DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Permitting and Compliance Division
Water Protection Bureau

Name of Project: Basin Mill

Type of Project: Froth floatation mill

Location of Project: 1/4 SE, Section 17, Township 6 North, Range 5 West

City/Town: Basin

County: Jefferson

Description of Project: (Summary of Proposed Action):

OT Mining Corporation (OTMC) owns the Basin Mill, a small froth floation mill. OTMC has been the owner of the mill since 1988. The mill has not been operated since 1989. Ore would come from either the OTMC Ruby mine and/or from gold-silver-lead mines active in the Basin area.

Tailings would be generated from a flotation mill for the recovery of precious and base metals. The mill is capable of processing approximately 150 tons per day. Cyanide has never been used or approved for milling use at this site. Tailings would be slurried into a two-acre bentonite lined tailings impoundment where the wastewater would be allowed to infiltrate to the ground water (Outfall 001). At an assumed 100 tons per day production and 30% solids, an estimated wastewater production would be 72,000 gallons per day (gpd).

Ground water underlying the site is Class I ground water, which is considered high quality state water for the nondegradation policy.

The mill, impoundment, and support structures (office and garage) are located approximately one-half mile east of the town of Basin on the north side of US Interstate 15 (Figure 1). The entire complex encompasses approximately 19 acres. The tailings impoundment is located on a bench approximately 50 feet above the Boulder River Valley. The river is approximately 1,500 feet to the south.

This area is located within the Basin Mining Area Superfund Site, which consists of two operable units. The mill site is located in the Town of Basin Operable Unit (OU) number 1. The Basin Mill was not one of the sites remediated in the OU1 efforts.

Agency Action and Applicable Regulations: The proposed action is to issue an individual MGWPCS permit that has effluent limits and effluent monitoring requirements. The permit is issued under the authority of the Montana Water Quality Act 75-5-101 *et seq.* Montana Ground Water Pollution Control System Administrative Rules of Montana (ARM) 17.30.1001-1070, and Montana Numeric Water Quality Standards in the Department Circular DEQ-7 (February 2008).

The project does not have an approval under the Montana Metal Mine Reclamation Act.

Summary of Issues: The purpose of this action is to regulate the discharges of pollutants to state ground water from the regulated facility. Issuance of an individual permit will require the applicant to implement monitor and management practices to prevent pollution and degradation of groundwater.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts).

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 proposed project – mill and tailings impoundment – are located at a site that has been used for milling for many years. Cretaceous Boulder Batholith (quartz monzonite and granodiorite) underlie the area, according the Montana Bureau of Mines and Geology geological map.
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] No milling has occurred at this site since 1989. The dry tailings could leach metals into the ground water through meteoric water and infiltration. However, the ground water data on file from 2002 to present does not show elevated metals
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] Ore hauling could generate road dust and diesel particulate increases around the mill site. Residents are located near the site, although none are present in the prevailing downgradient wind direction.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] The mill has been located at this site for many years. Disturbance from mining and milling has occurring in this area, specifically on the mill property, for several decades.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] The mill has been located at this site for many years. Disturbance from mining and milling has occurring in this area, specifically on the mill property, for several decades.
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] The mill has been located at this site for many years. Disturbance from mining and milling has occurring in this area, specifically on the mill property, for several decades.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] The mill has been located at this site for many years. Disturbance from mining and milling has occurring in this area, specifically on the mill property, for several decades.
8. 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?	[N] The mill and office buildings are visible from Interstate 15. The mill has not been operated for 20 years. No significant impacts have been identified during EA preparation.

9. 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 powerline or other energy source be needed)	[N] No significant impacts have been identified during EA preparation.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] No significant impacts have been identified during EA preparation.

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] No significant impacts have been identified during EA preparation. The permit contains effluent limits that protect water quality and the receiving water beneficial uses, including human health.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] No significant impacts have been identified during EA preparation.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] No significant impacts have been identified during EA preparation. Refer to the Department's 2006 EA for further details.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] No significant impacts have been identified during EA preparation.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] No significant impacts have been identified during EA preparation.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] No significant impacts have been identified during EA preparation.
17. 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] No significant impacts have been identified during EA preparation.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No significant impacts have been identified during EA preparation.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No significant impacts have been identified during EA preparation. Refer to the Department's 2006 EA for further details.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No significant impacts have been identified during EA preparation.

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No significant impacts have been identified during EA preparation.
22(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] No significant impacts have been identified during EA preparation.
22(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/A] see 22 a.
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(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/A] see 22 a.

23. Description of and Impacts of other Alternatives Considered:

A. No Action: Under the 'No Action' alternative the Department would not issue an individual ground water discharge permit under the Montana Ground Water Pollution Control System administrative rules.

B. Approval with modification: The Department has not identified any necessary modifications to grant approval.

24. Summary of Magnitude and Significance of Potential Impacts: Impacts were assessed with the assumption that the permittee will comply with the terms and conditions of the permit. Violations of the permit could lead to significant adverse impacts to state waters. In preparing permit limits and conditions, the Department has taken steps to ensure that beneficial uses of the receiving water are preserved and exceedance of water quality standards will not occur, which includes that the discharge will remain "nonsignificant", as required by ARM 17.30.subchapter 7 "Nondegradation of Water Quality". The Department provides assistance to applicants in understanding and implementing the requirements of the permit and conducts periodic inspections of permitted facilities, where potential problems with design or management practices might be identified. If violations of the permit do occur, the Department will take appropriate action under the

water quality act (Section 75-5-617, MCA). Enforcement sanctions for violations of the permit include injunctions, civil and administrative penalties, and cleanup orders.

25. Cumulative Effects: The issuance of this individual MGWPCS discharge permit would not have cumulative effects because the permit prohibits pollution and degradation of state waters.

26. Preferred Action Alternative and Rationale: The preferred action is to issue the individual MGWPCS discharge permit. This action is preferred because the permit provides a regulatory mechanism for protecting ground water quality by applying effluent limits and monitoring requirements to the discharged wastewater.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Rationale for Recommendation:

27. Public Involvement: A 30-day public comment period will be from July 27 through August 26, 2009. A public hearing is not scheduled.

28. Persons and agencies consulted in the preparation of this analysis:
Montana Natural Heritage Program

EA Checklist Prepared By:

Rebecca Ridenour July 15, 2009

Approved By:

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Jenny Chambers, Chief Date
Water Protection Bureau