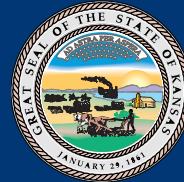




Activities in Kansas



ATSDR in Partnership With Kansas

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. From **fiscal years 1990 through 2003**, ATSDR awarded more than **\$1.1 million** in direct funds and services to **Kansas** for financial support of specific environmental health activities. 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 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. **Eighteen** sites have been designated to the NPL in **Kansas**.

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 current or future impact on public health. ATSDR, in collaboration with public health and environmental officials from **Kansas**, has conducted **20** public health assessments in the state, including the following recent examples.

- **Sunflower Army Ammunition Plant**—Sunflower Army Ammunition Plant is a government-owned, contractor-operated installation that operated from 1942 to 1992 near **DeSoto**. The plant's primary mission was to manufacture smokeless gunpowder and munition propellants for World War II, the Korean Conflict, and the Vietnam Conflict. Munitions testing also was conducted at the site. Since 1992, maintenance, environmental stabilization, and remediation have been the major activities at the site. The primary site contaminants are inorganics, explosives, and nitrate compounds in on-site soil, sediment, and groundwater.

In March 2002, ATSDR released a final public health assessment on the site. This public health assessment concluded that recreational exposure to the surface water and sediment in several nearby creeks are not expected to cause adverse health effects in children who may play in the creeks.

The soil in many areas of the site is contaminated; however, access to the site is restricted. Infrequent exposure to soil is not expected to cause adverse health effects. At this time, the future use of the site is uncertain. The public health assessment concluded that continued soil sampling and appropriate remediation would be needed before the general public has access to the soil at the site.

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Groundwater at the site is contaminated; however, this water is not used as a drinking water source. Therefore, no exposures are occurring, and no public health hazards exist from on-site groundwater. Groundwater contamination at the site is not negatively influencing the quality of drinking water at 13 private wells near the site. The impact of groundwater contamination cannot be determined for nine other private drinking water wells because data are lacking. Therefore, ATSDR agrees that planned sampling at three of those wells should continue and encourages plans be made to sample the remaining four. Because sources other than the site have the potential to affect the water quality at private groundwater wells, ATSDR suggests that private well owners regularly test the water from their wells to ensure that the water is safe to drink.

The U.S. Army is talking with **Johnson County** about turning over the land to the county, and the county plans to turn it over to a developer. The developer will have to continue cleanup efforts and plans to make an industrial park out of the land. The Kansas Department of Health and Environment and the U.S. Environmental Protection Agency (EPA) are part of those talks, and those two agencies will continue monitored cleanup.

- **Tri-County Public Airport**—In November 2002, ATSDR completed its final release public health assessment for the proposed Tri-County Public Airport NPL site in **Delevan**. The site is a former World War II Army airfield. During its peak operating period, the airfield consisted of more than 300 buildings and housed approximately 2,000 personnel. The airfield had a wastewater treatment plant, a 200,000-gallon fuel storage tank, a warehouse area, barracks, and a recreation area. The airfield was officially declared surplus in 1946 and deeded to the city of **Herrington** in 1948.

Since 1948, the site has been leased to several companies. Operations at the site have included aircraft restoration; aircraft storage; and manufacturing of farm implements, black powder, and roofing materials. Most of the buildings and structures have been removed, but two hangars, a water tower, several water supply wells, and a few small buildings remain.

One completed exposure pathway was identified in the November 2002 public health assessment: People were exposed to water from contaminated drinking water wells off-site by ingestion, inhalation, or absorption. Three potential exposure pathways also were identified: off-site surface water and springs, on-site drinking water wells, on-site surface soil, and on-site sediment.

ATSDR also concluded that adverse cancer and noncancer health effects are unlikely near the site and that exposure to site-related contaminants via drinking water occurred in the past. Exposure to drinking water contaminants has been stopped by the installation of carbon filtration units at residences where exposures exceed the maximum contaminant level.

ATSDR made four recommendations in the public health assessment for this site: (1) provide a more permanent solution for safe drinking water to residences near the site with contaminated well water, (2) continue periodic monitoring of the groundwater plume to ensure that private drinking water wells outside the plume do not become contaminated by migration of the plume, (3) take appropriate preventive measures to mitigate exposure if these wells become contaminated, and (4) inform trespassers and present workers on the site that they should avoid unnecessary contact with site soils and sediment.

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. To date, **244** documented health consultations have been conducted at **61** sites in **Kansas**, including the following recent examples.

- **Chemical Commodities Inc. (CCI)**—This site, which occupies about 1½ acres, is in a largely residential area of **Olathe**. From 1951 until 1989 the facility stored surplus or outdated chemicals. In January 2003, EPA asked ATSDR for technical assistance in evaluating newly collected air samples from crawl spaces and living spaces of eight homes near the site. ATSDR's March 2003 health consultation evaluated those samples to address EPA's response action decision to install ventilation systems and conduct additional air sampling in the affected areas.

ATSDR concluded that inhalation of contaminants (primarily trichloroethene) in living spaces of homes overlying the site may pose a public health hazard because of the potential for cancer and noncancer health effects. ATSDR's conclusion was consistent with EPA's conclusion about the potential for health effects from exposure.

ATSDR also concluded that contamination detected in crawl spaces is not likely to pose a health hazard because exposure in those areas is expected to be of limited duration and frequency (for example, during maintenance activities). However, the presence of contaminants in crawl space air indicates the potential for higher levels of contaminants to enter the home. Additional air sampling is needed to further evaluate the likelihood of this occurrence.

ATSDR recommended additional air monitoring to determine whether levels of contamination from crawl spaces enter living spaces in the homes as a result of seasonal changes, heating and ventilation system changes, and other factors. On the basis of this recommendation, EPA began the additional data collection in December 2003. Data collection is ongoing. ATSDR also recommended that if additional data confirmed the presence of indoor air contaminants at concentrations found in the fall 2002 samples, activities should be undertaken to reduce exposure to the residents. Such activities might include the installation of ventilation systems.

■ **Neodesha Refinery (Former Amoco Refinery)**—

In January 2002, ATSDR received a letter petitioning the agency to evaluate community exposures to lead waste buried near the New Beginnings building at the Neodesha Refinery in **Neodesha**. The New Beginnings building is an on-site facility for developmentally disabled adults and includes a playground area. In addition, community children use a nearby baseball field also on the Neodesha Refinery site. ATSDR agreed to evaluate the public health issues associated with the potential exposures to lead and other site chemicals in a public health consultation released for public comment in October 2003.

The refinery operated from 1897 until 1970. On-site operations included crude distillation, catalytic cracking, vapor recovery, alkylation, platinum reforming, treating, blending, and steam generation. Crude oil and products were stored in on-site tanks at the former tank farm.

Investigations for the former site owner determined that groundwater contamination exists both on-site and off-site. A contaminant plume of benzene, toluene, ethylbenzene and xylenes extends from the site, east and south under Neodesha.

City residents do not have private drinking water wells. The public water supply is obtained from a surface water source.



Health Studies

Health studies are investigations to determine the relations between exposures to hazardous substances and adverse health effects. Health studies 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 or investigation that ATSDR conducted or supported in **Kansas**.

- **Childhood Lead Levels**—The **Kansas Department of Health and Environment** received a grant to conduct a follow-up study of childhood blood lead levels after environmental cleanup. The purpose of the study was to evaluate whether major intervention (soil remediation and a community and professional health education campaign) initiated in 1991 in **Galena** had reduced the mean blood lead levels of all children, thereby reducing the proportion of children with elevated blood lead levels.

The sampling period began July 1, 2000, and ended August 31, 2000. Blood samples were obtained from 100 Galena children aged 6–72 months of age. A parent or guardian of each child involved in the study responded to questions about behavioral risk factors associated with blood lead levels. Environmental sampling was conducted at 72 homes. Sampling included dust wipes of window sills and floors and composite soil samples from yards. Additional soil sampling was conducted at homes with a garden, with an unpaved driveway,

or at which soil from outside the contaminated area had been brought in. Fluorescent x-ray was used to measure lead levels on the exterior and interior of the houses.

Interim study results reveal 6 of 100 children tested had blood lead levels greater than 10 µg/dL. In 34 of the 72 homes involved in the study, at least one environmental sample had elevated lead levels. The **Kansas Childhood Lead Poisoning Prevention Program** is collaborating with the **University of Kansas Medical Center** to publish the final report, which should be available in fall 2004.

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 are primarily 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 **Kansas**. 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.