

Health Consultation

BURLINGTON NORTHERN FUELING FACILITY

HELENA, MONTANA

SEPTEMBER 8, 2005

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Division of Health Assessment and Consultation

Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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HELENA, MONTANA

Prepared by:

U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry
Division of Regional Operations

BACKGROUND AND STATEMENT OF ISSUES

Burlington Northern (BN) Fueling Facility - Helena, Montana, at Phoenix Avenue and Harris Street, is an active locomotive fueling facility and former maintenance shop over 50 acres in size. It has been in operation since the 1890s. Spills and leaks from fueling activities contaminated soils and shallow groundwater with petroleum hydrocarbons, primarily diesel. The facility is not on CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) and no CERCLA ((Comprehensive Environmental Response, Compensation, and Liability Act of 1980) activities have been conducted at the facility.

The facility is located in a commercial and residential area in northwestern Helena. Residences are within about 500 feet of the facility. From 1981 through 1986, BN consultants conducted several limited investigations to determine the presence and extent of contamination.

SOIL SAMPLING

During subsequent investigations, BN's contractors discovered high levels of lead contamination in on and offsite soils. In 1999, the lead contamination was investigated using a grid sampling pattern and XRF analyses. Lead concentrations as high as 50,000 mg/kg were detected in areas of the rail yard.

BN, working with the Department of Environmental Quality (DEQ), also investigated the off-site migration of lead. Residential yards north and south of the rail yard were sampled. Some yards north of the rail yard along Phoenix Avenue showed concentrations of lead, above U.S. Environmental Protection Agency (EPA) Region IX PRG (Preliminary Remediation Goal) of 400 mg/kg. BN plans to further investigate lead-contaminated soils.

DISCUSSION

Lead contamination of residential soils in excess of EPA's standard of 400 ppm was limited to a scattered minority of the yards tested. In almost all of those yards, only one or two of the samples taken contained more than 400 ppm lead. Therefore, rather than conduct a general cleanup of entire yards throughout the neighborhood, EPA proposes to remediate only the isolated areas in the several yards where elevated soil lead (i.e., > 400 ppm) was detected.

THE QUESTION ASKED OF ATSDR:

In July of 2005, EPA asked ATSDR whether it considered that such a proposal would be adequately protective of public health.

CONCLUSIONS

ATSDR has reviewed the available data within the context of site-specific conditions of exposure and concludes that the EPA's proposed cleanup procedure would be adequately protective of public health. The 400 ppm guidance for lead in residential soil is protective of public health because it is based on the worst-case assumptions of high soil ingestion rates and high bioavailability. EPA's proposed cleanup procedure would afford this level of public health protection while simultaneously minimizing the expense and disruptiveness of cleanup activities.

RECOMMENDATIONS

No additional public health actions are recommended.

REFERENCES

ATSDR 1999. Toxicological Profile for Lead (Update). U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, Public Health Service. Available at <http://www.atsdr.cdc.gov/toxprofiles/tp13.html>

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