

Fact Sheet

Calumet Montana Refining, LLC Great Falls, Montana

Site Location

Calumet Montana Refining, LLC (CMR) owns and operates a petroleum refinery located at 1900 10th Street N.E., Great Falls, Montana. The refinery is bordered on the south by the Missouri River, and by Smelter Avenue on the north. The topography generally slopes to the south towards the Missouri River.

History

The petroleum refinery began operations in 1922. The refinery produces approximately 15,000 barrels per day of petroleum products and approximately 15,000 barrels per day of renewable diesel from non-petroleum feedstocks on behalf of Montana Renewables, LLC. The renewable diesel facility was constructed in 2022.

CMR operated a land treatment unit (LTU) at the refinery from 1979 to 1985. The LTU was used to treat hazardous and non-hazardous refinery wastes. The LTU was considered a regulated unit under the Montana Hazardous Waste Act and the Environmental Protection Agency's Resource Conservation and Recovery Act (RCRA). CMR was required to obtain a hazardous waste permit.

On September 22, 1995, the facility's hazardous waste permit was issued by Montana's Department of Environmental Quality (DEQ) and the Environmental Protection Agency (EPA). The permit included requirements to address post-closure care of the LTU and facility-wide corrective action. Facility-wide corrective action is the terminology used for site-wide cleanup of soil and water contamination.

On August 21, 2012, DEQ approved completion of the post-closure care of the LTU. The legal mechanism allowing DEQ to oversee cleanup of the site was changed to a Corrective Action Order on Consent (Order). CMR's hazardous waste permit was terminated when the Order was issued.

Corrective Action

CMR is required to clean up contaminated soil and groundwater at the refinery. Specific areas have been identified as having contaminated soil and/or groundwater. These areas are called areas of concern (AOCs) or solid waste management units (SWMUs). The LTU is considered a closed SWMU.

Investigation and cleanup activities have been ongoing at the refinery since the 1990s. Important milestones include:

- **Current Conditions Report (CCR):** The CCR was approved in a letter dated August 28, 1998. The CCR is a report describing, to the extent known, the refinery's current environmental setting, waste management activities, and previous remedial investigations. The information in the CCR is used to help guide the RCRA Facility Investigation.
- **RCRA Facility Investigation (RFI):** The RFI is used to determine the nature, concentration, rate, and extent of migration of any release of hazardous waste or hazardous constituents at or from the

refinery that might pose an unacceptable risk to human health or the environment. CMR has submitted multiple RFI work plans and reports. The most recent RFI effort began in 2022. CMR submitted a Draft RFI and Baseline Risk Assessment Work Plans in January 2022. DEQ and the United States Environmental Protection Agency (EPA) reviewed these Work Plans for accuracy and completeness. On May 19, 2023, DEQ approved the RFI for CMR. Field activities, such as groundwater and soil sampling, are planned to begin sometime during the 2023 field season. For more information, please visit CMR's online information and repository website: CMRsite.com.

- **Facility-Wide Groundwater Monitoring:** On January 16, 2019, DEQ approved a site-wide groundwater monitoring work plan. CMR is monitoring new and existing wells to better understand contamination at the site. The current RFI proposes soil sampling and an additional round of expanded groundwater monitoring during 2023.
- **Interim Measures (IM):** Interim measures are actions taken to respond to immediate threats to human health or the environment. Interim or stabilization measures may be taken at any time in the corrective action process. Interim measures have occurred at the following AOCs and SWMUs:

➤ *Gasoline and Light Oil Loading Rack*

The Gasoline and Light Oil Loading Rack, a truck loading rack, is located on the east side of 10th Street NE, east of the refinery's process units and storage tanks. In 1995 and 2001, releases of Light Non-Aqueous Phase Liquid (LNAPL), i.e., petroleum contamination, occurred and impacted the Missouri River. In response, CMR installed recovery trenches south of the truck loading rack.

In September 2016, Black Eagle Water and Sewer Board discovered vapors in the sanitary sewer. DEQ determined the source was petroleum contamination coming from a source at CMR. In December 2016, the Black Eagle sanitary sewer was rerouted, bypassing the impacted length of sewer. The new sewer line connects to the City of Great Falls' sewer line at River Road.

CMR has conducted additional investigations and began recovering LNAPL associated with releases from the truck loading rack. On July 19, 2019, DEQ approved additional interim measures to address LNAPL and contaminated groundwater. The interim measures include biosparging with LNAPL recovery in the source area, and air sparging and soil vapor extraction to address groundwater contamination downgradient of the truck loading rack.

- In 2013, DEQ required CMR to address contaminated soil at numerous contaminated areas of the refinery. CMR excavated a substantial amount of contaminated soil, under interim measures, at the following areas of the refinery:
 - TEL Building Area of Stained Soil
 - Staining Around Tanks 17, 52, 53, and 54
 - Stained Area East of Well DH-1
 - Tank 50 Stained Area
 - Tank 115 and 117 Stained Area and Sump
 - Lead Pit
 - Doctor Treatment Area

- Tank 48 Spill Area
- Past Leaded Sludge Oxidation Area South of Tank 52

➤ *Old Ponded Area*

Solid waste and some contaminated soil have been removed from the Old Ponded Area.

➤ *Storm Sewer Release July 2017*

In 2017, a sheen was observed from the outfall of a storm water pipe that passes underneath CMR's property. CMR does not discharge storm water into the pipe. An investigation determined a leaking underground pipe was causing intrusion of subsurface LNAPL into the storm sewer pipe. CMR rerouted the leaking pipe to an above-ground pipe rack and implemented LNAPL recovery. The storm sewer was lined with a cured in-place pipe to prevent additional intrusion of LNAPL.

➤ *River Sheens 2017 and 2022*

In June 2017 and again in June 2022, LNAPL from the West Rail Loading Area caused a visible sheen on the Missouri River. Interim Measures in 2017 included repairing drippage catch pans that are incorporated into the West Rail Loading Area railroad tracks and installing a trench to intercept impacted groundwater, which is routed to the refinery's wastewater treatment plant.

Railroad catch pans in the East Rail Loading Area were also found to be leaking during the 2017 investigation and were repaired at the same time as the West Rail Loading area catch pans. The area around the East Rail Loading Area will be investigated further during the RFI work scheduled for 2023.

IMs in the West Rail Loading Area required in 2022 are in the process of being implemented and include identifying the LNAPL pathway to the storm sewer and sealing those pathways to prevent LNAPL from reaching the storm sewer. Additional work to identify the location of the LNAPL in the area will be conducted as part of the RFI work scheduled for 2023.

➤ After CMR conducted investigative work, DEQ determined that under current industrial use of the site no further corrective action is required at these areas:

- Aeration Pond
- Oxidation Pond
- Tank 112 Dump Site
- Land Treatment Unit

Future Activities

DEQ and CMR will continue to work to determine the path forward for site clean-up. DEQ anticipates the following activities over the next several years:

- ❖ Data collection and reporting according to the approved facility-wide RFI Work Plan and Baseline Risk Assessment Work Plan;

- ❖ Review of ongoing facility-wide groundwater monitoring; and
- ❖ Evaluation of the effectiveness of installed interim measures at the Gasoline and Light Oil Loading Rack.

For more information, please contact:

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