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KRY SITE UPDATE

KALISPELL POLE & TIMBER, RELIANCE REFINING COMPANY AND YALE OIL CORPORATION FACILITIES

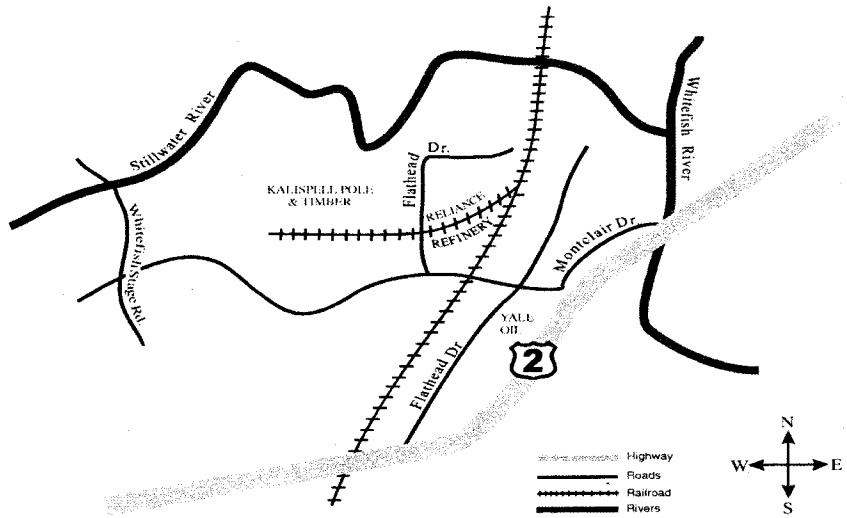
SITE RESPONSE SECTION

December 2008

KRY RECORD OF DECISION

The Montana Department of Environmental Quality (DEQ) issued the Record of Decision (ROD), providing rationale for the selected cleanup plan and describing how cleanup for the Kalispell Pole and Timber, Reliance Refining Company and Yale Oil Corporation facilities (collectively referred to as the "KRY Site") will be completed. The KRY Site is located in the Evergreen area of Kalispell and consists of a former wood treating operation, historic railroad and refinery, and bulk storage petroleum plant. It is close to the Stillwater River and residential areas. Soil and groundwater at the Site are contaminated primarily with pentachlorophenol (PCP), dioxins and furans, petroleum hydrocarbons and lead. The DEQ has determined that these contaminants pose unacceptable risks to human health and the environment. Some contaminants are cancer-causing agents. Other potential health effects include damage to the liver, skin, and immune, reproductive, neurological and respiratory systems. Cleanup at the KRY Site is regulated under Montana's Comprehensive Environmental Cleanup and Responsibility Act (CECRA), also known as State Superfund.

In addition to rationale for the agency's decision, the ROD is a technical and legal document that summarizes the science behind the cleanup decision, demonstrates how the remedy selection meets legal requirements, and provides a site history, including public comments and the DEQ response. The selected remedy is summarized on page two of this update.



Montana Department of Environmental Quality

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SELECTED REMEDY

Concentrations of contaminants at the KRY Site pose unacceptable risks to human health and the environment. The selected remedy protects human health and the environment, and is cost-effective. It consists of cleanup of contamination to levels described in the ROD, as well as institutional controls, such as land use and groundwater restrictions. The major elements of the selected remedy include petroleum sludge removal, soil excavation along with off site disposal and on site treatment, extraction of floating petroleum (free product) from groundwater, chemical oxidation of groundwater, monitored natural attenuation, long-term monitoring, and engineering and institutional controls.

Petroleum sludge removal

Petroleum sludge is present throughout the eastern portion of the KRY Site. It will be excavated and recycled at an offsite facility.

Contaminated soil excavation with off site disposal and on site treatment

Other contaminated soils will be excavated in phases to ensure that various contaminants are segregated for proper treatment. Lead-contaminated soil on the eastern portion of the site will be disposed of at an offsite disposal facility. The majority of contaminated soils, which are those with PCP and petroleum contamination, will be treated in land treatment units (LTUs) until contaminants are reduced to acceptable levels. Dioxins/furans often accompany the PCP contamination. However, dioxin/furan only-contaminated surface soils throughout the KRY Site will be consolidated into an onsite repository and capped.

Free product extraction from groundwater

Thinner petroleum floating on the groundwater from the western portion of the KRY Site will be removed using recovery technologies such as trenches or wells. The remedy for the thicker (almost tar-like) free product from the eastern portion of the Site will be to excavate down to the water table (which also removes contaminated soils), followed by recovery of product from the water surface.

Chemical oxidation of groundwater

The remedy for contaminated groundwater is chemical treatment in place to break down the PCP contamination. Chemical treatment, using oxidants, will also likely decrease the concentrations of dioxins/furans in groundwater. If dissolved petroleum contamination is present in this area, the chemical oxidation system will also reduce petroleum concentrations. The chemical oxidation system will treat the groundwater throughout the PCP and dioxin/furan plumes, including the deeper portion of the aquifer to address contamination at depth.

Monitored Natural Attenuation (MNA) for petroleum and metals

High concentrations of petroleum compounds, iron, manganese, and arsenic currently exist in groundwater at the KRY Site. The petroleum contamination is closely tied to the presence of free product in contact with the groundwater and the high levels of metals are likely due to the breakdown of free product and petroleum contaminated soils in these areas. Natural attenuation will be used to treat these contaminants. This method uses natural processes, along with removing the source of contamination, to reduce contaminant concentrations through time. Removal of the free product and overlying contaminated soil, followed by MNA, will decrease the petroleum and metals concentrations in groundwater through time.

SELECTED REMEDY—CONTINUED

Long-term monitoring

Long-term monitoring aids in evaluating the success of the cleanup and ensures that drinking water wells meet cleanup levels. Many of the existing monitoring, commercial/industrial, and residential wells will be tested in addition to any new wells that may be installed.

Institutional controls

Institutional controls (ICs) are restrictions on the use of property that protect human health. ICs in the form of groundwater use and land use restrictions are necessary as cleanup levels are based on commercial/industrial exposure and groundwater contamination is present above cleanup levels.

COST OF CLEANUP

The selected remedy is expected to cost approximately $32,062,368. The cost estimate is based on the best available information regarding the anticipated scope of the remedy. That information is presented in the Feasibility Study and Proposed Plan, which are documents that lead up to the ROD. Costs are influenced by factors such as fuel prices and final soil volume. Costs associated with these items were estimated in the ROD, and actual costs may differ.

CHANGES BASED ON PUBLIC COMMENT

DEQ encouraged public comment on the Proposed Plan during the 37-day public comment period. The DEQ received requests to extend the traditional 30-day public comment period and agreed to extend it by one week. A combined public meeting and hearing took place to provide additional information and receive comments. Based on comments, the DEQ made changes to the Proposed Plan that are reflected in the ROD, including but not limited to:

- Revising cleanup levels for some contaminants based on new toxicity information and re-screening of contaminants of concern due to new EPA screening levels.
- Adding consolidation and capping of dioxin-only contaminated soils, rather than treatment. This reduces volume of soil to be treated.
- Revising soil volume estimates for individual contaminants and free product estimates.
- Increasing the area of groundwater treatment, due to increased dioxin-furan plume, slightly increasing the cost.
- Providing the option to use clean soil instead of treated soil for backfill material to allow for more rapid redevelopment of the property.
- Providing alternate water should nearby wells be contaminated above cleanup levels.

WHAT'S NEXT?

- Produce Remedial Action Work Plan (road map for design).
- Generate preliminary design documents.
- Issue bid packages.
- Begin remedial action (cleanup).

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The Department of Environmental Quality's mission is to protect, sustain, and improve a clean and healthful environment to benefit present and future generations.

It is the mission of the Remediation Division to protect human health and the environment by preventing exposure to contaminants released to soil or water, and to oversee compliance with state and federal laws and regulations.

KRY SITE DOCUMENTS AND DOCUMENT AVAILABILITY

Significant documents leading up to the ROD include the Remedial Investigation (RI), Feasibility Study (FS), and the Proposed Plan. Public comment on these documents was considered in the DEQ's selection of the final remedy for the KRY Site.

The ROD, Proposed Plan, RI and FS are available at the DEQ Remediation Division, 1100 North Last Chance Gulch, Helena, and the Flathead County Library, 247 1st Avenue East, Kalispell. It is also posted online at the DEQ web link at: http://deq.mt.gov/StateSuperfund/kpt.asp. For more information, contact Moriah Bucy, DEQ Project Officer at (406) 841-5064, 1-800-246-8198, or mbucy@mt.gov.

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