



Burlington Northern Santa Fe Railroad Contaminated Site Investigation Skykomish, Washington

SUMMARIES OF STUDY REPORTS

April 1999

The following summaries are of those studies done separately from the Remedial Investigation. The indoor air testing health consultations and fact sheets are among the documents at the Skykomish Library Repository for the BNSF Site. The drinking water sampling data is available by request. The blood testing data on the children who participated is confidential.

Background

Petroleum products were found in soils and groundwater, as well as floating on the groundwater beneath the town of Skykomish. This environmental contamination is the result of past operations at the Burlington Northern Santa Fe's (BNSF) fueling and maintenance facility. BNSF and the Department of Ecology are currently working toward a cleanup of this site.

Drinking water sampling for petroleum

While there was no evidence that the petroleum contamination in Skykomish had impacted the town's drinking water, people in the community told us they would feel more comfortable if the water supply was specifically tested for petroleum contamination. In response to this request the Washington State Department of Health (DOH) conducted two rounds of drinking water tests, one during August of 1996 and one during March of 1997. Each set of samples was analyzed for the presence of petroleum.

For the first round of tests, DOH collected water samples at three separate locations. Water was collected from outside taps at two homes in the area above the petroleum "plume" (where petroleum is floating on the water table) and one sample was collected from the spigot in BNSF's "water shed" on Railroad Avenue. The second round of tests added the school to the locations sampled. DOH found no significant levels of petroleum in the Skykomish drinking water supply system.

Conclusion: There are no significant levels of petroleum in the Skykomish drinking water supply system.

Blood tests for lead

Due to concern over possible exposure to lead in the surface soils, in November 1996 the Seattle-King County Health Department tested four children in Skykomish for blood lead levels. The children were from two families considered at highest potential risk for lead exposure due to their proximity to the lead contaminated soils. The children's blood did not contain elevated levels of lead and the results of the tests are considered normal. The parents

of the children were notified of the results. No additional testing for blood lead is planned at this time unless new information indicates it is necessary.

Conclusion: The children whose blood was tested did not contain elevated levels of lead and the results of the tests are considered normal.

Indoor air testing for petroleum vapors

Indoor air can be affected by vapors from petroleum contamination rising through the soil and collecting in buildings, possibly affecting people's health. Although there was no evidence to indicate this was happening, BNSF, to be sure, collected indoor air samples and measured the levels of petroleum-related vapors found in those samples. Samples were collected seven times from August 1997 to February 1999. The sampling locations were the Skykomish Public School (two locations), the Skykomish Post Office, and four residences.

The Agency for Toxic Substances and Disease Registry (ATSDR), a federal health agency, and the Washington State Department of Health reviews the data to determine whether chemicals are present in amounts large enough to cause health effects. Recommendations are given based on their evaluation. The first and second set of indoor air data collected by BNSF have been evaluated. The remaining data is currently undergoing review.

Small amounts of many different chemicals were found in the air in the buildings during the first two rounds of sampling. Levels found during the 2nd quarter of sampling are lower than the 1st quarter of sampling. Additional chemicals were also found during the 2nd quarter. The health consultations prepared by ATSDR list the chemicals that were found and discuss their impact on public health.

The small amounts of chemicals found during the 1st and 2nd quarters of sampling are not expected to be a health threat for people who use the buildings. The levels found were similar to levels typically found in the air inside most homes. Most of the chemicals were not associated with petroleum. Many products used in the home and school could contribute to the chemicals found in the indoor air. Based on the scientific evidence, it does not appear that vapors from the soil are adding measurable amounts of petroleum vapors to the indoor air in the buildings examined.

The 3rd and 4th quarters of sampling have been completed by BNSF and the Department of Health is currently evaluating the results. A complete report on all four quarters of sampling will be made available during mid-1999.

Conclusion: People who are exposed to levels of chemicals found in indoor air during the 1st and 2nd quarters of sampling are not likely to experience an impact to their health.

For more information

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