

March 2021

Great Falls, Montana

CMR is providing this fact sheet to explain remediation activities at the Site, but it is not a technical document.

Introduction

The purpose of this document is to provide an update to the general public and local residents about ongoing Interim Measure (IM) design activities associated with the Gasoline and Light Oil Loading Rack (Truck Loading Rack). The Truck Loading Rack is located on the east side of the Calumet Montana Refinery, LLC (CMR), at 1020 Smelter Ave NE, Black Eagle, Montana. Current status and planned activities at the Truck Loading Rack are described in the sections below.



Truck Loading Rack History

The Truck Loading Rack and support area is a fuels transfer station for the active refinery. The IMs detailed herein will address historic spills that have occurred, such as:

- 1995 – petroleum release from loading rack.
- 2001 - underground pipe gasoline release.
- 2003 - product observed in recovery trenches led to the identification of a failure in the loading lines.
- 2011 - diesel #2 pipe leak north of scale shack.

Previous refinery owners constructed and operated a series of Light Non-Aqueous Phase Liquid (LNAPL) product recovery trenches. Approximately 21,000 gallons of LNAPL was recovered over a 9-year period until operation of the LNAPL recovery trenches was terminated in 2004.

In October 2016, detection of petroleum related vapors in an offsite residential property along 11th Street NE, east of the Truck Loading Rack resulted in emergency response actions. The Montana Department of Environmental Quality's (MDEQ) issued CMR an October 11, 2016 letter directing the immediate initiation of IMs to address threats to human health and the environment associated with the Truck Loading Rack. Rerouting and abandonment of the Black Eagle sewer line in November 2016 addressed soil vapor pathway issues to offsite residential properties.

CMR also conducted a series of IM soil and groundwater characterization investigations between 2016 and 2018 to delineate petroleum-related impacts from the Truck Loading Rack. On January 31, 2019, MDEQ sent a letter to CMR directing that an evaluation of IM remedies to address petroleum-impacted groundwater that posed a potential environmental threat to the Missouri River. CMR submitted a Truck Loading Rack Remedy Evaluation Report to MDEQ in June 2019. CMR conducted a pilot test of the initially recommended remedial technologies in October 2019 and provided modified recommended remedial approach in a January 2020 Pilot Study Evaluation Report. On January 28, 2020, MDEQ sent a letter to CMR approving the modified recommended remedial approach.

Selected IM Remedies

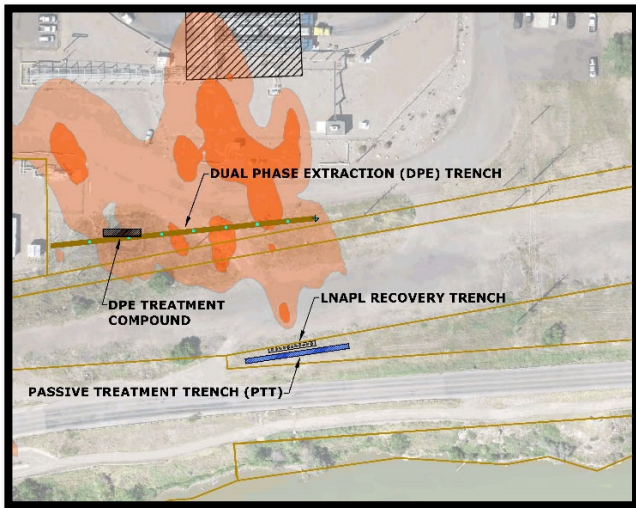
The source and downgradient IM selected remedies address Truck Loading Rack historic petroleum release impacts.

- Source Area IM remedial approach will include a dual phase extraction (DPE) trench along the Truck Loading Rack's southern flank. The DPE system is intended to recover contaminant mass associated with free-phase LNAPL, to reduce the extent of LNAPL, and to stabilize the dissolved phase plume emanating from the LNAPL.
- North River Road Area remedial approach will include a LNAPL recovery trench and a passive treatment trench (PTT). The LNAPL recovery trench and PTT are intended to mitigate dissolved phase groundwater impacts migrating from the Truck Loading Rack to the Missouri River.

IM Remedies Design

After the COVID-19 pandemic disrupted activities, a pre-design field investigation (PDI) was conducted in June 2020. Data collected from the PDI was used to facilitate the completion of the IM design plans. The Truck Loading Rack Final (100%) Design Report submitted to MDEQ this month, includes descriptions of the basis of design, design details, permits, construction plans, and a draft operation, maintenance and monitoring plan.

The DPE system will consist of eight DPE wells screened across the shallow water bearing zone. Vapors and liquids will be extracted through a single drop tube installed in each DPE well. Two rotary claw vacuum blowers installed in parallel will extract the vapor and liquid. Each well will be connected via conveyance piping to the vacuum blowers housed at the treatment enclosure for extraction and treatment on-site. A vapor/liquid separator and liquid transfer pump will be located prior to the vacuum pumps to separate vapor from fluids and convey the vapor to a self-recuperating catalytic thermal oxidizer (SRCO) unit for air treatment. Liquids will be pumped via underground conveyance piping to the CMR wastewater treatment plant (WWTP).



In the North River Road Area, an LNAPL recovery trench and PTT will be separated by approximately four feet and will be installed perpendicular to the groundwater flow path. The upgradient LNAPL recovery trench will be five feet wide by 10-feet deep by 50-feet long and backfilled with coarse sand intended to recover any marginal LNAPL that may be present to cut-off LNAPL from entering the PTT and overrun the sorption capacity of the activated carbon in the PTT. During the trench backfilling activities, eleven LNAPL recovery wells will be installed into the coarse sand to facilitate monitoring for and collection of LNAPL. The downgradient PTT will be five feet wide by 12.5 feet deep and 110 feet long. The PTT will be installed to the top of the aquitard unit/the top of the a strongly cemented very fine sandstone aquitard. The PTT will be backfilled with colloidal activated carbon plus terminal electron acceptors (Regenesis® product PetroFix™) incorporated into coarse sand. Hydrocarbons including

benzene, toluene, ethylbenzene, and xylenes will partition from the dissolved phase by adsorption to the activated carbon particles. The contaminants will be anaerobically biodegraded through chemical oxidation stimulated by electron acceptors.

Future Activities

CMR will conduct the following activities to implement the Truck Loading Rack IM remedies:

- IM bidding, contracting, procurement, permitting and access (Spring 2021).
- IM remedies construction and system commissioning (Summer/Fall 2021).

Community Involvement

Throughout the Truck Loading Rack IM remedies procurement, construction, and operation, CMR will keep the public informed through fact sheets, press releases, meetings and other appropriate activities. CMR will respond to public inquiries regarding questions pertaining to the Truck Loading Rack IM remedies related work..

Information Repository

An information repository has been established to store publicly available documents related to Truck Loading Rack IM remedies. The Information Repository can be found at www.CMRsite.com/repository.

For More Information

Additional and up to date information for the Truck Loading Rack and the CMR Site can be found at www.CMRsite.com.

If you have questions or need more information, please contact the following CMR or MDEQ representatives:

Mr. Joe Dauner
Environmental Manager
Calumet Montana Refinery
1900 10th Street NE
Great Falls, MT 59404
Phone: (406) 454-9887
Email: joseph.dauner@calumetspecialty.com

Mr. David T. Heidlauf, CPG
Principal Environmental Consultant
Ramboll US Consulting, Inc
333 West Wacker Drive, Suite 2700
Chicago, IL 60606
Phone: (312) 288-3823
Email: dheidlauf@ramboll.com

Ms. Denise A. Kirkpatrick
Hazardous Waste Specialist
Montana Department of Environmental Quality
Waste and Underground Tank Management Bureau
P.O. Box 200901
Helena, MT 59620-0901
Phone: (406) 444-3983
Email: dkirkpatrick@mt.gov