



# Activities in New Mexico



## ATSDR in Partnership With New Mexico

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. From 1990 through 2002, ATSDR awarded more than **\$850 thousand** in direct funds and services to the state of **New Mexico**. In addition to direct funds and services, ATSDR 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. **Seventeen** sites in **New Mexico** have been designated to the NPL.

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 **New Mexico**, has

conducted **15** public health assessments in the state. Following is an example of a public health assessment conducted in the state:

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- **Molycorp, Inc.**—The U.S. Environmental Protection Agency (EPA) proposed that this site be placed on the National Priorities List. The site encompasses two distinct areas, a molybdenum mine and its associated tailings ponds, both of which are near the town of **Questa, Taos County, New Mexico**. Contaminants of concern include metals such as arsenic, cadmium, chromium, cobalt, lead, manganese, and zinc.

In 2002, ATSDR released a draft public health assessment for the site. The draft public health assessment is a review of available information about groundwater and drinking water, soil, surface water and sediment, and air quality. These were reviewed to determine possible exposure pathways. ATSDR classified the site as posing no apparent public health hazard associated with current or future exposures to mining-related contaminants. ATSDR considers past exposures at the Molycorp site an indeterminate public health hazard due to the limited nature of historical groundwater and air monitoring data.

This public health assessment has been released for public comment. After the public comment period and a public meeting are held, the agency will evaluate the health concerns provided by community members to determine if any adverse health effects are the result of exposure to substances from the Molycorp 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,

33 documented health consultations have been conducted at 20 sites in **New Mexico**. Following are examples of health consultations conducted in the state:

■ **Navajo Nation Sheep Dip Vat Health Consultation**—ATSDR has an interagency agreement with the **Bureau of Indian Affairs (BIA)** to provide public health support for various issues. This includes support for public health issues associated with the cleanup of toxaphene contamination in soil from former sheep dipping vats in the Navajo Nation. BIA asked ATSDR to evaluate approximately 82 former dip vat sites as well as associated environmental data and to prioritize the sites, which are in Arizona and **New Mexico**,

based on the potential threat to public health. ATSDR staff met with representatives for BIA and the Navajo Nation Department of Historic Preservation and completed site visits to the former dip vat locations to evaluate the potential for human exposures.

■ **Cerro Grande/Los Alamos National Laboratory Fire**—During the fire in May and June of 2000, the U.S. Environmental Protection Agency (EPA) asked ATSDR to conduct a series of health consultations on potential health risks to people from the planned controlled-burn fire that spread out of control. ATSDR concluded that although polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), particulate matter, and metals were present in the air in detectable amounts, they appeared to be below levels of health concern.

Subsequently, in December 2000, ATSDR was asked by the **Los Alamos National Laboratory** of the Department of Energy to determine whether levels of radiologic and chemical contaminants in the smoke from the fire might

pose a longer term threat to persons who were exposed. ATSDR again determined that once the fire was extinguished, the potential for immediate hazard was eliminated. However, concerns were expressed that the damage done to the soil by heat and the loss of trees and plants covering the

ground might greatly increase the danger of future erosion by both water and wind. Increased erosion in the area could uncover material buried for disposal. The increased erosion of the soil in the burned area could also carry toxic materials into the Rio Grande River watershed. The state of New Mexico and the Los Alamos National Laboratory are taking steps to address erosion and the potential for contaminants washing into the Rio Grande River.



*ATSDR, BIA, and a Navajo Chapter official survey a former dip vat site in the Navajo Nation.*

■ **Fort Wingate Army Depot**—In 1999, on behalf of BIA, the Army asked ATSDR to evaluate explosives and lead dust contamination detected in former munitions storage igloos at the Fort Wingate Army Depot. The Army also asked ATSDR to determine how the contamination might affect future usage when the property is transferred to the BIA for use by the Navajo nation and the pueblo of Zuni. The Army wanted to determine whether the levels of contamination might be a human health hazard, and to obtain recommendations about the storage of raw and packaged foods in the igloos.

In September 2000, ATSDR determined that the current levels of contamination likely would not pose a health hazard to an occasional visitor. As a precaution, ATSDR recommended that children and women of childbearing age should not enter the igloos unless it was necessary. ATSDR further recommended that the igloos not be used for housing unless more extensive cleanup is performed. Additional use-specific recommendations were issued by ATSDR to assist in future use determinations.

## Public Health Advisories

A **public health advisory** is a statement of findings by ATSDR that a substance released into the environment poses a significant risk to human health. It includes recommended measures to reduce human exposure and eliminate, or substantially mitigate, the significant risk. The advisory is issued to EPA to inform state and local officials and the public about recommended actions. In **New Mexico**, ATSDR issued the following advisory.

- **Navajo Desiderio Group Uranium Mines**—On November 21, 1990, ATSDR issued a public health advisory to inform EPA, the Navajo nation, and others of a potentially significant threat to human health posed by the presence of radioactive mine wastes containing uranium, areas potentially contaminated with heavy metals, and other physical hazards. The areas of contamination lie on Navajo land near the town of **Bluewater**.

From 1952 to 1966, the Brown-Vandever Mine and the Desiderio Mine produced uranium ore for use in processing facilities in and around **New Mexico**. These mining operations left tailings and open mine pits and shafts throughout the area. Many children lived in the area, and a preschool was within 3 miles of one of the sites. About 125 people living within a 3-mile radius of the site were warned of the possible threat to their health from contact with mining site waste that contained uranium. Since the advisory was issued, EPA conducted an emergency removal of the waste, thereby reducing the possibility of radiation exposure by approximately 80%.

## Exposure Investigations

An **exposure investigation** collects information on specific human exposures through biologic sampling, personal monitoring, related environmental assessment, and exposure-dose reconstruction. Since 1994, ATSDR staff members have conducted **two** exposure investigations in **New Mexico**. Following is an example of such an investigation:

- **ECKO Products Facility**—ATSDR initiated an exposure investigation at the ECKO Products facility in Silver City as a result of a health consultation. The consultation evaluated available data from a fiberglass-helmet manufacturing plant and concluded that health concerns were

consistent with symptoms that could result from exposures to volatile organic compounds. ATSDR asked for technical assistance from the National Institute for Occupational Safety and Health (NIOSH). NIOSH reviewed facility operations and conducted time-weighted air sampling in various process areas. The information generated was used to focus on target chemicals for the exposure investigation. NIOSH found that worker exposure occurred, which prompted ATSDR to investigate whether compounds associated with emissions from the facility were present in community ambient air at levels of health concern. Two consecutive days of community air sampling were conducted for methyl ethyl ketone peroxide, methyl isobutyl ketone, and styrene.

Compounds associated with emissions from the facility were not present in community ambient air at levels of health concern. This information was provided to residents, businesses, and the facility operators as well as to government agencies for use in planning follow-up efforts.

## Tribal Government Collaboration and Health Education Activities

ATSDR has cooperative agreements to support educational activities for health professionals and communities on human exposure to hazardous substances in the environment. The **National Tribal Environmental Council (NTEC)** participated in this program from 1996 through 1999, and the **Eight Northern Indian Pueblos Council (ENIPC)** participated from 1996 through 2002. Both councils are in **New Mexico**. ENIPC Environmental Office staff members conducted an environmental health education needs assessment survey at each of the pueblos. The purpose of the survey was to identify environmental health concerns and culturally appropriate methods to share information, conduct community and health professional education, and address identified concerns including those related to possible radiation exposures from Los Alamos National Laboratory. In 1996, ENIPC performed data collection, data entry, and data analysis of the survey results. Environmental office staff members also started compiling community profiles for each of the pueblos to assist in planning future educational activities.

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NTEC and the National Environmental Health Association conducted a course titled *Health Risk Communication for Environmental Health Professionals* at the NTEC conference in San Diego in March 1996. At the same conference, ATSDR supported a workshop on pesticide management practices. A new column focusing on environmental health issues became a standard feature in NTEC's newsletter, *Tribal Visions*.

ATSDR recently conducted a series of professional seminars to meet the educational needs of local nurses working in support of the **Griggs and Walnut Street site in Las Cruces**. "Environmental Health—A Nurses' Perspective" provided targeted information as well as an opportunity for local nurses to earn continuing nursing education credits. An unplanned but welcome outgrowth of the seminars was a request for a special session for 30 promatros de salud (environmental health paraprofessionals) working as part of the Southwest Area Health Education Consortium with **New Mexico State University**. Conducted in Spanish, this session included discussions about how best to convey environmental health information to the Hispanic community.

## Association of Occupational and Environmental Clinics

ATSDR provides financial and technical support to members of the Association of Occupational and Environmental Clinics (AOEC). This support is provided to improve education and communication related to surveillance, diagnosis, treatment, and prevention of illness or injury related to exposure to hazardous substances. The AOEC member institution in **New Mexico** is the **Presbyterian Occupational Medicine Clinic in Albuquerque**.

## Health Studies

Health studies are investigations conducted to determine the relationships between exposures to hazardous substances and adverse health effects. They also define health problems that require

further investigation through, for example, health surveillance or an epidemiologic study. Following is an example of a health study that ATSDR conducted or supported in **New Mexico**:

- **Soil-Related Potential Lead Poisoning**— In 1990, ATSDR awarded a grant to the **New Mexico Department of Health and Environment** to assess lead exposure in persons living near the Billing Mine Smelter site in Socorro. Residents of the Billing Smelter area had mean blood-lead levels (3.67 micrograms per deciliter [ $\mu\text{g}/\text{dL}$ ]) that were statistically significantly higher than the mean blood-lead levels of residents in comparison areas (2.56 and 3.08  $\mu\text{g}/\text{dL}$ ). For the participants with both preabatement and postabatement blood-lead level measurements, a significant decrease in mean blood-lead levels was found after cleanup. Appropriate counseling and follow-up programs were recommended.

## Resource Materials

ATSDR develops materials that public health professionals and medical care providers can use to assess the public health impacts of chemical exposures. Resources are available in print, on the ATSDR Web site, and on CD-ROM. For example, medical management guidelines are available for acute chemical exposures to more than 40 chemicals. ATSDR's toxicological profiles comprehensively describe health effects; pathways of human exposure; and the behavior of more than 250 hazardous substances in air, soil, and water at hazardous waste sites. Since fiscal year 2002, more than **3,300** of these profiles have been sent to requesters, including representatives of federal, state, and local health and environmental departments; academic institutions; private industries; and nonprofit organizations in **New Mexico**. ATSDR has also developed extensive resources for community members.

**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).**