

Burlington Northern Livingston Shop Complex Update

State Superfund

March 2015

Rail Yard News

The Montana Department of Environmental Quality (DEQ) is issuing this update to keep you informed about the investigation and cleanup of contamination associated with the Burlington Northern Livingston Shop Complex State Superfund facility (Facility). The Facility includes an active rail yard, locomotive and rail car repair and maintenance shops. Montana Rail Link (MRL) is the current rail yard operator. Previous rail yard operating practices lead to soil and groundwater contaminated with chlorinated solvents, petroleum, lead, asbestos, and other compounds. A cleanup decision was issued in September 2001 that included several cleanup actions and additional investigations.

Recently, based on DEQ's requirement, the BNSF Railway Company (BNSF) has cleaned up soils contaminated with polycyclic aromatic hydrocarbons (PAHs) and lead. BNSF also removed asbestos found throughout the rail yard. In addition, with DEQ oversight, BNSF has investigated contamination in the bedrock aquifer. Finally, BNSF has successfully removed most of the floating petroleum on the groundwater.

The Livingston Restoration Group (LRG), working jointly with BNSF, has: conducted additional investigation in and around the Cinder Pile and in the vicinity of the former wastewater lines on the rail yard; expanded the soil vapor extraction system; and is conducting additional vapor intrusion sampling in some buildings.

Surface Soil Cleanup

The DEQ 2001 Record of Decision (ROD) for the Facility required that BNSF collect samples from the surface soil on the rail yard to determine whether there was any petroleum, PAHs, or lead contamination that required cleanup. BNSF completed the sampling in December 2011. The data indicated that removal of some contaminated locations ("hot spots") was required to be protective of rail yard workers and some nearby residences. These soils were removed from the Facility and disposed of at a DEQ-approved landfill in October and November of 2012. Following the cleanup, BNSF sampled groundwater to confirm that the soil contamination had not contaminated the groundwater.



Asbestos Cleanup

While conducting the surface soil sampling, DEQ discovered asbestos-containing building materials in areas of the rail yard not previously investigated for asbestos. DEQ required BNSF to complete an investigation to determine how much asbestos contamination was present and to clean up all the asbestos identified. BNSF completed the investigation in 2011 and completed the removal and disposal at a DEQ-approved landfill in June 2013. As part of these activities, MRL also removed several large debris piles that contained both asbestos debris and PAHs and disposed of the materials at a DEQ-approved landfill.

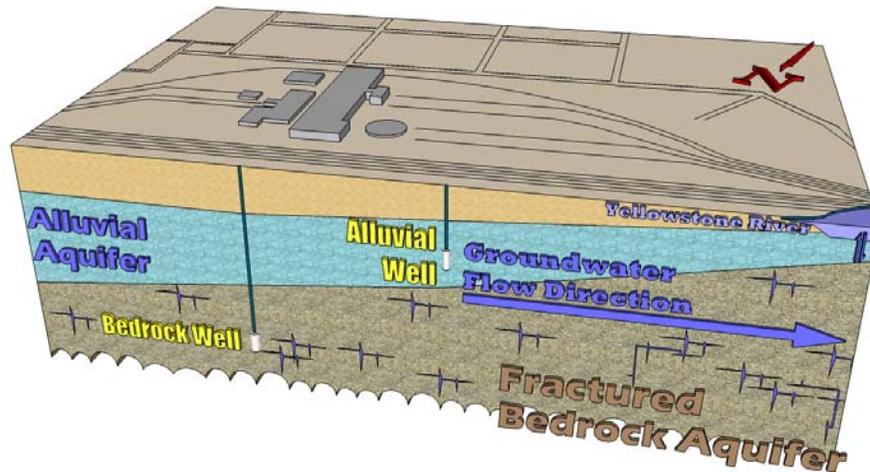
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Bedrock Aquifer Investigation

DEQ required BNSF to install several wells to investigate whether VOCs are present in the deep rock aquifer (the groundwater) at the Facility. BNSF installed wells into the deeper groundwater in 2010, 2012, 2013, and 2014. The data show that there are areas on the rail yard with very high concentrations of PCE in the top part of the bedrock aquifer. This contamination is the result of solvents sinking through the gravel aquifer into the bedrock. These high concentrations in the bedrock likely contribute to the contamination in the gravel aquifer. BNSF will soon submit a comprehensive report describing the investigation. DEQ will then determine whether additional investigation is necessary to define the nature and extent of this contamination and what cleanup alternatives must be evaluated.



Petroleum Product Recovery

In 2007, 2008, and 2012, DEQ required BNSF to construct a large system to clean up the petroleum in the groundwater by pumping it out and bioventing it. "Bioventing" means pumping air into and out of the ground in order to promote biologic activity that breaks down the petroleum in the soils. The first phase of the system consisted of 40 recovery wells located in the middle of the railroad tracks and south of the main line where most of the petroleum contamination is found. It also included a treatment plant located on the rail yard that separates the petroleum from the groundwater and then treats the remaining water before it is discharged to the Yellowstone River. The recovered petroleum was reused as industrial fuel.

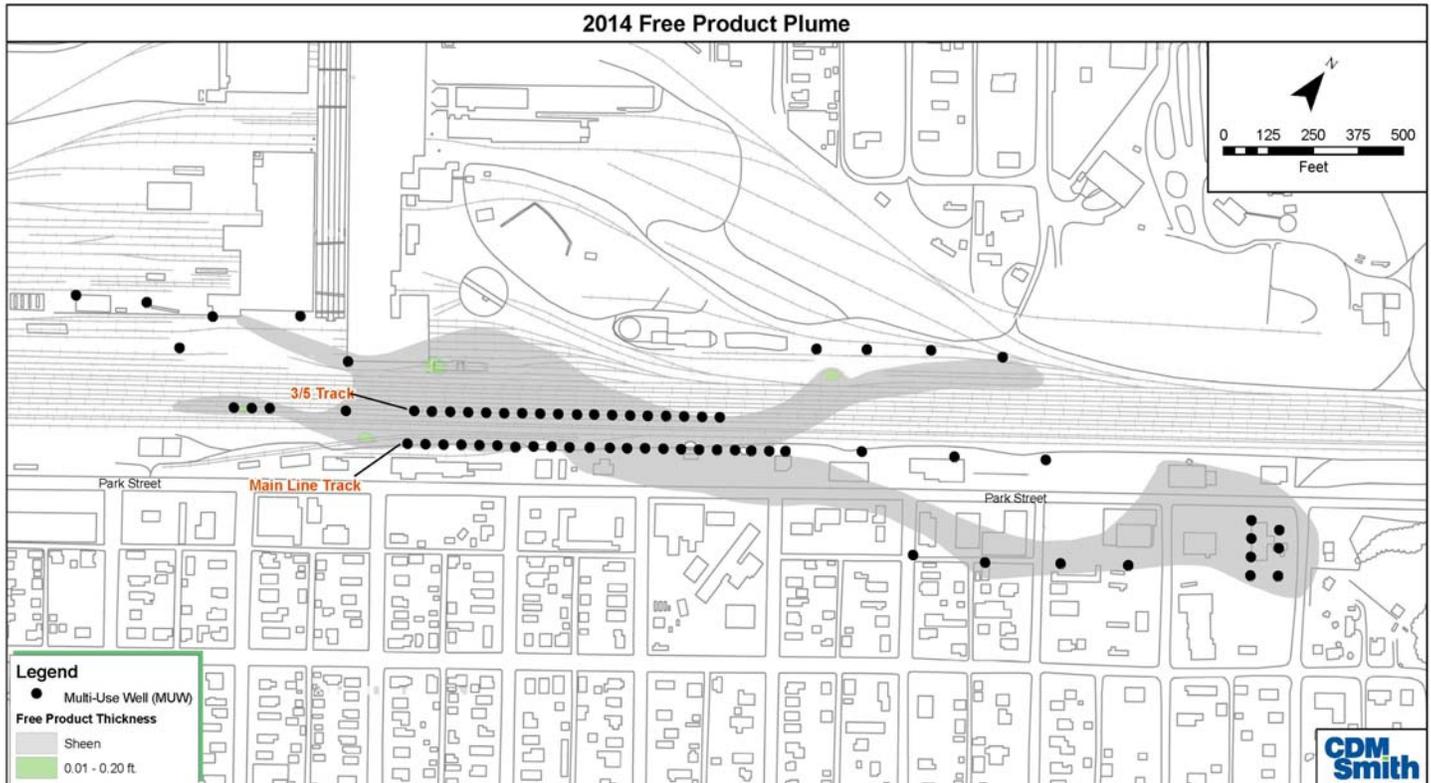
The system also includes seven additional bioventing wells located north of the rail lines. In 2012, DEQ required BNSF to install additional product recovery and bioventing wells south of Park Street and west of the first phase of the system to clean up the petroleum contamination in all the areas where the petroleum is currently located in the groundwater. To date, DEQ estimates that the system has removed or broken down over **50,000 gallons** of petroleum product from the ground.

During the last year of operating the system by pumping water throughout various sections of the plume, only one gallon of petroleum was recovered. This means that the system successfully removed the petroleum product that could be skimmed off the top of the groundwater. Therefore, at the end of 2014, DEQ allowed BNSF to stop active recovery. Some petroleum remains stuck to the gravel, so BNSF is required continue bioventing. BNSF also must continue to monitor the groundwater. This information will allow DEQ to determine whether additional recovery or additional bioventing well installation will be required.

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Livingston Restoration Group Activities

In May 2012, a Settlement Agreement was signed that ended a large lawsuit filed by the City of Livingston and several other plaintiffs against BNSF. The Livingston Restoration Group (LRG) was formed as a result of this settlement. This group consists of Livingston citizens who are responsible for implementing activities with a portion of the settlement provided by BNSF. The LRG has hired an environmental consultant to carry out various restoration activities. DEQ was not a party to this lawsuit or the settlement. This litigation was separate from the DEQ-required cleanup.

The LRG is working with BNSF to conduct some activities that DEQ has required of BNSF. Because some high vapor concentrations have been found near the capped Cinder Pile, additional investigation has been conducted in the area. The former industrial wastewater lines associated with the rail yard were identified in the ROD as potential sources of solvent contamination and the LRG investigated these areas. The LRG also added wells to the soil vapor extraction system in the former Electric Shop. Finally, the LRG is collecting additional indoor air, subslab, and soil vapor samples to verify previous sample results.

What's Next?

DEQ will determine what additional actions are necessary to address bedrock aquifer contamination. DEQ will continue to require BNSF to monitor the remaining petroleum in the groundwater and to continue to operate the bioventing system. BNSF will work with Pacific Steel to investigate the former C&P Packing Plant property. DEQ will evaluate the data submitted by the LRG and determine what additional actions are required. DEQ will continue to focus on the ongoing cleanup at the same time as the investigations so that the cleanup moves forward as quickly as possible.

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Questions? Concerns?

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Livingston, MT 59407
(406) 222-0862
<http://www.deq.mt.gov/StateSuperfund/BNLivingston.mcp>

Public Meeting

Date: Wednesday, March 11, 2015

Time: 7:00 p.m.

Location: Community Room of the City/
County Building
414 East Callender St.
Livingston, Montana

DEQ will share information about recently completed work at the Facility, including a brief overview of the bedrock aquifer investigation, the petroleum recovery and remediation, and details on the next steps. DEQ will also answer questions from the public.

NOTES