

Health Assessment Section Bureau of Environmental Health



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Cooperative Agreement Program

ODH – Health Assessment Section (HAS)

Agency for Toxic Substances and Disease Registry (ATSDR)



ATSDR federal grant dollars fund ODH HAS staff salary and training.

ODH HAS - ATSDR evaluates environmental data in order to determine if there is an exposure to toxic chemicals through contact with contaminated water, air, soil and if there is a public health threat posed to communities.

The mission of the federal-state partnership is to serve the public through responsive public health actions to promote healthy and safe environments and prevent harmful exposures.



Ohio Department of Health

**Health Assessment
Section**

Who is the ATSDR?

The **ATSDR** is a sister agency of the **CDC** and is the principal federal public health agency involved with hazardous waste sites, chemical exposures and human health issues.

ATSDR's headquarters are in Atlanta, GA, with 10 regional offices throughout the nation.

- Ohio is in Region V (five), Chicago.





ODH HAS works closely with the ATSDR, the U.S. EPA, Ohio EPA, local health districts and concerned communities at hazardous waste sites throughout Ohio.



How do we prevent, mitigate (reduce) or eliminate exposures to toxic chemicals in the environment?

- 1. ODH HAS provides technical assistance to environmental regulatory agencies and communities regarding the toxicology and exposure information for a hazardous waste site chemicals of concern.**



(continued)

- 2. ODH HAS determines the presence or absence of a “*Completed Exposure Pathway,*” that brings people in physical contact with a sites chemicals of concern. * Note the five (5) parts of a completed exposure pathway: 1. source 2. transport 3. point of exposure 4. route of exposure 5. people who could be exposed**

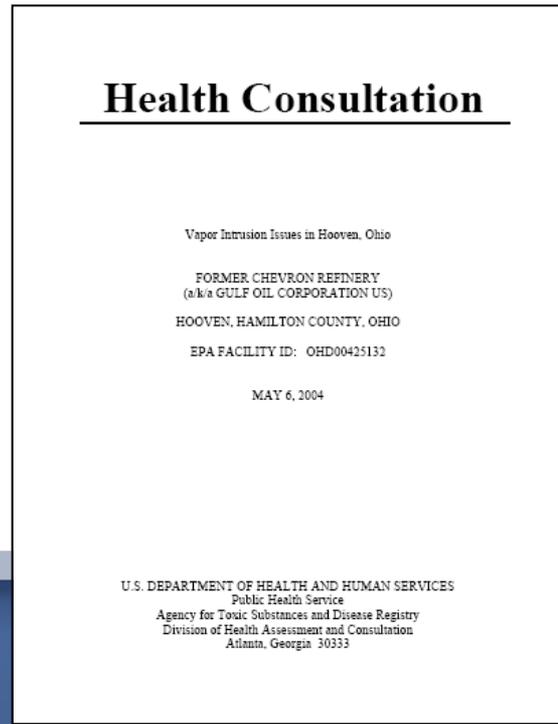
See the [Exposure to Toxic Chemicals](#) fact sheet

- 3. If there is a *Completed Exposure Pathway,* the ODH HAS/ATSDR Cooperative Agreement will make a determination as to whether the exposure poses a public health hazard to exposed residents.**



(continued)

- 4. ODH HAS will typically produce a Public Health Assessment or a Health Consultation document that focuses on all (or selected) chemicals of concern and all (or a single) exposure pathway (drinking water, food, soils, sediments, indoor and ambient air, etc.)**



ODH HAS Staff

ODH HAS staff has a diverse background and experience in the following areas:

- **Geology – Hydrogeology**
- **Environmental Chemistry**
- **Environmental Sampling (water, air, soil)**
- **Health Risk Assessment**
- **Community Involvement**
- **Health Education**
- **Epidemiology**
- **Toxicology**



ODH HAS Services

ODH HAS staff provides a variety of environmental public health services including:

- **Exposure Investigations**
- **Emergency Response**
- **Public Health Assessments**
- **Health Consultations**
- **Technical Assists**
- **Toxicology**
- **Community Involvement**
- **Health Education**



Professional Services: Exposure Investigations (EI)

- An exposure investigation (EI) gathers and analyzes environmental data from a hazardous waste site location and from the communities who live close to the site.
- Based upon the review of the environmental sampling data gathered from air monitors, groundwater and soil samples, **ODH HAS** determines whether a site poses a public health threat, or if we need additional data in order to be able to make a determination.



Professional Services: Emergency Response (ER)

- To improve the response to emergencies involving exposure to hazardous substances, ODH HAS provides health-related support to the U.S. EPA, the Ohio EPA and local health departments, offering site-specific and chemical-specific information to affected communities.
- Emergency responses include mercury spills, chemical releases from operational facilities and chemical spills from accidents.



Professional Services: Community Involvement (CI)

- **CI/HE staff serve as the liaison between the scientists (health assessors) that are collecting and analyzing the data and the community that is affected.**
- **We provide community-based information and serve as a contact for concerned public.**
- **We work with the U.S. EPA and Ohio EPA to develop community-appropriate educational materials.**





**Bureau of
Environmental Health
Health Assessment Section**

"To protect and improve the health of all Ohioans"

**Warren Township/Hydrogen Sulfide
Warren, Trumbull County, Ohio
July 2005 Community Newsletter**

Warren Recycling Inc./Warren Hills Landfill



In March 2005, the U.S. Environmental Protection Agency (EPA) Emergency Response Superfund Division began a "time-critical removal action" at the Warren Hills Landfill. In April 2005, the Agency for Toxic Substances and Disease Registry (ATSDR) issued a community newsletter announcing the U.S. EPA Emergency Response Superfund Division's removal action at the Warren Hills Landfill site. The goal of the removal action is to remove/reduce the leachate from the landfill and to prevent hydrogen sulfide (H₂S) gas from being released into the atmosphere. ATSDR's Public Health agency, ATSDR's aim is to work with the multi-agency health team to make sure site cleanup does not result in unhealthy conditions for the community and to ensure decisions that relate to site cleanup are protective of public health. ATSDR's attempts to provide information to the community about what will happen when the site cleanup activities start and what often happens when contaminated leachate is disturbed or removed.

The U.S. EPA created an Emergency Preparedness Plan to address on-site vandalism/trespassing, medical emergencies, fire/explosion hazards and H₂S gas releases into the community. These plans/protocols are in place to alert the U.S. EPA on-scene coordinator, the Warren City and Township Fire departments, the Warren Police Department, other local public officials and the community if there is a need for action.

Because individuals have different sensitivities to chemical exposure and because there are people who have pre-existing medical conditions that cause them to experience health effects while others may not, there is not a one-size-fits-all family health action plan we can recommend. The ATSDR and the Ohio Department of Health realize there may be a need to provide additional health information and education for individuals who experience health effects from exposure to H₂S. A health action plan for your family should be individually created, just like you would create an individual evacuation plan in case there was a fire in your home. We hope the following newsletter provides useful information about the current activities being conducted at the site and helpful suggestions to assist you when you create your individual family health action plan.

Example of community fact sheet

Removing Leachate

The U.S. EPA estimates more than 40 million gallons of leachate are currently on-site at the Warren Recycling Inc./Warren Hills

What is leachate?

Leachate is created when water finds its way into a landfill through cracks in the landfill surface. Once inside a pile of debris, the water will make its way (leach) through the debris until it reaches level ground or finds an opening to the outside. The leachate will/can then exit the landfill, run off-site or be collected, treated and/or removed.

In Construction & Demolition Debris (C&DD) landfills, the water that leaches through the landfill can come in contact with drywall (gypsum) board. Under the right conditions, bacteria will break down the drywall (gypsum) board and will produce hydrogen sulfide (H₂S) gas. H₂S can mix with the leaching water and eventually make its way to the outside of the landfill. H₂S gas can be released to the air and impact nearby residents. When pools or ponds of leachate are disturbed, there is a greater chance H₂S gas will be released into the air.

Note: The Warren Hills Landfill leachate has not been collected, treated or removed by the landfill operator and has been collecting in on-site pools/ponds.

When the landfill operator begins collecting, pumping or otherwise disturbing the on-site sources of leachate, the community may experience an increase in H₂S odor events. Please be aware U.S. EPA is currently monitoring the levels of H₂S gas being released on-site as well as measuring the H₂S levels at the property fence line where it has a greater chance of impacting the surrounding community. Under the Emergency Preparedness Plan, the ATSDR and the U.S. EPA established action levels which determine which agency is to be contacted and what health or safety actions need to be taken. Although the Emergency Preparedness Plan and action levels are very helpful for establishing guidelines, individual community members may experience health effects at levels which may not trigger a response from the local officials. Therefore, just like you would create an individual evacuation plan in case there was a fire in your home, you should create a health action plan for your family. If you or a family member smell H₂S and experience adverse (bad/negative) health effects, you should create your own health and safety plan and possible evacuation plan.

How will leachate be controlled and removed?

The U.S. EPA is proposing the leachate currently at the site be treated on-site, thus removing the harmful H₂S before sending the treated water through the sewer system to the Warren municipal wastewater treatment facility. The U.S. EPA will make every attempt to minimize the release of H₂S during the on-site treatment process.

The complete site cleanup activities involve the following:

- Install a thick clay soil cap to seal the landfill debris from water.
- Design and install a surface water and storm water collection system.
- Design and install a temporary on-site leachate treatment system.
- Design and install a permanent leachate management system.
- If necessary, design and install a soil vapor extraction and treatment system.



Professional Services: Health Education (HE)

Health education activities involve working with a variety of health agencies and community partnerships to incorporate the health concerns of the community living near a hazardous waste site.

Activities include:

- Develop and provide consistent, understandable fact sheets that address the chemicals found at the site.
- Disseminate materials on the health effects of the toxic substances to the community and the physicians and other health care providers that serve that community.
- Provide presentations about site-specific or general environmental health issues to the affected communities and stakeholders, schools, environmental groups and a variety of health professionals.





Arsenic

Answers to Frequently Asked Health Questions

What is arsenic?

Arsenic is an element found in nature. Arsenic has no smell or taste.

Where is the arsenic found in nature?

Natural arsenic is found in rocks. Ohio's rocks contain low levels of arsenic. We all have a small amount of arsenic in our bodies. Higher levels come from mining, some factories and chemical plants and wood treated products.

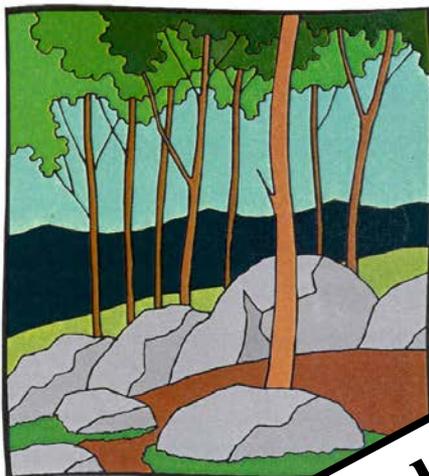
How do higher levels of arsenic get in the environment?

How does arsenic get in your body?

1. Arsenic goes into the air when materials that contain arsenic are burned.
 - People then breathe in the smoke and arsenic (inhalation).
2. During the burning, arsenic falls from the air to the ground or into the rivers and lakes.
 - Kids play outside in the dirt (dermal-skin contact).
 - People have gardens or flower beds and have contact with the soil (dermal-skin contact).
 - People eat food that was grown in contaminated soil (ingestion-eating or drinking).
3. On the ground, arsenic will dissolve into the underground drinking water.
 - Humans then drink the water (ingestion-eating or drinking).

Who is more likely to come in contact with higher levels of arsenic?

- Private well users that live in areas with higher levels of natural arsenic in the rock.
- Kids who play outside in dirt with high levels of arsenic.
- People who have gardens or flower beds in soils with higher arsenic levels.
- People who drink water polluted by a nearby chemical plant or waste site.



Can you get sick from arsenic?

Yes, you can get sick from arsenic. Getting sick will depend on how much you were exposed to (dose), how long you were exposed (duration), how often you were exposed (frequency), and your general health, age, and lifestyle.

Inorganic arsenic: This type can be found in the soil, especially seafood, and does not cause health problems.

- **Inorganic arsenic:** This type can be found in the soil, in the drinking water and in the air. This type sometimes causes health problems.

Exposure (contact) with the inorganic arsenic:

- How much you were exposed to (dose).
- How long you were exposed (duration).
- How often you were exposed (frequency).
- General Health, Age, Lifestyle
Young children, the elderly and people with chronic (on-going) health problems are more at risk to chemical exposures.

Note that both types of arsenic occur naturally. But very high levels of inorganic arsenic in food or water can cause serious, sudden health problems or sometimes death.



Benzene (ben' zeen)

Answers to Frequently Asked Health Questions

What is benzene?

Benzene, also known as benzol, is a colorless liquid with a sweet odor. It is highly flammable and evaporates in the air quickly.

Where do you find benzene?

Most people are exposed to small amounts of benzene in the air outside, at work, and in the home. People who are exposed to low levels of benzene from these activities.

Benzene is found in gasoline, oil, natural gas, and cigarette smoke. Small amounts of benzene are released from industrial emissions account for most of the nationwide exposure to benzene. The largest source of nationwide exposure to benzene is from cigarette smoking tobacco or from exposure to tobacco products. Other natural sources of benzene include volcanoes and forest fires.

The outdoor air has low levels of benzene that come from the car exhaust, gas fumes and cigarette smoke. Indoor air usually contains higher levels of benzene that can be found in cigarette smoke, glues, paints, furniture wax, and detergents.

Benzene is widely used in U.S. industry. Some industries use benzene to make other chemicals which are used to make plastics, resins, and nylon and synthetic fibers. Benzene is also used to make some types of rubbers, lubricants, dyes, detergents, drugs and pesticides.

How do you come in contact with unhealthy levels of benzene?

In the air:

- Higher levels of benzene can be released in the air around industries that make or use benzene.

In the underground drinking water:

- If underground storage tanks containing benzene leak, benzene could get into the underground well water and pollute it.

Occupation (job):

- Working in an industry that makes or uses benzene.

Can benzene make you sick?

Yes, you can get sick from benzene. Getting sick will depend on:

- How much you were exposed to (dose).
- How long you were exposed (duration).
- How often you were exposed (frequency).
- General Health, Age, Lifestyle
Young children, the elderly and people with chronic (on-going) health problems are more at risk to chemical exposures.

How does benzene affect health?

Breathing benzene:

Breathing high levels of benzene can cause rapid heart rate, dizziness, headaches, tremors (shaking), confusion, drowsiness (sleepy), and unconsciousness (passing out). Breathing very high levels of benzene can result in death.

Eating or drinking benzene:

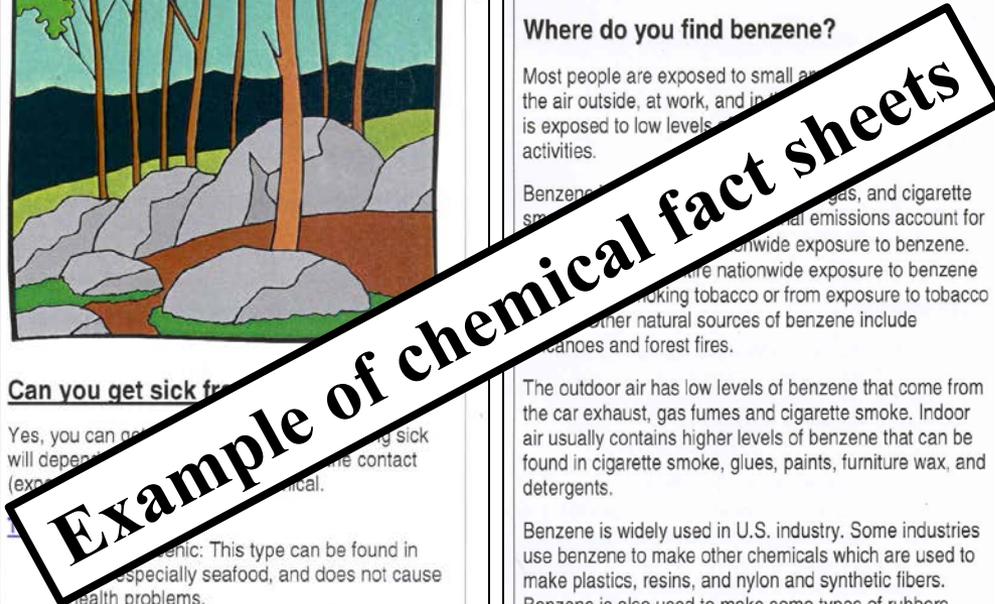
Eating foods or drinking water containing high levels of benzene can cause an irritated (upset) stomach, vomiting, rapid heart rate, dizziness, convulsions (severe shaking), sleepiness, and death.

Long-term exposure to benzene:

Long-term exposure (365 days or longer) to high levels of benzene causes serious problems with the production of blood. Benzene harms the bone marrow which produces the body's red and white blood cells. Red blood cells carry oxygen and white blood cells fight infection. A decrease in red blood cells leads to anemia. A decrease in white blood cells affects the immune system and increases the chance for infection.

Women exposed to benzene:

Some women who breathed high levels of benzene for many months had irregular menstrual periods and a decrease in the size of their ovaries. It is not known whether benzene exposure affects the developing fetus in pregnant women or fertility in men.



Trichloroethylene (TCE)

(try- klor'oh eth'uh- leen)
 Answers to Frequently Asked Health Questions

What is TCE?

TCE is man-made chemical that is not found naturally in the environment. TCE is a non-flammable (does not burn), colorless liquid with a somewhat sweet odor and has a sweet, "burning" taste. It is mainly used as a cleaner to remove grease from metal parts. TCE can also be found in glues, paint removers, typewriter correction fluids and spot removers.

The biggest source of TCE in the environment comes from evaporation (changing from a liquid into a vapor/gas) when industries use TCE to remove grease from metals. But TCE also enters the air when we use common household products that contain TCE. It can also enter the soil and water as the result of spills or improper disposal.

What happens to TCE in the environment?

- TCE will quickly evaporate from the surface waters of rivers, lakes, streams, creeks and puddles.
- If TCE is spilled on the ground, some of it will evaporate and some of it may leak down into the ground. When it rains, TCE can sink through the soils and into the ground (underground drinking) water.
- When TCE is in an oxygen-poor environment and with time, it will break down into different chemicals such as 1,2 Dichloroethene and Vinyl Chloride.
- TCE does not build up in plants and animals.
- The TCE found in foods is believed to come from TCE contaminated water used in food processing or from food processing equipment cleaned with TCE.

How does TCE get into your body?

- TCE can get into your body by breathing (inhalation) air that is polluted with TCE vapors. The vapors can be produced from the manufacturing of TCE, from TCE polluted water evaporating in the shower or by using household products such as spot removers and typewriter correction fluid.
- TCE can get into your body by drinking (ingestion) TCE polluted water.
- Small amounts of TCE can get into your body through skin (dermal) contact. This can take place when using TCE as a cleaner to remove grease from metal parts or by contact with TCE polluted soils.

Can TCE make you sick?

Yes, you can get sick from TCE. But getting sick will depend on the following:

- How much you were exposed to (dose).
- How long you were exposed (duration).
- How often you were exposed (frequency).
- General Health, Age, Lifestyle Young children, the elderly and people with chronic (on-going) health problems are more at risk to chemical exposures.

How does TCE affect your health?

Breathing (Inhalation):

- Breathing high levels of TCE may cause headaches, lung irritation, dizziness, poor coordination (clumsy) and difficulty concentrating.
- Breathing very high levels of TCE for long periods may cause nerve, kidney and liver damage.

Drinking (Ingestion):

- Drinking high concentrations of TCE in the water for long periods may cause liver damage, harm immune system, damage fetal development (although the exposure is not yet clear).
- It is possible that low levels of TCE...

Dermal Contact:

- Small amounts of skin contact with high levels of TCE may cause skin rashes.



Tetrachloroethylene (PCE)

Other names for tetrachloroethylene include PCE, perchloroethylene, PERC or tetrachloroethene.

What is PCE?

Tetrachloroethylene (also known as PCE, PERC or perchloroethylene) is a man-made chemical that is widely used for dry cleaning clothes and degreasing metal. It is also used to make other chemicals and can be found in some household products such as water repellents, silicone lubricants, spot removers, adhesives and wood cleaners. It easily evaporates (turn from a liquid to a gas) into the air and has a sharp, sweet odor. PCE is a nonflammable (does not burn) liquid at room temperature.

How does PCE affect your health?

People can be exposed to PCE from dry cleaning businesses, household use. It can also be found in the air if it is not properly stored or was spilled or leaked on the ground, it may enter the groundwater (underground drinking water).

People can be exposed to PCE from the environment from household products, from dry cleaning products and from their occupation (work). Common environmental levels of PCE (called background levels) can be found in the air we breathe, in the water we drink and in the food we eat. In general, levels in the air are higher in the cities or around industrial areas where it is used more than rural or remote areas.

The people with the greatest chance of exposure to PCE are those who work with it. According to estimates from a survey conducted by the National Institute for Occupational Safety and Health (NIOSH), more than 650,000 U.S. workers may be exposed. However, the air close to dry cleaning business and industrial sites may have levels of PCE higher than background levels. If the dry cleaning business or industry has spilled or leaked PCE on the ground, there may also be contaminated groundwater as well.



What happens to PCE in the environment?

Much of the PCE that gets into surface waters or soil evaporates into the air. However, some of the PCE may make its way to the groundwater. Microorganisms can break down some of the PCE in soil or groundwater. PCE in the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain. PCE does not appear to collect in fish or other animals that live in water.



How can PCE enter and leave my body?

PCE can enter your body when you breathe contaminated air or when you drink water or eat food contaminated with the chemical. If PCE is trapped against your skin, a small amount of it can pass through into your body. Very little PCE in the air can pass through your skin into your body. Breathing contaminated air and drinking water are the two most likely ways people will be exposed to PCE. How much enters your body depends on how much of the chemical is in the air, how fast and deeply you are breathing, how long you are exposed to it or how much of the chemical you eat or drink.

Most PCE leaves your body from your lungs when you breathe out. This is true whether you take in the chemical by breathing, drinking, eating, or touching it. A small amount is changed by your body (in your liver) into other chemicals that are removed from your body in urine. Most of the changed PCE leaves your body in a few days. Some of it that you take in is found in your blood and other tissues, especially body fat. Part of the PCE that is stored in fat may stay in your body for several days or weeks before it is eliminated.

Example of chemical fact sheets



Total & Fecal Coliform Bacteria

Answers to Frequently Asked Health Question

What is coliform?

Total coliform bacteria are a collection of relatively harmless microorganisms that live in large numbers in soils, plants and in intestines of warm-blooded (humans) and cold-blooded animals. Coliform aid in the digestion of food.

Where do you find coliform?

There are 16 species of total coliform found in soils, plants and in animal and human waste. A subgroup of coliform, called fecal coliform bacteria, is different from the total coliform group because they can grow at higher temperatures and are found only in the fecal waste of warm-blooded animals. There are six species of fecal coliform bacteria found in animal and human waste. *E. coli* is one type of the six species of fecal coliform bacteria. A rare strain of *E. coli* that you may have seen in the news can cause potentially dangerous outbreaks and illness. This strain is called *E. coli* O157.

How do you come in contact with coliform?

Coliform are a family of bacteria common in soils, plants and animals. You can come in contact with these bacteria by eating or drinking (ingesting) soils on plants and in water sources such as ponds, lakes and rivers. Fecal coliform bacteria can be found in water contaminated by domestic sewage or other sources of human and animal waste.

Can coliform harm your health?

Finding coliform or other bacteria in water does not necessarily always mean you will become ill. However, if the organisms are present, other disease-causing organisms may also be present. The presence of fecal coliform is a sign that a possible health risk exists for individuals exposed to this water. Health symptoms related to drinking or swallowing water contaminated with fecal coliform bacteria generally range from no ill effects to diarrhea (gastrointestinal distress). Sanitarians and those who test water look for total and fecal coliform to alert people to the possible dangers and suggest proper treatments to remove potential contaminants from the water. The presence of any fecal coliform in drinking water is of immediate concern because of the potential for spread through fecal transmission.

How can you reduce coliform contamination?

Groundwater (underground drinking water) in a properly constructed well is free of coliform bacteria. If coliform are found in a well, it generally means surface water has somehow leaked into the drinking water. This could be because of poor construction of a new well or because older wells may have developed holes in the well casing. Contamination can also occur if rain runoff or snowmelt makes its way into the well through cracks in rock outcroppings, gravelly soil or sandy soil or because of the lack of grout (sealing material) around the well casing.

Homeowners who use cisterns as a drinking water source should use treatment devices to filter and clean the water to remove coliform bacteria.

Improperly maintained treatment devices also can be sources of contamination. Home water filters and other water-treatment devices should be changed and maintained in accordance with manufacturer's recommendations.

References:

Ohio Department of Health, Bureau of Environmental Health, Private Water Program, 2004.

Vermont Department of Health, Safe Water Resource Guide, A Fact Sheet on Coliform Bacteria in Water (electronic).

Kentucky Water Watch, Fecal Coliform Bacteria (electronic).

Created October 2004



The Ohio Department of Health is in cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), Public Health Service, U.S. Department of Health and Human Services.

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E. coli

Answers to Frequently Asked Health Questions

What is E. coli?

Simply put, *E. coli* is a bacterium. *E. coli* is the abbreviated name of the bacterium named *Escherichia coli*.

Where do you find E. coli?

E. coli bacteria are everywhere in the environment. *E. coli* and other kinds of bacteria are found in our intestines and are necessary for us to digest food and remain healthy. *E. coli*, along with other species of bacteria in our intestine, provide many necessary vitamins including Vitamin K and B-complex vitamins. We have billions of *E. coli* bacteria in our bodies, making us healthy. *E. coli* helps us digest our food and maintaining our health. Because these bacteria can be found in the waste of humans and animal intestines, you can find these bacteria in the waste (feces) we produce. Sanitarians and those who test water look for these bacteria to alert people to the possible dangers and suggest proper treatments to remove potential contaminants from the water.

Can E. coli harm your health?

Although most *E. coli* are harmless, there are some strains of *E. coli* that can cause illness. A rare strain of *E. coli* that you may have seen in the news can cause potentially dangerous outbreaks and illness. This strain is *E. coli* O157:H7. This *E. coli* can cause hemolytic uremic syndrome (HUS) and produce a toxin (SLT).



How do you come in contact with E. coli?

By ingesting (eating and drinking) *E. coli* bacteria-contaminated items. Again, *E. coli* bacteria are everywhere in the environment. Because they are found in virtually all animals, any time we eat something, drink something or put our hands on something that has been near where persons or animals are, there is always the potential we might ingest these bacteria. The harmful *E. coli* bacteria have been found in unpasteurized apple juice and milk, meat (especially ground beef), sprouts, lettuce, salami and in sewage-contaminated water.

What are some of the health effects of harmful E. coli?

The harmful strain of *E. coli* bacteria can cause abdominal cramping, diarrhea* and occasionally vomiting. Usually little or no fever is present. Dehydration, even in mild cases of diarrhea, can easily occur. Normally the illness resolves in 5 to 10 days. In 5%-10% of cases, hemolytic uremic syndrome (HUS), which is characterized by kidney failure and loss of red blood cells, can occur. In severe cases of the disease, 2%-7% may have permanent kidney damage. Dehydration is particularly dangerous to small children who are too small to tolerate much blood and fluid loss. The presence of these bacteria can also be very dangerous to the elderly population or persons who are already ill.

* Sometimes persons may have bloody diarrhea.

Example of chemical fact sheets

Professional Services: Public Health Assessments (PHA)

A Public Health Assessment (PHA) evaluates data and information on the release of hazardous substances into the environment in order to assess any current or future impact on public health.

- What chemicals were found?
- How do these chemicals affect health?
- Is there a present or future health threat?
- What actions are recommended to protect the public?
- How can ODH/ATSDR help the U.S. EPA and Ohio EPA best protect public health in its cleanup decisions?





Public Health Assessment for

PETERS CARTRIDGE FACTORY
KINGS MILL, WARREN COUNTY, OHIO
EPA FACILITY ID: OHD987051083
MARCH 24, 2006

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
PUBLIC HEALTH SERVICE
Agency for Toxic Substances and Disease Registry

**Public Health Assessment
Example**



Professional Services: Health Consultations (HC)

- **Public Health Consultations are similar to the Public Health Assessment. However, a health consultation will usually address one specific site-related public health concern. A series of health consultations may be written for one site.**



Health Consultation

Vapor Intrusion Issues in Hooven, Ohio

FORMER CHEVRON REFINERY
(a/k/a GULF OIL CORPORATION US)

HOOVEN, HAMILTON COUNTY, OHIO

EPA FACILITY ID: OHD00

**Public Health Consultation
Example**

OHIO DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333



PHA's/HC's

PHA's and HC's, which are intended to prevent or reduce exposure, may lead to recommendations for specific actions. Possible actions include:

- Restricting the use of or replacing water supplies
- Intensifying environmental sampling (collect additional sampling)
- Restricting site access
- Removing contaminated materials

PHA's and HC's may also produce comment addressing the plan for a site cleanup. For instance, the Ohio or U.S. EPA might design a plan that outlines what is to be sampled at a specific site. After a review of the plan, ODH HAS may request additional sampling and/or request specific sampling methods.



Ohio PHA's/HC's

Site	Type	Location	Date
A & L Salvage C&dd Landfill Private Wells [PDF, 557 KB]	HC	Lisbon, Columbiana County	01/22/2009
Allied Chemical and Ironton Coke [HTML]	PHA	Ironton, Lawrence County	5/16/1994
ARMCO Incorporated - Hamilton Plant [PDF, 1000 KB]	PHA	New Miami, Butler County	06/27/2005
Armco Incorporation-Hamilton Plant [HTML]	HC	Hamilton, Butler County	3/26/2002
Behr VOC Plume Site - Phase 1 Chrysler Investigation Chrysler Corporation, Phase I Area Vapor Intrusion Investigation and Mitigation [PDF, 2415 KB]	HC	Dayton, Montgomery County	09/30/2006
Behr VOC Plume Site - Phase 1 US EPA Investigation Initial United States Environmental Protection Agency Investigation [PDF, 2050 KB]	HC	Dayton, Montgomery County	09/30/2006
Brentwood Estates Subdivision [PDF, 1869 KB]	HC	Dayton, Montgomery County	12/01/2006
Brush Wellman Elmore Plant a/k/a Brush Wellman Incorporated [PDF, 334 KB]	HC	Elmore, Montgomery County	12/01/2006
Brush Wellman Elmore Plant - R (a/k/a Brush Wellman Inc.) [PDF, 415 KB]	HC	Elmore, Montgomery County	12/01/2006
Buckeye Reclamation [HTML]	PHA	St. Clairsville, Belmont County	3/31/1993
Cady Road, North Royalton [HTML]	HC	North Royalton, Cuyahoga County	3/31/2003
Chem-Dyne Corporation [HTML]	PHA	Hamilton, Butler County	9/7/1995
Cincinnati Country Day School Lead Site [PDF, 260 KB]	HC	Cincinnati, Cincinnati County	06/28/2004
Copley Square Plaza [PDF, 574 KB]	PHA	Copley Township, Summit County	09/28/2007
Delphi Home Avenue Site Vapor Intrusion [PDF, 5551 KB]	HC	Dayton, Montgomery County	08/19/2008
Dover Chemical Corporation [HTML]	PHA	Dover, Tuscarawas County	1/8/1996
Eagle Picher Industries [HTML]	HC	Delta, Fulton County	2/6/2003

East Troy Contaminated Aquifer Site Vapor Intrusion [PDF, 3239 KB]	HC	East Troy, Franklin County	07/29/2008
Fair Oak Park [PDF, 346 KB]	HC	Fair Oak Park, Franklin County	09/30/2006
Fayette Tubular Products (FTP) [HTML]	PHA	Fayette, Lawrence County	3/26/2002
Feed Materials Production [HTML]	HC	Dayton, Montgomery County	1/1/1900
Feed Materials Production (USD) [HTML]	PHA	Fernald, Hamilton and Butler Counties County	08/17/2004
Fernald Site [HTML]	PHA	Ashtabula, Ashtabula County	4/9/1996
Fernald Site [HTML]	HC	Elyria, Lorain County	1/25/2002
Former Chevron Refinery (Soil Vapor Intrusion in Hooven, Ohio) [PDF, 3138 KB]	HC	Hooven, Hamilton County	11/27/2006
Former Chevron Refinery (a/k/a Gulf Oil Corporation US) [PDF, 479 KB]	HC	Hooven, Hamilton County	05/06/2004
Former O.M. Scott and Sons Company [PDF, 451 KB]	HC	Marysville, Union County	09/22/2005
Former Tiffin Landfill (5) [HTML]	PHA	Republic, Seneca County	3/14/2002
Fultz Landfill [HTML]	PHA	Byesville, Guernsey County	3/31/1993
Geauga Industries (a/k/a Carlisle Engineered Products) Groundwater Contamination Issues [PDF, 714 KB]	HC	Middlefield, Geauga County	01/29/2004
Gentile Air Force Station (a/k/a US DOD Defense Electronics Supply Center) Part 1 [PDF, 679 KB] Figures 1-3 [PDF, 818 KB] Figures 4-6 [PDF, 528 KB] Appendices [PDF, 164 KB]	PHA	Keittering, Montgomery County	08/12/2004
Greiner's Lagoon [HTML]	HC	Freemont, Sandusky County	4/11/2002
Kings Junior High School [PDF, 186 KB]	HC	Kings Mill, Warren County	09/30/2003

ATSDR Web Site for Ohio PHA's/HC's
<http://www.atsdr.cdc.gov/hac/PHA/HCPHA.asp?State=OH>

Ohio PHA's/HC's



What the ODH HAS does NOT do at a hazardous waste site:

- We do *not* look at medical records and patient charts.
- We do *not* go door-to-door and count community disease or illness.
- In other words... We do not conduct a health study. If the environmental data show people are currently being exposed or have been exposed to chemicals at levels expected to cause health problems, a health study could be recommended and conducted by the ATSDR, Division of Health Studies (DHS).



Health Assessment Section

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Bureau of Environmental Health

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Health Assessment Section

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