

## ***FACT SHEET FOR BN WHITEFISH FUELING FACILITY – 8/28/2008***

### **Facility Description**

The BN Whitefish Fueling Facility is ranked a high priority on Montana's Comprehensive Environmental Cleanup and Responsibility Act (CECRA) priority list. The Facility is an active, approximately 90-acre locomotive fueling and repair facility which has operated since the early 1900s. The Facility had three separate fueling areas: a freight fueling area west of the highway overpass and two Amtrak fueling areas east of the overpass on either side of the Amtrak depot, known as the east and west passenger fueling areas. Three wastewater lagoons are located in the freight fueling area. Spills and leaks at the fueling facilities and oily discharges to the wastewater lagoons caused soil and shallow groundwater contamination with petroleum products, polynuclear aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs) (See Figure 1).

### **Site Operational History**

The railyard was constructed in 1903 and 1904. A roundhouse and associated shops have reportedly been in operation at Whitefish since their construction in 1904. Locomotive maintenance and repairs were done at these shops until 1958, at which time major repair activities were transferred to other BN facilities. The roundhouse shops were removed in 1981, and only minor maintenance is presently performed at the railyard.

Coal, wood, or heavy bunker oil was used to fire the steam locomotives in Montana until the mid-1930s, when railroads began using diesel-fired switcher engines. Bunker "C" and similar heavy fuel oil products were dispensed in the former Bunker "C" Fueling Area. The use of diesel road engines began in the 1940s. Three diesel fueling areas were constructed at the facility during this period: the Freight Locomotive Fueling (FLF) area (northeast of the roundhouse shops), the West Passenger Fueling (WPF) area (west of the existing depot), and the East Passenger Fueling (EPF) area east of the depot. The FLF is presently operational and was reconstructed in 1999. Fueling area improvements included the installation of a concrete platform with subgrade secondary containment liner, leak detection equipment, and a new fuel dispensing system. The WPF and EPF areas were closed in the early 1980's in response to the decrease in passenger rail service. Key railyard features are depicted on Figure 1.

A lagoon system designed to contain and treat oily wastewater at the railyard was constructed in the 1960s. The system was designed to treat wastewater generated in the roundhouse and at track pans that were installed around 1970. The wastewater system drained to a concrete oil/water separator. Recovered oil was shipped offsite for recycling. The water from the oil/water separator was discharged to a series of three lagoons located east of the roundhouse. The three lagoons were significantly upgraded in 1998. Upgrade activities included regrading the existing lagoon system, installing a subdrain system, and lining each lagoon with a high-density polyethylene (HDPE) geomembrane.

In 1998, DEQ determined the BNSF Railway Company (BNSF) was liable for cleanup at the Facility and issued a Unilateral Administrative Order requiring BNSF to conduct a remedial investigation and feasibility study.

### **Identified Contamination**

At this time, BNSF's investigations has identified the following contaminants that have been released to the environment at the Facility: diesel fuel; bunker "C" fuel (a heavier than diesel liquid hydrocarbon); VOCs, primarily trichloroethene (a solvent); PAHs – which are present in fossil fuels, fuel spills and are also formed by the incomplete combustion of carbon fuels; polychlorinated biphenyls (PCBs – which are typically used as coolants and insulating fluids for transformers and capacitors and as a pesticide extender); and heavy metals including antimony, arsenic, cadmium, chromium, lead, nickel and zinc. Former locomotive fueling spills resulted in diesel and bunker "C" fuels in soil and groundwater at the Facility. The specific sources of VOCs and PCBs have not yet been definitively identified. The heavy metal contamination has been attributed to railcar wheel bearings and railcar repair activities.

### **Interim Remedial Actions**

An interceptor/recovery trench was installed near the Whitefish River in 1973 and has been in operation since that time collecting and routing groundwater with petroleum product to an oil/water separator and lagoon system for treatment.

In 1988, an additional recovery trench network with associated recovery wells were constructed in the FLF area. This system initially recovered petroleum product; however, volumes diminished over time and BNSF ceased operation of the system.

Several monitoring wells have been utilized for free product recovery by use of motorized skimmers and hand bailing. Only the primary interceptor/recovery trench installed in 1973 is currently recovering product at this time. As of 2008, there have been approximately 13,000 gallons of petroleum product (primarily diesel fuel) recovered at the facility. It is estimated that there is an additional 23,000 to 110,000 gallons of petroleum product remaining in site soils and groundwater.

In addition to the above petroleum cleanup actions, there has been some effort to cleanup contaminated solid media at the Facility. In 1992, BNSF thermally treated approximately 5,900 tons of soil generated from the construction of the new fueling facility installed at the railyard. Also in 2005, BNSF removed an area of identified lead and antimony soil contamination.

### **Current Site Status**

BNSF is going to implement a pilot test project to recover additional petroleum product that has contaminated soil and groundwater by installing a microwell recovery system. Additional river sampling will be conducted to verify current sediment contaminant

levels and gauge the amount of natural recovery in the river system. Work is being conducted to complete the remedial investigation and begin the feasibility study.

A recent third party investigation, conducted on a property adjacent to the Facility on Miles Avenue, discovered elevated petroleum levels in soil that were outside the current known boundary of contamination. While no free product was discovered, levels of petroleum in soil were elevated. As a result, the CECRA facility boundary has been enlarged to include this area. DEQ will require that BNSF conduct additional monitoring of this area.

All cleanups conducted to date have been interim measures taken to limit exposure to areas containing the highest concentrations of contamination. A comprehensive cleanup needs to be conducted in the future. Completion of the remedial investigation and feasibility study by BNSF will allow DEQ to select a final remedy for the Facility that will ensure protection of human health and the environment.

**For more information**

Denise Martin  
Site Response Section Manager  
Remediation Division  
Montana Department of Environmental Quality  
PO Box 200901  
Helena, MT 59620-0901  
Phone (406) 841-5060  
[demartin@mt.gov](mailto:demartin@mt.gov)  
<http://deq.mt.gov/StateSuperfund/Index.asp>