

Montana Department of Environmental Quality
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
P.O. Box 200901
Helena, Montana 59620-0901

Final Environmental Assessment

Calumet Montana Refining, LLC
1900 10th Street NE
Great Falls, MT 59404

Legal Location

Northeast ¼ of Section 1, Township 20 North, Range 3 East, in Cascade County, Montana

Purpose of the EA

The Montana Department of Environmental Quality (DEQ) is required under the Montana Environmental Policy Act (MEPA) to conduct an environmental assessment (EA) on the proposed action described in the next section. An EA documents: 1) all reasonable alternatives to DEQ's action; and 2) outlines the potential impacts to the human environment resulting from DEQ's action and the reasonable alternatives to that action.

Based on the impact analysis and professional judgment, DEQ makes a decision on the proposed action and summarizes the decision in the EA. If the decision significantly impacts the human environment then a more detailed environmental review, called an environmental impact statement, must be conducted by DEQ.

Public Comment Period

The public including interested citizens, DEQ, EPA, other governmental agencies, and the applicant were provided fifteen (15) days to review and comment on the draft EA and proposed action. The comment period extended from March 20, 2014, through April 4, 2014.

Description of Action

Calumet Montana Refining, LLC (CMR) is an active petroleum refinery whose corrective action activities are regulated under Corrective Action Order on Consent #MHWCAO-12-01 issued by the State of Montana.

On March 6, 2014, DEQ received a request from CMR to send contaminated soil to a permitted hazardous waste landfill. CMR's request cites 40 Code of Federal Regulations (CFR) 264.555, incorporated by reference in Administrative Rules of Montana (ARM) 17.53.801. 40 CFR 264.555 *Disposal of CAMU-eligible waste in permitted hazardous waste landfills* is part of the CAMU rule. The purpose of the CAMU rule is to facilitate cleanup of contaminated sites while providing a measure of relief from the Land Disposal Requirements (LDR) for waste managed from implementing cleanup.

The soil CMR is proposing for designation as CAMU-eligible is part of a previously approved work plan being implemented to mitigate impacts to human health and groundwater. On January 8, 2014, DEQ approved a Work Plan for cleanup of contaminated areas called Areas of Contamination (AOCs) and Solid Waste Management Units (SWMUs). The AOCs and SWMUs include AOC #10, AOC #12, AOC #13,

AOC #22, AOC #23, AOC #27, AOC #31, AOC #32, and SWMU #11. The areas in the Work Plan are accessible due to plant expansion activities resulting in the removal of tanks and piping.

The soil addressed in the Work Plan is contaminated from historical activities at the refinery and upon excavation will be managed as a hazardous waste. CMR proposed to ship a portion of the soil as CAMU-eligible waste to a hazardous waste landfill in Indiana. There are no hazardous waste landfills in Montana permitted to take hazardous waste from off-site sources.

Approximately 14,200 cubic yards of CAMU-eligible soil will be shipped from the refinery in closed containers. The containers will be loaded at the refinery by heavy equipment, shipped by truck to a rail yard in Great Falls, and then loaded onto railcars for shipment to Indiana.

DEQ may approve the proposal if the conditions of 40 CFR 264.555(a)(1) through (3), incorporated by reference in ARM 17.53.801, have been met. These conditions include that the waste meets the definition of CAMU-eligible waste, principal hazardous constituents have been identified and meet appropriate standards, and the landfill receiving the waste is permitted to receive this type of waste.

The soil that will be excavated meets the definition of CAMU-eligible waste because it will be removed as part of cleanup activities under an approved Work Plan. DEQ has identified lead as the principal hazardous constituent and lead in the soil meets adjusted treatment standards under 40 CFR 264.552(e)(4)(v)(E)(I). The soil will be shipped as a hazardous waste to a permitted hazardous waste landfill. The engineering design of the permitted landfill should provide long-term protection of human health and the environment.

Based on the information provided by CMR, DEQ is approving the designation of the contaminated soil as CAMU-eligible waste and the disposal of the waste in an off-site hazardous waste landfill.

The previously approved Work Plan requires excavation of soil. This EA only addresses DEQ's action to grant approval of the waste designation as CAMU-eligible.

A letter responding to comments on the draft EA, the approval letter to CMR, and a technical memo documenting DEQ's decision are on file at DEQ.

Objectives of Proposed Action

DEQ's objective in approving the request or denying the request is to comply with 40 CFR 264.555.

Alternatives Considered

This section describes the alternatives considered.

Alternative I – Granting CMR's Request

DEQ is approving CMR's request because the conditions in 40 CFR 264.555(a)(1) through (3) have been met. DEQ is granting the request using the adjusted treatment standards under 40 CFR 264.552(e)(4)(v)(E)(I).

Under this alternative, soil in the proposed area would be excavated and shipped off-site as CAMU-eligible waste to a permitted hazardous waste landfill.

Alternative II –Denial of Request

DEQ may deny CMR's request if the requirements of 40 CFR 264.555 were not met. CMR has submitted sufficient information; therefore, DEQ does not believe the denial alternative is reasonable.

Under this alternative, CMR's corrective action project would proceed including excavation of all soil in the proposed CAMU-eligible area. The soil would be shipped off-site as a hazardous waste. The soil would be required to meet the Universal Treatment Standards (40 CFR 268.49(d)) for soil without any adjustments.

Scope of EA

DEQ's authority for oversight of hazardous waste regulations is limited to Montana. Therefore, this EA only evaluates the potential impacts to the human environment resulting from DEQ's proposed action and the reasonable alternatives at the location where the cleanup is taking place i.e. the CMR refinery in Great Falls, Montana.

There are no treatment, storage, or disposal facilities permitted in Montana to receive hazardous waste from another facility. Any hazardous waste generated from the approved Work Plan will be shipped out of Montana to a hazardous waste permitted landfill that meets the requirements of 40 CFR 264 Subpart N – Landfills.

The EPA Regional Administrator or State Official with jurisdiction at the landfill must approve placement of CAMU-eligible waste in the landfill. 40 CFR 264.555 requires that the receiving landfill incorporate into their permit through permit issuance or a permit modification (including providing public notice and an opportunity for public comment) applicable standards for CAMU-eligible waste.

In addition, the landfill must provide written notice to persons on the facility mailing list of the landfill's intent to receive CAMU-eligible waste. The impacts on the human environment resulting from receipt of CAMU-eligible waste at a landfill are evaluated by the government authority where the disposal facility is located.

Stipulations and Controls

Remediation at the refinery is governed by Corrective Action Order on Consent #MHWCAO-12-01. CMR must comply with the Order to be in compliance with Montana's hazardous waste laws and regulations.

Analysis of Regulatory Impacts on Private Property Rights

A Private Property Assessment Act Checklist was completed for this action and is on file at DEQ. DEQ determined that no taking or damaging implications exist requiring a further impact assessment.

Summary of Impacts

The checklist below was completed for Alternative I and Alternative II.

The human environment includes those attributes, such as biological, physical, social, economic, cultural, and aesthetic factors, that interrelate to form the environment. Impacts may be adverse, beneficial, or both. The following criteria are used to rate the impacts:

- ◆ The severity, duration, geographic extent, and frequency of occurrence;
- ◆ The probability the impact will occur if the proposed action occurs;

- ◆ Growth-inducing or growth-inhibiting aspects of the impact;
- ◆ The quantity and quality of each environmental resource or value effected;
- ◆ The importance to the State and society of each environmental resource or value effected;
- ◆ Any precedent set as a result of an impact from the proposed action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and
- ◆ Potential conflict with local, state, or federal laws, requirements, or formal plans.

The following are definitions for major, moderate, minor, none, and unknown impacts on the human environment:

Major: A significant change from the present conditions of the human environment. Major impacts are serious enough to warrant preparing an environmental impact statement (EIS).

Moderate: Not a major or minor change from the present condition of the human environment. A single moderate impact may not warrant preparing an EIS; however, when considered with other impacts, an EIS may be required.

Minor: A slight change from the present condition of the human environment. Minor impacts are not serious enough to warrant preparing an EIS.

None: No change from the present conditions of the human environment.

Unknown: An EIS must be conducted to determine the effects on the human environment if impacts are unknown.

Tables 1 and 2 rate potential human environment impacts from Alternative I and Alternative II.

Table 1. Potential Impacts on Physical and Biological Environment

Alternative I = X
Alternative II = O

Resources		Major	Moderate	Minor	None	Unknown	Discussion Attached
A.	Air Quality				X O		*
B.	Water Quality, Quantity, and Distribution				X O		
C.	Geology and Soil Quality, Stability, and Moisture				X O		
D.	Historical and Archaeological Sites				X O		
E.	Aesthetics				X O		
F.	Terrestrial and Aquatic Life and Habitats				X O		
G.	Vegetation Cover, Quantity, and Quality				X O		

H.	Unique, Endangered, Fragile, or Limited Environmental Resources				X O		
I.	Demands on Environmental Resource of Water, Air, and Energy				X O		*
J.	Cumulative and Secondary Impacts				X O		*

A. Air Quality

Under the approved interim measures Work Plan, the excavation and handling of soil may result in an increase in fugitive emissions from the refinery. However, the activities will occur over a limited period and if done in compliance with air quality requirements, the impacts should be minor. The excavation and handling of soil from the project will occur regardless of the designation of the waste as CAMU-eligible. Therefore, DEQ’s designation of the waste will have no bearing on air quality during the remediation project.

I. Demands on Environmental Resources of Water, Air, and Energy

Management of excavated soil will require energy since heavy equipment will be required to perform the work. The use of resources for excavation and transportation will occur whether the soil is designated CAMU-eligible or not. Therefore, DEQ has noted no impacts.

Under Alternative II, the resource use for management of the soil to another hazardous waste management unit such as an incinerator will result in additional energy consumption. For example, if the soil must be transported to an incinerator, additional energy to thermally treat the soil and then mitigate air pollution will be required. The management of waste products from pollution control equipment and the ash will be necessary. However, evaluating all of the potential hazardous waste management options and their impacts is beyond the scope of this environmental assessment. DEQ is only evaluating whether the soil is CAMU-eligible and meets the requirements of 40 CFR 264.555.

J. Cumulative and Secondary Impacts

Cumulative impacts are impacts that may be negligible or minor for a specific project or action under consideration, but collectively (many similar projects or actions) or incrementally may result in significant impacts. Secondary impacts are those occurring at a later time or distance from the triggering action. After completion of this project, DEQ does not anticipate future projects of this magnitude that would generate large volumes of CAMU-eligible waste. DEQ does not anticipate that Alternative I or Alternative II will result in cumulative impacts or any secondary impacts at the Great Falls refinery.

Under Alternatives I and II the hazardous waste will be shipped off-site for disposal. The disposal of the waste may impact the physical and biological environment where the hazardous waste management unit is located. Since a facility permitted to receive hazardous waste must comply with the standards of 40 CFR 264, any impacts should be addressed under the receiving facility’s permit.

Table 2. Potential Impacts on Social, Economic, and Cultural Environment

Resources		Major	Moderate	Minor	None	Unknown	Discussion Attached
A.	Social Structures and Mores				X O		
B.	Cultural Uniqueness and Diversity				X O		
C.	Local and State Tax Base and Tax Revenue				X O		
D.	Agricultural or Industrial Production			X O			*
E.	Human Health				X O		*
F.	Access to and Quality of Recreational and Wilderness Activities				X O		
G.	Quantity and Distribution of Employment				X O		
H.	Distribution of Population				X O		
I.	Demands for Governmental Services			X O			*
J.	Industrial and Commercial Activity				X O		
K.	Locally Adopted Environmental Plans and Goals				X O		
L.	Cumulative and Secondary Impacts				X O		*

D. Agricultural or Industrial Production

DEQ is approving waste disposal in a hazardous waste landfill under adjusted treatment standards. No treatment of the soil is required prior to land disposal. This disposal is more economical and less resource intensive than management that would require treatment prior to disposal. Economical management and disposal of the hazardous waste is likely a minor benefit for CMR and perhaps industrial production. Under Alternative II, if excavated soil must be incinerated, the disposal cost will be greater. Alternative II would have a minor negative impact on the cost of the project.

E. Human Health

Excavation and handling of the soils may expose on-site workers to contaminated soil. CMR must comply with Occupational Safety and Health Administration (OSHA) regulations including those for hazardous waste operations. CMR is required to comply with applicable air quality regulations that are protective of ambient air quality surrounding the refinery. Therefore, the project should not negatively affect the surrounding community. Completing the work should result in a reduction in the long-term human exposure potential because the toxicity, mobility, and volume of contaminated soil will be reduced.

The EA is evaluating the designation of the waste as CAMU-eligible. The designation of the waste will have no bearing on impacts to human health.

I. Demands for Governmental Services

The requirements of 40 CFR 264.555 will require that governmental service be used in Montana and at the location of the receiving landfill. The tasks that the government undertakes are prescribed in the regulations and are not onerous. It is possible that DEQ may be contacted by the receiving landfill's regulators. Therefore, minor impacts to governmental services are possible.

L. Cumulative and Secondary Impacts

DEQ does not anticipate further remediation projects of this magnitude at the refinery that would generate CAMU-eligible waste. The designation of the waste as CAMU-eligible should have no secondary impact to industrial and commercial production or activity.

Cumulative and secondary impacts on social, economic, and cultural environment at the receiving facility under Alternative I and Alternative II are possible. However, the impacts should be minimal and managed under the facility's permit.

Individuals or Groups Contributing to EA

Montana Department of Environmental Quality

Draft EA Prepared

By: Denise A. Kirkpatrick

Date: March 18, 2014

Final EA Prepared

By: Denise A. Kirkpatrick

Date: April 9, 2014

Recommendation

Based on the EA analysis, DEQ has selected Alternative I. CMR submitted sufficient information to DEQ for approval of the request for waste disposal pursuant to 40 CFR 264.555(a)(1) through (3), incorporated by reference in ARM 17.53.801. CMR included in their request the information required in 40 CFR 264.555(b). DEQ has provided public notice and a reasonable opportunity for public comment as required in 40 CFR 264.555(c). DEQ received comments from a member of the public and has provided a written response.

In conclusion, DEQ is approving placement of CAMU-eligible waste in an off-site hazardous waste landfill. DEQ believes that the adjusted treatment standards for the soil's principal hazardous constituents are protective of human health and the environment given the engineering design of a landfill permitted to receive CAMU-eligible waste.

The EA is an adequate level of environmental review; an EIS is not required. The EA analysis demonstrates that this State action will not be a major action significantly affecting the quality of the human environment.