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Human Exposure to Toxic Chemicals in Washington State

## Burlington Northern Santa Fe Railroad - Skykomish

### Health Consultation Summary - Indoor Air Testing

#### Background:

Petroleum products were found in soil and groundwater and are floating on groundwater under parts of Skykomish, Washington. These contaminants were released to the environment during past operations of Burlington Northern Santa Fe's (BNSF) railroad refueling and repair facility located in the town. The Washington State Department of Ecology (Ecology) asked BNSF to collect data to determine whether the contaminants could affect people's health. In addition to sampling soil, groundwater, surface water and sediments, BNSF agreed to collect and analyze indoor air samples four times within a twelve-month period starting in August 1997.

The Agency for Toxic Substances and Disease Registry (ATSDR), a federal health agency, reviews data to determine whether chemicals are present in amounts large enough to cause health effects. Recommendations are given based on this evaluation. ATSDR has evaluated the first set of indoor air data collected by BNSF. This is a summary of that health evaluation.

#### Why measure indoor air?

Vapors from the petroleum products in the groundwater could rise through the soil and collect in buildings, possibly affecting people's health. To determine whether harmful levels of vapors are collecting in buildings, BNSF recently collected air samples and measured the levels of volatile and semivolatile chemicals found in those samples. Samples were collected in the Skykomish Public School, the Skykomish Post Office, and two residences.

#### What was found?

Small amounts of many different chemicals were found in the air in the buildings. A health consultation prepared by ATSDR lists the chemicals that were found. The consultation is available at the Skykomish Library, 100 5th Street.

**Are these chemicals a health hazard?**

The small amounts of chemicals found during this round of sampling are not expected to be a health hazard for people who use the buildings. The levels found were similar to levels typically found in the air inside normal homes. Due to the widespread use of petroleum products, chemical components of petroleum can be found in the air at low levels throughout the world. Many things in the home and school could also contribute to the contamination found in indoor air. While it is impossible to be certain from a single set of tests, it does not appear that vapors from the subsurface plume are adding measurable amounts of contaminants to the indoor air in the buildings examined.

**Community Health Concerns:**

Residents expressed concerns about past exposure. ATSDR does not know the length of past exposure or the amount of past exposure. Health information is based on what is currently known. If you have health concerns, talk to your local health care provider and ask them to take a complete exposure history. Washington Department of Health (DOH) can supply your health care provider with exposure history forms. A complete exposure history will look at different ways exposure may have occurred to these or other chemicals. You can be exposed to many chemicals through your job, hobbies and other activities. By completing an exposure history form, you may identify specific actions you can take to limit potential chemical exposure.

**Future tests:**

Levels of volatile and semivolatile contaminants tend to vary over time. Since only a few samples were taken at a single point in time, this one set of tests may not accurately reflect the conditions that occur throughout the year. Three more rounds of samples will be collected and analyzed to allow us to better evaluate how the levels of chemicals change throughout the year. ATSDR recently requested that a greater number of samples be collected and analyzed during each round. DOH will evaluate the future samples and provide you with a summary of the evaluations.

**Conclusion:**

The results of this round of air sampling do not suggest that there is a health hazard from chemicals arising from the subsurface contamination.

**For more information, contact:**

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