

US EPA ARCHIVE DOCUMENT

Frequently Asked Questions About Environmental Aspects of the Kennecott Eagle Mine Project



What is the federal role in regulating mining projects such as this one?

Mining projects tend to be complicated and have many governmental interests. Federal, tribal, state and local government involvement in a mining project depends on the specific circumstances associated with each phase of a project. EPA's overarching role is to ensure that all federal laws and regulations are complied with during the entire project period. EPA is also responsible for consulting with federally recognized Indian tribes where EPA actions can potentially affect tribal lands or resources.

What is EPA's role in regulating this mining project?

EPA is directly responsible for federal regulatory programs that have not been delegated to a state. In this case, EPA has direct responsibility for implementation of the Underground Injection Control program – often called the UIC program – under the Safe Drinking Water Act since it has not been delegated to the state of Michigan.

EPA also retains an oversight role where the federal regulatory program has been delegated to the state, even though a state is responsible for issuing permits and complying with federal regulatory requirements. In this case, the state of Michigan is delegated authority to issue permits under the Clean Air Act. Michigan issued an air pollution control permit to Kennecott on Dec. 14, 2007. Michigan has other non-federal laws relating to mining projects, but EPA does not have an oversight role under those state laws.

What is the Underground Injection Control program?

The UIC program is part of the federal Safe Drinking Water Act and is designed to protect underground sources of drinking water. The program regulates the underground injection of waste, and its regulations require that a facility be authorized to dispose of waste underground.

Why is the company allowed to do this?

A UIC permit can be issued only if EPA is convinced that the activity meets the requirements of applicable Federal laws. UIC permits contain performance requirements, such as meeting all Federal drinking water standards, and enforcement action is taken if a company does not comply with its permit.

Does Kennecott need a permit or permits from EPA for any part of this mining project?

Yes. Kennecott needs a federal UIC permit for portions of this project. There are actually three parts of the project that involve disposal of fluids underground:

- The planned septic system for the disposal of sanitary waste. Disposal of this waste does not require an individual permit, but is authorized as long as the company complies with federal regulations.
- The treated water infiltration system – sometimes called the TWIS – for which an individual UIC permit is required. The proposed treated water infiltration system is a large drainfield for the disposal of treated wastewater from the mining operation. EPA calls this a Class V industrial wastewater disposal well. The fluids must be treated to meet or be better than drinking water standards before they can be discharged through the infiltration system. Kennecott applied for this permit, and EPA is reviewing the application.
- Kennecott may need a second UIC permit from EPA if it injects fluid into the mine as part of closing the mine. The company needs to submit more information about this proposal before we make a decision. If EPA determines a permit is necessary, the company will have to apply for and receive a permit.

What is the process for reaching a permit decision?

EPA staff reviews all information submitted by the permit applicant to determine whether the proposed underground disposal facility meets the requirements of the regulations. (These regulations can be found in Title 40 of the Code of Federal Regulations Parts 124, 144 and 146). We consider the siting, construction, operation and maintenance of the proposed system in making this determination. We may ask an applicant for further information in order to determine if a permit should be issued. If the application is determined to meet the regulatory criteria, EPA will issue a draft permit for public comment. If the application does not demonstrate compliance with the criteria, EPA will propose denying the permit. In either case, the draft decision will be issued for public notice and comment. Depending on the degree of public interest, a public hearing may be held. We specifically seek any information that the public may have that was not available during the review process. All comments received during the public comment period are considered carefully and a response is prepared. EPA then issues a final decision, based on all the information available.

EPA Headquarters website has a discussion of the permitting process in the Technical Program Overview: Underground Injection Control Regulations

http://www.epa.gov/safewater/uic/pdfs/techguide_uic_tech_overview_uic_regs.pdf beginning on page 17.

What is being done to prevent pollution of ground water?

Preventing pollution of ground water is the responsibility of both federal and state agencies. EPA is reviewing the Kennecott permit application for an Underground Injection Control permit under the Safe Drinking Water Act to ensure that the proposed waste disposal system will protect underground sources of drinking water. Any UIC permit would require that wastewater is treated to meet or be better than drinking water standards and would require monitoring to ensure this. In addition, Michigan Department of Environmental Quality has issued a ground water discharge permit under the Michigan Natural Resources and Environmental Protection Act, which includes conditions relating to ground water protection.

The water in the aquifer is cleaner than the water Kennecott plans to put back in, how is this NOT contamination?

The Safe Drinking Water Act only requires that contaminants in drinking water be below concentrations for which there are known human health effects. This is not a non-degradation standard. If issued, a UIC permit would require the company to meet all Federal drinking water standards before being allowed to dispose of its water using the TWIS.

What is being done to prevent pollution of surface water?

Preventing pollution of surface waters is regulated under the National Pollution Discharge Elimination System program, which is part of the Clean Water Act. MDEQ has authority to implement this federal statute. The company plans to treat all wastewater and pump it into the ground. An NPDES permit is required only if there is an immediate connection between the discharge and surface waters. MDEQ determined that an NPDES permit was not required. EPA reviewed this determination and agreed.

Doesn't the ground water under the infiltration system go into area rivers?

Yes. Treated water from the system is expected to move downward and join with local ground water, which moves generally to the northeast. Some of this ground water eventually emerges as springs along the north slope of the Yellow Dog Plains. These springs serve as the headwaters to some of the local rivers.

What happens if they are unable to pump the amount of water they say they can and it gets into the Yellow Dog River?

If a UIC permit is issued, it will have volume (rate) limits based on the available information. It will also require monitoring of the groundwater elevations and place limits on how high the groundwater table can rise. If Kennecott is unable to comply with these limits, it will have to find an alternate method to dispose of its water.

What about impacts on endangered species and the coaster brook trout?

EPA consults with U.S. Fish and Wildlife Service on this issue. F&WS advises us about any potential impacts on threatened or endangered species. F&WS has issued a determination that the coaster brook trout is not a separate species in need of special protection.

How does the National Historic Preservation Act apply to this project?

Region 5 UIC staff members are working with EPA's Office of Federal Facilities and National Historic Preservation Act experts to determine how the act applies to this project. We consulted with the Keweenaw Bay Indian Community as well as other tribes and have received information concerning traditional cultural properties in the area. Kennecott has also submitted a report on the subject. EPA will consider these reports and any other information received from the public. We will also consult with the Michigan

State Historic Preservation Office. The requirements of the NHPA must be met in order for a final UIC permit to be issued.

Will Kennecott be required to reclaim the site of the treated water infiltration system?

Yes. If a permit is issued, Kennecott will be required to remove the system completely and dispose of its parts (e.g. pipes) properly, as well as restore the surface and replant vegetation.

What financial assurances must be made to ensure that sufficient money has been set aside to properly close the well?

If a UIC permit is issued, EPA will require Kennecott to demonstrate that it has set aside adequate funds to remove the treated water infiltration system properly and restore the area. In addition, Kennecott has provided a \$17 million letter of credit to the state of Michigan for site reclamation.

What recourse does EPA have if Kennecott provides that financial assurance and later takes it back?

Kennecott cannot “take back” the financial assurance. All UIC permits require that the permit holder *maintain* financial responsibility and resources to close the underground injection well in accordance with federal regulations. Permit holders cannot substitute an alternative demonstration of financial responsibility without the approval of the director of the EPA Region 5 Water Division. The director may also require the permit holder to update the financial assurance at any time. If at any time the operator does not provide adequate financial assurance, EPA can terminate the permit.

How can I get a copy of the information submitted by Kennecott?

That information is available at <http://www.epa.gov/region5/water/uic/kennecott>. If you do not have access to the Internet, contact Ross Micham at 312-886-4237 or write to him at EPA Region 5 (WU-16J), 77 W. Jackson Blvd., Chicago, IL 60604-3590.

What is the timetable for the EPA decision process?

Assuming there is no need for further information, we hope to have a draft decision by the end of this year, followed by a public comment period. EPA cannot make a final determination until we analyze all public comments and finalize our responses.

Will the public have an opportunity to comment on EPA’s proposed decision?

Yes. All UIC permit actions require a public comment period. A notice of the proposed decision will be sent to interested parties and put on the UIC Web site. A public hearing will be held during the comment period. This hearing will be announced in a local newspaper and on the EPA Web site. Both oral and written comments can be submitted during the public hearing and comment period.

When is EPA taking comments on the UIC permit decision?

The dates for reviewing the decision and providing comments will be announced on EPA's Web site and through the local media. If you want us to notify you directly, please send your mailing address or email address to Ross Micham via the Web page, by e-mail to micham.ross@epa.gov, by calling him at 312-886-4237 or by writing to him at the address above.

How many wells like this one has EPA approved? Have there been other systems like this?

EPA Region 5 (based in Chicago) has never issued a permit for this type of Class V well. Other EPA regions have issued permits for disposal facilities with large drainfields.

Has there been an independent (third party) hydrologic study of the area?

No. Applicants for permits are required to provide this information. However, EPA hired an independent contractor to review the permit application and the additional information provided by Kennecott. The contractor's report was the basis for EPA's request for Kennecott to provide additional information. The contractor will review reports submitted by other parties related to this permit application.

Do we consider the cumulative impacts of this on the other aquifers in the area (or the other projects in the area?)

We are not aware of any nearby injection operations that will affect the underground source of drinking water.

How often will EPA monitor the data?

If a UIC permit is issued, it will require continuous monitoring of certain indicator parameters and periodic monitoring of the injectate composition and ground water quality and elevation. Monitoring results must be submitted to EPA monthly and will be reviewed by EPA staff. If a draft permit is issued, the public will have the opportunity to comment on the specific monitoring requirements.

How will the mine deal with extreme precipitation events?

The permit application indicates that the facility's storage basins have been designed for peak runoff events during periods of combined rapid snow melt and spring rains. The size of these basins is based on the maximum annual precipitation for the period of record, 1948 to 2004.

Can EPA require them to monitor hydrocarbons?

Yes. A UIC permit, if issued, can require this.

How are older adults as a vulnerable group protected?

EPA sets values for national drinking water standards – known as Maximum Contaminant Levels – to protect the health of everybody, including vulnerable groups

like children and the elderly. For more information on setting standards for safe drinking water, visit www.epa.gov/safewater/standard/setting.html.

What is the status of EPA's National Historic Preservation Act review? Will the public have the opportunity to provide input?

We are still engaged in the NHPA process. The public will have an opportunity to provide input on NHPA issues following the procedures prescribed in the NHPA regulations. NHPA regulations require EPA to consider the project as a whole when looking at the potential effects of a project on historic properties eligible for listing in the *National Register of Historic Places*. For more information, visit www.nps.gov/nr.

Is EPA considering what they can or can't do if the well fails?

UIC permits have requirements for corrective action if there is contamination of any underground source of drinking water. The regulations allow EPA to order actions necessary to prevent violations of any primary drinking water standard and to take enforcement action when appropriate. (These regulations can be found in 40 CFR Section 144.12.) The Kennecott mine permit application indicates that the contact water basins are designed to handle peak snow melt and rain events that exceed the 100-year, 24-hour precipitation event. They are designed to hold 14 days of mine drainage water. In the event that runoff exceeds the capacity of these basins, excess water will be routed to the temporary development rock storage area and can also be pumped into vacant underground mine workings in an emergency.