



Water Protection Bureau
Environmental Assessment

Name of Project: Rosebud Mine, Westmoreland Rosebud Mining LLC

Location of Project: Rosebud Mine located adjacent to the City of Colstrip, MT, Rosebud County;
See Permit for latitude/longitude locations of the 153 individual outfalls

Description of Project:

The Montana Department of Environmental Quality (DEQ) proposes to renew the Montana Pollutant Discharge Elimination System permit for the Rosebud Mine to discharge mine drainage to East Fork Armells Creek, West Fork Armells Creek, Stocker Creek, Black Hank Creek, Donley Creek, Lee Coulee, Spring Creek, Cow Creek, and Pony Creek. For a more detailed description of the project please see the Fact Sheet prepared for the facility which includes a facility site map.

Agency Action and Applicable Regulations:

The MPDES permit regulates point source discharge of pollutants to state surface waters. The permit includes effluent limits and monitoring requirements to protect the beneficial uses of state surface waters.

The agency action is to renew MPDES Permit MT0023965 for another five-year cycle.

Administrative Rules of Montana (ARM) Title 17, Chapter 30 – Water Quality

Subchapter 2 - Water Quality Permit and Authorization Fees

Subchapter 5 - Mixing Zones in Surface and Ground Water

Subchapter 6 - Surface Water Quality Standards and Procedures

Subchapter 7 - Nondegradation of Water Quality

Subchapters 12 & 13 - Montana Pollutant Discharge Elimination System (MPDES) Standards

Montana Code Annotated (MCA), Title 75-5-101 et. seq., “Montana Water Quality Act”

Summary of Issues:

The proposed action authorizes 153 outfalls discussed above. Technology-based effluent limitations (TBELs) based on federal effluent limitation guidelines are applicable to the facility and have been included in the proposed permit for total iron, total suspended solids, and pH. TBELs for discharges caused by precipitation events less than or equal to the 10-year, 24-hour precipitation event are applicable to the facility and have been included in the proposed permit for settleable solids and pH.

The proposed permit renewal retains the effluent limits for total dissolved solids, sulfate, and boron from the previous permit (modification 2 of the 2012 permit). The proposed permit includes effluent limitations for electrical conductivity and retains the monitoring requirements sodium adsorption ratio (SAR) for outfalls discharging to Lee Coulee from the previous permit.

The proposed permit includes narrative standards for outfalls discharging to the hydrologically ephemeral segment of East Fork Armells creek to mitigate the potential for effluent to reach the downstream intermittent segment. This includes all outfalls upstream of the in-channel dam located between Outfalls 022 and 023.

The proposed permit includes water quality-based effluent limitations (WQBELs) for outfalls discharging to the intermittent segment of East Fork Armells Creek. WQBELs for dissolved aluminum, total iron, mercury, total nitrogen, ammonia as N, selenium, and silver replace less stringent water quality-based effluent limitations for dissolved aluminum, total iron, and selenium and monitor-only requirements for mercury, total nitrogen, and silver contained in the previous permit. This includes all outfalls downstream of the in-channel dam located between Outfalls 022 and 023.

The proposed permit retains the self-monitoring requirements of the previous permit in order to (1) assure compliance with effluent limits, including new pollutants; (2) monitor other pollutants of concern; and (3) better characterize the effluent. The proposed action also retains the requirements for Whole Effluent Toxicity (WET) testing annually for outfalls where activities meeting the definition of “coal preparation plant”, “coal preparation plant associated areas”, and “coal plant water circuit” as determined in 40 CFR 434.11 are conducted or located. WET testing will assess any negative effects caused by aggregate toxic effects of pollutants in the discharge(s).

Due to reclamation progress at the Rosebud Mine, Area E has been fully reclaimed and achieved final phase 4 bond release in May 2019. A proposed action is to remove Outfalls 003, 004, 005, and 027 (in the Cow Creek drainage) from MPDES Permit MT0023965.

Affected Environment & Impacts of the Proposed Project:Y = Impacts may occur N = Not present. *or* No Impact will likely occur.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. 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?	[N] The facility is long established and no new impacts from renewal of the MPDES permit have been identified.
2. 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?	[N] The renewed permit contains effluent limits and monitoring requirements that will continue to assure discharge quality and protect beneficial uses of the receiving waters. All effluent limits in the draft renewal permit are equal to or more stringent than those in the previous MPDES permit.
3. Air Quality: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] The continued operation of the facility subject to the permit renewal represent no new impacts on air quality.
4. Vegetation Cover, Quantity and Quality: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] Based on a search of the Natural Heritage Database, there are two vegetative species of concern in or within one mile of the site: <ul style="list-style-type: none"> • <i>Astragalus barrii</i> (Barr's Milkvetch), <i>Amorpha canescens</i> (Lead Plant) This MPDES permitting action is the renewal of an existing wastewater discharge permit, with no new impact anticipated on these or other vegetative communities.
5. Terrestrial, Avian, and Aquatic Life Habitats: Is there substantial use of the area by important wildlife, birds or fish?	[N] Based on a search of the Natural Heritage Database, there are twenty-three animal species of concern in or within one mile of the site: <ul style="list-style-type: none"> • Nine (9) mammals: <i>Euderma maculatum</i> (Spotted Bat), <i>Lasiurus borealis</i> (Eastern Red Bat), <i>Sorex merriami</i> (Merriam's Shrew), <i>Corynorhinus townsendii</i> (Townsend's Big-eared Bat), <i>Lasiurus cinereus</i> (Hoary Bat), <i>Antrozous pallidus</i> (Pallid Bat), <i>Myotis lucifugus</i> (Little Brown Myotis), <i>Cynomys ludovicianus</i> (Black-tailed Prairie Dog), <i>Myotis thysanodes</i> (Fringed Myotis) • Ten (10) avian species: <i>Gymnorhinus cyanocephalus</i> (Pinyon Jay), <i>Spizella breweri</i> (Brewer's Sparrow), <i>Aquila chrysaetos</i> (Golden Eagle), <i>Centrocercus urophasianus</i> (Greater Sage-Grouse), <i>Lanius ludovicianus</i> (Loggerhead Shrike), <i>Ardea Herodias</i> (Great Blue Heron), <i>Melanerpes erythrocephalus</i> (Red-headed Woodpecker), <i>Accipiter gentilis</i> (Northern Goshawk), <i>Athene cunicularia</i> (Burrowing Owl), <i>Oreoscoptes montanus</i> (Sage Thrasher) • One (1) aquatic species: <i>Anaxyrus congatus</i> (Great Plains toad) • Three (3) reptilian species: <i>Phrynosoma hernandesi</i> (Greater Short-horned Lizard), <i>Lampropeltis gentilis</i> (Western Milksnake), <i>Heterodon nasicus</i> (Plains Hog-nosed Snake) This MPDES permitting action is the renewal of an existing wastewater discharge permit, with no new impact anticipated on these or other species.
6. Unique, Endangered, Fragile, or Limited Environmental Resources: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] All wetlands are identified within Rosebud Mine boundaries. See response to #5, above, for a list of species of concern. No known federally listed threatened or endangered species are present. No new impacts to these resources are anticipated from the renewal of this permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>7. Sage Grouse Executive Order: Is the project proposed in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: http://dnrc.mt.gov/divisions/cardd/sage-grouse?</p> <p>If yes, did the applicant attach documentation from the Program showing compliance with Executive Order 12-2015 and the Program’s recommendations? If so, attach the documentation to the EA and address the Program’s recommendations in the permit. If project is in core, general or connectivity habitat and the applicant did not document consultation with the Program, refer the applicant to the Sage Grouse Habitat Conservation Program.</p>	<p>[Y] DEQ consulted the sage grouse Executive Order map; the area associated with the permit renewal is located in general sage grouse habitat.</p> <p>Per Executive Order (EO) No. 12-2015, “[e]xisting land uses and activities (include those authorized by existing permit but not yet conducted) shall be recognized and respected by state agencies, and those uses and activities that exist at the time the Program becomes effective will not be managed under the stipulations of this Conservation Strategy... Provided these uses and activities are within a defined project boundary (such as a... mine plan...) they may continue within the existing boundary, even if they exceed the stipulations of this Conservation Strategy” (EO No. 12-2015, Attachment A, Clause 20).</p> <p>All MPDES outfalls are located within the boundary of existing surface mine permits and are necessary to facilitate mining of the permitted coal. Therefore, the Program’s conservation stipulations are not applicable.</p>
<p>8. Historical and Archeological Sites: Are any historical, archaeological, or paleontological resources present?</p>	<p>[N] Based on the Montana Cultural Resource Database there are existing historical sites identified within the facility. This MPDES permitting action is the renewal of an existing wastewater discharge permit, with no new impact anticipated on these sites. Should structures need to be altered or if cultural materials are inadvertently discovered, the State Historic Preservation Office (SHPO) must be contacted.</p>
<p>9. Aesthetics: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>[N] This facility is long established and no new aesthetic impacts have been identified.</p>
<p>10. 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? Will new or upgraded powerlines or other energy sources be needed?</p>	<p>[N] This facility is long established and no new impacts have been identified.</p>
<p>11. Impacts on Other Environmental Resources: Are there other activities nearby that will affect the project?</p>	<p>[N] There are no known nearby activities that would affect the project.</p>

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>12. Human Health and Safety: Will this project add to health and safety risks in the area?</p>	<p>[N] The renewed permit contains effluent limits that will protect public health.</p>
<p>13. Industrial, Commercial, and Agricultural Activities and Production: Will the project add to or alter these activities?</p>	<p>[N] the facility subject to the permit renewal is long established and the renewal of this permit will not affect these uses.</p>
<p>14. Quantity and Distribution of Employment: Will the project create, move or eliminate jobs? If so, estimated number.</p>	<p>[N] The continued operation of the facility subject to the permit renewal has no anticipated impact on the quantity and distribution of employment.</p>

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
15. Local and State Tax Base and Tax Revenues: Will the project create or eliminate tax revenue?	[N] The continued operation of the facility subject to the permit renewal has no anticipated impact on tax revenue.
16. Demand for Government Services: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] The continued operation of the facility subject to the permit renewal has no anticipated impact on tax revenue.
17. Locally Adopted Environmental Plans and Goals: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] No new impacts are anticipated at this time.
18. Access to and Quality of Recreational and Wilderness Activities: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] There are no wilderness or recreational areas accessed through this tract.
19. Density and Distribution of Population and Housing: Will the project add to the population and require additional housing?	[N] The continued operation of the facility subject to the permit renewal has no anticipated impact on population.
20. Social Structures and Mores: Is some disruption of native or traditional lifestyles or communities possible?	[N] Disruption of native or traditional lifestyles or communities will not be changed by the renewal of this permit.
21. Cultural Uniqueness and Diversity: Will the action cause a shift in some unique quality of the area?	[N] Continued operation of the facility has no anticipated impact on cultural uniqueness or diversity of the area.
22. Other Appropriate Social and Economic Circumstances	[N] No new impacts are anticipated.
23(a). Private Property Impacts: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N]
23(b). Private Property Impacts: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[N]
23(c). Private Property Impacts: If the answer to 23(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[N]

24. Description of and Impacts of other Alternatives Considered:

- A. No Action: Under the “No Action” alternative, DEQ would not renew MPDES Permit # MT0023965. “No Action” could result in unauthorized wastewater discharge. This may result in a negative impact on state water quality.

B. Approval with Modification: DEQ has not identified any necessary modifications to grant approval.

25. Summary of Magnitude and Significance of Potential Impact:

The discharges from the 153 outfalls are regulated by the conditions of the proposed permit. The permit conditions ensure that all beneficial uses of the receiving water are protected and the discharges will not cause significant changes in existing water quality. The Department has determined no significant adverse impacts to the physical or human environment associated with the permitted discharge of effluent.

26. Cumulative Effects:

The permit conditions ensure there will be no significant changes to existing water quality associated with renewal of the MPDES Permit. Cumulative effects resulting from other State agencies at this facility are generally related to mine reclamation and expansion activities as regulated by the Montana Surface Mining Control and Reclamation Act of 1977 (SMCRA) and Strip and Underground Mine Reclamation Act (MSUMRA).

27. Preferred Action Alternative and Rationale:

The preferred action is to renew the existing MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the terms of the MPDES permit.

Recommendation for Further Environmental Analysis:

Environmental Impact Statement (EIS) More Detailed EA No Further Analysis

Rationale for Recommendation:

28. Public Involvement: A 30-day public comment period will be held.

29. Persons and agencies consulted in the preparation of this analysis: Montana Natural Heritage Program, Montana Cultural Resource Database

Environmental Assessment Prepared By: Heather Henry, March 2021

Approved by:

DRAFT

Jon Kenning, Chief
Water Protection Bureau

Date