

Fact Sheet, May 2021



## Facility Location and Operation

The ExxonMobil Billings Refinery (Refinery) located northeast of Billings, Montana has been in operation since July 1949. The Refinery has the capacity to process approximately 60,000 barrels per day of domestic and Canadian crude oil into refined petroleum hydrocarbon products, by-products, and intermediate products.

Refinery operations are conducted on 367 acres of 770 acres owned by ExxonMobil; leaving approximately 403 acres of undeveloped land surrounding the Refinery operations. The processing portion of the Refinery is bound to the south by railroad tracks and the Interstate 90 corridor; to the north by the Yellowstone River; to the east, by the Refinery's wastewater treatment ponds, two inactive land treatment units, a former gravel quarry, and undeveloped land; and to the west by undeveloped land and an island of the Yellowstone River. Beyond the property boundary are several businesses and residences. The site is currently zoned for heavy industrial use.

## Hazardous Waste Permit

The Montana Hazardous Waste Act (MHW), the state equivalent of the Federal law Resource Conservation and Recovery Act (RCRA), regulates the management, treatment, storage, and disposal of hazardous waste. Facilities that are or have managed hazardous waste in specific ways must obtain a hazardous waste permit, as required by MHW. The ExxonMobil Billings Refinery has had a hazardous waste permit since 1988. DEQ issued the current permit (MTHWP-17-01) on March 9, 2017.

### ***Permitted Hazardous Waste Units at the Refinery***

<b>Hazardous Waste Management Unit</b>	<b>General Description</b>	<b>Current Status</b>
South Land Treatment Unit (SLTU)	A landfarm* used in the past to degrade hazardous waste and currently used to degrade non-hazardous waste. The SLTU also contains a vehicle decontamination pad to wash landfarm vehicles.	Operating. Accepting only non-hazardous waste.
Waste Staging Area (WSA)	A bermed, concrete pad used to store containers of hazardous waste for greater than 90 days, before shipment to an offsite commercial treatment, storage, and disposal facility.	Operating
New East Land Treatment Unit (NELTU)	A landfarm* formerly used to degrade hazardous and non-hazardous waste.	Certified closed and currently in post-closure care. New waste on the unit is not allowed.
Old East Land Treatment Unit (OELTU)	A landfarm* formerly used to degrade hazardous and non-hazardous waste.	Certified closed and currently in post-closure care. New waste on the unit is not allowed.

\*Land farming, or Land Treatment, is a method of degrading petroleum-affected wastes by applying the waste to soil, which is then tilled and fertilized. Microorganisms in the soil degrade the waste over time. Land treatment has been successfully employed to degrade petroleum wastes for many years at the Refinery.



### **Corrective Action Program**

Corrective action is the investigation and remediation process at hazardous waste sites. The mandate for corrective action is contained in federal and state regulations under RCRA.

Remedial investigations at the ExxonMobil Billings Refinery began in 1987 when EPA conducted an assessment of the facility and found areas of potential contamination in subsurface soil and groundwater.

ExxonMobil conducted several investigations between 1993 and 2005 to identify the nature and extent of the contamination. Baseline human health and ecological risk assessments were also completed. Areas of the refinery where contaminants exceed cleanup levels were identified during the investigation and risk assessments. Contaminants of concern include petroleum hydrocarbon-related compounds and metals.

**Site-Wide Remedial Action**

DEQ made a facility-wide remedial decision for the ExxonMobil Billings Refinery in 2008. The decision is described in a Statement of Basis, attached to the 2017 ExxonMobil hazardous waste permit (MTHWP-17-01). The following cleanup remedies were included in DEQ’s remedial decision:

<b>Cleanup Remedy</b>	<b>General Description</b>	<b>Current Status</b>
Air Sparging	Consists of injecting atmospheric air into the subsurface, which provides oxygen for biodegradation and also physically strips volatile compounds from the groundwater.	158 air sparge wells have been installed and are active in three areas along the Yellowstone River.
Phytoremediation	Plants are used to utilize photodegradation, enhanced rhizosphere biodegradation, hydraulic control, and phytovolatilization.	Two phytoremediation plots consisting of poplar and willow trees are installed along the Yellowstone River.
Interceptor Trenches	Total fluids are pumped from trench sumps and the oil is separated for recovery.	Two interceptor trenches were constructed northwest of the active portion of the refinery, south of the Yellowstone River.
Capture Zone	Groundwater is pumped through a number of wells to slow or prevent groundwater from flowing downgradient of the wells.	Five wells have been installed but are currently not in operation due to improved groundwater conditions in the area.
Vacuum-Enhanced Contaminant Recovery	Groundwater wells are equipped with pumps to remove various contaminants from the subsurface and groundwater.	Wells have been installed throughout the refinery and vacuum-enhanced recovery has been in operation since 2001.
Absorbent Socks	Absorbent material is placed in select groundwater wells to capture oily contaminants in the groundwater.	Wells within the refinery that do not contain a substantial amount of contaminants for vacuum-enhanced recovery to be effective have absorbent socks installed and monitored.
Monitored Natural Attenuation	Relies on natural processes to decrease concentrations of contaminants from soil or groundwater. Monitoring involves regularly assessing the contaminants and soil or groundwater characteristics to ensure proper attenuation is occurring.	Over thirty wells throughout the refinery are sampled and analyzed for monitored natural attenuation conditions annually.

Institutional and land use controls, along with business safety practices, are also part of the remedy. ExxonMobil is also required to investigate and implement cleanup measures, as necessary, if new areas of contamination or releases are discovered.

## **Public Involvement**

Throughout the permitting and cleanup process, DEQ will keep the public informed through notices of public meetings and public comment periods. Notices are published in local newspapers and are also sent to anyone on DEQ's interested parties list. If you would like to be included on the interested parties list, please contact the project manager provided below.



## **DEQ Contact/Project Manager**

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## **About Us**

The Montana Department of Environmental Quality is charged with protecting a clean and healthy environment as guaranteed to our citizens by our State Constitution. Our ultimate goal is to protect public health and to maintain Montana's high quality of life for current and future generations.