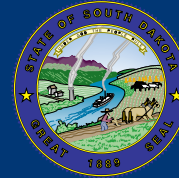




Activities in South Dakota



ATSDR in Partnership With South Dakota

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 a budget for 2004 of approximately \$73 million. ATSDR assesses the presence and nature of health hazards at specific Superfund sites, helps to prevent or reduce further exposure and illnesses resulting from those hazards, and expands 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. 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 ATSDR'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. A **public health assessment** is a written, comprehensive evaluation of available data and information about the release of hazardous substances into the environment in a

specific geographic area. Such releases are assessed for past, current, or future impact on public health. ATSDR, in collaboration with public health and environmental officials from **South Dakota**, has conducted **five** public health assessments in the state, including the following recent example.

- **Gilt Edge Mine**—Located near **Deadwood**, the Gilt Edge Mine is an open-pit, cyanide-heap-leach gold mine. Sulfide waste rock and exposed ore zones contain heavy metals, including arsenic, cadmium, cobalt, copper, lead, and zinc. High levels of nitrates and sulfates also are present in heap-leach residues. In 1999, the operating company was no longer able to maintain the site. It left 150 million gallons of acidic, heavy-metal-laden water in three open pits, as well as millions of cubic yards of acid-generating waste rock requiring cleanup and long-term treatment.

ATSDR is conducting a public health assessment for the site; however, more detailed environmental information is needed before the assessment can be completed. The U.S. Environmental Protection Agency (EPA) is conducting the necessary environmental sampling and other investigations to obtain the information. The remedial investigation and risk assessment, which should be complete by early 2005, will determine the extent of risk for both humans and the environment.

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. A health consultation is a more limited response than a public health assessment is. **Sixteen** health consultations have been developed at **14** sites in **South Dakota**, including the following recent examples.

ATSDR has conducted five public health assessments and 16 health consultations in South Dakota.

- **Pine Ridge Indian Reservation Sharps Corner/Porcupine Area**—Residents of the **Pine Ridge Indian Reservation** in South Dakota asked ATSDR to determine whether exposure to possible contaminants in selected private well water and indoor air in the **Sharps Corner/Porcupine** area would adversely affect the health of area residents. The primary contaminants of concern for the Sharps Corner/Porcupine area are radionuclides in the drinking water and radon in the indoor air of private residences.

In a health consultation released in September 2003, ATSDR concluded that radon poses no apparent public health hazard to residents in homes sampled for radon in the Sharps Corner/Porcupine area. ATSDR also concluded that ingestion of uranium from water in private wells in the Sharps Corner/Porcupine area poses no apparent public health hazard because calculated uranium levels in residents were lower than the acceptable exposure limit for uranium in the general public.

ATSDR recommended conducting a second indoor radon test in residents' homes where radon was detected. ATSDR also recommended public health education about cancer, lung cancer, radon, and smoking. Either radon exposure or smoking can independently increase the risk for lung cancer; exposure to both greatly enhances that risk.

- **Takini School**—The Takini School is on the **Cheyenne River Indian Reservation** near **Howes**. In early 2001, the interior of a water tower serving the school and a nearby residential area was painted with an inappropriate paint. Before it was disconnected, the tower briefly supplied water to the school and housing water lines. Because of concerns about residual contamination left in the lines, the Bureau of Indian Affairs (BIA), in collaboration with the **Cheyenne River Sioux Tribe Environmental Program**, pursued further evaluation and precautionary testing. BIA asked ATSDR to review the precleanup and postcleanup sampling data for the school and residences to determine the public health implications of any contamination left in the school water system.

Sampling results from February 2001 showed some nonchlorinated organic substances in the school and water samples but sampling results from August 2001 did not show these substances. No contamination is in the water tower or in the water

supply system. However, samples revealed high levels of chlorination disinfection by-products, or trihalomethanes, caused by high levels of chloroform. ATSDR recommended reduction of exposure to these by-products. Reduction may be accomplished by several means, such as working with the water supplier to reduce the levels in the supply or providing and maintaining filters on drinking fountains and in the kitchen and home economics room in the school.

Resource Materials

ATSDR develops materials for public health professionals and medical care providers to use to assess the public health impacts of chemical exposures. These 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 50 chemicals. These guidelines were designed to aid emergency department physicians and other emergency health care professionals, such as first responders, who manage acute exposures resulting from chemical incidents. 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. The toxicological profiles primarily are used as a comprehensive resource by health professionals at all levels. 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 **South Dakota**. ATSDR also has 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 site at www.atsdr.cdc.gov.