"To protect and improve the health of all Ohioans"

Ohio Success Stories

ATSDR AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

ATSDR in Partnership with Ohio

The Agency for Toxic Substances and Disease Registry (ATSDR) is a sister agency of the CDC and is part of the U.S. Department of Health and Human Services. ATSDR's headquarters are in Atlanta, GA, with 10 regional offices throughout the nation. ATSDR is the principal federal public health agency involved with hazardous waste and human health issues. The Ohio Department of Health (ODH), Health Assessment Section (HAS) is the in-state representative of the ATSDR. The goal of this federal-state public health partnership is to serve the public by using the best environmental science to provide accurate health information in order to help prevent adverse health effects and disease related to harmful exposures to toxic substances. A [large] part of ATSDR's $73 million dollar annual budget provides funding and technical assistance to states like Ohio and other partners to identify and evaluate environmental health threats to their communities. In 1989, ATSDR formed a Cooperative Agreement partnership with the Ohio Department of Health (ODH) and from fiscal years 2001 through 2008, ATSDR awarded more than $3 million in direct funds and services to Ohio for comprehensive support of its environmental health unit at the ODH, the Health Assessment Section (HAS). Since 1989, HAS produced over 63 public health assessments and 170 health consultations. In the past three years alone, HAS produced four (4) public health assessments, 13 health consultations, 12 technical assists and distributed educational materials to over 457 residents.

Ohio Department of Health
Health Assessment Section

Did You Know...?

The HAS staff come from diverse backgrounds, including geology, environmental chemistry, health risk assessment, environmental sampling, community involvement, health education, epidemiology and toxicology.

Success Stories

Behr VOC Plume Site

The Behr VOC Plume Site is located in Dayton, Montgomery County, Ohio. Formerly owned and operated by the Chrysler Corporation, the Chrysler Air Temp facility (now Behr-Dayton facility) manufactured vehicle air conditioning and engine cooling systems from approx. 1937 until April of 2002. As a part of their manufacturing process, Chrysler used trichloroethylene (TCE) to degrease metal parts and high concentrations of TCE have been detected in a groundwater plume under the former Chrysler Air Temp facility. Although Dayton's public water supply was not impacted by this contamination, in October of 2006, an Ohio EPA investigation took place to evaluate the potential risk posed by vapor intrusion in the nearby neighborhood. Soil gas monitoring detected high concentrations of TCE, prompting the Ohio EPA to request the assistance of the U.S. EPA Emergency Response Branch to conduct sub-slab soil gas and indoor air sampling in the neighborhood adjacent to the Behr-Dayton facility. In November of 2006, the U.S. EPA asked ODH HAS to establish sub-slab and indoor air screening and action levels for the TCE and PCE contamination which could potentially impact the private homes and commercial structures in the area. Subsequent U.S. EPA indoor air sampling demonstrated residents were being exposed to TCE exceeding chronic and intermediate health-based screening values. HAS produced two public health consultations which established the Behr VOC Plume Site poses a ***public health hazard*** to nearby residents. The health consultation recommendations included installing vapor abatement systems in residences where contaminant levels exceeded the screening values. To date (June 2009) 492 homes have been sampled and 205 vapor mitigation systems have been installed. A Soil Vapor Extraction (SVE) system was also installed in the residential area closest to the identified source. The installation and operation of this SVE was necessary to bring indoor air levels in these homes below screening values. In September of 2008 the site was proposed for listing as a Superfund site and the U.S. EPA Remedial Response Branch started their Remedial Investigation (2009). A multi-agency approach has been taken at this site and many positive activities and products have been produced for the community living next to the Behr-Dayton site. HAS continues coordinate efforts with the Ohio EPA - U.S. EPA Emergency Response Branch – Public Health of Dayton & Montgomery County - ATSDR Region 5 Toxicologist - City of Dayton Water - City of Dayton School Board - Dayton Northeast Priority Board – Dayton area Legislators - ODH Chronic Disease and Behavioral Epidemiology Section (which produced a community cancer assessment for the area - 2008) - ATSDR Division of Health Studies - ATSDR Region 5 Medical Director (which conducted a physician education session for area healthcare providers who serve this community - 2008) – U.S. EPA Remedial Response Branch – BVOCAL (local concerned community group).

Delphi VOC Plume Site

The Delphi Home Avenue facility in Dayton, Montgomery County, Ohio, is an industrial auto parts complex located in an urban residential area about one mile west of downtown Dayton. The facility, formerly owned by General Motors Corp., makes engine mounts and brake products. Underground storage tanks containing perchloroethylene (PCE), trichloroethylene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and chloroform were once located in the eastern edge of the complex and the soils and groundwater beneath the facility are contaminated with these chemicals which leaked from the former underground storage tanks. In 2005 and 2006 Delphi installed off-site soil gas probes which detected high concentrations of these chemicals moving off their property. In 2006 Delphi installed a Soil Vapor Extraction (SVE) system on-site to clean up the contaminated soils at the site. Concerned about vapor intrusion, in March of 2007, the Ohio EPA requested assistance from the U.S. EPA Emergency Response Branch to sample indoor air and sub-slab soil gas in the area of the Delphi Home Ave. plant. The U.S. EPA asked ODH HAS to establish sub-slab and indoor air screening and action levels for the TCE, PCE and chloroform contamination potentially impacting the private homes and commercial structures in the neighborhood surrounding the Delphi Home Ave. site. Subsequent indoor air samples taken by the U.S. EPA indicated residents were being exposed to chemicals exceeding the long-term screening levels. HAS produced a public health consultation which established the Delphi VOC plume site poses a ***public health hazard*** to nearby residents. The health consultation recommended vapor abatement systems are installed in residences where contaminant levels exceeded the screening values. HAS also recommended Delphi continue to operate the SVE system until the environmental sampling indicates levels of chemicals on-site no longer pose a viable source of off-site contamination. To date (June 2009) 32 homes have been sampled and seven (7) vapor mitigation systems have been installed. The on-site SVE system has resulted in significant reductions in soil vapor concentrations of chloroform, PCE and TCE over time in this neighborhood. A multi-agency approach has been taken at this site and many positive activities and products have been produced for the community adjacent to the Delphi Home Ave. site. HAS continues to coordinate efforts with the Ohio EPA - U.S. EPA Emergency Response Branch – Public Health of Dayton & Montgomery County - ATSDR Region 5 Toxicologist - City of Dayton Water – Dayton Southwest Priority Board – Dayton area Legislators - ODH Chronic Disease and Behavioral Epidemiology Section (which produced a community cancer assessment for the area - 2008) - ATSDR Division of Health Studies - ATSDR Region 5 Medical Director (which conducted a physician education session for area healthcare providers who serve this community - 2008).

To learn more about the ODH HAS cooperative agreement and the work they do in Ohio, visit their Web site at www.odh.ohio.gov and select "H" in the A-Z Index and then select the "Health Assessment Section" from the menu.

Taking Action in Ohio

- Countywide Landfill - Aluminum Dross reaction: HAS conducted extensive evaluations of air quality and heat-producing chemical reactions at a landfill in Stark County and produced a Landfill Gas and Odors and Your Health fact sheets for the impacted communities.
- Behr –Dayton and Delphi VOC Plume sites: HAS worked closely with ATSDR Region 5 Medical Director, Michelle Watters, MD, PhD, MPH to provide physician/provider education to the healthcare provider community serving the two impacted communities of Dayton, Ohio
- Behr –Dayton and Delphi VOC Plume sites: HAS worked closely with the local Dayton community Priority Boards (Northeast Priority Board and Southwest Priority Board) to meet with concerned communities and address their concerns.
- Behr –Dayton and Delphi VOC Plume sites: Prompted by community cancer concerns, ODH HAS worked closely with the ODH Chronic Disease and Behavioral Epidemiology Section to produce two community cancer assessments for the sites in North and West Dayton.

Current Planned Activities

- ODH HAS will continue to review & evaluate Ohio EPA collected environmental data in Clyde, Sandusky County, Ohio in response to the concerns generated after an ODH community cancer assessment identified a significantly higher than expected rate of childhood cancer in Clyde.
- ODH HAS will continue to work with the Ohio Department of Natural Resources (ODNR) at the Bainbridge Natural Gas Well Blow-out site in Bainbridge Township, Geauga County, Ohio.
- ODH HAS will continue to work with the Ohio EPA and Ashland/Chevron Oil at the Ramp Creek refinery site in Heath, Licking County, Ohio to address the vapor intrusion concerns generated from a historical gasoline spill that has contaminated the area groundwater.

Public Health Challenges in Ohio

- Old contaminated water sites which become new vapor intrusion sites
- No nationally established indoor air numbers
- Increase in Construction, Demolition and Debris (C&D) Landfills
- Aluminum dross reaction in solid waste landfills

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