Activities in California

ATSDR in Partnership With California

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 **fiscal years 1988–2004**, ATSDR awarded more than **$22.5 million**—more than **$1.9 million** in the last 2 years—in direct funds and services to **California** for comprehensive support of its environmental health unit. 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 **California**, has conducted **154** public health assessments in the state, including the following recent examples.

ATSDR awarded more than $1.9 million in the last 2 years in direct funds and services to California.

- **Abex/Remco Hydraulics**—The **Environmental Health Investigations Branch** (**EHIB**) of the **California Department of Health Services** (**CDHS**) prepared a public health assessment to assess the public health implications from exposure to historic (1964–1995) air releases of hexavalent chromium from the Abex/Remco Hydraulics facility in **Willits**. CDHS will also prepare a public health assessment to evaluate all potential routes of exposure to site-related contaminants.

  Because of ongoing community health concerns about the site, the U.S. Environmental Protection Agency (EPA) asked CDHS to evaluate the potential health impact posed by the facility. The primary chemical of concern at the site is hexavalent chromium, although lesser levels of chemicals such as cadmium, nickel, zinc, and lead were also released.

  In a health assessment released for public comment in July 2003, CDHS and ATSDR concluded that releases of airborne hexavalent chromium posed a public health hazard in the past (1964–1990). An indeterminate health hazard exists for current and future exposure to hexavalent chromium and lead in dust that may be generated during site or building remediation or demolition activities.

  CDHS and ATSDR recommended consideration of medical monitoring and clinical evaluation for Willits residents and facility workers who may have been exposed to air releases of hexavalent chromium from the site between 1964 and 1995. CDHS is consulting with in-house physicians to determine

whether medical tests are necessary and whether the tests would be beneficial for the community.

At CDHS' request, additional off-site surface soil sampling for hexavalent chromium was conducted in areas with the highest estimated air levels of hexavalent chromium. Sampling was conducted to further address potential effects on soil from aerial deposition.

- **Alark Hard Chrome—CDHS** prepared a public health assessment for the Alark Hard Chrome site in **Riverside**. Alark was a metal-plating facility that operated from 1971 to late 1985. Many chemicals were handled at the facility, including metals, acids, cyanides, and volatile organic compounds (VOCs). Site activities resulted in contamination of the soil and groundwater. In 1985, the **California Environmental Protection Agency** closed the facility for failure to comply with violation notifications.

  In a public health assessment released by ATSDR in September 2003, CDHS did not identify any completed exposure pathways to site-related contaminants (hexavalent chromium, total chromium, cadmium, lead, nickel, cyanide, and sodium cyanide, and trichloroethylene). Therefore, provided remedial site activities continue, CDHS concluded that no past, current, or future health hazard exists from exposure to contaminated soil, surface water, or groundwater at the site.

  CDHS identified one potential exposure pathway for past air releases of hexavalent chromium at the site. This pathway will be evaluated in a separate health assessment using data derived from air modeling. CDHS eliminated several pathways relating to drinking-water wells, contaminated soil, surface water, sediment, and groundwater because contamination in these media are not accessible to the public or contaminant concentrations are below levels of health concern.

- **Chrome Crankshaft and J&S Chrome Plating—EHIB** prepared a public health assessment released in December 2003 to address the theoretical impact of historical airborne contaminants, hexavalent chromium in particular, on students and teachers in the **Bell Gardens** community near the Chrome Crankshaft and J&S Chrome Plating facilities. From the late 1950s through the 1990s, both sites were electroplating facilities. Site characterization and clean-up activities are under way at both sites.

  Community members have raised health concerns about the facilities, as have teachers and parents of students at the adjacent **Suva Elementary and Intermediate Schools** in the **Montebello Unified School District**.

  In a public health assessment released in December 2003, CDHS concluded that historic emissions of hexavalent chromium (1963–1990) from the site were not at levels that would cause noncancer health effects. Theoretical increased cancer risk estimations for 1963–1990 exceeded current standards; thus, the site was classified as a past public health hazard. By 1991, emissions were substantially reduced and did not pose a public health hazard; the site was classified as posing no health hazard for 1991–1999.

  CDHS estimated the theoretical increased cancer risk for six community populations exposed to estimated concentrations of hexavalent chromium from 1963–1990 as a low increased cancer risk.

  At the community's request, CDHS estimated whether increased cancer risks existed for children who attended Suva Schools and lived in the Bell Gardens community from 1963 to 1990. Facility emissions during this period resulted in an unacceptable cancer risk for teachers and children at Suva Schools and for residents of Bell Gardens. ATSDR classified the facility as a public health hazard during those years.

  CDHS and ATSDR reviewed cancer rates for communities living near the sites. Results and conclusions of the review are summarized in the health consultation section of this fact sheet.

  With ATSDR funding, CDHS conducted a health study to assess possible chromium exposures and their potential relation to respiratory health effects in children.

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. **One hundred seventy-one** health consultations have been conducted at **101** sites in **California**, including the following recent examples.

- **Chrome Crankshaft and J&S Chrome Plating—EHIB** prepared a health consultation that reviewed

cancer rates for community members living near the Chrome Crankshaft and J&S Chrome Plating facilities in **Bell Gardens**.

The health consultation released in January 2003 addressed the question of whether more cases of cancer were found near the facilities than would be typically expected. No excess cancer rates were found that could be attributed to the facilities. Because the ambient air levels in the community near the facilities were much lower than those levels found to cause lung cancer in workers, it is unlikely that cancers among residents were caused by exposure to these facilities. In addition, the geographic pattern of excess cancer is not associated with the location of the two facilities.

The facilities are not in operation and currently pose no apparent public health hazard.

- **Pacific Gas and Electric**—In August 2001, **EHIB** was asked by the **Lahontan Regional Water Quality Control Board** to review and provide a public health interpretation of sampling results for 25 private domestic wells in **Hinkley**. These wells are located around the area of groundwater contaminated with chromium by the Pacific Gas and Electric gas-compressor station.

  In a health consultation released in April 2003, EHIB concluded that levels of total and hexavalent chromium in the 25 wells did not exceed the drinking water standard for total chromium; however, one well had levels of nitrate, lead, and mercury that were above the drinking water standards. Consumption of water from this well may pose a health hazard, particularly to children (from lead contamination) and pregnant women and formula-fed infants under 6 months of age (from nitrate contamination).

  EHIB informed Spanish-speaking residents of the test results and the health implications of chromium in well water. EHIB informed the residents that their water was not tested for coliform, one of the more common water contaminants. EHIB arranged a follow-up visit by the **San Bernardino County** public health nurse and a Spanish translator.

  EHIB also reviewed test results from the 25 wells and compared the levels of contaminants to drinking water standards. The levels of total chromium did not exceed the drinking water standard and do not pose a health risk. However, three wells on adjacent properties had levels of nitrate, lead, and thallium that exceeded drinking water standards.

  One resident owned three wells that had elevated levels of nitrate, lead, and thallium. EHIB explained the health implications of the elevated levels of the chemicals in the wells to the two residents and one property owner whose homes were served by the three wells. EHIB also responded to follow-up inquiries from the property owner.

- **National Asbestos Exposure Review Site**—The W.R. Grace and Company Plant in **Santa Ana** is part of ATSDR's National Asbestos Exposure Review (NAER) being conducted with other federal, state, and local environmental and public health agencies. NAER is an examination of more than 200 U.S. sites that received asbestos-contaminated vermiculite ore mined in Libby, Montana, from the early 1920s until 1990. ATSDR is working closely with EPA and state health partners to determine whether a hazard to public health exists at any of the sites.

  From 1972 through 1993, the Santa Ana facility processed over 400,000 tons of Libby vermiculite. Recent EPA environmental samples from the site showed low levels of Libby asbestos in soils in several areas. However, much of the site is paved. No vermiculite or vermiculite waste stockpiles are present at the site.

  A health consultation released in September 2003 concluded that people who worked at the plant before 1994 were exposed to hazardous levels of asbestos. People who lived with former workers probably were exposed to hazardous levels from fibers carried home on workers' hair and clothing. Levels of residual Libby asbestos inside the former processing areas pose no apparent public health hazard to present or future workers. Outside, much of the site is paved, so uncovered soil areas containing residual Libby asbestos are limited and do not appear to pose a health hazard.

  The health consultation concluded that not enough data were available to determine whether people who lived near the plant in the past were exposed to hazardous levels of Libby asbestos. Current community exposure to Libby asbestos from plant emissions or from onsite asbestos-contaminated

materials poses no public health hazard. Not enough data were available to determine whether individuals are being exposed to Libby asbestos from waste that may have been used in the community. In other communities, waste vermiculite has been used for a variety of purposes, such as fill, driveway surfacing, or soil amendments.

Health Education and Community Activities

California has participated in ATSDR's cooperative agreement program since 1989. Under this program, **CDHS** has received funding and technical assistance for development of community education and activities associated with human exposure to hazardous substances in the environment. Following are examples of these types of activities conducted in the state.

- **Abex/Remco Hydraulics**—CDHS and ATSDR provided health education to the community at several community meetings. Topics included an overview of the public health assessment process and air modeling, an introduction to toxicology and chromium health effects, and the health effects of VOCs. In March and April 2004, workshops were conducted for clinicians in **Willits** and **Ukiah** on site issues and health effects associated with hexavalent chromium and other chemicals. CDHS and ATSDR will continue to provide health outreach and education to the community and recommend that health education activities be tailored to meet the community's needs.
- **Wyle Labs, Norco Facility**—CDHS worked with a community advisory group interested in the Wyle Labs site in **Norco**. CDHS presented the group with information about the public health assessment process.
- **Casmalia Disposal**—CDHS and ATSDR met with community members to discuss on-site work performed during the past year at the Casmalia Disposal site in **Casmalia**. Updates about installation of air-monitoring equipment were also provided.

Activities related to the Abex/Remco, Wyle Labs, and Casmalia sites included developing and distributing flyers and fact sheets in English and Spanish.

Health Studies

Health studies are investigations to determine the relations 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 are examples of health studies or investigations that ATSDR conducted or supported in **California**.

- **Exposure to Tremolite Asbestos in Vermiculite Ore**—In 2001, ATSDR entered into a cooperative agreement with **CDHS** to conduct health statistics reviews related to human exposure to contaminated vermiculite ore at sites in **California** that received or processed ore from the W.R. Grace mine in Libby, Montana.
- **Linking Chronic Disease and Environmental Data Sources**—In 2002, ATSDR awarded a cooperative agreement to the **University of California-Los Angeles** to conduct research on the potential impact of environmental exposures on chronic disease outcomes. This program was developed to address issues related to the Pew Environmental Health Commission's recommendation to establish a Nationwide Health Tracking Network.

Association of Occupational and Environmental Clinics

Since 1998, ATSDR has provided funds to Association of Occupational and Environmental Clinics (AOEC) to support a project establishing Pediatric Environmental Health Specialty Units (PEHSUs) as a national resource for pediatricians, other health care providers, federal staff, and the public. The PEHSUs develop materials and present training to health professionals and public health officials on environmental health issues and their impact on children's health.

The PEHSUs for **California**, Arizona, Nevada, and Hawaii are the **University of California-San Francisco** and the **University of California-Irvine**. The units were established in 2000 and work in collaboration with the **California Poison Control System**, the **University of California-San Francisco Department of Pediatrics**, and the **University of California-Irvine Department of Pediatrics**.

The California PEHSUs were established in 2000; their goal is to improve the recognition and management of environmental health problems among children.

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.