

DEPARTMENT OF ENVIRONMENTAL QUALITY  
PERMITTING AND COMPLIANCE DIVISION  
ENVIRONMENTAL MANAGEMENT BUREAU



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June 30, 1998

RECEIVED

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ENVIRONMENTAL  
QUALITY COUNCIL

Dear Reader:

Enclosed for your review is an Environmental Assessment (EA) prepared by the Department of Environmental Quality- Hard Rock Program. The EA evaluates a proposal by Minerals Technologies, Inc. for the Regal Mine in Madison County. The proposal defines (a) a limited lateral mine pit expansion and (b) consolidation of Operating Permits 00013 and 13A. The proposed mine expansion plan would increase the total mine disturbance by 13 acres.

Public comment on this EA will be received by the Hard Rock Program until 5:00 p.m. July 22, 1998. Comments should be about the adequacy of the EA in assessing issues, new information not considered that may influence the analysis, and clarification. Comments should be specific. The Department will use these comments, the EA, and the application to make a final decision on the application. The decision may be to approve the proposal, deny the proposal or approve with modifications.

Written comments should be directed to:

Laura Kuzel  
Department of Environmental Quality  
Hard Rock Program  
PO Box 200901  
Helena, MT 59620-0901

Thank you for your time and consideration. Please call me at 406-444-1967 if you have any questions or desire to record verbal comments.

Sincerely,

A handwritten signature in cursive script that reads "Charles D. Freshman".

Charles D. Freshman  
Mining Engineer  
Hard Rock Program  
Permitting and Compliance Division

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Enclosure

## CHECKLIST ENVIRONMENTAL ASSESSMENT

**COMPANY NAME:** Minerals Technologies, Inc.

**PROJECT:** Regal Mine

**LOCATION:** T8S, R7W, Section 2, approximately 11 miles east of Dillon, Montana on the Sweetwater Road. Milling is done at the Barretts Mill, 8 miles south of Dillon

**COUNTY:** Madison, Montana

**PROPERTY OWNERSHIP:**  Federal  State  Private

**TYPE AND PURPOSE OF ACTION:**

This proposal is for a small mine pit expansion to provide a continuous supply of talc ore for the mill while the Department and the company proceed with it's review and environmental analysis of the larger Life of Mine Plan. This proposal would consolidate Operating Permits 00013 (1972) and 13A (1993) into one Permit, 00013.

**Proposed Plan:**

**Operational:** The company proposes to expand the existing open pit mine to the east along the talc deposit. Talc ore production would be range from 10,000 to 200,000 tons annually, depending on market conditions. The waste rock dump would be enlarged as combination valley and sidehill fill by haul truck end-dumping. The dump would be enlarged from the existing 1.5 million tons to approximately 5.5 million tons. The Sweetwater Road would be realigned to the east around the expanded pit perimeter. The proposed mine expansion plan would increase the total disturbance form 66 to 80 acres, approximately 14 acres.

**Reclamation:** At the end of this stage of mining, an open pit approximately 21 acres in size would remain. Reclamation of the pit would include placing soil to a depth of 24 inches and revegetation of the accessible pit benches and pit floor. With the exception of the waste rock dump, the open pit, and the relocated Sweetwater Road, the remainder of the site would be returned to near original topography and would be reclaimed at the end of mining. The waste rock dump would be graded and covered with 24 inches of topsoil and revegetated. Benches in the open pit and other disturbed areas would also be covered with 24 inches of topsoil and seeded.

Previous Environmental Assessments were completed by the Department of State Lands on April 6, 1977 and April 8, 1993 for this mine site. Each proposal was determined to have no significant environmental impacts.

N = Not present or No Impact will occur.

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

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?	[Y] The open pit would remain following mine closure that is unlike the premining topography. The accessible pit benches and pit floor would receive soil and vegetation established. The waste rock dump would permanently fill the upper end of the draw. The waste dump slope would be regraded to a ratio of 3 feet horizontal to 1 foot vertical to match the nearby landforms. The slope length would be long and uninterrupted (475 feet) and could be susceptible to erosion. The Department would require a revised waste dump slope design that maintains the 3H:1V slope and adds a 25-foot wide bench to reduce erosion.
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] Total depth of the pit would be 120 feet to the 6,380 elevation, near the static water table level. The pit would not extend into groundwater and no springs or streams would be affected. The Department would require that the water resources monitoring plan be submitted and approved before the mining company could proceed with this expansion.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N]

### IMPACTS ON THE PHYSICAL ENVIRONMENT

4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N]
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N]
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]
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N]
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?	[Y] The expanded open pit, the waste rock dump and the re-aligned Sweetwater Road would be topographic changes. The waste rock dump reclaimed to 3:1 slopes reduces aesthetic impact. The area is foothills and the topographic impact is not considered significant in relation to the open setting and varied topography of the region.
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?	[N]
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	

### IMPACTS ON THE HUMAN POPULATION

11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[Y] The proposed Sweetwater Road realignment would be close to the pit edge and would have a sharp bend. The Department would require the road be moved further east away from the pit edge. The road would be constructed to Madison County road construction standards.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N]
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] Existing mine personnel from Barretts' Treasure Mine and/or local contractors would be used (less than 15 employees).
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] The existing tax base would continue as a result of this action.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[Y] Ore hauling truck traffic would be variable, from approximately one trip per day, to a maximum of 20 trips per day. Minerals Technologies, Inc. has agreed to improvements along the haul route including funding options and maintenance with Beaverhead and Madison County. Sweetwater Garnet and Dillon Vermiculite are other mining companies using the Sweetwater road.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N]

## IMPACTS ON THE HUMAN POPULATION

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]
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. 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.	[Y] The mining activity is regulated by the Montana Metal Mine Reclamation Act (Title 82, Part 4).
22. PRIVATE PROPERTY IMPACTS: Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	[N]
23. PRIVATE PROPERTY IMPACTS: 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.	[N]
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

25. Alternatives Considered:

No Action: The mining would cease in two years. The waste rock dump would remain at the approximate size (19 acres) as it is now. The Sweetwater Road would remain in its present location. The pit would remain at approximately 15 acres.

Approval: Approve the company's proposed plan.

Approval with modifications: Approve the companies proposed plan with the Department modifications: (1) the water resources monitoring plans must be in place to produce baseline conditions for analyzing the Life of Mine plan and monitor any unexpected effects that this proposal may generate, (2) the company must submit a revised waste dump slope design that has a 3H:1V slope and includes a 25-foot wide bench to reduce erosion, and (3) Sweetwater road must be located further east from the pit rim than proposed.

26. Public Involvement: A three week public comment period is planned upon release of this EA.

27. Other Governmental Agencies with Jurisdiction: none
28. Magnitude and Significance of Potential Impacts: Impacts to soils and vegetation would be temporary. Disturbances would be reclaimed at the end of mine life. An open pit would remain permanently. These impacts are considered insignificant.
29. Cumulative Effects: The Department is currently reviewing a life-of-mine plan that proposes a much larger pit that would extend into groundwater. After closure a pit lake would remain in the bottom of the 36 acre open pit. The waste dump would also be enlarged to contain 19 million tons and cover an area of 46 acres. The total disturbed area would be 107 acres. A separate environmental document would be produced for the Life-of-Mine plan and would analyze issues such as pit lake water quality and impacts to area spring flow.

There would be additional traffic on the Sweetwater Road by Sweetwater Garnet and possibly Dillon Vermiculite. Dillon Vermiculite has applied for an Operating Permit.

**Recommendation for Further Environmental Analysis:**

EIS     More Detailed EA     No Further Analysis.

**EA Checklist Prepared by:** Laura Kuzel, Charles Freshman, Joe Gurrieri, and Bob Winegar, **Reviewed By:** Greg Hallsten and Nancy Johnson

**Approved By:**

Robert C. Winegar  
Signature

6/30/98  
Date

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