

Vapor Intrusion Assessment

City of Montesano – Grays Harbor County, Washington

Fact Sheet – May 2009

DOH PUB NO 334-203

The Washington State Department of Health completed a health consultation that looked at soil and groundwater contaminated with petroleum and solvents in downtown Montesano. The goal is to see if contamination would affect indoor air quality in the community.

Background

Petroleum and some solvent-contaminated soil and groundwater have been found associated with spills or leaks at Whitney's Chevrolet, Tony's Short Stop Texaco, and the former Brumfield/Twidwell properties. These properties are located in a three block area bordered by Pioneer Avenue to the north, Wynoochee Avenue to the south, Church Street to the east, and 1st Avenue South to the west. Some petroleum has been found floating on the groundwater surface within this three block area.

Underground storage tanks are being used or were used in the past at the three properties. Chemicals stored in the tanks include gas and diesel fuel, solvents, waste oil, and heating fuel. The tanks, through leaks or spills, appear to be the source of soil and groundwater contamination in the area.

There have been other contaminant releases in the downtown area. These releases have either been cleaned up or are in the process of being cleaned up.



What is known about the contamination at this site?

The Department of Ecology and the property owners have been testing soils and groundwater to determine the types of chemicals released and how far those chemicals have traveled. Their studies show:

- The petroleum in groundwater spread across a significant part of the three block area; some extends southward toward the railroad tracks.
- Contaminated soil boundaries have not been defined beyond these properties.
- Low levels of petroleum and similar products have been found in storm drains and abandoned sewers.

These releases could be a potential threat to indoor air quality at some buildings in downtown Montesano. Additional information is needed to know for certain.

How can something in soil or groundwater affect indoor air?

Chemicals that are spilled, dumped on the ground, or that leak from underground storage tanks can seep into the soil. If the spill or leak is large enough, it can travel down through the soil and get into the groundwater. When chemicals known as volatile organic compounds (volatile chemicals) like gasoline and solvents, are released into soil or shallow groundwater, these chemicals evaporate, producing fumes that travel up through the soil. These vapors can enter buildings through crawlspaces and cracks or other openings in the foundation. This is called *vapor intrusion*, and it can make indoor air unhealthy.

Could volatile chemicals in indoor air affect my health?

When volatile chemicals are at high enough levels, people may get headaches, nausea, and/or eye and respiratory irritation. These symptoms usually go away when the person moves into fresh air. If people breathe low levels of these chemicals for many years, there may be a small health risk.

Conclusions and next steps

The soil and groundwater contaminated with petroleum and solvent in downtown Montesano poses a potential threat to indoor air quality. Additional work is needed to learn more about the type and extent of the contamination and how it might affect indoor air quality. The Department of Ecology will work with Whitney's Chevrolet, Tony's Short Stop Texaco, and the former Brumfield/Twidwell property owners to:

- Conduct a building survey of downtown Montesano to identify buildings that may be vulnerable to

the contaminated soil and groundwater.

- Compile existing data and maps to show contaminant distribution in the area and find data gaps.
- Conduct soil gas and/or indoor air tests to see if there's a health threat.

The Department of Health will work with Department of Ecology on vapor intrusion planning and data evaluation.

Helpful links

Department of Health report, City of Montesano — Vapor Intrusion Assessment, Petroleum and Solvent Contaminated Soil and Groundwater — Grays Harbor County, Washington
(<http://www.doh.wa.gov/ehp/oehas/hc95topresent.htm#M>)

Vapor Intrusion fact sheet
(<http://www.doh.wa.gov/ehp/oehas/docs/vaporintrusion.pdf>)

Department of Ecology
(http://www.ecy.wa.gov/programs/tcp/sites/montesano/montesano_hp.htm)

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