



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN

DEPARTMENT OF NATURAL RESOURCES

LANSING



REBECCA A. HUMPHRIES
DIRECTOR

December 11, 2007

TO: Rebecca A. Humphries, Director

Information: Natural Resources Commission (NRC)

Transaction: One Mining and Reclamation Plan pursuant to Metallic Mineral Lease M602 in Marquette County; Executive Summary located at http://www.michigan.gov/documents/dnr/MiningandReclamationPlan_186442_7.pdf

Authority: Part 5, Department of Natural Resources, Section 502(3), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Applicant: Kennecott Eagle Minerals Company (Kennecott), Marquette, Michigan.

Jurisdiction: Department of Natural Resources (DNR) State Mineral Ownership at ore body.

Surface Description: Ore body lies in the NE ¼ of SE ¼ of NW ¼ and the SE ¼ of NE ¼ NW ¼ of Section 11 and proposed mine entrance lies in the SW ¼ of NW ¼ of Section 12 T50N, R29W, Michigamme Township, Marquette County.

Requirements: The Mining and Reclamation Plan sets forth Kennecott's plan of development in building, operating, and restoring the proposed mining site pursuant to Metallic Mineral Lease M602.

Notice: This item appeared on the January 29, 2007 DNR Business Calendar and was noticed and available for comment and information at a series of public meetings September 10, 11, 12, 13, and 19, 2007. It was discussed and available for comment at the November 8, 2007 and December 6, 2007 NRC meetings. It is eligible for approval on January 10, 2008.

NATURAL RESOURCES COMMISSION

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Recommendation: The DNR replied to Kennecott on December 7, 2007 with additional questions and requested clarifications of the proposed Mining and Reclamation Plan (enclosed). The DNR anticipates a response from Kennecott by December 14, 2007. Recommend approval of the Mining and Reclamation plan pending a satisfactory response, which adequately addresses the DNR's questions.

Lynne M. Boyd, Chief
Forest, Mineral and Fire Management

Douglas A. Reeves, Acting Chief
Wildlife

Kelley D. Smith, Chief
Fisheries

Arminda S. Koch
Resource Management Deputy

I approve the staff recommendation.

Rebecca A. Humphries
Director

Approval Date



STATE OF MICHIGAN

JENNIFER M. GRANHOLM
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LANSING

REBECCA A. HUMPHRIES
DIRECTOR

December 7, 2007

Mr. Jonathon Cherry, P.E.
Kennecott Eagle Minerals Company
1004 Harbor Hill Drive, Suite 103
Marquette, MI 49855

Dear Mr. Cherry:

The Department of Natural Resources (Department) has reviewed the comments received as a result of the public hearings, those provided directly to the Department, and those received from Kennecott on October 17, 2007. In addition, we have compared these and the Department's original comments on Kennecott's Mining and Reclamation Plan (MRP) with the conditions required in the Department of Environmental Quality's Part 632 draft mining permit.

As a result, additional questions have developed, and additional concerns have been expressed over several aspects of the MRP. The Department requires clarification about the following elements of the MRP:

- Kennecott has maintained that the proposed location for the portal and surface facility is the best from a resource, operations, and safety perspective. The Department has agreed, based on the information it has, that the proposed location is preferred. However, Kennecott has not provided specific detail to support these claims. Please provide the specific rationale and data to support why the proposed location for the surface facility and portal are superior to other available options.
- Kennecott has indicated they will develop a plan for subsidence monitoring. The metallic mining lease requires the lessee to demonstrate that mining is conducted in a manner which will prevent slumping and heaving. As such, the Department requires the plan for subsidence monitoring to be provided as part of the MRP. Please provide details on how Kennecott will monitor for surface and subsurface subsidence, including the frequency and sensitivity of the proposed method.

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- Kennecott has indicated they have developed a plan for response to a leak in the TDRSA, but the MRP and information included in Section 8 of the Mining Permit Application do not address a response to a leak in the TDRSA. Please provide details on how Kennecott will respond to the discovery of a leak in the TDRSA, including the actions to be taken to identify the source of the leak, methods to be used to repair the leak, operational contingencies during the period of leak repair, and analysis of causes of the leak to preclude possible future leaks.
- Kennecott has stated they will develop a Mine Groundwater Assessment Plan that will provide a response to inflow rates greater than 300 gallons per minute. Please identify how Kennecott will respond to sustained ground water flows greater than 300 gallons per minute, including operational methods to handle increased water flow, procedures to be used to reduce flow rates below 300 gallons per minute, and operational contingencies during periods of water flow above 300 gallons per minute.
- The COSA storage area and truck wash area contain impermeable surfaces that are not proposed to be underlain by secondary containment. Please identify the plan of inspection of the impermeable surfaces, to assure they are free from cracks and penetrations and an operational program to assure that collected fluids are kept to a minimum volume and remain on the impervious surfaces for a minimum period of time.
- While existing soil parameters are discussed in Exhibit A, there is no discussion of the effect on the soils of stockpiling them for extended periods of time. The Department's experience suggests that soils, which have been moved and stored for an extended period, will experience changes to their pH and fertility. The topsoil in this area is only a few inches thick. Successfully segregating thin topsoil over a large area will be dependent on the methods used. Please provide information discussing the changes expected in the stored topsoil, and discuss the means whereby Kennecott will successfully segregate and re-spread the topsoil. Please include an expected plan of fertilization and augmentation necessary to achieve a topsoil thickness and fertility commensurate with pre-construction conditions.
- Kennecott stated that it has modified its plan of abandonment for the portal to include placing boulders below the final grade level of the exterior of the portal plug to prevent access to the portal plug. This requirement will be incorporated into any approval of the MRP.

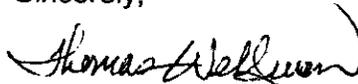
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The Department has also considered the comments referenced above with respect to the proposed Surface Use Lease. Please see enclosed draft Surface Use Lease and note the addition of paragraphs 4.A.4. and 11.J. Please also note that Paragraph 3 identifies the Lessee representative and alternate who are authorized to make decisions regarding the maintenance and operation of the Premises for the Lessee. Please provide the names of the Lessee representative and alternate. Finally, please note on page 8, the lease identifies the name and address to be used when sending notifications to Kennecott. Please provide this information in your response to the Department.

As discussed during last night's Natural Resources Commission (NRC) meeting, there is a narrow window of time available to provide the information requested above to the NRC and Director, in time for the January NRC meeting. Please provide this information by **December 14, 2007**. My return address is DNR, Forest, Mineral and Fire Management, P.O. Box 30452, Lansing, MI 48909-7952.

If you have any questions or need more information, please contact me.

Sincerely,



Thomas Wellman, Manager
Mineral and Land Management Section
Forest, Mineral and Fire Management
517-373-7666

Enclosure

cc: Mr. Harold Fitch, DEQ
Ms. Lynne Boyd, DNR
Ms. Debbie Begalle, DNR
Mr. William Brondyke, DNR
Mr. Milt Gere, DNR