



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



C. HEIDI GREETHER  
DIRECTOR

December 14, 2018

Mr. Sylvain Collard, Project Manager  
Copperwood Resources Inc.  
310 US Highway 2  
Wakefield, Michigan 49968

Dear Mr. Collard:

**SUBJECT: Copperwood Mine - Mining Permit Amendment - MP 01 2012  
Final Decision**

The Department of Environmental Quality (DEQ) notified Copperwood Resources, Inc. (Copperwood) on September 25, 2018 of the proposed decision to grant Copperwood's request to amend Mining Permit MP 01 2012. Upon review and consideration of comments received during the October 24, 2018 public hearing and subsequent written comment period regarding the proposed decision, the DEQ is hereby issuing a final decision to approve the amendment request.

In accordance with Rule 425.201(5) of Part 632, the department may impose terms and conditions in a mining permit, in addition to those specified in the application, that are necessary to implement the rules and statute. Consistent with the proposed decision, the following special permit conditions are hereby in effect as of the date of this letter:

**K30A.** A subsidence monitoring plan that is a revision of the plan referenced in Special Permit condition K30 shall be submitted to the DEQ for approval prior to the start of mining operations. The revised plan shall take into account changes in the mine development plan as specified in the Mining Permit Application Amendment, March 2018.

**K31A.** A plan to conduct confirmation baseline sampling prior to the start of mining operations shall be submitted to the DEQ for approval.

**O13A.** The outdoor ore stockpile area shall be reclaimed and area regraded to conform to the reclamation grading plan in accordance with the approved Reclamation Plan and Special Permit Conditions O-1, 2, 7, 11, and 13. The geomembrane liner shall be removed and disposed of at a local landfill in accordance with applicable solid waste regulations.

**O14A.** Infrastructure constructed as part of the make up water supply shall be reclaimed as approved by the United States Army Corps of Engineers (USACE)

and the DEQ, unless the permittee enters into an agreement with another party in which a property end use is established that includes beneficial use of the water supply infrastructure, and the party assumes the responsibilities for maintaining the system.

O15A. Infrastructure constructed in the mining area as part of the power supply for the mine shall be removed once it is no longer necessary, unless the permittee enters into an agreement with another party in which a property end use is established that includes beneficial use of the electrical service.

Special Permit Condition O5 shall be amended as follows:

O5A. The underground workings, box cut opening, and any other mine openings shall be reclaimed to prevent adverse impacts from migration of fluids from the underground openings upward to the surface, which shall include grouting of the historic boreholes as they are encountered during mining operations and engineered bulkhead(s) placement within the underground workings that would effectively reduce head pressure to minimize migration of fluids through historical boreholes and the box cut. These measures are in response to the prediction that the hydraulic head in the mine will be above ground surface above the northern portion of the mine. The permittee may demonstrate through additional data that bulkhead(s) within the mine workings in addition to the box cut are not required to prevent the discharge of post mining fluids from the mine workings to ground surface. The mined area shall be flooded with fresh water as soon as practical after mining is completed.

In addition, as Copperwood has agreed, the following shall be implemented as part of the site-wide environmental monitoring plan:

- The Mining Permit requires subsidence monitoring during the post-closure monitoring period and an additional proposed condition requires approval an updated plan prior to operations. The original plan included visual monitoring at the surface. Visual monitoring shall include monitoring the surface above the underground workings for leakage to coincide with the surface subsidence monitoring.
- The Mining Permit requires DEQ approval of TDF plans and specifications prior to construction, and the development of an operations plan for the TDF that addresses all components of the final design. These plans shall include monitoring of TDF non-contact water for indicators of leakage.

R 425.301(1) under Part 632 stipulates that a mining permit shall not be effective until the permittee establishes financial assurance in accordance with the mining permit as issued. The cost estimates for financial assurance that were submitted as part of the amendment application do not include costs associated with the additional and

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amended permit conditions imposed in the final decision. Therefore, Copperwood is required to submit for approval an updated itemized list of reclamation and postclosure monitoring activities and associated cost estimates to include the requirements in the additional and amended permit conditions. The cost estimates currently include expected salvage value of equipment. While those values could be applied to closure costs, please provide an explanation of how Copperwood proposes to ensure that the State of Michigan would be able to apply the salvage values to reclamation should the DEQ be required to carry out closure activities at the mine.

Thank you for your cooperation and attention in this regard. If you have any questions, please contact Melanie Humphrey at 906-250-7564, [humphreym@michigan.gov](mailto:humphreym@michigan.gov), or you may contact me.

Sincerely,



Harold R. Fitch, Director  
Oil, Gas, and Minerals Division  
Department of Environmental Quality  
517-284-6823

cc: Mr. Rick Henderson, DEQ  
Mr. Adam Wygant, DEQ  
Ms. Melanie Humphrey, DEQ