



DRAFT ENVIRONMENTAL ASSESSMENT

October 2024

**Water Quality Division
Montana Department of Environmental Quality**

PROJECT/SITE NAME: Libby Exploration Project – Libby Creek Adit	
APPLICANT/COMPANY NAME: Montanore Minerals Corporation	
PROPOSED PERMIT/LICENSE NUMBER: MT0032158	
LOCATION: Section 15 Township 27 Range 31W	COUNTY: Lincoln
PROPERTY OWNERSHIP: _____ FEDERAL _____ STATE _____ PRIVATE <u>X</u>	

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1. PURPOSE AND NEED FOR PROPOSED ACTION

1.1 AUTHORIZING ACTION

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental assessment (EA) for state actions that may have an impact on the human environment. The Proposed Action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an EA. This EA will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608.

1.2 DESCRIPTION OF DEQ REGULATORY OVERSIGHT

DEQ implements the Water Quality Act of Montana, issuing discharge permits in conformance with the federal Clean Water Act under the Montana Pollutant Discharge Elimination System (MPDES) pursuant to Section 75-5-101, *et. seq.*, Montana Code Annotated (MCA), and the Administrative Rules of Montana (ARM) Title 17, Chapter 30, Sub-chapters 2, 5, 6, 7, 11, 12, and 13.

1.3 PROPOSED ACTION

Montanore Minerals Corporation (MMC) has applied for a new MPDES permit for the new Libby Exploration Project that includes mineral (silver ore and copper ore) exploration at the Libby Creek Adit. The proposed action would be located on private land, near Libby, Montana. All information included in this EA is derived from the permit application, submitted design report and plans and specifications, discussions with the applicant, analysis of aerial photography, topographic maps, the 2015 Joint Environmental Impact Statement (EIS), and other research tools. See the Fact Sheet (MT DEQ, 2024) for more information.

Table 1: Summary of Proposed Action

Proposed Action	
General Overview	The proposed action is to issue an MPDES permit for (1) discharge from Libby Adit during adit rehabilitation, expansion, and exploration, and (2) potential discharge of runoff from storm water to state waters in Upper Libby Creek Drainage near Libby, Montana. See Part 1 of the permit Fact Sheet (MT DEQ, 2024). The permit specifies both effluent limits and monitoring requirements.
Duration & Hours of Operation	The proposed action is to issue MPDES permit MT0032158 for a term of five years. Discharge would occur intermittently 7-days a week to maintain water at the desired level in the adit, to maintain freeboard in the lined storm water ponds, and to correspond with staff working schedules. Ground water and storm water collected in the surface ponds are pumped to the wastewater treatment plant routinely, and discharge is expected to occur seven days a week but could vary to meet dewatering requirements or work schedules.
Estimated Disturbance	The permitting action would cause disturbance on <14.8 acres within the project site. Disturbance on the surface would be limited to this area. The project is in an area that has already undergone disturbance by previous

	mining from Noranda Mining and Exploration (Noranda) and changes made by MMC. Construction projects include expansion of the existing lined waste rock storage area (WRSA) #1 to increase storage capacity to about 77,000 cubic yards (yd ³); construction of a new lined WRSA #2 with a storage capacity of about 87,000 yd ³ ; construction of a new lined 360,000-gallon waste rock sump; relocation of a soil stockpile to accommodate WRSA #2; and upgrades to the water treatment plant.
Construction Equipment	Limited amount of construction equipment used during construction of wastewater infrastructure (construction/maintenance of BMPs, upgrades to the WTP, construction of Outfall 001 percolation pond, construction of Outfall 003, construction of ground water wells, construction of the waste rock sump (WRS), and the two waste rock storage Areas (WRSAs)). Vehicles and construction equipment include one excavator, one dozer, two haul trucks, one roller, and two crew trucks.
Personnel Onsite	Sufficient personnel onsite to construct and maintain wastewater infrastructure associated with permitted outfalls and to collect discharge samples as required by the MPDES permit. This is estimated to include a construction crew of six people and two MMC employees on site.
Location and Analysis Area	Location: The MPDES permit issuance is protective of beneficial uses in the immediate receiving waters (ground water and Libby Creek). Protection of the immediate receiving waters would also protect downstream beneficial uses. See Part 3 of the Fact Sheet (MT DEQ, 2024). The location of any associated construction and adit expansion are within the project areas shown in Figure 1. Analysis Area: The area being analyzed as part of this environmental review includes the immediate project area (Figure 1), as well as neighboring lands surrounding the analysis area, as reasonably appropriate for the impacts being considered.
The applicant is required to comply with all applicable local, county, state, and federal requirements pertaining to the following resource areas.	
Air Quality	No air quality regulations apply for issuance of the MPDES permit. The construction associated with the Project may result in short-term, temporary effects on air quality during construction due to vehicle exhaust associated with the work, see Section 2.1.k Greenhouse Gas Assessment.
Water Quality	The applicant proposes to obtain MPDES permit coverage and comply with requirements for discharge to state surface waters.
Erosion Control and Sediment Transport	The applicant proposes to implement storm water Best Management Practices (BMPs; water bars, sedimentation basins, and vegetated buffers) to limit sediment transport and control erosion, see Part 1 of the permit Fact Sheet (MT DEQ, 2024).
Solid Waste	The MPDES permit does not allow for solid waste disposal. Solid waste regulations do not apply.
Cultural Resources	No historical sites present in project area according to the Montana Cultural Resource Database. MMC is required to comply with applicable local, county, state and federal requirements pertaining to cultural resources.

Hazardous Substances	Hazardous substances associated with this permit are expected to be limited to those associated with the exploration explosives, drilling fluids and additives construction equipment from onsite construction, additives associated with wastewater treatment, and vehicle fuel and other compounds. Best management practices observed during vehicle fueling and maintenance will minimize the potential for any hazardous material spills.
Reclamation	MMC will be subject to reclamation requirements as directed from the DEQ Mining Bureau and DEQ Operating Permit #00150, as well as any other federal, state, or local agencies and regulations.

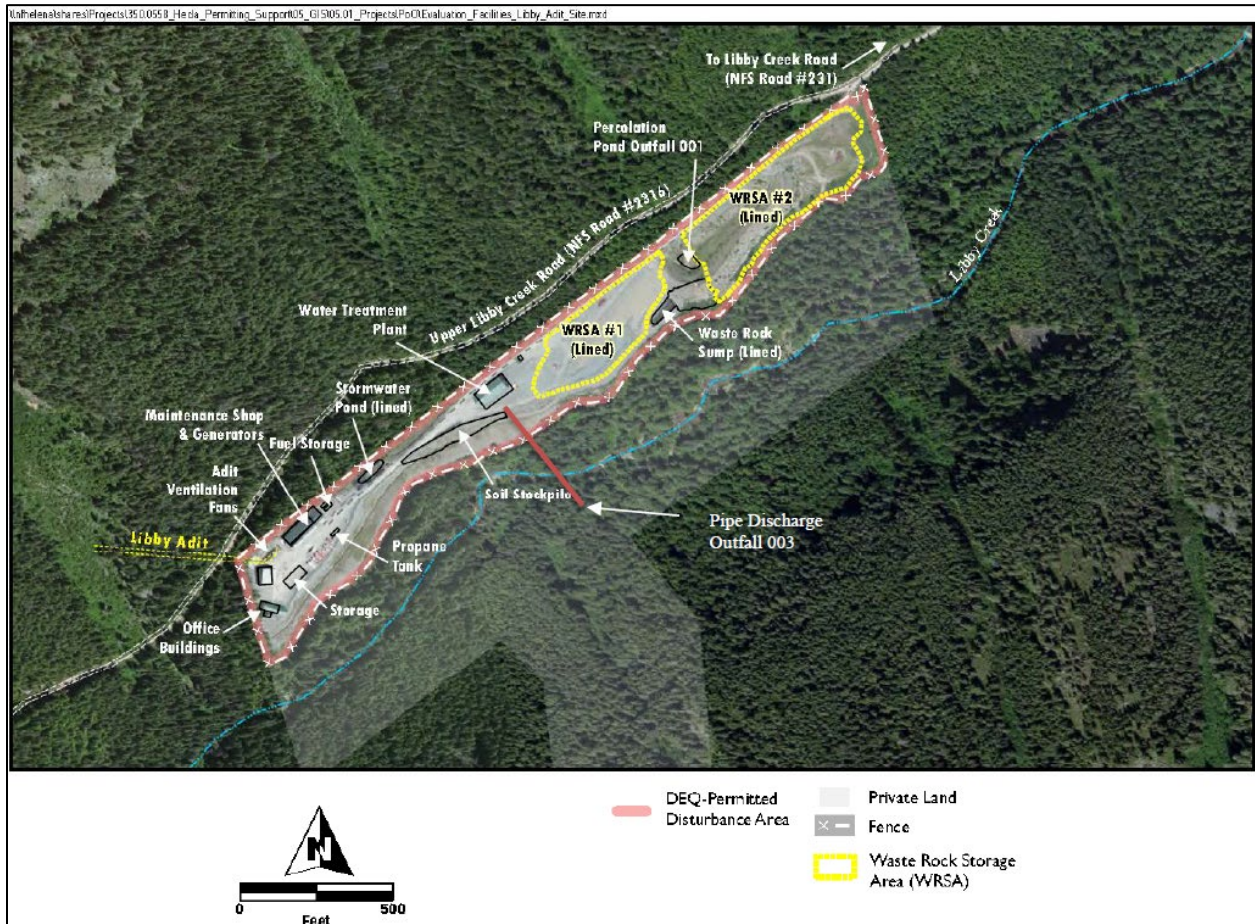
Cumulative Impact Considerations	
Past Actions	<p>MMC is currently permitted under MPDES permit #MT0030279 for adit dewatering only. Upon issuance of this MPDES permit, MT0030279 would be terminated.</p> <p>The nearest permitted sources of wastewater are for Suction Dredge General Permit authorizations and Storm Water Construction authorizations associated with Libby Creek before it passes under U.S. Hwy 2. Permit conditions in the proposed permit protect the water quality standards in the immediate receiving water and downstream state waters and would prevent cumulative impacts with past permitted discharges. See the permit Fact Sheet.</p> <p>MMC obtained coverage with the DEQ Hard Rock program under Operating Permit #00150 for the exploration adit activities.</p> <p>A Joint Final EIS was published for the Montanore Project in December 2015 by the Kootenai National Forest (KNF) and Montana DEQ.</p>
Present Actions	Upon issuance of this MPDES permit, MT0030279 would be terminated.
Related Future Actions	No other applications under consideration.

1.4 PURPOSE, NEED, AND BENEFITS

DEQ's purpose in conducting this EA is to act upon MMC's application for an MPDES permit. DEQ's action on the permit application is governed by § 75-2-201, *et seq.*, Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) Title 17, Chapter 30, Sub-chapters 2, 5, 6, 7, 11, 12, and 13. DEQ's action on the design review is governed by § 75-6-101, *et seq.*, Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) 17.38.101, *et seq.*

The applicant's purpose and need, as expressed to DEQ in proposing this action, is to ensure wastewater generated during the Libby Exploration Project that would discharge to ground water and Libby Creek comply with the water quality standards for pollutants of concern during the Libby Exploration Project.

Figure 1. Map of the Proposed Project



1.5 OTHER GOVERNMENTAL AGENCIES AND PROGRAMS WITH JURISDICTION

The proposed project would be located on private land. All applicable local, state, and federal rules must be adhered to, which may also include other local, state, federal, or tribal agency jurisdiction. Other governmental agencies which may have overlapped, or additional jurisdiction include but may not be limited to: U.S. Forest Service, U.S Army Corps of Engineers, Bonneville Power Administration, Montana Department of Natural Resources, Montana Department of Fish Wildlife and Parks, U.S. Fish and Wildlife Service, U.S. Mine Safety and Health Administration, and Lincoln and Sanders Counties.

2. AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE

2.1 EVALUATION AND SUMMARY OF POTENTIAL IMPACTS

The impact analysis will identify and evaluate direct and secondary impacts TO THE PHYSICAL ENVIRONMENT AND HUMAN POPULATION IN THE AREA TO BE AFFECTED BY THE PROPOSED PROJECT.

Direct impacts occur at the same time and place as the action that causes the impact. *Secondary impacts* are a further impact to the human environment that may be stimulated, induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described in this analysis.

Cumulative impacts are the collective impacts on the human environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The projects identified in Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

The duration is quantified as follows:

- **Short-term:** Short-term impacts are defined as those impacts that would not last longer than the installation and operation of the proposed Facility.
- **Long-term:** Long-term impacts are impacts that would remain or occur following proposed project closure and removal.

The intensity of the impacts is measured using the following:

- **No impact:** There would be no change from current conditions.
- **Negligible:** An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor:** The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate:** The effect would be easily identifiable and would change the function or integrity of the resource.
- **Major:** The effect would alter the resource.

a. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE

Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?

The six soil types in this project are listed below and further described in the EIS (Part 3.19.3.1).

- Alluvial soils that formed in rocky alluvium
- Glaciolacustrine soils that formed in fine-textured glaciolacustrine deposits
- Alpine glacial soils that formed in rocky alpine glacial drift
- Continental glacial soils that formed in rocky continental glacial drift
- Residuum/glacial soils that formed in rocky residuum and glacial drift
- Colluvial/glacial soils that formed in rocky colluvium and glacial drift

NRCS Web Soil Survey Results show that the Facility site and the nearest segment of Libby Creek are primarily Andic Cryochrepts, moraines (mixed loamy till, 98%) and rock outcrop – Andic

Cryochrepts – Lithic Cryochrepts complex, glacial trough walls (Belt supergroup loamy till derived from metasedimentary rock, 2%).

Direct Impacts

Proposed Action: While regulated discharges are not expected to impact soils and geology, the construction and maintenance of settling ponds associated with permitted outfalls may result in minor impacts to soils and geology within the areas of disturbance. The extent of the impacts would be <14.8 acres. Comprehensive reclamation and mitigation measures are required by the surface mining permit to protect soils, geology, and associated land uses.

The discharge of runoff flow into the receiving stream is expected to have no impacts on the geology, soil quality or stability. The discharge into Libby Creek may not enter the creek at a flow rate that exceeds the nonsignificance criteria described in ARM 17.30.715(1)(a), as described in the MT0032158 Fact Sheet in Part 3.7.2. The facility would discharge intermittently to maintain water at the desired level in the adit, to maintain freeboard in the lined storm water ponds, and to correspond with staff working schedules. After the discharge drains through the Outfall 001 percolation pond, the mixed discharge and groundwater enter Libby Creek in a diffuse manner, over a distance of 3,400 feet. Discharge would represent a nonsignificant addition to Libby Creek and would cause no meaningful change in natural conditions regarding geology and soils. The project is in an area that has already undergone disturbance by previous mining from Noranda Mining and Exploration (Noranda) and changes made by MMC. New impacts, if any, are expected to be negligible.

Secondary Impacts

Proposed Action: Site best management practices (BMPs) include berms, sediment traps, ditches, native materials (brush pile filters, surface revegetation/reclamation), and lined sumps. See the Fact Sheet (MT DEQ, 2024) for additional detail. There would be no secondary impacts because the permit conditions would protect human health and beneficial uses of state surface waters, both at the site and downstream.

Cumulative Impacts

Proposed Action: The site was previously disturbed by Noranda Mining and Exploration. Cumulative impacts to geology and soil quality, stability and moisture are not expected with this permitting action.

b. WATER QUALITY, QUANTITY, AND DISTRIBUTION

Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels or degradation of water quality?

Direct Impacts

Proposed Action: The MPDES permit includes effluent limits, monitoring requirements and other permit conditions that would ensure the water quality standards and beneficial uses are protected. DEQ found that the unnamed tributaries and downstream waters are high quality waters per Montana's Nondegradation Policy. The proposed discharges were evaluated to ensure the changes in water quality would be nonsignificant. See the Fact Sheet

(MT DEQ, 2024) for additional detail.

Secondary Impacts

Proposed Action: See permit Fact Sheet (MT DEQ, 2024). The conditions and requirements of the permit would protect beneficial uses of the receiving water and downstream uses. Secondary impacts are not expected.

Cumulative Impacts

Proposed Action: The nearest permitted sources of wastewater are for Suction Dredge General Permit authorizations and Storm Water Construction authorizations associated with Libby Creek before it passes under U.S. Hwy 2. Each of these permits protect the beneficial uses of the receiving waters at their specific locations and cumulative effects to water quality are not expected.

c. AIR QUALITY

Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?

The Cabinet Mountains Wilderness is listed as a Class I airshed. The Montanore Project EIS discusses this and the implications with reference to the Project. The Project is not considered a major source of nitrogen or sulfur deposition on air quality related values to the Class I area (KNF and DEQ, 2015).

Direct Impacts

Proposed Action: Only minimal and short-term impacts on air quality resulting from the issuance of the MPDES permit are expected, including vehicle and equipment use necessary to conduct water sampling activities, and construction and maintenance of wastewater and discharge infrastructure. Permitting activities include the use of the existing generators.

Secondary Impacts

Proposed Action: Secondary impacts to air quality are not expected with this permitting action.

Cumulative Impacts

Proposed Action: Cumulative impacts to air quality are not expected with this permitting action.

d. VEGETATION COVER, QUANTITY AND QUALITY

Will vegetative communities be significantly impacted? Are any rare plants or cover types of present?

The Montana Natural Heritage Program identified the plant species of concern (SOC) *Botrychium crenulatum* (Wavy Moonwort) and *Sphagnum girgensohnii* (Star Hair Peatmoss) as species occurrences within a one to two-mile radius of the Project.

Direct Impacts

Proposed Action: The project is in an area that has already undergone disturbance by the Noranda Mining and Exploration Company. New impacts, if any, would be negligible.

Secondary Impacts

Proposed Action: Secondary impacts to vegetation cover, quantity, and quality are not expected with this permitting action.

Cumulative Impacts

Proposed Action: Reclamation activities are regulated by DEQ’s Hard Rock Mining program under DEQ Operating Permit #00150, which includes post mining land use. Cumulative impacts to vegetation cover, quantity, and quality are not expected with this permitting action.

e. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS

Is there substantial use of the area by important wildlife, birds, or fish?

The Montana Natural Heritage Program identified *Salvelinus confluentus* (Bull Trout), *Oncorhynchus mykiss gairdneri* (Columbia River Redband Trout), *Ursus arctos* (Grizzly Bear), *Gulo gulo* (Wolverine), *Pekania pennanti* (Fisher), *Corynorhinus townsendii* (Townsend's Big-eared Bat), *Myotis evotis* (Long-eared Myotis), *Oncorhynchus clarkii lewisi* (Westslope Cutthroat Trout) as animal SOC present in the vicinity of the project.

Impacts of the Montanore Project on aquatic species was evaluated in the EIS (KNF and MT DEQ, 2015). Permit limits and conditions would protect beneficial uses and prevent significant changes in water quality.

Direct Impacts

Proposed Action: Effluent limits and permit conditions would ensure water quality standards for aquatic life are protected (MT DEQ, 2024). Impacts to terrestrial or avian species are limited to the construction phase of the project (construction/maintenance of BMPs, upgrades to the WTP, construction of Outfall 001 percolation pond, construction of Outfall 003, construction of ground water wells, construction of the waste rock sump (WRS), and the two waste rock storage areas (WRSAs)). The project is in an area that has already undergone disturbance by the construction and operation of mining. New impacts are expected to be negligible.

Secondary Impacts

Proposed Action: Secondary impacts to terrestrial, avian, and aquatic life and habitats are not expected with this permitting action.

Cumulative Impacts

Proposed Action: Cumulative impacts to terrestrial, avian, and aquatic life and habitats are not expected with this permitting action.

f. HISTORY, CULTURE AND ARCHEOLOGICAL UNIQUENESS

Are there any historical, archaeological, or paleontological resources present?

Direct Impacts

Proposed Action: No impacts to history, culture, or archaeological uniqueness is expected as there are no known historical or archaeological sites present of the Proposed Action (SHPO, 2024).

Secondary Impacts

Proposed Action: Secondary impacts to history, culture, and archaeological uniqueness are not expected with this permitting action.

Cumulative Impacts

Proposed Action: Cumulative impacts to history, culture, and archaeological uniqueness are not expected with this permitting action.

g. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY

Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?

This is an existing facility. MMC is currently permitted under MPDES permit #MT0030279 for adit dewatering only. Upon issuance of this MPDES permit, MT0030279 would be terminated. There may be an increase in power generation for exploration and an upgraded Water Treatment Plant. The Proposed Action is in an area that has already undergone disturbance by the construction and operation of the Mine.

Direct Impacts

Proposed Action: The site has already undergone disturbance from Noranda Mining and Exploration. There may be increased energy demands of the upgraded Water Treatment Plant. New impacts are expected to be short term and negligible.

Secondary Impacts

Proposed Action: Secondary impacts to demands on environmental resources of land, water, air, or energy are not expected with this permitting action.

Cumulative Impacts

Proposed Action: Exploration and wastewater treatment are powered by generators. Cumulative impacts to demands on environmental resources of land, water, air, or energy are not expected with this permitting action.

h. HUMAN HEALTH AND SAFETY

Will this project add to health and safety risks in the area?

The applicant would be required to adhere to all applicable state and federal safety laws. The Occupational Safety and Health Administration (OSHA) has developed rules and guidelines to reduce the risks associated with this type of labor. Few, if any, members of the public would be in immediate proximity to the project during construction or operations.

Direct Impacts

Proposed Action: Effluent limits and permit conditions would ensure water quality standards are met and human health is protected. No direct impacts to human health and safety are anticipated due to the issuance of this permit.

Secondary Impacts

Proposed Action: Secondary impacts to health and human safety are not expected with this

permitting action.

Cumulative Impacts

Proposed Action: Cumulative impacts to health and human safety are not expected with this permitting action.

i. SOCIOECONOMICS

Will the project add to or alter industrial or agricultural activities? Will the project create, move, or eliminate jobs? Will the project create or eliminate tax revenue? Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed? Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect? The project would occur on private land. Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract? Will the project add to the population and require additional housing? Is some disruption of native or traditional lifestyles or communities possible?

Direct Impacts

Proposed Action: The Project would occur on private land, that has historically been used for mining. The proposed permit would be issued for a 5-year term. Exploration is permitted by the Department of Environmental Quality Mining Bureau and DEQ Operating Permit #00150 with associated activities permitted by the U.S. Forest Service. The project is not expected to add to or alter industrial, commercial, or agricultural activities in the area. A few short-term jobs may be created during construction of the wastewater infrastructure needed for the Project. No additional jobs are expected to be created in response to MPDES permit issuance. No significant impacts were identified by DEQ after an in-depth review of the Application, Research, and other Government Agency References in development of the Tentative Determination documents for the current permit action (DEQ, 2024).

Secondary Impacts

Proposed Action: Secondary impacts to socioeconomics are not expected with this permitting action.

Cumulative Impacts

Proposed Action: Cumulative impacts to socioeconomics are not expected with this permitting action.

j. PRIVATE PROPERTY IMPACTS

The proposed Project would take place on private land owned by the applicant and below a wilderness area managed by the U.S. Forest Service. If DEQ issues Montanore Minerals Corporation an MPDES permit, any conditions of the permit are required by either the federal Clean Water Act or the Montana Water Quality Act, as implemented by the MPDES program. DEQ does not propose to include in the permit any conditions that are not required under the applicable regulations. Therefore, DEQ is not required to determine whether there are alternatives that would reduce, minimize, or eliminate the restriction on the use of private property, and to analyze those alternatives.

k. GREENHOUSE GAS ASSESSMENT

MMC will conduct construction of the wastewater infrastructure including: construction and maintenance of BMPs, upgrades and operation of the WTP, construction of Outfall 001 percolation

pond, construction of Outfall 003, construction of ground water wells, construction of the Waste Rock Sump (WRS), and construction of the two Wasterock Storage Areas (WRSAs). Additionally, some vehicle traffic associated with sampling required for MPDES permit compliance would occur.

Equipment and vehicles associated with the project would include the generators, WTP heater, one excavator, one dozer, two haul trucks, one roller, two crew trucks see MMC Responses to MDEQ October 21, 2024 Questions. Of the equipment and vehicles listed, the five pieces of equipment have 100-to-150-gallon diesel tanks, the two crew trucks have a 45-gallon diesel tank and a 100-gallon diesel slip tank each, the two tanks located at the facility site for the generators are 3000 and 3500 gallon diesel tanks, and the one tank for the WTP heat is a 300-gallon diesel tank. MMC estimates a total capacity of 7840 gallons for during construction. Construction is expected to take two to three months (40 to 60 days) to complete.

A crew truck may be used for sampling associated with the permit. This is estimated to increase the total capacity to 7900 during the five-year permitting period. DEQ assumed monthly monitoring may occur with a maximum travel distance of 10 miles, leading to a use of 30 gallons of fuel in the permitting term. DEQ rounded up to 60 gallons to ensure a conservative estimate.

The analysis area for this resource is limited to the activities regulated by the issuance of MPDES permit number MT0032158 which is construction and operation of discharging treated wastewater. The amount of off-road diesel fuel utilized at this site may be impacted by a number of factors including seasonal weather impediments and equipment malfunctions. To account for these factors DEQ used the maximum capacity.

For the purpose of this analysis, DEQ has defined greenhouse gas emissions as the following gas species: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and many species of fluorinated compounds. The range of fluorinated compounds includes numerous chemicals which are used in many household and industrial products. Other pollutants can have some properties that also are similar to those mentioned above, but the EPA has clearly identified the species above as the primary GHGs. Water vapor is also technically a greenhouse gas, but its properties are controlled by the temperature and pressure within the atmosphere, and it is not considered an anthropogenic species.

The combustion of diesel fuel at the site would release GHGs primarily being carbon dioxide (CO₂), nitrous oxide (N₂O) and much smaller concentrations of uncombusted fuel components including methane (CH₄) and other volatile organic compounds (VOCs).

DEQ has calculated GHG emissions using the EPA Simplified GHG Calculator version May 2023, for the purpose of totaling GHG emissions. This tool totals carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄) and reports the total as CO₂ equivalent (CO₂e) in metric tons CO₂e. The calculations in this tool are widely accepted to represent reliable calculation approaches for developing a GHG inventory. DEQ has determined EPA's Scope 1 GHG impacts as defined in the Inventory Guidance for Greenhouse Gas Emissions are appropriate under MEPA for this Proposed Action. Scope 1 emissions are defined as direct GHG emissions that occur from sources that are controlled or owned by the organization (EPA Center for Corporate Climate Leadership). DEQ's review of Scope 1 emissions is consistent with the agency not evaluating downstream effects of other types of impacts.

This review does not include an assessment of GHG impacts in quantitative economic terms, otherwise known as evaluating the social cost of carbon. DEQ instead calculates potential GHG emissions and provides a narrative description of GHG impacts. This approach is consistent with Montana Supreme Court caselaw and the agency's discussion of other impacts in this EA. See *Belk v. Mont. DEQ*, 2022 MT 38, ¶ 29.

Operation of diesel fueled vehicles throughout the life of the proposed project would produce exhaust fumes containing GHGs.

To account for variability due to the factors described above, DEQ has used the maximum capacity given in the Applicant's estimate. Using the Environmental Protection Agency's (EPA) simplified GHG Emissions Calculator for mobile sources, a maximum of 81 CO₂e would be produced for the project during the five-year permit term, including construction, see MMC Responses to MDEQ October 21, 2024 Questions.

Secondary Impacts

GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM 2021).

Per EPA's website "Climate Change Indicators", the lifetime of carbon dioxide cannot be represented with a single value because the gas is not destroyed over time. The gas instead moves between air, ocean, and land mediums with atmospheric carbon dioxide remaining in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Methane remains in the atmosphere for approximately 12 years. Nitrous oxide has the potential to remain in the atmosphere for about 109 years (EPA, Climate Change Indicators). The impacts of climate change throughout the northwest region of Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2020).

Cumulative Impacts

Montana recently used the EPA State Inventory Tool (SIT) to develop a greenhouse gas inventory in conjunction with preparation of a possible grant application for the Community Planning Reduction Grant (CPRG) program. This tool was developed by EPA to help states develop their own greenhouse gas inventories, and this relies upon data already collected by the federal government through various agencies. The inventory specifically deals with carbon dioxide, methane, and nitrous oxide and reports the total as CO₂e. The SIT consists of eleven Excel based modules with pre-populated data that can be used with default settings or in some cases, allows states to input their own data when the state believes their own data provides a higher level of quality and accuracy. Once each of the eleven modules is filled out, the data from each module is exported into a final "synthesis" module which summarizes all of the data into a single file. Within the synthesis file, several worksheets display the output data in a number of formats such as GHG emissions by sector and GHG emissions by type of greenhouse gas.

DEQ has determined the use of the default data provides a reasonable representation of the greenhouse gas inventory for the various sectors of the state, and the estimated total annual greenhouse gas inventory by year. The SIT data from EPA is currently only updated through the

year 2021, as it takes several years to validate and make new data available within revised modules. DEQ maintains a copy of the output results of the SIT.

DEQ has determined that the use of the default data provides a reasonable representation of the GHG inventory for all of the state sectors, and an estimated total annual GHG inventory by year. At present, Montana accounts for 47.77 million metric tons of CO₂e based on the EPA SIT for the year 2021. This project may contribute up to 81 tons per year of CO₂e. The estimated emission of 81 metric tons of CO₂e from this project would contribute 0.00017% of Montana's annual CO₂e emissions.

GHG emissions that would be emitted as a result of the proposed activities would add to GHG emissions from other sources. The No Action Alternative would contribute less than the Proposed Action Alternative of GHG emissions. The permitting action would cause disturbance on <14.8 acres within the project site. Disturbance on the surface would be limited to this area. The project is in an area that has already undergone disturbance by previous mining from Noranda Mining and Exploration (Noranda) and changes made by MMC.

4. DESCRIPTION OF ALTERNATIVES

4.1 ADDITIONAL ALTERNATIVES CONSIDERED

No Action Alternative: In addition to the proposed action, DEQ must also consider a "no action" alternative. The "no action" alternative would deny the approval of the MPDES permit. The applicant would lack the authority to conduct the proposed activity and alternative methods of wastewater disposal from the MMC's Libby Creek Adit Wastewater facility would have to be found.

If the applicant demonstrates compliance with all applicable rules and regulations required for approval, the "no action" alternative would not be appropriate.

Other Reasonable Alternative(s): No other alternatives were considered.

4.2 CONSULTATION

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff. External scoping efforts also included queries to the following websites/databases/personnel:

- U.S. EPA Center for Corporate Climate Leadership, Scopes 1, 2 and 3 Emissions Inventorying and Guidance
- U.S. EPA Center for Corporate Climate Leadership, Simplified GHG Emissions Calculator
- Montana Natural Heritage Program
- Montana State Historic Preservation Office (SHPO)
- U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey
- U.S. Forest Service, Prevention of Significant Deterioration (PSD) Program

4.3 NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

- The severity, duration, geographic extent, and frequency of the occurrence of the impact;

- The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
- Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts – identify the parameters of the proposed action;
- The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
- The importance to the state and to society of each environmental resource or value that would be affected.
- Any precedent that would be set as a result of an impact of the proposed action that would commit the department 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.

A Joint Final EIS was published for the Montanore Project in December 2015 by the KNF and Montana DEQ.

As described above, DEQ’s decision to issue MPDES Permit No. MT0032158 authorizes discharge of treated wastewater and storm water. The treated discharges and storm water runoff are subject to permit conditions and limitations that would protect beneficial uses and prevent significant changes in water quality. The impacts from construction may result in dust but are expected to be of short duration and not significant. Environmental impacts resulting from issuance of the MPDES permit are localized and would be managed through permit conditions and limitations. At the time of this analysis, there are no known conflicts with local, state, or federal laws, requirements, or plans.

Impacts were assessed with the assumption that the facility would comply with the terms and conditions of the permit. Violations of the permit could lead to adverse impacts to state waters. Violations of the permit are not an effect of the agency action since the permit itself forbids such activities. However, the Department has taken steps to ensure that violations do not occur. The Department provides technical assistance to permittees for operation and maintenance, and also in understanding and implementing the requirements of the permit. The Department also conducts periodic inspections of permitted facilities, and identifies potential problems with design or management practices. If violations of the permit do occur, the Department will take appropriate action under the Montana Water Quality Act. Enforcement sanctions for violations of the permit include injunctions, civil and administrative penalties, and cleanup orders.

5. PUBLIC INVOLVEMENT

A 30-day public comment period will be held.

6. CONCLUSIONS AND FINDINGS

The preferred proposed action is to issue the new MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the effluent limits, monitoring, and other conditions of the MPDES permit.

Environmental Assessment and Significance Determination Prepared By:

DEQ Water Protection Bureau

Environmental Assessment Reviewed By:

DEQ MEPA

DEQ Hard Rock Section

Approved By:

DRAFT

Tatiana Davila, Chief
Water Protection Bureau
Department of Environmental Quality

Date

7. REFERENCES

- ARM Title 17, Chapter 30, Sub-chapter 2 - Water Quality Permit Application and Annual Fees.
- ARM Title 17, Chapter 30, Sub-chapter 5 - Mixing Zones in Surface and Ground Water.
- ARM Title 17, Chapter 30, Sub-chapter 6 - Surface Water Quality Standards.
- ARM Title 17, Chapter 30, Sub-chapter 7 - Nondegradation of Water Quality.
- ARM Title 17, Chapter 30, Sub-chapter 11 – Storm Water Discharges.
- ARM Title 17, Chapter 30, Sub-chapter 12 and 13 - Montana Pollutant Discharge Elimination System Standards.
- Kootenai National Forest (KNF) and Montana DEQ, 2015. Joint Final Environmental Impact Statement (EIS), Montanore Project.
- Montana Historical Society: Montana State Historic Preservation Office (SHPO). Montana Cultural Resource Database. <https://svc.mt.gov/adsams/>. Accessed 8/29/2024.
- Montana Minerals Corporation, 2023. MPDES Permit Application for MT0032158.
- Montana Natural Heritage Program (MTNHP), Environmental Summary. <https://mtnhp.org/mapviewer>. Accessed 10/7/2024.
- Montana Water Quality Act, MCA 75-5-101 et. seq.
- Montanore Minerals Corporation. MMC Responses to MDEQ October 21, 2024 Questions. October 23, 2024.
- MT DEQ, 2022. Hard Rock Mining Operating Permit #00150, Montana Minerals Corporation.
- MT DEQ, 2024. Draft Fact Sheet for Montana Pollution Discharge Elimination System Permit MT032158, Montanore Minerals Corporation.
- MT DEQ, 2024. Draft Permit for Montana Pollution Discharge Elimination System Permit MT032158, Montanore Minerals Corporation.
- United States Bureau of Land Management (BLM). 2020 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends.
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Web Soil Survey, National Cooperative Soil Survey. <https://websoilsurvey.nrcs.usda.gov>. Accessed 10/7/2024. <https://www.blm.gov/noc/blm-library/report/2020-blm-specialist-report-annual-greenhouse-gas-emissions-and-climate>.
- United States Environmental Protection Agency (EPA). Climate Change Indicator: Greenhouse Gases. <https://www.epa.gov/climate-indicators/greenhouse-gases>.
- United States Environmental Protection Agency (EPA). EPA Center for Corporate Climate Leadership, Scopes 1, 2 and 3 Emissions Inventorying and Guidance. <https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance>.
- United States Forest Service. Prevention of Significant Deterioration (PSD) Program. https://www.fs.usda.gov/air/PSD_limits.htm. Accessed 10/7/2024.

8. COMMENT SUMMARY AND RESPONSES TO SUBSTANTIVE COMMENTS

Responses to substantive comments.