

The Site

The Billings PCE Superfund Site (the Site) consists of shallow groundwater contamination, extending from Central Avenue approximately three miles, east-northeast, through several mixed-use neighborhoods and into downtown Billings. In addition to the contaminated groundwater, there are contaminated soils at the source areas and indoor air concerns. In September 2021, the EPA added the Site to the Superfund National Priorities List, making the Site eligible for additional study and cleanup resources under Superfund.

What is Superfund?

Superfund is EPA's program for cleaning up some of America's most contaminated land and responding to environmental emergencies, oil spills and natural disasters.

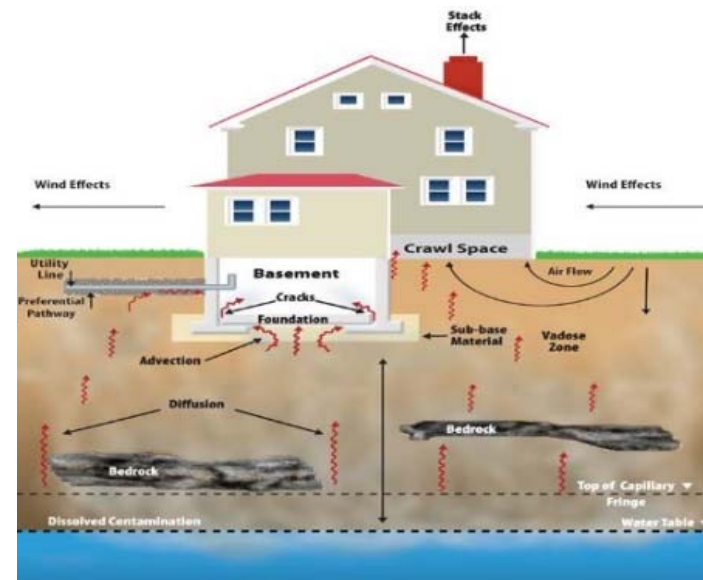
Contamination

The primary contaminants of concern at the Site are chlorinated, volatile organic chemicals including tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene, and vinyl chloride as well as petroleum hydrocarbons. These contaminants can disperse as vapor from shallow groundwater and contaminated soils and enter the indoor air of buildings through a process commonly called vapor intrusion.

These vapors can be inhaled and may pose short- and long-term risks to public health. Contaminated groundwater may also pose a health concern if it is used for drinking water or residential uses. Contaminated soils may also pose a health concern to on-Site workers who contact the soils, which can continue to be a source of contamination for the groundwater plume if not addressed.

What is Vapor Intrusion?

Vapor intrusion is a way that volatile chemicals in soil or groundwater may enter buildings and contaminate air inside the structure (indoor air). Chlorinated volatile organic chemicals are liquids that can evaporate easily and become a vapor capable of moving through the air and soil. When a chemical is released, either from a spill above ground or leak underground, it has the potential to enter the groundwater and travel distances through the soil and water underground. If that chemical is volatile, it can become a vapor, and seep through openings, like cracks in basements, foundations, or sewer lines, into nearby buildings.



Why is Vapor Intrusion Important to Me?

When vapors intrude indoors, you can be exposed by breathing indoor air. This exposure may cause health effects, depending on the type and amount of chemical, as well as the frequency and duration of exposure.

The health effects associated with exposure to chemicals such as TCE and PCE are primarily related to exposure and dose. A person exposed to high doses of these chemical vapors for a short amount of time might experience dizziness, headaches, nausea, and poor coordination.

A person exposed to low doses of these chemicals over a longer period of time might experience adverse health effects including neurological symptoms, immune effects, liver or kidney effects, or certain cancers.

While groundwater is not used for potable water, a person may be exposed to these chemicals if they drink water from a contaminated irrigation well or use contaminated irrigation water for recreational purposes such as filling a pool, or kids playing in sprinklers.

If you would like to have your house or business tested for vapor intrusion contamination, email or call: Roger Hoogerheide, EPA Remedial Project Manager, (406) 422-9725, hoogerheide.roger@epa.gov

Locate Your Property

Wondering whether your property is located within the Billings PCE study area? Use this web link to find out.

<https://arcg.is/0KyfvL1>

What has been done at the Site?

Between 1999 and 2001, the Montana Department of Environmental Quality (MDEQ) conducted a site investigation and determined that indoor air contaminant concentrations within structures overlying the plume could potentially cause a health risk for building occupants following long-term exposures.

In 2007, EPA conducted a removal action that included removing and disposing of contaminated soil around 7th Street and Central Avenue, injecting chemicals into the subsurface to help reduce groundwater contamination and installing a barrier wall around the most contaminated groundwater. EPA also installed vapor mitigation systems at seven structures overlying the groundwater plume. Since that time, EPA and MDEQ have been documenting plume characteristics and evaluating health risks due to vapor intrusion into structures overlying the plume.

In 2019, MDEQ issued a remedial investigation report that characterizes the current nature and extent of soil and groundwater contamination, determines whether other sources are contributing to contamination, and shows whether vapor intrusion is continuing to occur. Results indicate multiple sources of contaminated soil, and that subsurface soils, and possibly surface soils, at these source locations are continuing to contaminate groundwater. Further, while groundwater contamination has decreased since EPA's removal work, vapor intrusion is still occurring, and the shallow groundwater plume remains contaminated above Montana's human health standards for drinking water.

EPA and MDEQ completed groundwater sampling in November 2021.

Upcoming Activities

January/February 2022 - collect up to 150 soil gas samples to delineate the extent of soil gas in the subsurface. Will also collect up to 60 samples in the sewer pipes to determine if these pipes act as a pathway for vapors to enter homes and businesses.

February/March 2022 – Evaluate indoor air at up to 50 homes and businesses.

Community Meeting

EPA and MDEQ will host an online informational meeting on the Billings PCE Superfund site. The meeting can be accessed with a computer or by phone.

Time: Dec 15, 2021, at 6:00 PM.

To the meeting with Zoom visit:
<https://us02web.zoom.us/join>

Meeting ID: 883 8273 1591
Password: 095995

To join meeting by telephone dial:
(406) 444-9999

Meeting ID: 883 8273 1591
Password: 095995

Contact Information

U.S. EPA Region 8

Christin Russell, Remedial Project Manager
303-854-7541; russell.christin@epa.gov

Roger Hoogerheide, Remedial Project Manager
406-422-9725; hoogerheide.roger@epa.gov

Montana DEQ Waste Management & Remediation Division Office

Jason Rappe, Remedial Project Officer
406-444-6442; 800-246-8198; jason.rappe@mt.gov

Montana Department of Public Health and Human Services (DPHHS)

Dawn Nelson, State Toxicologist
406-444-6910; dawn.nelson@mt.gov

Web Links

EPA website to learn more about the Superfund program
www.epa.gov/superfund

EPA website for more information about Billings PCE site:
www.epa.gov/superfund/billings-pce

Find Information About:

- ✓ *The Billings PCE Superfund Site*
- ✓ *Upcoming soil vapor, sewer pipe and indoor air investigations*
- ✓ *Project contacts for EPA, DEQ, and DPHHS*
- ✓ *Web links on Superfund, vapor intrusion and chemicals of concern*
- ✓ *The December 2021 public meeting*



US Environmental Protection Agency
10 West 15th Street, Suite 3200
Helena, MT 59626
Attn: R. Hoogerheide