traditionally, responses conducted under the authority of HSCA are not at active, operating facilities. HSCA addresses abandoned industrial facilities and contaminated sites where the owner is financially unable to conduct the necessary cleanup or where no known owner can be located. In these circumstances, DEP deploys state-funded contractors to investigate and assess the site. In cases where a responsible party is financially viable and chooses to ignore site conditions, HSCA also provides DEP with the authority to enforce actions to achieve site cleanup. In these cases, the responsible party may either be forced to conduct the appropriate cleanup action or reimburse DEP for its expended funds.

If a contractor is tasked with assessing a site, the contractor proceeds under a scope of work defined by the regional Hazardous Sites Cleanup Program (HSCP). That scope of work generates a site assessment report. Upon review of the assessment, the regional HSCP reviews the findings and determines the next course of action. That course of action often is the development of a remedial action plan. DEP may implement that plan in the form of a prompt interim response, an interim response, or a remedial response, based on the nature of contamination, the risk it presents, and the time and monies required to remediate the site. The Land Recycling and Environmental Remediation Standards Act provides the cleanup standards implemented by the HSCP.



HSCA establishes a fund to provide DEP with the financial resources needed to plan and implement a timely and effective response to the release of hazardous substances and contaminants.

HSCA also coordinates with EPA for activities under the Federal Superfund program. Through HSCA, the state is required to pay 10 percent of the cleanup costs at federally funded Superfund sites. DEP entered into two additional state Superfund contracts with EPA during the past fiscal year. Those contracts addressed the Butz Landfill Site and the Berkley Products Site, totaling more than \$228,000 in state-matching funds. These state-matching funds will leverage more than \$2 million in federal funds for response actions within Pennsylvania.

The following 14 sites highlight actions initiated through HSCA, from July 1999 to June 2000. They represent facilities ranging from light industrial, to food/beverage processors, to dump sites.

**Adams County —
Gettysburg Foundry**
Southcentral Region

The foundry is located five miles south of Gettysburg Borough. The 49-acre, secondary aluminum smelting plant site contains a foundry building, maintenance garage and ball mill building. Aluminum was recycled to produce aluminum ingots at the site. The company filed for bankruptcy in 1996, and ceased operations in March 1997.

DEP initiated a prompt interim response in the summer of 1999, to complete previous interim responses on the site. On Aug. 11, 1997, a prompt interim response was conducted to repair the fence surrounding the building and to transfer dross fines piles to the inside of the foundry, preventing exposure to weather. DEP conducted a second response in 1998, to remove deteriorating drums from the site. On Nov. 4, 1998, DEP entered a consent order and agreement with C.M. Metals, which purchased the facility. C.M. Metals did not meet its obligation under the agreement, which was to remove the aboveground dross wastes and baghouse fines. DEP completed the interim response for the company on July 19, 1999. A total of 4,885 tons of dross waste and 62 tons of

baghouse waste was removed from the foundry for disposal at permitted facilities. DEP completed the response on Sept. 9, 1999, for a cost of about \$350,000.

Allegheny County — Swissvale Auto Surplus Parts
Southwest Region

This half-acre site is located in a residential/light industrial area in Swissvale. An on-site cement building contained metal scrap and debris from a metal recycling facility which operated from 1940–1984. Oils containing PCBs were burned in an on-site incinerator to produce heat for the buildings. From 1984–1987, EPA conducted an emergency action that removed 6,000

tons of contaminated soil and drummed PCB waste, and decontaminated and dismantled the incinerator building. In 1995, remaining dioxin waste was removed for final disposal. PCB-contaminated scrap and debris were left in the remaining building, creating a direct-contact risk. The site was abandoned and posed a burden to the local community.

DEP initiated a prompt interim response to remove

the PCB-contaminated building, its contents and any contaminated soil. The action was completed in December 1999, for a cost of about \$600,000. DEP entered into an agreement with the responsible parties, who contributed \$118,750 as their share of the cleanup costs. The site later attained the Act 2 residential statewide health standard and is to be used by the Allegheny County Port Authority.

Berks County — Tipton Site
Southcentral Region

The Tipton Site is located in Tipton Borough. The site has been determined hazardous due to a groundwater plume originating from the Lehigh Industries property (formerly U.S. Seating). Residential wells have been impacted by PCE from the U.S. Seating manufacturing process.



Environmental inspector samples soil for contaminants.

DEP began a prompt interim response action to remove contaminated soil on Oct. 29, 1999. This action removed 1,058 tons of impacted soil at a cost of about \$32,000. As part of this action, a potassium permanganate injection system was installed before the excavation was filled. The first injection occurred in January 2000. Two additional injections have been made since that time. Because of the clay nature of the soil, monitoring has not shown that the permanganate reached the groundwater. In July 2000, injection directly into the wells occurred to treat the groundwater. If this treatment method proves ineffective, alternative treatment methods will be considered.

Crawford County — Woodruff Property (Adjunct to Former Avtex Fibers, Inc.)

Northwest Region

The Avtex Fibers site is located in Vernon Township. This 170-acre property is the site of an abandoned fiber manufacturing plant. Remedial action, conducted by responsible parties in 1995 and 1996, consisted of contaminated soil excavation. In addition, a fire damaged electrical substation was demolished and encapsulated in concrete. Tenants of the Crawford County Industrial Redevelopment Authority occupy the site buildings.

In 1996, freestanding mercury was uncovered in six former wastewater treatment trickling filters. Investigations revealed contamination in lagoons and wetlands on the Avtex site. Mercury contamination in sediments, soil and waste also were found on adjunct properties. A HSCA response was initiated in July 1999 for the adjunct Woodruff property. Contaminated waste and soil were excavated and disposed off site. DEP's contractor has completed removal actions at seven of the remaining 10 adjunct sites. In May 2000, four additional adjunct sites were discovered. Remedial action for the Avtex property will begin in late 2000.

Elk County — Beech Grove Drum Site

Northwest Region

The Beech Grove Drum Site is located in Horton Township. It consists of two adjacent parcels of property of eight-acres and 13.7-acres, respectively. The site includes vacant land, a few residential dwellings and one commercial building. The area also is used as a private dump, as evidenced by the disposal of car parts and household appliances.

In December 1998, DEP was notified that about 30–40 drums containing paint waste were buried on the property. A search warrant was executed on July 27, 1999. During the search, DEP found partially buried drums containing paint and solvent waste. Drum wastes and site soils were sampled for hazardous substances.

DEP initiated a prompt interim response in November 1999. The contractor excavated another drum and several drum carcasses. Eight test pits also were excavated for evidence of buried drums or contaminated soils. No additional contamination was found. All of the drums and debris were packed and staged for transport and disposal. The total estimated cost of the response was \$85,000.

Lawrence County — DuPont/New Castle Junk Site

Northwest Region

This 49-acre site in Union Township consists of two adjacent properties; an inactive junkyard owned by the Lawrence County Economic Development Corporation, and the former Shenango China facility, owned by Realities USA, Inc.

Numerous past industrial activities at the site have contaminated the area. Hazardous substances have been detected in the groundwater, surface water, sediments, soil, waste and fill materials on the property. Human and ecological exposure to the groundwater contamination has not occurred. DEP initiated a remedial response. The contractor excavated 70,000 tons of battery casings and contaminated soils. The site was then treated and backfilled. The project was completed in June 2000. The remaining contract work will be completed in the near future. Over the past several years, DEP has been negotiating with the responsible parties to reach a settlement.

Lehigh County — Bottle House Site

Northeast Region

The Bottle House Site is located in a residential part of Allentown. It consists of a large, three-story brick building, built in mid-1900, as the former bottling house for the Neuweiler Brewery. The brewery ceased operations in the late 1960s. Recently the building was used as a warehouse and manufacturing facility, in which large quantities of hazardous materials were stored.

HSCA ordered a prompt interim response action on Sept. 27, 1999, to eliminate the immediate threat to human and environmental health. The response included the cleanup and disposal of 2,000 55-gallon drums. The cleanup also included the transport and disposal of numerous small containers, five laboratories containing chemicals, mixing vats, bags of chemicals, and containers of plastic resins and pellets. The building interior was decontaminated by removing piping and tanks, sweeping and grinding the concrete upper floor and pressure-washing the floors. The response was completed on May 4, 2000, at an estimated cost of \$1.5 million. Criminal and civil investigations against the responsible parties are continuing.

Lehigh County — Jacob Kline Cooperage

Northeast Region

The Jacob Kline Cooperage Site is located in a light industrial park in Allentown. It operated for many years as a drum reconditioning and recycling business. The site consisted of 11 trailers, two rolloff containers and drums, all of which contained waste material. An estimated 600 drums of waste were abandoned at this property. The current owner purchased the property at a judicial county tax sale on Sept. 25, 1996.

HSCA started a prompt interim response on Nov. 1, 1999. The objective of the response was to remove all hazardous substances to off-site facilities that have regulatory approval to treat and dispose the waste. The work was completed on April 5, 2000, at a contractor cost of about \$410,000. The current owner is responsible for submission of a plan to remove tanks and, if necessary, conduct an environmental assessment and remediation under the Land Recycling Program.

Luzerne County — Penn-Tex

Northeast Region

The Penn-Tex facility, located in Hazle Township, is an abandoned textile finishing plant that housed many drums of waste materials and chemicals. In July 1999, DEP issued a prompt interim response and removed 67 drums of flammable chemicals that were stored in a trailer at the site. The estimated cost of this action was about \$43,000. On Sept. 13, 1999, the response continued to address more hazardous substances remaining at the site. The work included inventorying, sampling and characterizing the chemicals for off-site disposal.

The second phase of the cleanup was completed on Dec. 15, 1999, at an estimated cost of \$188,000. The DEP Bureau of Investigation is attempting to locate the responsible parties.

Montgomery County — Baghurst Alley

Southeast Region

Baghurst Alley is located in Upper Salford Township. This residential area contains a groundwater contamination plume of unknown size and origin. The contaminants of concern are TCA, DCE, DCA and TCE. DEP is providing affected residents with bottled water to minimize the exposure to the contaminants. A contractor hired by DEP is investigating the size and origin of the plume.

HSCA started an interim response on Dec. 17, 1999. The Pennsylvania Department of Health and the Montgomery County Department of Health recommended 23 homes be provided carbon filtration systems on their water supplies. Filter installation was completed on June 15, 2000. The entire DEP response effort cost an estimated \$50,500. Existing public water lines are several miles away from the site in any direction; therefore, the most practical solution to providing clean water may be drilling one or more public water wells to provide portable water to the homes at the site.

Montgomery County — Chemigraphics, Inc.

Southeast Region

This 17-acre property is located in Whitpain Township. Chemigraphics fabricated stainless-steel products before ceasing operations. Designs in Stone is the only company open at this site.

When Chemigraphics halted operations, 50–100 drums of waste materials and several containers were abandoned on the property. A documented release of TCE, which resulted in soil and groundwater contamination, existed. Five monitoring wells were installed on the site.

HSCA started a prompt interim response action on March 17, 2000. Stabilized drum wastes were removed. Additional monitoring wells were installed on April 25, 2000. Another priority issue included a survey of area residents to determine if any were using well water. No contaminants were uncovered in the samples taken from the three residences using well water. The response action will cost an estimated total

of \$250,000. A buyer acquired the site mortgages and a settlement has been approved. The buyer has begun to foreclose and take control of the property.

Northampton County — Freemansburg USMC Range

Northeast Region

The former USMC Reserve Training Center is located in Freemansburg. This site is under the Department of Defense Multi-Site Agreement with DEP. The firing range underwent remediation through a HSCA contract. High levels of lead were found in the ventilation system and the firing range areas in August 1999. A response occurred in March–May 2000. It included excavation and disposal of sand from the firing range, and removal of the ventilation ductwork and blower unit, a steel target plate and concrete pad and asbestos. A tire distributor plans to occupy the basement area of this remediated site.

Luzerne County — Santey Junkyard

Northeast Region

The Santey Junkyard is a half-acre site located in a residential area of Bear Creek Township. The property was used as a metals reclamation facility, from 1955 until 1986. The metals reclamation process involved the draining of transformer fluids into 55-gallon drums, shipping the drums off site, dismantling the transformers and recovering the copper cores within the transformers.

On June 30, 1999, DEP deemed an interim response action necessary for the site. The area of concern was an unknown volume of heavy metals and PCB-contaminated soil and sediment. DEP conducted a study on Nov. 29, 1999, to quantify and characterize the contamination. The contaminated material removal phase was initiated shortly after, and is scheduled to be complete by late summer/early fall 2000. The cost of the cleanup is estimated to be \$775,000.

Lycoming County — Reach Road Industrial Park

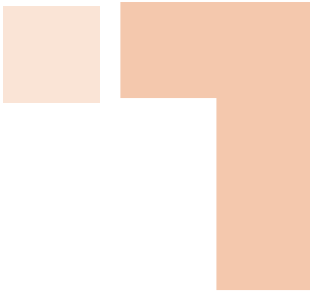
Northcentral Region

In July 1999, DEP learned that a residential drinking water supply in Williamsport was contaminated with VOCs. Ten out of 14 sampled water wells were contaminated above the VOC drinking water standards. DEP immediately offered residents and business owners bottled drinking water until a permanent solution is in place.


DEP intends to connect all affected homes and businesses to the municipal water system. Installation of the water main, funded by HSCA through a grant agreement, was completed on June 21, 2000. On July 6, 2000, a local plumbing contractor was awarded the contract to complete the connection process. The estimated cost of the entire project is \$110,000.

Related Program Successes

Storage Tank Cleanups



*Since 1995,
2,760 storage
tank cleanups
have been
completed
under the
Land
Recycling
Program.*



DEP's assistance in cleanup efforts under the Land Recycling Program consists largely of storage tank cleanups. Tank cleanup sites range from local gas stations to large aboveground storage tank (AST) complexes. Prior to the cleanup standards established by the Land Recycling Program in 1995, cleanup activity was guided by the Corrective Action Process regulation of 1993.

Responsible Party Cleanups

The Storage Tank and Spill Prevention Act of August 1989 requires responsible parties (tank owners and operators) to fund and clean up site contamination using certified contractors. Since 1989, DEP has tracked the status of 13,244 regulated storage tank release sites.

Under the Land Recycling Environmental Remediation Standards Act (Act 2 of 1995), three types of cleanup standards are available to responsible parties: background standard, statewide health standard and site-specific standard. The *Land Recycling Program Technical Manual* provides guidelines for remediation using these standards. By choosing one of these remediation standards, responsible parties are relieved of further liability.

Since 1995, 2,760 storage tank cleanups have been completed under the Land Recycling Program. As a result, DEP has issued a no further action or liability protection letter to the responsible party. A total of 296 sites have been completed during July 1999–June 2000.

Publicly Funded Cleanups

Although most storage tank cleanups have responsible parties, some remediation activities have required DEP or EPA involvement. Extreme lack of cooperation from responsible parties require DEP or EPA to take action to prevent further degradation to the environment and exposure to contamination. In addition, instances of bankruptcy or insufficient funds on the part of the responsible parties cause DEP or EPA to take necessary action for successful remediation.

From July 1999 through June 2000, 22 state- and federally-led actions (including site cleanups, assessment activities or monitoring activities either prior to or after remediation) were initiated, continued or completed. At these release sites, corrective action activities conducted by environmental consultants ranged from the operation and maintenance of groundwater remediation systems to the supply of bottled water to the community. Established in February 1994, and administered by the Department of Insurance, Bureau of Special Funds, the state Underground Storage Tank Indemnification Fund (USTIF) provides

funding for these projects. Under the January 1998 (Act 13 of 1998), Storage Tank and Spill Prevention Act, DEP receives a maximum of \$5.5 million annually from the USTIF to cover costs for corrective action activities at regulated underground storage tank (UST) release sites.

The following site descriptions are some of the significant state- and federally-led actions conducted during the past year. The sites and their activities are listed by county and region:

Clearfield County — Lucas Brothers Garage

Northcentral Region

Until 1993, this site was an active gasoline service station in Westover Borough. The owner removed three regulated gasoline USTs and found that all three had leaked. Soil and groundwater contamination were reported to DEP and the owner was directed to conduct a characterization of the site. The owner installed three monitoring wells, which revealed elevated levels of petroleum hydrocarbons in the groundwater. The owner, due to his lack of financial assets and ineligibility for USTIF, could not continue with further site work.

Through the use of special funding, DEP retained a contractor to complete the site characterization and to finish the removal of product piping and associated dispensers. A total of eight monitoring wells have been installed and sampled. The extent of both soil and groundwater contamination has been defined. During fieldwork, DEP identified a property owner down gradient of the Lucas site that was using a well, despite available public water. DEP sampled this well and found concentrations of MTBE. In response, DEP installed a lateral water line and connection to the borough's main water line. DEP is evaluating remedial options for the site.

Dauphin County — Hilltop Grocery (former)

Southcentral Region

In February 1994, the site owner removed four USTs from service. A small hole in one tank was observed and photographed, while soil samples from two other tanks showed elevated contamination levels. In August 1994, DEP requested the site owner conduct a site characterization. No action was taken. By January 1996, two residences and one apartment complex complained of petroleum odors in drinking



Petro Clean, Inc., inspector M. Hartley assesses an underground storage tank.

water. In January 2000, DEP selected a contractor to conduct a site characterization. Four monitoring wells were installed and several soil borings were taken. Site characterization activities are underway.

Delaware County — 202 Island Car Wash

Southeast Region

In March 1997, DEP received a complaint of gasoline odors in portable well water from one of the residents in the Conestoga Farms neighborhood adjacent to the 202 Island Car Wash. A sampling of about 75 homes in and around the Conestoga Farms neighborhood revealed that four residential wells had levels of MTBE that exceeded DEP's standards. Investigation of the facility revealed leak detection was not performed on the facility's USTs.

In February 1998 and January 1999, DEP ordered the car wash to cease operations. The facility had to comply with DEP's Corrective Action and Release Detection regulations, conduct quarterly residential well sampling, perform filter maintenance for homes that had carbon filters and pay civil penalties. Several hearings were held in front of the Environmental Hearing Board, in which the board upheld DEP's requirements. The cleanup, however, is not complete. Legal actions are ongoing.

In summer 1999, DEP granted Concord Township monies to install a waterline to provide public water to 75 homes in and around the Conestoga Farms neighborhood. All but six homes have been hooked up to public water.

Elk County — Bob's Service Center

Northwest Region

This site in Ridgeway Township had two 1,000-gallon USTs removed. One UST was regulated and contained an unleaded gasoline-water mixture and the other UST contained PCB-contaminated waste oil. The UST removal costs were divided between the Storage Tank and HSCA programs. UST removal costs activities occurred Feb. 7–14, 2000. Localized contaminated soil was encountered while removing the tanks. The contaminated soil was removed and staged on site. Confirmatory samples were collected following removal of the contaminated soil. A final report was submitted on June 2, 2000. About 1,400 gallons of PCB-contaminated waste oil-water mixture and 100 tons of non-hazardous petroleum-contaminated soils were disposed. The site has been graded and restored.

Lackawanna County — Jermyn Mill & Grain

Northwest Region

Located in Jermyn Borough, this one-acre site was previously a feed and grain mill with operations dating back to the 1920s. Most recently, the site was a gas station, and a fuel and waste oil bulk storage and transfer facility. The site has been vacant since 1994, when a fire destroyed all buildings on the site. DEP initiated a joint interim action in August 1999 between the Storage Tank Cleanup and HSCA programs.

The response investigated all existing storage tanks for evidence of leakage and removed them. A total of 32 tanks (28 USTs and four ASTs) were emptied, cleaned, inspected and removed from the site. The tanks contained gasoline, diesel, waste oil, waste anti-freeze and water. As many as 70 drums, tires, petroleum dispensers, dumpsters and auto-related garbage also were removed from the site. In February 2000, DEP initiated activities to investigate the soil and groundwater for evidence of contamination. Eight monitoring wells were installed and soil samples were taken. The data is being evaluated for evidence of environmental damage.

Lebanon County — Sandman II Truckstop

Southcentral Region

In 1993, soil and groundwater contamination was identified at this facility during a tank removal at the East Hanover Township site. Impacts were evident in the area of the tanks and north of the facility in a tributary to the Swatara Creek. The bulk of the impacted soil was excavated, but left on site. Gasoline

also was left floating on top of the water table in the immediate area of the facility.

After several attempts by DEP to enlist a response from the responsible party, DEP selected a contractor to undertake a site characterization. Fieldwork began on Nov. 29, 1999, at which time piezometers were installed. The stockpiled contaminated soil was tested and removed. Subsequent soil, groundwater and stream sampling occurred. A draft remedial action plan has been developed and submitted to DEP for implementation.

Luzerne County — Lehman Sunoco

Northwest Region

The original, portable groundwater remediation system will be replaced with a larger, permanent system at the service station in Lehman Township. The new system is in the design phase. After the site was closely characterized, a more permanent system was considered instead of the original system. The new equipment will be purchased with Oil Spill Liability Trust Fund monies. Bottled water is being supplied to affected residents.

Luzerne County — Tranguch Tire

Northwest Region

DEP and EPA have been reviewing the results of the soil vapor extraction system that was installed in December 1999 at this Hazelton City site. The results have been promising for this remedial effort. Samples have been taken from area homes, beginning in March 2000. The presence of BTEX compounds in the air of one of these homes prompted the investigation. Vapor levels that exceed EPA Action Levels have been recorded. The Department of Health suggested the installation of vapor recovery systems in two homes. Additional sampling has been scheduled to determine the extent and magnitude of the problem.

Montgomery County — Blue Bell Gulf Station

Southcentral Region

DEP continues its cleanup efforts from a 1998 UST release at the Wagner Blue Bell Gulf service station in Whitpain Township. Between 10,000 and 15,000 gallons of gasoline were released, impacting the soil and groundwater in the surrounding area. The station owner was ordered by DEP to conduct a site investigation and cleanup. A claim filed by the station owner resulted in a \$1 million USTIF grant. The USTIF cleanup funds were exhausted in early 1999, and the station owner stopped remediation action.



With assistance from Senator Edwin Holl, DEP secured additional funding from Act 13 to continue the on- and off-site characterization and cleanup work. All homeowners in the impacted area have been connected to a public water supply or have been provided carbon filter systems. Several recovery well systems were installed in the area along with free product removal units, stripper units and a soil vapor extraction system. Development of the remedial action plan continues.

Northampton County — Hokendauqua Creek

Northeast Region

This creek in Northampton Borough has been polluted with gasoline since 1987. Near the end of 1999, the Remedial Action Plan for the gasoline seep cleanup of Hokendauqua Creek was finalized. About 1.2 tons of contaminated soil were excavated from the seep area where the petroleum exited the stream bank. Five groundwater monitoring wells (MWs) and two soil borings were installed to conduct a site investigation into the source and extent of contamination. Oxygen Release Compound socks were assembled and installed in the MWs. This installation will expedite the degradation of dissolved phase petroleum hydrocarbons in the groundwater aquifer, since site limitations restrict the installation of larger, more active groundwater treatment systems.

Perry County — Kell's Korner Market

Southcentral Region

Kell's Korner Market is an operating gasoline station and convenience store located in Spring Township. A release of an unknown quantity of gasoline migrated off site and contaminated a neighbor's domestic well. The owner of Kell's Korner conducted a partial site characterization of the property. DEP is in the process of completing the site characterization on neighboring properties. Five off-site monitoring wells have been installed to determine the extent of the groundwater contaminant plume. In addition, soil borings were installed and soil samples were collected and analyzed for gasoline constituents to define the extent and degree of gasoline exposure to off-site soils. A large diameter recovery well and vapor monitoring points also were installed on the Kell's Korner property to allow DEP to

conduct a remedial feasibility study. The goal of the study was to design a remediation system for the site.

Schuylkill County — Hartranft Texaco

Northeast Region

Funds from the Coast Guard's Oil Spill Liability Trust Fund have allowed DEP to continue groundwater treatment of this contaminated area. Once a former service station, this site in Rush Township contained gasoline leaking USTs. The treatment system maintenance and operation is controlled by DEP, and has been running efficiently and effectively.

Groundwater contamination levels have been declining based on periodic DMRs. DEP will continue to oversee the remedial efforts at this site.

Washington County — Tri-State Wholesale Oil Co.

Southwest Region

Tri-State Wholesale Oil Company was a petroleum blending and distribution business in Hanover Township. In early 1998, Tri-State Wholesale Oil Company declared bankruptcy and ceased operations. In January 2000, an IRSC contract allowed removal of 20 leaking USTs from the property. DEP employed a contractor to remove the USTs and associated parts.

During February, March and April 2000, a total of 14 USTs were removed, cleaned and scrapped from the facility. During April, two ASTs were removed, cleaned and scrapped. Contaminated soil in excess of 1,000 tons was generated and properly disposed. In addition to the contaminated soils, more than thirty drums of sludge and tank cleanings were properly identified and disposed. All excavations were back-filled with fill material, graded and seeded or graveled appropriately. The majority of site work was completed on April 12, 2000. The drum disposal was completed on June 12, 2000.