



# Activities in Pennsylvania



## ATSDR in Partnership With Pennsylvania

The Agency for Toxic Substances and Disease Registry (ATSDR) is the lead public health agency responsible for implementing the health-related provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). ATSDR is an Atlanta-based federal agency with more than 400 employees and an annual budget for 2003 of approximately \$82 million. ATSDR is responsible for assessing the presence and nature of health hazards at specific Superfund sites, helping to prevent or reduce further exposure and illnesses resulting from those hazards, and expanding the knowledge base about the health effects of exposure to hazardous substances.

ATSDR works closely with state agencies to carry out its mission to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances. ATSDR provides funding and technical assistance to states and other partners through cooperative agreements and grants to identify and evaluate environmental health threats to communities. These resources enable state and local health departments and other grantees to further investigate environmental health concerns and to educate communities. From **fiscal years 1986 through 2003**, ATSDR awarded more than **\$6.8 million**—more than **\$660,000** in the last 2 years—in direct funds and services to **Pennsylvania** for comprehensive support of its environmental health unit. In addition to direct funds and services, ATSDR staff provides technical and administrative guidance for state-conducted site activities.

## ATSDR Site-Specific Activities Public Health Assessment-Related Activities

One of the agency's important mandates is to conduct **public health assessments** of all National Priorities List (NPL) sites and of other sites where a significant threat to public health might exist. **One hundred**

**eighteen** sites have been designated to the NPL in **Pennsylvania**.

### A public health assessment

is a written, comprehensive evaluation of available data and information on the release of hazardous substances into the environment in a specific geographic area. Such releases are assessed for current or future impact on public health. ATSDR, in collaboration with public health and environmental officials from **Pennsylvania**, has conducted **160** health assessments in the state, including the following recent examples.

- **Bear Creek Chemical Area**—The Bear Creek Chemical Area site in Butler and Armstrong Counties consists of 26 known or suspected industrial waste disposal areas. Until the 1970s, industrial waste was hauled from three nearby industrial facilities to several private properties for disposal.

Drinking water near the Bear Creek Chemical Area site has been impacted by several contaminants, including resorcinol, sulfonic acids, and calcium petronates. Limited scientific information is available for the contaminants of concern. As a result, the **Pennsylvania Department of Environmental Protection (DEP)** has been providing bottled water for drinking for more than 18 months to approximately 930 homes and businesses; the contaminated drinking water is being used for showering and other nonpotable uses.

ATSDR became involved with the site in summer 2003 at the request of the **Pennsylvania Department of Health (PADOH)**. In July 2003, ATSDR representatives conducted a site visit with representatives of DEP and PADOH. ATSDR is in the process of conducting a public

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health assessment for the site. ATSDR also held a public availability sessions at the Petrolia Fire Hall on July 15, 2003, to discuss the public health assessment process and gather health concerns from the community. During the public availability session, ATSDR met one-on-one with approximately 100 community members.

Because no health guidelines have been developed for the chemicals of concern at this site, ATSDR is conducting a review of the available scientific literature on health effects associated with exposure to these

chemicals. The results of the toxicologic evaluation will be incorporated into the public health assessment for the Bear Creek Chemical Area site, which is expected to be completed by July 2004.

- **Watson Johnson Landfill**—In September 2003, PADOH and ATSDR released a public comment draft health assessment for the Watson Johnson Landfill site in **Richland Township**. PADOH and ATSDR began work at this community in 2000 at the request of the U.S. Environmental Protection Agency (EPA). To date, PADOH and ATSDR have released two health consultations that review private well data for this site, participated in several community meetings, and gone door-to-door to talk to residents about their questions and concerns.

The purpose of the health assessment was to evaluate the site's impact on the community's health from all environmental media, including groundwater, surface water, soils, and sediments. One conclusion in the health assessment is that arsenic in groundwater near the landfill is present at levels that, if ingested over a lifetime, could cause a low to moderate increased risk for cancer. Another conclusion is that volatile organic compounds (VOCs) in groundwater near the landfill are present at levels that are not expected harm residents'



***PADOH/ATSDR blood-lead screening and information tent at Hamburg Community Days, August 2003.***

health; however, continued exposure over a lifetime poses a low increased cancer risk.

ATSDR and PADOH are planning a meeting in the community in fall 2003 to accept community comments and answer questions about the agencies' ongoing activities at the site.

A **health consultation** is a written or oral response from ATSDR to a specific request for information about health risks related to a specific site, chemical release, or hazardous material. It is a more limited response than a public health assessment is. To date, **265** documented health consultations have been conducted at **158** sites in **Pennsylvania**, including

the following recent examples.

- **Hamburg Lead**—EPA asked ATSDR to comment on the public health implications posed by lead contamination in soil at the sites that make up the Hamburg Lead site in **Hamburg**. The Hamburg Lead site encompasses several properties, including the Berry site, Hamburg Field House, Hamburg Playground, Ambulance Garage site, Geary Drive site, and Kaercher Creek site. Soil in residential areas and other properties throughout the region is contaminated with lead from battery cases used as fill material, and also from aerial disposition from a former lead smelter.

ATSDR released health consultations related to various land parcels for the Hamburg Lead site in 1993, 1995, 2000, and 2003. The most recent of these consultations involved the Kaercher Creek, Geary Drive, and Ambulance Garage sites, and were released in January, March, and June 2003, respectively.

The Kaercher Creek health consultation concluded that the lead contamination in the creek soil and sediment is likely to have an adverse impact on human health, especially for developing fetuses and children up to 6 years old. ATSDR classified this site as a public health hazard that requires public

health intervention. ATSDR's public health action plan for the site includes blood lead screening for area residents (in coordination with **PADOH**) and health education activities for residents and county health professionals.

The Geary Drive and Ambulance Garage consultations evaluated potential exposure for trespassers from incidental soil ingestion. Although the site is bordered by residential areas, the likelihood of exposure is limited because the site is along a creek bank and is mostly covered by grass. Further, no recreational activities occur on the site, and pedestrian foot traffic is infrequent. ATSDR concludes that although lead levels are above background in surface soil at the site, exposure is not expected to occur at levels of health concern. ATSDR classified both the Geary Drive and Ambulance Garage sites as no apparent public health hazard for this exposure scenario.

- **Tranguch Gasoline Spill**—In 1993, **DEP** responded to the gasoline spill associated with a leaking underground storage tank at the Tranguch Gasoline Site in **Hazleton**. In the early 1990s, DEP sampled homes and installed vapor recovery systems. At DEP's request, in 1996 EPA began sampling and remediating homes affected by the gasoline spill as well as defining the extent of groundwater contamination. Former coal mines and sewer main breaks in the area of the groundwater contamination are believed to have served as a pathway of exposure to residents living beyond the immediate area of the groundwater plume. Public health agencies have been involved with the site, at EPA's request, since May 2000.

In 2001, ATSDR prepared a health consultation on the safety of action levels for benzene, toluene, ethylbenzene, and xylenes (BTEX) chemicals found in homes impacted by the site. In spring 2001, ATSDR and **PADOH** conducted door-to-door visits to more than 80 homes to answer health questions and provide information on health issues related to the site. Both agencies also jointly conducted an educational program for physicians and other local health care professionals serving the Hazleton area, as well as a program on community stress issues. During winter 2001, ATSDR collaborated with **PADOH** to individually review all of the environmental sampling data available for all 368 homes and businesses in the site area; all

of the property owners received individual letters stating the lack of public health threat under current postremediation conditions.

The **University of Pittsburgh School of Public Health** was contracted by local officials to study the possibility of health effects in the affected community. In October 2003, the university released its final reports for the community. **PADOH** has also been reviewing the cancer statistics for the area. The primary public health issue of concern is the possibility that leukemia rates are elevated in this community. ATSDR will review the cancer data and the university's final reports and make any necessary follow-up recommendations for this community. ATSDR formed an internal workgroup that is now reviewing the final summary report.

### **Health Education and Community Activities**

**Pennsylvania** has been a participant in ATSDR's cooperative agreement program since **1987**. Under this program, **PADOH** has received funding and technical assistance for the development of community education and activities associated with human exposure to hazardous substances in the environment.

- **Hamburg Lead**—Because of the widespread nature of the contamination at this site, **PADOH** and ATSDR are leading a comprehensive health education effort to inform health care providers and community residents in the area about the health effects of lead and about resources to prevent or reduce lead exposure. A special focus of these activities is on promoting childhood lead prevention and surveillance. ATSDR is providing technical assistance to **PADOH** that includes the review and development of health educational materials and the coordination and distribution of hundreds of information packets for physicians. **PADOH** and ATSDR activities conducted in relation to the Hamburg Lead site include
  1. Developing and distributing a fact sheet on the health effects of lead exposure and the importance of lead screening.
  2. Conducting physician visits to increase their awareness of lead issues related to the Hamburg Lead site and to inform them of future health education and blood lead screening activities.
  3. Offering blood lead screenings to children 6 months through 6 years old at the 2003 Hamburg



Community Days and the Hamburg Borough Center.

4. Conducting an environmental health grand rounds presentation for the local medical community in October 2003 at Reading Hospital.

## Health Studies

**Health studies** are conducted to determine the relationship between exposure to hazardous substances and adverse health effects. They also define health problems that require further investigation through, for example, a health surveillance or epidemiologic study. Following are examples of health studies or investigations that ATSDR conducted or supported in **Pennsylvania**.

- **Medical Records Review**—In September 2003, the **University of Pennsylvania** released its ATSDR-funded “Medical Records Review of a Group of Residents Near the Precision National Plating Services Site.” Physicians at the university solicited and reviewed medical records provided by medical professionals for both current and former occupants of the nine residences closest to the former chrome-plating facility in a rural area near the town of **Clarks Summit**. The purpose of this review was to address lingering community concerns about illnesses in the community and a possible relationship of these illnesses to contamination from the facility. The study concluded that the medical conditions recorded among the current or former residents in the study did not appear to be related to contaminants from the site.
- **Multistate Case-Control Study of Childhood Brain Cancers**—The role of environmental chemicals in childhood brain cancer etiology is not clearly understood. Because brain cancer in children has become a major concern in communities near hazardous waste sites, ATSDR conducted this population-based case-control study to examine the association between the risk of childhood brain cancer and living near the NPL sites. Cases diagnosed at less than 10 years of age during 1993–1997 with first primary cancer of the brain, excluding lymphomas, in Florida, New Jersey, Pennsylvania, and New York (excluding New York City) were identified from the statewide cancer registries. Controls were selected by random-digit dialing by individually matching to

cases on race, birth year (within 1 year), and state of residence at the time of diagnosis.

Five hundred twenty-six case-control sets were included in the first phase of the study. Computer-assisted telephone interviews were conducted with the biological mothers to collect the residential history and other exposure information. The exposure periods included 2 years prior to the child’s birth for parents and from birth to 1 year before the year of diagnosis.

In the second phase of the study, the relationship between the childhood brain cancer risk and mother’s blood levels of persistent organic pollutants was examined. Blood specimens were collected from the 147 mothers of the case and control children who were diagnosed at less than 5 years of age (reference age for controls) during the most recent 2 years. The data analysis was focused on the 10 analytes that had a concentration level above the detection limit in at least 60% of the participating mothers. The draft final report has been completed, and is in the process of an external peer review.

- **National Exposure Registry: Trichloroethylene (TCE) Subregistry**—The National Exposure Registry (NER) comprises chemical-specific subregistries to aid in assessing the long-term health consequences of low-level, long-term exposures to hazardous chemicals at hazardous waste sites. TCE, a synthetic chemical not occurring naturally in the environment, was the first chemical subregistry of the NER. The **Pennsylvania** site included in the TCE subregistry is **Crossley Farm/Hereford Township** in Berks County. Health outcome rates for the TCE Subregistry are being compared with national rates. Significantly excessive health effects reported by the TCE Subregistry members include speech impairment; hearing impairment; anemia and other blood disorders; effects of stroke; urinary tract disorders; liver problems; kidney problems; diabetes; and skin rashes, eczema, or other skin allergies.

**For more information, contact ATSDR toll-free at 1-888-42ATSDR (1-888-422-8737) or visit the ATSDR Web page at [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov).**