Contamination Stations

Kalispell
DEQ PRIORITY **HIGH**

35-acre wood treatment facility, 10-acre former oil refinery

Soil and groundwater contamination discovered in 1988, has pentachlorophenol (PCP), dioxins, polynuclear aromatic hydrocarbons and diesel. BNSF is one of four potential liable parties.

Cleanup ongoing. No remediation plan in place. DEQ filed lawsuit requesting reimbursement of costs.

Whitefish
DEQ PRIORITY **HIGH**

90-acre rail yard est. in 1890s

Soil and groundwater contaminated with diesel, polynuclear aromatic hydrcarbons, PCBs, volatile organic compounds and heavy metals.

Cleanup ongoing. No remediation plan in place with DEQ.

Missoula
DEQ PRIORITY **HIGH**

32-acre rail yard est. in 1890

Diesel and VOCs found in soil and groundwater. Two municipal water wells within one-quarter mile. Contaminated plume is at least three blocks to the south.

BNSF is doing some recovery. No remediation plan in place with DEQ.

Great Falls
DEQ PRIORITY **HIGH**

21-acre rail yard est. in 1948

Three diesel plumes found between 1985-87. Plume has migrated off site. BNSF is monitoring groundwater and investigating.

BNSF installed interceptor wells in 1987, recovery wells in 1990 to pump diesel out. No remediation plan in place with DEQ.

Havre
DEQ PRIORITY **MAXIMUM**

90-acre rail yard est. in 1890s

Diesel and volatile organic compounds in soil and groundwater. Contaminants found in aquifer at least three blocks off site. Domestic wells and homes within 200 feet of site.

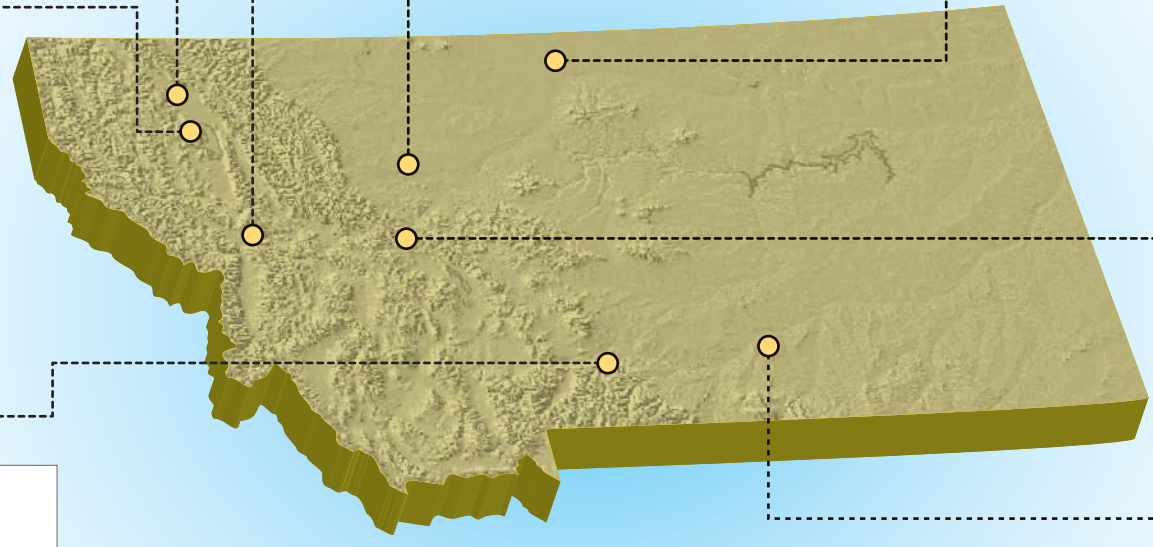
BNSF recovered 176,000 gallons on site from 6 systems as of March 2004. No remediation plan in place with DEQ.

Livingston
DEQ PRIORITY **MAXIMUM**

640-acre rail yard est. in 1883

Diesel and VOCs found in municipal wells and soils beginning in 1985. Contaminated plume has migrated off site.

BNSF undertaking significant recovery actions. Final cleanup plan signed in 2001. DEQ now wants to modify consent decree to implement the record of decision.



Helena
DEQ PRIORITY **HIGH**

50-acre rail yard est. in the 1890s

Off-site diesel plume discovered in 1981; high levels of lead in soils found more recently. Chloronated solvents underground may or may not be caused by BNSF.

BNSF is doing some recovery. No remediation plan in place with DEQ.

Billings
DEQ PRIORITY **MEDIUM**

20-acre rail yard in use 1940s-70s

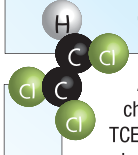
Tetrachloroethylene and TCE found in groundwater in 1989; it may come from source other than railroad. Diesel also in groundwater.

BNSF is monitoring.

Chemical primer on rail yard contaminants

Volatile organic compounds (VOCs) are a class of chemicals that have certain properties in common: They readily evaporate and contain carbon. They can enter groundwater from a variety of sources.

All VOCs can irritate the skin upon contact, or the mucous membranes if inhaled. At high levels of exposure, many VOC can cause central nervous system depression like drowsiness or stupor.

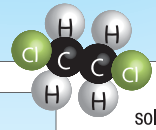


Trichloroethylene (TCE)

A colorless or blue liquid with a chloroform-like odor. The greatest use of TCE is to remove grease from fabricated metal parts and some textiles.

Drinking water standard: 0.005 mg/L

Health Impacts: EPA has found TCE to potentially cause vomiting and abdominal pain from acute exposures. Long-term exposure may cause cancer and liver damage.

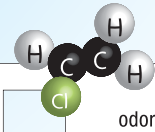


Dichloroethylene (DCE)

An odorless organic liquid used as a solvent for waxes and resins; in the extraction of rubber; as a refrigerant; in the manufacture of pharmaceuticals and artificial pearls; in the extraction of oils and fats from fish and meat; and in making other organics.

Drinking water standard: 0.005 mg/L

Health impacts: Short-term exposure can cause central nervous system disorders, and adverse lung, kidney, liver circulatory and gastrointestinal effects. Long-term exposure may cause cancer.



Vinyl Chloride

A colorless organic gas with a sweet odor. It is used in the manufacture of building and construction products, in the automotive industry, electrical wire insulation and cables, piping, industrial and household equipment, medical supplies, and is depended upon heavily by the rubber, paper, and glass industries.

Health impacts: Short-term exposure at high levels can damage the nervous system. Long-term exposure can cause cancer and liver damage.

Sources: Department of Environmental Quality, Environmental Protection Agency **Illustration:** Matthew J. Wolfe - Independent Record