

FACT SHEET FOR BN WHITEFISH FACILITY – June 2010

Facility Description

The BN Whitefish Facility is ranked a high priority on Montana's Comprehensive Environmental Cleanup and Responsibility Act (CECRA) priority list. The Facility is an active, approximately 78-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 passenger fueling areas east of the overpass on either side of the depot, known as the east and west passenger fueling areas. Three wastewater lagoons are located in the freight fueling area. Railroad operations, spills, leaks, and other improper disposal at the fueling facilities as well as oily discharges to the wastewater lagoons caused soil and shallow groundwater contamination with petroleum products, polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and heavy metals. Contamination originating at the Facility has entered Whitefish River water and sediments.

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 a former 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.

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 August 1995, DEQ sent BNSF Railway Company (BNSF) a letter notifying it of its status as a potentially liable person for the Facility. In 1998, DEQ determined 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

BNSF's investigations have 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. Trench repair and improvement work in 1997 included a 100-foot extension of the east leg of the trench.

In 1988, an additional recovery trench network with associated recovery wells was 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. Field testing of product recoverability initiated in April 2006 has continued into 2009 resulting in additional removal of petroleum from groundwater beneath the Facility. As of September 2009, there have been approximately 15,668 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 have been interim actions taken to cleanup some 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 continuing to recover petroleum contamination from groundwater through the interceptor trench . DEQ and BNSF are working to complete the remedial investigation and risk assessment and begin the feasibility study.

The City of Whitefish obtained a \$50,000 grant from the Montana Department of Natural Resources and Conservation to conduct additional soil and groundwater contamination investigations outside of the current Facility boundaries. The results of the City's investigation, performed in November 2009, indicate that contamination from the Facility above applicable screening levels is not present in the grant study area.

In the summer of 2009, BNSF began removal activities in the Whitefish River adjacent to the Facility under an Administrative Order from the U.S. EPA under the Oil Pollution Act. Activities under this order have included investigation of contamination in the river and in soil between the interceptor/recovery trench and the river bank. BNSF completed a pilot removal project (Phase I) in a stretch of the upper reach of the Whitefish River just south of the railyard roundhouse in December 2009. Approximately 2,800 cubic yards of petroleum-contaminated sediments were excavated from this area and disposed of. In April 2010, BNSF performed sampling with the purpose of determining where additional phases of cleanup work in the river will occur.

The 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, including risk assessment, 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 in the long term.

For more information

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