

Bozeman Solvent Site

A State Superfund Update



Montana Department of
ENVIRONMENTAL QUALITY
Hazardous Waste Site Cleanup Bureau

December 2009

The Montana Department of Environmental Quality (DEQ) will be holding a public meeting at the City Commission Meeting Room, 121 N. Rouse, in Bozeman on December 17, 2009, from 7:00 to 9:00 p.m. DEQ will be sharing information about the upcoming indoor air (also called vapor intrusion) investigation planned for the Bozeman Solvent Site this winter. DEQ will also provide an update on other activities associated with the Bozeman Solvent Site and

will answer your questions. If you have any questions about this meeting or require accommodation, please contact Kate Fry, Bozeman Solvent Site Project Officer, at 406-841-5066 or by email at kfry@mt.gov.

Public Meeting
December 17, 2009, 7:00 pm
City Commission Room
121 N. Rouse, Bozeman

Indoor Air Investigation

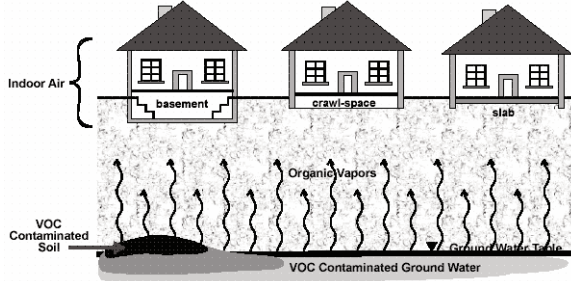
DEQ is requiring the City of Bozeman (City) and CVS Pharmacy, Inc. (CVS) to conduct an indoor air investigation at the Bozeman Solvent Site in an area above known groundwater contamination. Soil vapor samples collected by the City and CVS this past summer identified tetrachloroethene (PCE) at concentrations exceeding a health risk-based screening level. Exposure to PCE can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. PCE is a carcinogen. Based on the soil vapor data, DEQ is requiring the City and CVS to sample inside 21 buildings (residences and businesses) in the area north of the former

Buttrey Shopping Center (also known as the Hastings Shopping Center).

This work will begin in January of 2010 when indoor and outdoor air temperatures may cause soil vapors to move inside buildings more readily and when windows and doors are typically kept closed. The City and CVS will collect indoor air samples and samples from below buildings, such as subslab or crawlspace samples, from selected residences and businesses within the Residential Study Area shown below. If you reside in this area, the City and CVS may request permission to access your property to conduct this work.



What is vapor intrusion? Vapor intrusion is the migration of volatile chemicals from an underground or subsurface source, such as contaminated groundwater, through the soil and into the indoor air of overlying buildings (see below).



Vapor Intrusion Illustration

What is the purpose of the indoor air investigation? PCE was historically used at a dry cleaning business in the former Buttrey Shopping Center. PCE was released into the ground, or subsurface, through an old sewer line and old septic system. The PCE eventually came into contact with groundwater. Dissolved PCE is now present in the groundwater underlying the Bozeman Solvent Site at concentrations greater than Montana groundwater standards. The upcoming indoor air investigation will determine whether contaminants, specifically PCE, related to the Bozeman Solvent Site are moving from groundwater to indoor air, and if so, whether the contaminants are accumulating in residences or businesses at levels that may pose an unacceptable human health risk.

Where will samples be collected? During this investigation, certain residences and businesses overlying the Bozeman Solvent Site contaminated groundwater plume will be sampled. The City and CVS will contact property owners to ask for permission to conduct the sampling. Air samples will be collected from inside and below buildings to determine if PCE is present underneath or inside the buildings.

How will samples be collected and analyzed? Metal “Summa” canisters, like the one shown, will be placed in each sampling location for



Summa Canister

immediately beneath the building. A specialized probe is placed in the hole. A “Summa” canister is connected to the probe and the subslab (soil) vapor sample is collected in approximately 1 hour. The hole is sealed after the sample has been collected and the canisters are sealed and shipped to a laboratory for analysis.

24 hours to collect a representative indoor air sample.

In addition, subslab or crawlspace samples will be collected from underneath the buildings. Subslab samples require drilling a small hole in the concrete slab of a building in order to collect a vapor sample



Subslab Probe

Prior to the sampling, owners of residences and businesses will be asked to complete a questionnaire and may be asked to temporarily remove materials such as paint, glue, and cleaning products from the area being sampled. Some of these products may contain volatile organic compounds (VOCs), such as PCE, that might be detected in the indoor air samples.

Background

The Bozeman Solvent Site is located south of West Main Street and east of North 19th Avenue. It includes the Hastings Shopping Center (formerly the Buttrey Shopping Center) and extends north of the East Gallatin River. Soil and groundwater at the Bozeman Solvent Site have been contaminated, primarily by PCE. Indoor air at the Hastings Shopping Center has been impacted by some contaminants.

How will DEQ evaluate the sampling results? DEQ will use multiple lines of evidence to evaluate the results. It will include, but not be limited to, comparing subslab (or crawlspace) sample results to indoor air sample results from the same structure to determine if contamination is present and moving from soil vapor into indoor air. In addition, indoor air sample results will be compared to screening levels that are compiled by the U.S. Environmental Protection Agency, and to outdoor air results.

If indoor air sample results exceed screening levels and the vapor intrusion pathway is determined to be complete (migrating from underneath the building into indoor air), the indoor air sampling will be expanded to cover additional residences and businesses that overlie the Bozeman Solvent Site dissolved PCE groundwater plume.

If the sample results are inconclusive, the structure may be resampled to double check the results. DEQ will send sample results to the residents/owners of the buildings sampled.

If a vapor intrusion pathway is found to be complete in a building and the risk assessment being completed by DEQ shows an unacceptable risk to human health, mitigation may be required. Mitigation interrupts the vapor intrusion pathway either by preventing contaminated soil vapors from entering the building or by removing the vapors that are inside the building. These methods are a response to vapor intrusion that can be used while the source of the contamination is being cleaned up. Decisions for mitigation have not been made at this time.

For more information about vapor intrusion, see <http://deq.mt.gov/StateSuperfund/FrequentlyAskedQuestions.asp>.

Other News about the Bozeman Solvent Site

DEQ will soon finalize the risk assessment for the Bozeman Solvent Site that includes cleanup levels for compounds in soil, groundwater, and onsite (Hastings Shopping Center) indoor air. If necessary, an addendum to the risk assessment will be developed to calculate cleanup levels for offsite (not at Hastings Shopping Center) indoor air. Once the risk assessment is finalized, the City will submit a feasibility study to evaluate potential cleanup options to address the contamination associated with the Bozeman Solvent Site.

Once a final draft of the feasibility study is complete, DEQ will prepare the Proposed Plan, which will identify DEQ's preferred remedy to clean up the Bozeman Solvent Site.

DEQ will solicit public comment on the Proposed Plan. DEQ will then issue a Record of Decision (ROD) that describes the selected remedy that the City and CVS will implement.

The City and CVS recently completed an enhanced bioremediation test at the Hastings Shopping Center to evaluate whether this option can effectively cleanup the PCE in the subsurface. DEQ is currently reviewing the results.

The City and CVS are continuing groundwater monitoring to evaluate contaminant trends and to verify that no one is drinking groundwater that exceeds federal drinking water standards.

Questions? Concerns?

Contact Kate Fry, DEQ Project Officer:

Phone (406) 841-5066 (direct)
(800) 246-8198 (Superfund hotline)
Fax (406) 841-5050
Email kfry@mt.gov

Or come to the public meeting:

7 p.m., Thursday, December 17, 2009,
City Commission Room, 121 N. Rouse St., Bozeman

For More Information

You can review documents related to the Bozeman Solvent Site, at the locations listed opposite.

The Agency for Toxic Substances and Disease Registry (ATSDR) provides information about PCE at <http://www.atsdr.cdc.gov/tfacts18.html>.

Information Located At

Bozeman Public Library
626 East Main
Bozeman, MT 59715
Telephone (406) 582-2400

Montana Department of Environmental Quality
Remediation Division
1100 North Last Chance Gulch
Helena, MT 59620-0901
Telephone (406) 841-5000

Persons with disabilities who need an alternative accessible format of this information, or who require some other reasonable accommodation in order to participate in the public meeting should contact DEQ at least 3 days before the meeting.



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Information on the cost of this publication can be obtained by writing the Department of Administration, Helena, Montana.