STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

NATIONAL WILDLIFE FEDERATION,
KEWEENAW BAY INDIAN COMMUNITY,
YELLOW DOG WATERSHED PRESERVE, INC.
and HURON MOUNTAIN CLUB,

Petitioners/Appellants,

vs.

Case No. 10-264-AA
Hon. Donald E. Shelton

MICHIGAN DEPARTMENT OF NATURAL
RESOURCES AND ENVIRONMENT and
KENNECOTT EAGLE MINERALS COMPANY,

Respondents/Appellees.

/

Bruce T. Wallace (P24148)
William J. Stapleton (P38339)
Angela L. Jackson (P53930)
Hooper, Hathaway, Price, Beuche & Wallace
126 South Main St.
Ann Arbor, MI 48104-1945
(734) 662-4426
Counsel for National Wildlife Federation, Huron Mountain Club and Yellow Dog Watershed Preserve, Inc.

F. Michelle Halley (P62637)
National Wildlife Federation
P.O. Box 914
Marquette, MI 49855
(906) 361-0520
Co-Counsel for National Wildlife Federation and Yellow Dog Watershed Preserve, Inc.

Eric J. Eggan (P32368)
Joseph M. Polito (P25313)
Honigman, Miller, Schwartz and Cohn LLP
222 North Washington Square, Suite 400
Lansing, MI 48933-1800
(517) 377-0736
Counsel for Keweenaw Bay Indian Community

John R. Baker (P10366)
107 Beartown Road
Baraga, MI 49908
(906) 353-4106
Counsel for Keweenaw Bay Indian Community

Rodrick W. Lewis (P43968)
Christopher J. Predko (P56040)
Scott M. Watson (P70185)
Warner Norcross & Judd LLP
900 Fifth Third Center, 111 Lyon Street, NW
Grand Rapids, MI 49503
(616) 752-2500
Counsel for Kennecott Eagle Minerals Company

Robert P. Reichel (P31878)
Assistant Attorney General
6th Floor, Williams Building
525 West Ottawa Street
P.O. Box 30755
Lansing, MI 48909
(517) 373 7540
Counsel for Michigan Department of Natural Resources and Environment

/

PETITIONERS' BRIEF IN SUPPORT OF PETITION FOR REVIEW (NONFERROUS METALLIC MINING PERMIT - PART 632)

THIS APPEAL INVOLVES A RULING THAT A PROVISION OF THE CONSTITUTION, A STATUTE, RULE OR REGULATION, OR OTHER STATE GOVERNMENTAL ACTION IS INVALID
ORAL ARGUMENT REQUESTED

Table of Contents

Page

Index of Authorities

Cases **Page**

Statutes

Federal Regulations

Mich Admin Code

Other Authorities

STATEMENT OF THE BASIS OF JURISDICTION

The jurisdiction of the Court over this contested case appeal is provided by Const 1963, art 6, § 13 and MCR 7.105. MCL 24.304(1) provides that a petition for review must be filed "within 60 days after the date of mailing notice of the final decision or order of the agency." The Michigan Department of Natural Resources and Environment issued its Final Determination and Order in the contested case on January 14, 2010, and Petitioners timely filed their Petition for Review in this Court on March 12, 2010.

STATEMENT OF QUESTIONS

1. Whether Kennecott failed to establish that its proposed mine will not pollute, impair, or destroy natural resources.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

2. Whether Kennecott's Mining Permit Application included an Environmental Impact Assessment addressing the affected area and Eagle Rock in compliance with MCL 324.63201, *et seq* and R 425.201, *et seq*.

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

3. Whether Kennecott failed to assess Eagle Rock in its environmental impact assessment as required by MCL 324.63205(2)(b) and R 425.202.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

4. Whether Kennecott failed to submit a mining and reclamation plan that reasonably minimizes impacts to Eagle Rock as required by MCL 324.63205(2)(c).

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

5. Whether Kennecott submitted a Mining Permit Application containing the contingency plans required by MCL 324.63201, *et seq* and R 425.201, *et seq*.

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

6. Whether Kennecott submitted a Mining Permit Application containing a cumulative impacts analysis in compliance with the requirements of MCL 324.63201, *et seq* and R 425.201, *et seq*.

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

7. Whether Kennecott submitted a Mining Permit Application demonstrating prevention of acid rock drainage in compliance with MCL 324.63201, *et seq* and R 425.201, *et seq*.

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

8. Whether Kennecott submitted a Mining Permit Application demonstrating that the mine will not contaminate surface waters.

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

9. Whether Kennecott filed a Mining Application in compliance with the Clean Water Act and the Ground Water/Surface Interface monitoring requirements of R 425.406(4) and R 323.1098.

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

10. Whether Kennecott submitted a Mining Permit Application containing a reclamation and environmental protection plan for the affected area in compliance with MCL 324.63205(2)(c).

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

11. Whether Kennecott submitted a Mining Permit Application demonstrating that all methods, materials, and techniques proposed to be utilized are capable of accomplishing their stated objectives in protecting the environment in compliance with MCL 324.63205(2)(c)(ii).

Respondent Michigan Department of Natural Resources & Environment answered: "Yes."

Intervenor/Respondent Kennecott answered: "Yes."

Petitioners/Appellants answer: "No."

12. Whether the Final Determination and Order erroneously imposed the burden of proof regarding adverse environmental impacts on Petitioners when Part 632, MCL 324.63201, *et seq.*, plainly places that burden on the Applicant.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

13. Whether the Final Determination and Order incorporated factual and legal conclusions directly contradicted by the overwhelming preponderance of its own factual findings.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

14. Whether the conclusions set forth in the Final Determination and Order that Petitioners failed to establish a *prima facie* case is in direct conflict with its own Findings of Fact.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

15. Whether the activities permitted under the Mining Permit violate Michigan's Water Legacy Act, MCL 324.32721.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

16. Whether the proposed mine violates the Wetlands Protection Act set forth in Part 303 of NREPA.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

17. Whether the Administrative Law Judge committed procedural error in excluding Exhibit 11 to the *de bene esse* deposition of Dr. David Sainsbury from the record.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

18. Whether the Administrative Law Judge and the FDO employed an incorrect standard of review in the Contested Case, and whether the ALJ improperly admitted, and the FDO improperly relied upon, Kennecott's supplemental application materials.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

19. Whether Petitioners' procedural rights were violated in the Contested Case below.

Respondent Michigan Department of Natural Resources & Environment answered: "No."

Intervenor/Respondent Kennecott answered: "No."

Petitioners/Appellants answer: "Yes."

INTRODUCTION

This is an appeal from the Final Determination and Order ("FDO")[1] of the Michigan Department of Natural Resources and Environment ("MDNRE") upholding the issuance to Kennecott Eagle Minerals Company ("Kennecott") of the first permit granted under the provisions of Part 632 of Michigan's Natural Resources and Environmental Protection Act. MCL 324.63201 *et seq*. The Permit allows Kennecott to mine a 4 million ton "sulfide" ore body in the Upper Peninsula, which is located directly beneath the headwaters of the Salmon Trout River, a pristine trout stream originating in the Yellow Dog Plains and flowing to Lake Superior. (Attachment A)[2] The mine portal will be located at the base of Eagle Rock, a sacred place of worship for Petitioner Keweenaw Bay Indian Community.

The term "sulfide" mining refers to the fact that the ore to be mined consists of rock containing large quantities of sulfur and smaller quantities of valuable minerals. When exposed to air and water, this sulfide ore produces sulfuric acid which leaches toxic metals from the ore and releases them into the environment. This is commonly known as acid rock drainage ("ARD") and has occurred wherever sulfide mining has been conducted.

In the context of that history of environmental destruction, Kennecott's proposed Eagle Mine stands poised to combine, here in the Great Lakes system, elements of recent West Virginia and Utah mine disasters with the catastrophe of the Gulf oil spill. As oil is to the waters

[1] The FDO appears in the electronic record at TAB 118. The Administrative Law Judge's Proposal for Decision, which was adopted in its entirety by the FDO, appears in the electronic record at TAB 96. Petitioners note that the electronic record forwarded to the Court is not complete, missing, for example, Volume 41 of the transcript. Petitioners will seek, by stipulation or motion, to supply the missing portions.

[2] Exhibits A-G are attached to this Brief. Additional significant exhibits and transcript pages are set forth in the accompanying Appendices. All other record citations are to the electronic record.

of the Gulf of Mexico, sulfuric acid and heavy metals like nickel, copper and arsenic could be to Lake Superior if, as predicted, the proposed mine or treatment systems fail.

Part 632 was enacted specifically to address the extraordinary risks of environmental damage related to sulfide mining. The Michigan Legislature's introduction to Part 632 states:

> Nonferrous metallic sulfide deposits are different from the iron oxide ore deposits currently being mined in Michigan in that sulfide minerals may react, when exposed to air and water, to form acid rock drainage. If the mineral products and waste materials associated with nonferrous metallic sulfide mining operations are not properly managed and controlled, they can cause significant damage to the environment, impact human health, and degrade the quality of life of the impacted community. MCL 324.63202(c) (emphasis added).

In an attempt to prevent another chapter in the globally damaging history of sulfide mining, the Act requires the applicant to submit in its mining application a proposed mine plan that will not "pollute, impair or destroy natural resources." MCL 324.63205(11)(b). The applicant is required to disclose in detail the specific methods, materials, equipment and techniques to be utilized within the mining area itself. MCL 324.63205(2)(c)(i). Equally significant, in recognition of the geographically widespread consequences of sulfide mining, resulting from toxic ARD, the statute also requires the mining company to conduct and include in its application an Environmental Impact Assessment ("EIA"), which inventories and analyzes, over at least a two year period, all of the flora, fauna, and natural resources "outside the mining area" which have the "potential" to be affected by the mining operation. MCL 324.63205(2)(b); Michigan Administrative Code Rule 425.202. To avoid any ambiguities as to the breadth of the required EIA, the drafters defined the term "affected area" as:

> an area outside the mining area where the land surface, surface water, ground water or air resources are determined through an environmental impact assessment to be potentially affected by mining operations within the proposed mining area. (Emphasis added). MCL 324.63201(b)

The purpose of requiring a mining company to collect and provide, in advance, detailed natural resource information for the entire potentially affected area is twofold: 1) to enable the regulatory agency to assess the potential impacts to the specific lands and water bodies, plants, trees, wildlife and other relevant human-made features within that potentially affected area; and 2) to establish bench mark data as to species populations and health and natural resource qualities to monitor whether these resources are being degraded as the mining operation eventually proceeds. The EIA is the linchpin to assuring environmental protection against an initially ill-conceived mining plan, or later irresponsibly conducted mining operations.

Kennecott's application pointedly failed to define the area outside the mining area which could potentially be damaged by heavy metal bearing sulfuric acid discharges in the mine's effluent or deposit of toxic particulate matter from the mine's road dust and exhaust stack. There is no dispute that this particulate matter will be distributed over dozens of square miles beyond the mine and into Lake Superior. (Attachment B)

In its application, and to date, Kennecott has successfully ignored the "potentially" "affected area" requirement for the EIA. Contrary to thousands of pages of testimony and exhibits from experts for all parties, Kennecott persuaded the Administrative Law Judge ("ALJ") and the agency to exempt it from the "affected area" study requirement by effectively reading the word "potential" out of the statute, and declaring, against all logic and scientific data, that the mining operation would have "no adverse environmental effects outside the mine's fence line." (TAB 96, p. 005417) Instead of assessing and discussing the potential consequences of massive ore truck traffic in and out of the Yellow Dog Plains, the noise of drill and blast mining operations, the effects of toxic dust and mine exhaust and the potential escape of acid rock drainage – the original entire purpose for the statute – Kennecott argued, and the agency

accepted, that there would be no effects whatsoever, not even "potential" effects, from any of these phenomena beyond the immediate mine site.

Kennecott and the agency have also steadfastly refused to take into account the overwhelming concerns from experts on all sides of the contested case that the proposed mine, as designed, would be unstable and likely to collapse.

During the initial statutorily prescribed public comment period and in response to the public's scientifically documented concerns about the stability of the mine, which the agency unabashedly admitted it did not have the expertise to evaluate, MDEQ retained a leading industry expert to review the geotechnical portion of the application drafted by Kennecott's mine design consultants, Golder & Associates ("Golder"). This first MDEQ expert, Dr. David Sainsbury ("Sainsbury"), found Golder's conclusions about subsidence indefensible. (Attachment C)

Subsequently, MDEQ hired a second outside geotechnical expert, Dr. Wilson Blake ("Blake"). He too found that Petitioners' concerns were legitimate and that many of Dr. Sainsbury's specific criticisms remained completely unanswered. At the contested case hearing, Dr. Sainsbury testified by deposition and his devastating reports were entered into the record. Dr. Blake testified live and agreed with Sainsbury's criticisms. In addition, three nationally recognized experts presented by Petitioners, industry expert Jack Parker, and Drs. Marcia Bjornerud and Stanley Vitton, provided days of testimony corroborating, explaining and supporting the criticisms of Drs. Sainsbury and Blake, and the prediction of likely mine collapse, in detail. The overwhelming preponderance of the factual testimony, and indeed specific findings in the ALJ's Proposal For Decision ("PFD"), demonstrate that the Eagle Mine, as

designed, is likely to fail, with disastrous consequences for the mine workers and the environment.

Petitioners' industry-side expert, Jack Parker, provided perhaps the most compelling résumé of any expert to testify at trial. Parker, a former faculty member at Michigan Technological University and an industry consultant for decades, has personally inspected more than 500 mines.[3] According to the MDEQ's own expert, Parker's study of the geologic stresses in Michigan's Upper Peninsula, and the significance of those stresses for mine construction, remains the seminal work on the subject. MDEQ's expert voluntarily identified Mr. Parker as an "icon" in his field. (TAB 673, p. 050949; TAB 96 p. 005273) Parker testified unequivocally that the risk of collapse at the proposed Eagle Mine is "likely." (TAB 671, p. 050421) He underscored how human error in the mining industry is inevitable and requires explicit pre-planning, and he found such planning woefully lacking with respect to worker safety in the event of fires and other expectable emergencies in what he termed a "very, very poor" quality mining application by Kennecott. (TAB 706, p. 057879; See also, pp. 057880-057882)

In mining parlance, the roof of a mine over the excavated void is referred to as the "crown pillar," but it is not actually a pillar at all. It is merely the material that is not excavated between the top of the mined cavity and the surface. Kennecott's mine design does not include any actual pillars to support the roof. One of the risks of this method of mining is that the roof, or crown pillar, may subside or collapse. In this case, because the mine is located underneath the Salmon Trout River, the ground that would subside (i.e., sink) is the river bottom, which would lower the river at the surface. If the crown pillar were to collapse altogether, the river would be sucked all the way down into the mined cavity itself.

[3] Expert résumés appear in the Appendix I, dividers 66-75.

MDEQ's first expert, Dr. David Sainsbury, reported

> The analysis techniques used to assess the Eagle crown pillar stability do not reflect industry best practice…the hydrologic stability of the crown pillar has not been considered.… The conclusions made within the Eagle project mining permit application regarding crown pillar subsidence are not considered to be defensible.

(Attachment C) MDEQ's second expert, Dr. Wilson Blake, having accorded Mr. Parker "icon" status, explained why Parker's seminal studies of geologic stresses in the Upper Peninsula were of such great significance with respect to concerns about the Eagle Mine. Blake testified that consideration of regional geology is the "cornerstone" of designing a mine to prevent catastrophic collapse. (TAB 673, p. 05882) The problem that considering regional geology posed for Kennecott was the fact that nearby mines in the same regional geology had previously collapsed. The ALJ accepted and recited Mr. Parker's testimony on these points, and then, inexplicably, ultimately ignored these concerns in approving the mine permit.

Dr. Blake was hired by MDEQ specifically to review Dr. Sainsbury's work. Dr. Blake issued two reports which did in fact use milder language than Sainsbury, but Dr. Blake's testimony at the contested case hearing was similarly devastating to the proposed mine plan. He specifically confirmed Parker's opinion about the failure to analyze horizontal stresses in relation to the collapse of the nearby Athens mine. He testified that "to my knowledge there has been no investigation … and I don't think we have sufficient data to carry out a thorough investigation. … More data is needed." (TAB 673, p. 050940) He emphasized that "the effect of a horizontal *in situ* stress on the stability of the crown pillar [roof of the Eagle mine] is still unknown." (*Id*. p. 050950) He said that this critical question remained "a complete unknown" (*Id.*) and agreed that, even after final approval of the mining permit, we still have "zero information about the direction and magnitude of horizontal stress at the Eagle mine project." (*Id*., p. 050951)

And, despite the alarming preponderance of evidence, from both sides, that this mine is likely to collapse, both Kennecott's expert and MDEQ's mining team leader, Joseph Maki, conceded that Kennecott had presented no contingency plan for the potential of such a collapse. (TAB 681, pp. 052731-052733; TAB 698, p. 056176) Part 632, for obvious reasons, specifically requires such a contingency plan. MCL 324.63205(2)(d)

The ALJ accorded barely a paragraph out of 177 pages of his PFD to the scathing testimony and reports of MDEQ's own experts, Sainsbury and Blake, on the subject of mine stability (TAB 96, pp. 005271-005272), and said nothing about the omission of any contingency plan in the event of collapse. These inexplicable omissions alone require reversal, as the final agency ruling was required to be supported by "the whole record." MCL 24.306(d)

The ALJ did clearly understand and was troubled by the fact that the proposed mining operation would begin with heavy explosives at the base of Eagle Rock, a centuries old place of worship of the tribal Petitioner, and end with this religious site being fenced off from the tribe and the public for decades, if not permanently. The scheduled blasting will desecrate Eagle Rock and permanently ruin its use as a sacred site. These unrebutted facts on the record led the ALJ to hold that Kennecott had failed to comply with the Sulfide Mining Act's requirement that an applicant assess in its EIA the potential impact of its proposed mine on places of worship. Rule 425.202(2)(p) While upholding the issuance of the Permit, the ALJ specifically required that Kennecott relocate the access to the mine to a location that would not interfere with Eagle Rock. (TAB 96, p. 005413) Kennecott thereupon vehemently opposed the only part of the ALJ's ruling in Petitioners' favor, and the MDEQ responded by engaging in a series of procedural maneuvers which overturned the ALJ's findings and conclusions regarding the protection of Eagle Rock. This final ruling meant that Kennecott's mine application, termed

"indefensible" and "very, very poor" by experts on both sides, has now been approved in every single particular by the agency.

This Brief will give foremost attention to the following issues:

1. The predicted collapse of the mine underneath the Salmon Trout River bringing the pristine waters of the river in direct contact with the acid-generating sulfide ore beneath;

2. Kennecott's decision, with the agency's support, to ignore the requirement that it thoroughly study the "potential" effects of this mining operation over the entire "affected area" "outside of the mine area" and the significance of this refusal to comply with clear statutory and regulatory requirements. (MCL 324.63201(b); R 425.202; and

3. Kennecott's plan, again with agency approval, to blow up the base of the sacred Eagle Rock with explosives and fence off this place of worship from the Keweenaw Bay Indian Community members and the public.

4. The expected development and consequences of a toxic plume flowing downstream through the Salmon Trout River out into Lake Superior, even apart from crown pillar failure;

Numerous additional errors in the proceedings below necessarily will be addressed more briefly.

This Court will be able to invalidate the mining permit on the following narrow bases, among others, simply because the Permit application did not meet the requirements of Part 632 as required by MCL 324.63205:

1. The application did not include an EIA for the affected area that meets the requirements of MCL 324.63205(2)(b), R 425.202(1)(a) and R 425.202(2)(y);

2. The application did not include a reclamation and environmental protection plan for the affected area as defined in the Act, as required by MCL 324.63205(2)(c) and R 425.201(1)(d);

3. The application did not include information that demonstrates that all methods, materials and techniques proposed to be utilized are capable of accomplishing their stated objectives in protecting the environment, as required by MCL 324.63205(2)(c);

4. The application did not include a contingency plan meeting the requirements of MCL 324.63205(2)(d) and R 425.201(1)(e);

5. The application did not include an assessment of the potential impacts of mining operations on Eagle Rock as a place of worship as required by MCL 324.63205(2)(b) and R 425.202(2)(p), and also omitted any assessment of impacts on Keweenaw Bay Indian Community members' land uses at Eagle Rock and the surrounding area as required by MCL 324.63205(2)(b) and R 425.202(2)(x); and

6. The ALJ committed plain legal error by imposing the burden of proof regarding environmental "pollution, impairment and destruction" on Petitioners, when Part 632 plainly places that burden on the applicant, MCL 324.63205(3).

This appeal is not about whether there can be sulfide mining in Michigan. According to Kennecott, there are billions of dollars worth of nickel and copper to be extracted by "sulfide mining" methods in Michigan's Upper Peninsula. Under the carefully crafted sulfide mining statute the issues are where and how such mining can safely be conducted. It is essential that we get this right the first time, essential for Petitioners, for future mine employees, for both the Upper Peninsula's tourism and mining industries, and for the pristine environment which makes the Upper Peninsula the special place that it is in Michigan.

The concerns briefly highlighted in this introduction about the Eagle mine project are eerily familiar to those who follow the post-tragedy studies and investigations that occur in the aftermath of national disasters. The difference this time is, or can be, that nationally leading experts have probed the details of a proposed mine and identified issues which, if corrected in advance, can avoid disaster. Having said that, it is the intent of this Brief to adhere unfailingly to the written record developed prior to this appeal. Every significant fact required to support reversal of the Final Determination and Order, including substantial reliance on the ALJ's own Findings of Fact, will be meticulously cited. For convenience, highlighted copies of most exhibits cited in this Brief are either attached hereto or included in Appendix 1. Highlighted copies of all testimony cited in this Brief are included in Appendix II. For context, substantial additional exhibits and testimony, not specifically cited in the Brief, are included in the

Appendices. Petitioners ask no more than that this record be scrutinized and the Sulfide Mining Act be applied as written

STATEMENT OF FACTS

Part 632 of the Sulfide Mining Act (the "Act") requires an applicant to prepare and file with the Michigan Department of Natural Resources and Environment ("MDNRE")[4] a detailed mining permit application ("MPA") describing precisely how the applicant proposes to mine the ore body, how it will store the mined rock which leaches sulfuric acid, how it proposes to contain and treat the effluent containing heavy metal bearing sulfuric acid, and specifically what methods, materials and equipment will be used for each part of the operation. MCL 324.63205. The Act places the burden on the applicant for a permit to demonstrate that its operation will not "pollute, impair or destroy natural resources." MCL 324.63205(11). In order to meet that burden of proof, the Act requires, among other things, that the applicant prepare an Environmental Impact Assessment ("EIA") for any part of the entire region which may "potentially" be affected by the mining activities (excavation, blasting, air pollution, waste disposal, ore truck traffic and the like), including plant and wildlife studies, historical and religious sites, and air, water and transportation impacts. MCL 324.63205(2)(b). The EIA must assess "species and abundance of aquatic and terrestrial flora and fauna on at least 2 years of relevant information." R 425.202(2)(y). Attachment D contains relevant sections of the Act and Rules promulgated thereunder.

After the filing of the application, the public may file written comments and give testimony at an initial public hearing. MCL 324.63205(6)-(7); R 425.201(4). If the agency preliminarily approves issuance of the permit, the public is entitled to another full round of

[4] Throughout most of the proceedings, the agency was known as the Michigan Department of Environmental Quality. Where applicable, it will be referred to herein as "MDEQ."

public comments and public hearings to challenge the specifics of the preliminary permit. MCL 324.63205(8); R 425.201(4)(d). Final issuance of a permit by MDNRE may be appealed in a "contested case" under the Administrative Procedures Act conducted by the State Office of Administrative Hearings and Rules. MCL 24.306.

Kennecott filed a permit application for a massive sulfide mining operation in the heart of the biologically rich Yellow Dog Plains in the Upper Peninsula's Marquette County. A copy of Kennecott's permit application is designated in the electronic record at TABS 123-154. Kennecott is owned by London headquartered Rio Tinto, which is one of the largest mining companies in the world. The location of the proposed mine is between the famed McCormick Wilderness Tract and the Huron Mountain Club, a 40-square mile tract of rivers, inland lakes and old growth forest, and encompasses a large swath of the Keweenaw Bay Indian Community's ceded treaty lands. (Appendix I, divider 6; TAB 452)

Petitioners are the National Wildlife Federation, the Keweenaw Bay Indian Community, the Yellow Dog Watershed Preserve and the Huron Mountain Club. The uncontested standing of each Petitioner is set forth in Appendix I, divider 65 and the transcript pages cited therein.

The National Wildlife Federation ("NWF") is a regional leader in protecting the Great Lakes for wildlife and humans that depend upon the invaluable natural resources of the Great Lakes basin. (Appendix I, divider 65)

The Keweenaw Bay Indian Community ("KBIC" or "the Community") is a federally recognized Indian tribe whose members reside in Baraga County and elsewhere. Its members have the right to hunt, fish, trap and gather in, on and over lands which include the mine site and surrounding areas. The Community also owns riparian property along the Salmon Trout River downstream from the mine site. Eagle Rock, is a sacred place of worship and gathering for

Community members and has served as the location of tribal ceremonies since time immemorial. (TAB 669, pp. 050181-050182; TAB 676, pp. 051528-051529) Kennecott has fenced off Eagle Rock, precluding any public entry or access, and intends to blast into and tunnel through Eagle Rock in order to access the ore body. (Appendix I, divider 65)

The Yellow Dog Watershed Preserve consists of members from Marquette County and elsewhere. The group's mission is to protect the Yellow Dog River, Salmon Trout River and the Yellow Dog Plains which contain the headwaters of both rivers. (Appendix I, divider 65)

The Huron Mountain Club ("HMC") is a Michigan not-for-profit corporation established as a family retreat and wildlife preserve in 1889. Property owned by the HMC is within four miles of the mine site and includes 11 miles of the Salmon Trout River downstream from the mine. (Appendix 1, divider 65) The Club's property, known as a "reference ecosystem," is the subject of more than 200 scientific studies. (TAB 670, pp. 050238-050240, TAB 669, p. 050138) The flora and fauna inventoried at HMC include more than 5000 separate species, many of them endangered, threatened, rare, or species of special concern. (TAB 448)

The ore deposit Kennecott proposes to mine is located beneath the headwaters of the Salmon Trout River, a pristine, world-class trout stream which flows north from this location directly to Lake Superior, through virgin and old growth forests, which are home to an extremely diverse population of flora and fauna. It is undisputed that the Salmon Trout River is fed by a vast complex of wetlands surrounding the mine site. Witnesses for all of the parties agreed that the Eagle mine operation would result in drawdown of the water table above and around the mine and that there is clearly potential for adverse consequences for the entire Salmon Trout River watershed. (TAB 96, p. 5335)

It is also undisputed that the bedrock directly above the ore body is fractured and faulted and is intersected by one or more dikes, conditions which, at other Upper Peninsula mines in the same general vicinity, have resulted in or contributed to substantial subsidence and collapse. (Attachment C, pp. 11-12)

Under Kennecott's mining plan, its 92-acre surface facilities will include, among other things, a compressor plant, generator plant, propane storage and mine heater, loading dock/warehouse, fuel storage area, septic system, office buildings, parking areas, an assay lab, maintenance shop, truck wash and scales, storage buildings for explosives, a 110-ton fly ash silo, a 110-ton cement silo, a treated water infiltration system ("TWIS"), soil stockpile area, aggregate storage area, construction staging area, a crusher ramp, crusher conveyor and crushed ore storage area, holding ponds and waste water treatment facilities. (Appendix I, divider 5; TAB 123, pp. 007452-007453) In addition, surface facilities will include a Mine Ventilation Air Raise ("MVAR") – a stack extending 65 feet above ground with a diameter of 14 feet, which will emit exhaust containing toxic metallic dust from underground mining operations. (TAB 674, p. 051189; TAB 675, p. 051282; Appendix I, divider 5; TAB 123, pp. 007464, 007478) The 378,914 ton pile of sulfide waste rock removed from the decline and tunnels during construction, which will form acid rock drainage ("ARD") when exposed to the elements, will be stored in a six acre Temporary Development Rock Storage Area ("TDRSA"). (Appendix I, divider 5; TAB 123, p. 007458) Electrical power for the facility will be provided by three gigantic generators. (*Id*., p. 007469) The entire site will be surrounded by an eight foot chain link fence. (*Id*., p. 007460) A fleet of 40, massive ore trucks will transport the crushed ore daily through the forest to another facility for further processing. (TAB 694, p. 055438)

The portal to the underground operations will be blasted through Eagle Rock and miles of tunnels will extend downward to the ore body. (TAB 681, pp. 052691, 052758) Underground facilities will include, among other things, a cement plant where additional trucks will be loaded with cement for backfilling mined-out areas, automated ore collection equipment, drilling equipment, and other vehicles. (Appendix I, divider 5; TAB 123, pp. 007485-007486; TAB 96, pp. 005251-005252)

Kennecott proposes to use the "longhole stope" method of mining, which involves the removal of ore in vertical sections, from the bottom of the ore body upward. (TAB 96, pp. 005251-005252) A series of primary voids or "stopes," approximately 10 meters wide, 30 meters high and 50 meters long, separated by sections of intact rock, will be created by sequential blasting. (Appendix I, divider 5; TAB 123, pp. 007478-007480) Kennecott promises to backfill these primary stopes with cemented rock fill. (TAB 96, p. 005252) Explosives will then be used to remove the remaining rock, located between the backfilled primary stopes. These secondary stopes are supposed to be backfilled with a mixture of limestone and "development" rock, *i.e.*, bedrock that is removed during construction of the decline and access tunnels and stored at the surface during mine operations. (*Id*.)

Several miles of underground tunnels, measuring approximately 15' x 15' (*i.e.*, several million cubic feet), will not be backfilled at all and will remain, unless and until they collapse, open, empty voids. (TAB, 681, p. 052758)

Total rock excavation is estimated at over 4 million tons over the nine years of the mine's operation. (Appendix I, divider 5; TAB 123, p. 007453) When mining has been completed, the mine will be reflooded and the portal will be sealed with a concrete plug. (Appendix I, divider 5; TAB 123, p. 007520; TAB 681, p. 052644)

In January 2007, MDEQ announced that it proposed to approve Kennecott's Part 632 permit. (TAB 96, p. 005264) However, in February 2007, Petitioners informed MDEQ that they had reason to believe that reports prepared by Dr. David Sainsbury, an expert consultant retained by MDEQ to review information provided by Kennecott relating to crown pillar stability and subsidence, which were highly critical of the geotechnical information Kennecott provided in its application, had not been disclosed to the public. (TAB 96, pp. 005264-005265; Attachment C) MDEQ admitted that there were in fact two Sainsbury reports that had not been disclosed. (TAB 698, p. 056209, TAB 699, p. 056380) The public meetings were cancelled while an "independent investigation" into the missing reports was conducted by a former colleague of the MDEQ staff selected by its Director. (TAB 96, p. 005265) That investigation found no wrongdoing and the public meetings were rescheduled. (*Id*.) The MDEQ issued the requested Mining Permit and Groundwater Discharge Permit to Kennecott on December 15, 2007. They were signed by MDEQ Deputy Director Sygo. (*Id*.)

Petitioners filed for separate contested case hearings on the Part 632 Mining Permit and the Part 31 Groundwater Discharge Permit on December 21, 2007. (Appendix I, divider 1; TAB 001) The cases were consolidated. (TABS 006, 013) Petitioners then moved for authorization to conduct some prehearing discovery (TABS 020, 037), which MDEQ and Kennecott opposed. (Appendix I, divider 2; TABS 024, 025) The ALJ denied Petitioners' request for discovery in its entirety. (TAB 053)

The consolidated contested case hearing began on April 28, 2008. There were 40 days of testimony, concluding on July 16, 2008, followed by a site visit. During the hearing, 59 persons testified, many of them expert witnesses. In addition, the *de bene esse* deposition of Dr.

Sainsbury was admitted, as were numerous detailed technical exhibits. All parties' closing arguments and proposed findings of fact were filed by October 15, 2008. (TAB 89)

Ten months after the conclusion of the contested case, the ALJ issued his PFD on August 18, 2009. It found against Petitioners on every issue except one – the ALJ found that Eagle Rock was a sacred "place of worship," requiring specific assessment in Kennecott's EIA. (TAB 96, pp. 005411-005413) The ALJ held that "the excavation and drilling in the immediate area of Eagle Rock and fencing it off [would] materially affect its use as a place of worship." (*Id.*, p. 005413) The PFD recommended that the Part 632 permit be issued "with the exception that provision be made to avoid direct impacts to Eagle Rock that may interfere with the religious practices thereon." (*Id.*, p. 005418) Petitioners filed extensive exceptions to the PFD. (TAB 104) Kennecott and MDEQ filed exceptions to the ALJ's ruling with respect to Eagle Rock. (TABS 105, 106)

On October 8, 2009, Governor Granholm issued Executive Order 2009-45, consolidating the Department of Environmental Quality and the Department of Natural Resources into a new department named the Michigan Department of Natural Resources and Environment ("MDNRE"), to become effective January 17, 2010, and transferred responsibilities of the former MDEQ to MDNRE effective on that date. On November 5, 2009, MDEQ Director Chester remanded the PFD to the ALJ, on the legal issue of whether Eagle Rock is a "place of worship" within the meaning of Part 632. (Appendix I, divider 3; TAB 110, pp. 007049) The Order of Remand was based on Director Chester's erroneous finding that the parties "had not briefed that issue before issuance of the Proposal for Decision," despite the fact that all parties had thoroughly briefed that issue in their written post-hearing closing arguments filed with the ALJ. (*Id.*) In fact, not only had the "place of worship" issue been fully briefed prior to the issuance of

the PFD, the PFD specifically rejected the arguments of Kennecott and MDEQ that only "buildings used for human occupancy" could constitute places of worship. (TAB 96, pp. 005412-005413) Pursuant to the Order of Remand, the parties again briefed the issue. (TABS, 111 - 116) All of those briefs were filed by December 7, 2009.

At some point between December 7, 2009 and January 14, 2010, the ALJ prepared a Supplemental PFD as directed by the Order of Remand. The Supplemental PFD apparently again held in favor of Petitioners on the Eagle Rock issue, but a redacted version was only obtained by Petitioners months later through a Freedom of Information Act request. (See, Exhibit 4 to Petition for Review.) In the meantime, Director Chester announced his decision to retire effective January 4, 2010, and Deputy Director Sygo was named Interim Director, effective January 5, 2010. On that same day, Interim Director Sygo, who would otherwise have had responsibility for the final decision on Kennecott's Permits, delegated that responsibility because he had been the MDEQ official who had signed the Permits originally. The statute on which Mr. Sygo relied in making this delegation, MCL 324.99903, provided that the delegation could be made to another individual within the agency or outside it. The matter was delegated to another MDEQ employee, "Senior Policy Advisor" Frank Ruswick, Jr. (Appendix I, divider 4; TAB 117, pp. 007394-007395)

On January 13, 2010, Governor Granholm named the former Director of the Department of Natural Resources, Rebecca Humphries, to be Director of the new combined agency. The following day, January 14, 2010, less than 10 days after being tasked with reviewing 183 pages of Exceptions to a 177-page PFD based on an 8000 page transcript, Mr. Ruswick issued a Final Determination and Order ("FDO"), vacating former Director Chester's Order of Remand to the ALJ for a supplemental Proposal for Decision. Mr. Ruswick then reversed the ALJ's findings on

the "place of worship" issue and ordered that the Part 632 and Part 31 permits be granted in their entirety. (TAB 118)

SCOPE OF REVIEW

Petitioners adopt in its entirety and incorporate by reference the Scope of Review set forth in their Brief Concerning Groundwater Discharge Permit No. GW1810162 filed in Case No. 10-268-AA.

I. COLLAPSE OF THE EAGLE MINE

The overwhelming weight of the evidentiary record preponderates in favor of a finding that the Eagle Mine is at substantial risk for collapse if constructed as designed in the mining permit application. Recognizing the difficulty for an appellate court in determining whether the FDO is supported by "competent, material and substantial evidence on the whole record" where the whole record consists of extensive testimony and exhibits, Petitioners present the case of likely mine collapse almost exclusively through the following portions of the record:

1. The ALJ's findings contained in his Proposal for Decision;
2. The reports and testimony of MDEQ's first mine stability expert witness, Dr. David Sainsbury;
3. The reports and testimony of MDEQ's second mine stability expert witness, Dr. Wilson Blake;
4. Unrebutted testimony and exhibits provided by Petitioners' leading industry expert in mine engineering, professor Jack Parker; and
5. Unrebutted testimony from Drs. Marcia Bjornerud and Stanley Vitton on geological and mine engineering issues.

In summary terms, the PFD includes at pages 31- 44 (TAB 96, pp. 005272-005285), extensive findings based on the testimony of Professors Parker, Bjornerud and Vitton, with record citations from those witnesses' testimony and exhibits for virtually every finding.

Professor Parker has visited and analyzed more than 500 mines and emphasizes the need to understand the geologic stresses placed on a mine by the regional geology. As rock is removed and voids are created within the geological regime, these pressures, working in conjunction with the force of gravity pulling the roof down into the mine cavity, may have any of three consequences: 1) if the pressure is too great, the horizontal stresses may act to crush the mine or its remaining roof (the "crown pillar"); 2) if there is too little pressure, it may result in "plug failure," meaning that the entire roof of the mine will not be sufficiently held in place by the "clamping" pressure of the surrounding rock and will plunge straight down to the bottom of the empty cavity, leaving a vast crater; or 3) if the amount of pressure is just right, it will "clamp" the roof in place so that it will not fall to the bottom of the mine when excavation takes place below the roof. (TAB 673, p. 050950) Because two nearby mines, the Athens and Ropes mines, had collapsed through plug failure, Professor Parker advised that the proposed Eagle Mine ran exactly the same risk. (TAB 671, pp. 050344-050345)

Professor Parker was also concerned about the quality of the rock which would make up the "roof" (crown pillar) of the Eagle Mine. This is because another principal way that mines designed on the crown pillar model (which includes no actual pillars at all, but merely a roof over the excavated area) can fail is if the quality of the rock making up the crown pillar is not strong enough to support itself as the enormous void of a mine is created beneath it. Dr. Bjornerud studied extensive photographs[5] of the core samples which showed the quality of rock in and around the intended crown pillar and, using generally accepted formulas, determined that the rock was of very low quality (rubble) and that the crown pillar itself could fail through crumbling or longer-term deterioration. (Attachment E; Appendix I, divider 9; TAB 96, pp.

[5] Despite repeated requests to Kennecott and the ALJ, Petitioners were denied the ability to inspect the core samples themselves. (TAB 53)

005277-005280; TAB 672, p. 050530; TAB 493, pp. 037989-039178) MDEQ experts shared the very concerns raised by Petitioners' experts and did so in substantial and highly critical detail. Instead of cataloguing these criticisms from Respondents' own witnesses, the PFD omits the entire analysis provided by Drs. Sainsbury and Blake and, in a single paragraph (TAB 96, pp. 005271-005272), contends that these criticisms were mere "points of disagreement" between the outside experts (which included both MDEQ's and Petitioners' experts) and Kennecott's paid consultants at Golder & Associates.

The PFD then recites that both Sainsbury and Blake had concluded that, if the crown pillar were thick enough (specifically 87.5 meters thick), the mine would be stable. (TAB 96, p. 005272) Nowhere in the course of the entire contested case, nor the briefs and arguments filed thereafter, despite Petitioners' ongoing criticism that the 87.5 meter figure was simply pulled out of thin air, is there any calculation or model which demonstrates how Kennecott arrived at this 87.5 meter figure as representing a sufficiently thick crown pillar.

Likewise, no answer has ever been given to the simple point that the thickness of a crown pillar is no protection against "plug failure," because plug failure involves not crown pillar strength but crown pillar weight and support. The nearby Athens crown pillar was 1800 feet (600 meters) thick when it plunged to the bottom of that mine. The water-filled crater caused by this cataclysmic collapse near Ishpeming remains there to this day. (Appendix I, divider 7; TAB 458, pp. 037309-237315)

The way the PFD reaches a "conclusion" that this mine will not collapse, against all of the testimony and calculations of the five geologic and mine engineering experts which indicate that it *will* likely collapse, was by either omitting (with respect to Sainsbury and Blake) or dismissing out of hand (with respect to Parker, Bjornerud and Vitton) all of the testimony

indicating the likely catastrophic collapse of this mine. Thus the ALJ's analysis, contained at pages 29-30 (TAB 96, p. 005270-005271), and 49-50 (TAB 96, pp. 005290-005291) proceeds as follows.

The PFD first acknowledges that the stability of the crown pillar "is of vital importance both for safely developing underground mine workings and removing the ore and avoiding environmental impacts projecting to the surface through the subsidence of the crown pillar." (TAB 96, p. 005270) The PFD goes on to explain how rock strength is measured through two types of standards, RQD (Rock Quality Designation) and RMR (Rock Mass Rating).

These RQD and RMR values are drawn from observation of core samples, which are cylindrical columns of sand, gravel, mud and rock collected by drilling into the ground where the mine is to be located and pulling up the entire cylinder of material at that location for study. Kennecott then used two analytical methods to study crown pillar stability. The first, called the "Empirical Scaled Span" method, was developed by one of Kennecott's own witnesses, Trevor Carter, of Golder Associates, who had created a database of numerous existing crown pillars throughout the world of varying rock quality, void size, geometries and thickness. Under the Scaled Span method, this database is compared to the same information for the proposed mine, including the RMR figures to determine whether the result will be stable. (TAB 96, p. 005270)

The other method, called the C-Pillar method, is meant to test for "plug failure" which is "the collapse or sinking of the entire crown pillar down into the mine." (TAB 96, pp. 005270-005271) The ALJ concluded that because Kennecott's consultant, Golder, had asserted from its versions of these two analytical methods that the mine would be stable, that this assertion somehow demonstrated mine stability if the arbitrarily selected 87.5 meter thickness is utilized for the crown pillar. (TAB 96, p. 005271)

In short, the ALJ accepted Kennecott's Scaled Span, C-Pillar and backfill answers to the testimony of the five experts on both sides who voiced serious concerns about all of Golder's analyses, Golder's field work, and Golder's conclusions of stability.

Several points need to be made about these blanket, and frankly simplistic, conclusions which swept away the key experts' criticisms and analyses. First, the "Scaled Span" method, which examines crown pillars around the world, ignores the importance of specific regional geology, which the five experts agreed was a critical consideration. Crown pillar behavior in other parts of the world is essentially irrelevant to a given mine in a given geologic regime, in light of the unique, existing and measurable stresses on that particular mine. Parker and MDEQ's Blake actually had no use for either the Scaled Span or the C-Pillar analyses. (TAB 671, pp. 052822, 050326-050327) Sainsbury and Parker both insisted that local mine collapses were highly relevant to the predictable stability of the Eagle Mine. (TAB 671, pp. 050343-050359; TAB 359, p. 026413) Sainsbury, Parker and Bjornerud were critical of the RQD and RMR methodology and data used as input to the Golder Scaled Span analysis. (TAB 359, p. 026408; TAB 671, p. 050417; TAB 672, pp. 050527-050528) MDEQ's Sainsbury and Petitioners' Bjornerud testified that Golder used the wrong RMR index, and Bjornerud demonstrated in exacting detail that Golder simply omitted extensive "bad rock" that had been encountered in the core samples but not included in the RMR calculations. (TAB 359, p. 026498; TAB 672, pp. 050536-050537)

In addition, one of the key elements of rock strength depends on whether the rock is generally wet or dry and Golder gave the Eagle crown pillar a 100% dryness rating (*i.e.,* extremely strong) for every sample submitted. (TAB 706, p. 057982; TAB 684, pp. 053409, 053412) This assumption, which dramatically skewed all of the input, was directly contradicted

by Kennecott's own witness who testified at trial, unsurprisingly, that the crown pillar (beneath the Salmon Trout River) will be entirely wet. (TAB 688, p. 054234; TAB 706, p 057982)

The ALJ compounded the error of accepting Golder's RQD, RMR, and Scaled Span analyses by apparently misunderstanding the role of crown pillar thickness in plug failures. After telling us on page 29 that the C-Pillar method analyzes plug failure (in which crown pillar thickness is irrelevant) (TAB 96, p. 005270), the ALJ then states on page 30 that the C-Pillar analysis "concluded that an 87.5 meter thick crown pillar will be stable." (*Id.,* p. 005271) With plug failure, it doesn't matter if the crown pillar rock is "stable;" what matters is whether it's going to fall to the bottom of the mine or not.

An ironic and unfair note was interjected into these proceedings regarding Dr. Bjornerud's detailed analysis of the core samples. Kennecott refused to produce the core samples to Petitioners' experts and the ALJ refused to order their production (TAB 53), leaving Petitioners to conduct their analysis from photographs obtained through FOIA requests. The ALJ then stated:

> …Assessing rock quality and performing RMR calculations from photographs of core is problematic at best, and very likely highly unreliable. In fairness, it should be noted that [Kennecott] denied Petitioners' experts access to the actual core samples …. (TAB 96, p. 005286)

That is where the invocation of "fairness" ended. The ALJ dismissed all of Petitioners' experts' testimony based on compelling photographs regarding the rubble that makes up the proposed crown pillar (Appendix 1, divider 9; TAB 493, pp. 037989-039178; Attachment E) because Petitioners did not have access to the actual core samples – access which the ALJ himself denied.

The ALJ's reliance on experimental backfill procedures to prevent crown pillar failure is equally misplaced. Even <u>before</u> blasting occurs in the secondary stopes, right up against the backfill in the primary stopes, the strength of that backfill is only a tiny fraction of that of the ore

it is replacing (20,000 psi vs. 218 psi). (TAB 672, pp. 050696-050697) Dr. Vitton's calculations show that a combination of deterioration through blasting against the backfill and acidic action on the already weak backfill would alone lead to a prediction of 12 feet or more of subsidence beneath the Salmon Trout River, a conclusion that was not contradicted. (Appendix I, divider 11; TAB 546, p. 039443)

Nor have Kennecott or MDEQ ever tried to answer Petitioners' key point – repeatedly testified to by their own experts – that none of the miles of tunnels to and around the central mine cavity are going to be backfilled at all. The plan is to leave this entire tunnel system as unfilled voids forever. (TAB 681, p. 052691) If backfill is the key to preventing subsidence and collapse, Kennecott's miles of remaining unfilled tunnels (several million cubic feet) will be forever unprotected from either subsidence or complete collapse.

The following order of events from the record leaves no room to assert that the final mine plan is designed to avoid catastrophe.

1. First Kennecott's outside mining consultants, Golder & Associates, drew up a mining plan for the mining application providing for a 27.5 meter thick and (later) providing for a 57.5 meter thick crown pillar. (TAB 123, pp. 07477-07478, 074783)

2. Kennecott submitted this design as part of its mining application. (TAB 123, p. 007478)

3. The MDEQ outsourced technical review of the Golder mine design to geotechnical expert Dr. David Sainsbury for analysis. (TAB 359, pp. 026363-026364)

4. Dr. Sainsbury's May 2006 final Technical Review (Attachment C; TAB 359, pp. 026566-026589) concluded as follows:

    a. The analysis techniques used to assess the Eagle crown pillar stability do not reflect industry best-practice. In addition, the hydrologic stability of the crown pillar has not been considered. Therefore, the conclusions made within the Eagle Project Mining Permit Application regarding crown pillar subsidence are not considered to be defensible.

b. The … analysis conducted clearly indicates that stability of the proposed Eagle crown pillar should be a concern…. Considering the sensitive nature of the hydrological environment surrounding the Eagle project [*i.e.*, the mine is underneath the Salmon Trout River], further detailed analysis should be conducted to fully understand the expected short- and long-term crown pillar subsidence and hydrologic stability.

5. The MDEQ kept the first Sainsbury report secret while it tried to obtain a less critical report from Dr. Sainsbury. Instead it received a shorter report in which Dr. Sainsbury repeated all of his earlier conclusions. The principal difference between Dr. Sainsbury's second report, dated May 22, 2006 (TAB 359, pp. 026559-026565), and his earlier Technical Review (Attachment C; TAB 359, pp. 026566-02658) was the deletion of any comparative references to other mines, such as the local Athens mine (which collapsed) and Kennecott's Crandon mine, which were discussed in the first memo but eliminated at the insistence of MDEQ's mining team manager Joe Maki.[6]

6. Neither of Dr. Sainsbury's reports was posted on the MDEQ's web site, and neither was disclosed by the MDEQ in response to Petitioners' October, 2006 FOIA requests. (TAB 699, p. 056209) Thus, both were withheld from public scrutiny. In fact, all evidence of both reports was expunged from the MDEQ's files. (*Id.*, p. 056240)

7. In response to a request by the MDEQ for additional information, Kennecott provided a Geotechnical Memorandum by Golder dated July 7, 2006. It did not provide any additional data or results of further investigation or analysis. (TAB 359, pp. 026620-026635) Instead it proposed that mining would begin at the lowest levels and proceed upward to the 327.5 meter elevation, effectively increasing the crown pillar thickness to 87.5 meters.

8. There is further evidence, improperly excluded by the ALJ, that Dr. Sainsbury did not consider his earlier concerns obviated by an 87.5 meter crown pillar. That is the e-mail which Dr. Sainsbury sent to his colleague, Andre Van As, at Rio Tinto (Kennecott's parent corporation) on November 9, 2006 (Attachment F), the same day Sainsbury concurred with the idea of allowing Kennecott to begin mining, but not above the point where the crown pillar would be 87.5 meters thick. (Attachment G) As Dr. Sainsbury testified, he obtained permission from the MDEQ and Kennecott to send his original technical review to a colleague at Rio Tinto because he believed that there was no one internally at Kennecott who had the expertise to understand the technical nature of his discussions in it. (TAB 359, pp. 026391-026392)

[6] Evidence of this fact is contained in the e-mail dated May 23, 2006 from Mahesh Vidyasagar, whom Maki identified as the individual he relied on to communicate his instructions to Dr. Sainsbury (TAB 699, p. 056251), which the Hearing Officer improperly excluded from the record in this case.

9. When Petitioners discovered that Dr. Sainsbury's conclusions had been suppressed, and the MDEQ temporarily halted the application review process, MDEQ hired a second expert to review both the Golder conclusions and Dr. Sainsbury's conclusions. This second outside expert, Dr. Wilson Blake, also rubber-stamped the 87.5 meter crown pillar thickness, but his actual testimony at trial regarding his reports corroborated the conclusions of Petitioners' experts leading to an opinion that the mine was still destined to collapse.

10. MDEQ's Dr. Blake first specifically admitted that Petitioners' experts Parker, Vitton, and Bjornerud had raised legitimate concerns, including criticisms he expressly agreed with. (TAB 672, p. 050871) Dr. Blake found no actual support for the 87.5 meter measurement in the record: "I'm not sure exactly, I mean, how that – how they arrived at that specific number – ." (TAB 673, p. 050874)

11. MDEQ's Dr. Blake testified that Petitioners' expert Dr. Bjornerud (who was extremely critical of Golder's work) "certainly did an extremely thorough job." (TAB 673, pp. 050882-050883) Dr. Blake had no criticism of Dr. Vitton's analysis that the 87.5 meter thickness would be extremely unsafe; he did no calculations of his own; and he never saw any calculations by Golder establishing that 87.5 meters was supportable. (*Id.*, p. 050885)

12. MDEQ's Dr. Blake questioned why the hydraulic stability of the crown pillar wasn't considered at all, especially in light of the location of the ore body underneath a sensitive body of water, which he acknowledged as "a reason for particular concern about this mine environmentally." (TAB 673, pp. 050887, 050912, 050913) His concern related to "subsidence or collapse causing drawdown of water and effects far downstream." (emphasis added)

13. Dr. Blake considered the subject of collapse and the "possible hydrological effects of draining the water body above it" to be "a huge consideration." (TAB 673, pp. 050901-050902) By hydrological effects, he meant the drawdown of the water body above the crown pillar. (*Id.*, p. 050902) Again, he agreed that such "drawdown could affect the river above [the mine] and the river downstream." Dr. Blake clearly stated that Golder's "work certainly wasn't to the level that one would have expected." (*Id.*, p. 050912)

14. When MDEQ's Dr. Blake was asked whether Dr. Sainsbury's pointed criticisms had eventually been addressed, he testified:

    a. As to Dr. Sainsbury's criticism that no sensitivity study was conducted, Dr. Blake said that as far as he knew, such a study was never conducted. (TAB 673, p. 050919)

b. As to Sainsbury's criticism that the subvertical fault plane intersecting the Eagle deposit was not considered by Golder, Dr. Blake acknowledged that this could be a problem from the standpoint of risk of collapse. (*Id.*, p. 050920)

c. Finally, and most critically, Dr. Blake entirely agreed that Golder had failed to conduct a "long term, time dependent behavior study of the Eagle crown pillar." (*Id.*, pp. 050925-050926, 050935) (emphasis added)

15. Like Dr. Sainsbury, Dr. Blake considered the issue of "time dependent degradation" a "serious concern" at the Eagle Mine. (TAB 673, p. 050935) He was given no explanation why time dependent behavior has never been studied at this proposed mine. (*Id.*, p. 050935)

16. MDEQ's Dr. Blake considers Kennecott's mining application to be "sloppy work" (TAB 673, p. 060930) and believes that looking at "nearby mines, mines with a similar ore body, mines that are being mined by a similar mining method" and studying "mine collapses all over the world" are important to analyzing the potential for failure in any particular mine. (*Id.*, p. 050938) Dr. Blake then explained that his concern about shear failure at the Eagle Mine, replicating what occurred at the Athens mine collapse, had not been sufficiently investigated. (*Id.,* p. 050939) He stated: "To my knowledge there has been no investigation … and I don't think we have sufficient data to carry out a thorough investigation." Simply put, according to Dr. Blake, "more data is needed." (*Id.*, p. 050940) Dr. Blake also conceded that the thickness of the crown pillar affords no protection against a plug failure such as occurred at the Athens mine. (*Id.*, p. 050940)

Basically cornered by the mountain of evidence pointing towards likely crown pillar instability and potential mine collapse, Kennecott eventually advanced a third argument, in addition to its "crown pillar thickness" and "partial backfill" defenses. In this third defense, Kennecott proposed, MDEQ agreed, and the ALJ adopted the novel notion that the whole substandard mining application which had fared so badly during the public review and contested case process would be subject to future revisions during the course of excavation and mining, this time without any public review whatsoever. (TAB 611, p. 048767) This idea – *we can always redesign it later if it seems to be failing, or even diminish the thickness of the crown*

pillar if it seems to be working – has no support in the statute and completely subverts the essential public review process.

Petitioners' concerns and supporting proofs are underscored by the PFD's extraordinary conclusion to its mine stability analysis, quoted here verbatim:

> One final area needs to be addressed. Mr. Maki [the MDEQ project manager] agreed to a list of concerns that Kennecott was never asked by him to resolve and did not resolve, to his personal knowledge, including, for example: (These points rely on Exhibit R632-667, ***App. 24)***.
>
> - After Sainsbury raised concerns about Kennecott's use of an RMR rating of ten (dry conditions), Mr. Maki did not ask Kennecott why they assumed that RMR. (Tr. 31:6396; Exhibit R632-667, ***App. 24)***.
>
> - Mr. Maki did not ask Kennecott any questions concerning White Pine [another Upper Peninsula mine] horizontal stress figures and their implications for the Eagle Mine. (Tr. 31:6397).
>
> - Mr. Maki did not ask Kennecott any questions about the long-term time-dependent behavior of the Eagle crown pillar. (Tr. 31:6399).
>
> - To Mr. Maki's knowledge, the long-term time-dependent behavior of the crown pillar has never been considered to date. (Tr. 31:6401).
>
> - Kennecott was never asked to do an analysis of the Athens Iron Mine collapse relative to the design of the Eagle Mine. (Tr. 31:6401).
>
> - Mr. Maki excluded from questions to Kennecott anything about the other mines that Sainsbury considered relevant because he was relying on a summary document rather than Sainsbury's full report. (Tr. 31:6402).
>
> - Mr. Maki did not raise any of Dr. Sainsbury's specific concerns in his questions to Kennecott. (Tr. 31:6402).
>
> - Mr. Maki did not ask Kennecott any questions about induced horizontal strain in relationship to the fact that they were going to be mining under water. (Tr. 31:6404).
>
> The bottom line regarding Mr. Maki's review of crown pillar subsidence is that he understood that Dr. Sainsbury was raising concern about Golder's study of crown pillar stability but he did not understand what those concerns really were. (Tr. 31:6397-6398)

> To be clear, Mr. Maki knew that the DEQ and his Mining Review Team lacked sufficient expertise to review some technical portions of the 8000 page application. (Tr. 31:6412) According to Mr. Maki, he himself does not have the expertise to be able to define and analyze what his own questions to Kennecott really meant. "To be honest, I do not have the expertise to be able to define and analyze what those questions mean." (Tr. 31:6394) In particular, he recognized there was insufficient expertise in rock mechanics, geochemistry, mine and mine waste geochemistry, and financial assurance to conduct such a review. (Tr. 31:6412) However, he testified that he and the team relied upon outside expertise in those respects.
>
> Petitioners contend that Mr. Maki, knowing full well that the Salmon Trout River was at the very heart of the concerns of the public (Tr. 31:6395), did not ask Kennecott anything regarding the effects of the mine on the Salmon Trout River to satisfy Sainsbury's criticisms or the public's concerns. (Tr. 31:6395-6396).
>
> However, these contentions of perceived shortcomings in Mr. Maki's role, place too much of a burden on him. He frankly admitted his and the department's limitations in some areas that needed to be addressed in this new complex program. That is precisely the reasons outside experts [Sainsbury and Blake] were retained. Therefore, these limitations were recognized and addressed. A review of the record as a whole, including those retained experts, indicate a thorough and ongoing review by others than Mr. Maki sufficient to address the concerns discussed in detail above, and I so find, as a Matter of Fact.

(TAB 96, pp. 005292-005293)

The ALJ's defense of Mr. Maki troublingly misses the real point. The real point is that Maki claimed reliance on outside experts; those experts were Sainsbury and Blake; those experts raised the very concerns listed in the bullet points above and many other even more serious concerns; and those concerns, the MDEQ's experts' concerns, were never answered by anybody – not Golder, not Kennecott, not the MDEQ, and not the experts themselves. These concerns about the likelihood of crown pillar collapse remain unanswered to this day.

The lack of agency expertise during the mine application process, as admitted by Mr. Maki, needs to be recognized in the context of three extraordinarily dangerous realities:

1. Kennecott's plan to redesign the mine in the course of mining, when public input will be impossible and the MDNRE oversight will obviously be limited or useless;

2. Budget constraints which will only exacerbate the drastic limitations on the MDNRE's ability to monitor and regulate mining in the future; and

3. The fact that no one will be able to monitor what is happening underground in the long term future because Kennecott plans to seal the mine off with cement to preclude any future inspection or assessment of long-term stability. (TAB 681, p. 052644)

From the combined testimony of Mr. Maki, Dr. Sainsbury and Dr. Blake, we now know that none of them ever conducted or reviewed any calculation that would justify the 87.5 meter final thickness of the crown pillar. Proceeding with a mine design so scientifically unsupported, with the possibility that the mine design may be further revised later to diminish that crown pillar thickness (TAB 611, p. 048767), is a blueprint for environmental disaster.

The environmental stakes and the human lives at risk in a massive mining operation of the kind proposed by Kennecott are too serious to proceed on a record of such glaring omission. Neither Kennecott's obligation to establish that this mine will not "pollute, impair or destroy natural resources," nor its statutory obligation to assess the entire "potential" area that will be affected by such a mine collapse has been met. Kennecott's Part 632 mine permit should be revoked and Kennecott should be required to submit a revised mine design, not subject to imminent, or long-term, collapse or subsidence and not destined to "pollute, impair or destroy natural resources."

II. AFFECTED AREA

The likelihood of a sudden, complete collapse of the mine in combination with the absence of a contingency plan to address such a collapse, added to the near certainty that, even before such a collapse occurs, the bottomlands beneath the Salmon Trout River and above the mine will subside on the order of 12 feet, clearly indicate that the Salmon Trout River will be affected for its entire length out into Lake Superior. This one "potential" example highlights the

failure of Kennecott to conduct an EIA over the entire "potentially" "affected area" as required by statute. MCL 324.63205(2)(b); MCL 324.63201(b). Not only did Kennecott not conduct an EIA for the full length of the Salmon Trout River in recognition of the potential for mine collapse, Kennecott failed to conduct an EIA which addressed any of the additional material specific requirements of the Act and regulations as set forth below.

A. Flora and Fauna.

Kennecott was required to provide an EIA which, *inter alia*, would include two years of studies of plant life and wildlife over the entire area that would, "potentially" be affected by the construction and operation of a sulfide mining operation in the Yellow Dog Plains. MCL 324.63205(2)(b); MCL 324.63201(b). Prior to filing the mine permit application, Kennecott officials had visited the Huron Mountain Club located approximately four miles north of the mine site. (TAB 669, pp. 050140-050141) HMC property surrounds approximately 11 miles of the Salmon Trout River, and its flora and fauna species have been inventoried to include more than 5000 separate species, many of them endangered, threatened, rare, or species of special concern. (TAB 448) The HMC's 10,000 acres of old growth forest and many lakes, rivers and streams have been meticulously protected for over 100 years. (TAB 669, p. 050112) Thus, it was clear from the outset that the potential effects of the mining operation on the Salmon Trout River watershed and on the Club's surrounding sensitive lands, the Yellow Dog Plains, and the federally protected McCormick Tract, would be required under the statute to be the subject of detailed study over at least a two-year period preceding the filing of the mine application.

In order to avoid this expensive undertaking, Kennecott came up with a facile solution: against all logic and credible science, simply declare the total area that would be impacted by the mining operation to be essentially the mine footprint itself, and deny that possible mine collapse,

potential and certain acid rock drainage, river level drawdown, particulate emissions, blasting noise, truck traffic and the like would affect anything whatsoever outside that footprint. The PFD recites and adopts the circular reasoning that Kennecott advanced at the hearing – based on the surveys of flora and fauna in the immediate area comprising and surrounding the mine site, Kennecott's consultants concluded: "that impacts on wildlife from construction and operation of the mine would be affected or limited to the footprint of the mine surface facility, and that impacts outside the footprint would be minimal." (TAB 96, p. 005327)

In other words, in order to determine how large an area of flora and fauna to study, Kennecott started with the proposition that only the mine site area itself need be studied, then studied that area to some degree, and used that study to conclude that it was the only area that needed to be studied. This is like studying the crater from a nuclear explosion and concluding that the only effect of a nuclear explosion was the crater itself, because that is all you studied.

Kennecott's flora and fauna studies are so narrow and incomplete as to be essentially useless analytical tools for environmental protection under the statute. Kennecott's own well-credentialed expert, Dr. William Taylor, was clear that, at a minimum, the entire watershed of the Salmon Trout River needed to be studied. (TAB 702, p. 057375) In addition, Kennecott limited the required study to occasional visits within a seven or eight month period, and the ALJ agreed that plant and wildlife studies in the Upper Peninsula of Michigan need not be conducted at times when there was snow on the ground (which in some years this would be half of the year). (TAB 681, pp. 052734-052735) This approach avoided studying the eagles that nest nearby on the Salmon Trout River, the wolves that traverse the Yellow Dog Plains en route to their den on the HMC property, the endangered Kirtland's Warbler sighted and photographed

near the mine site, the at-risk spruce grouse, and the literally hundreds of rare and sensitive life forms catalogued in the HMC's All Taxa Inventory. (TAB 448, pp. 37093-37212)

Once having accepted the proposition that the only affected area will be the mine footprint, then the PFD could agree with Kennecott that "no threatened or endangered species reside within the footprint of the mine"; "the habitat within the footprint does not provide critical habitat to any endangered species"; "the common species within the mine footprint will relocate to areas outside the footprint during construction and operation." (TAB 96, p. 005327) (emphasis added) Acceptance of the "footprint" premise, standing alone, eviscerates the value of the EIA, directly contravenes the statutory mandate for study of flora and fauna within "potentially" affected areas "outside" of the mining area, and dictates that Kennecott be required to start over with a proper EIA covering the statutorily defined "affected area."

By the end of the contested case hearing, no witness had refuted that copper and nickel bearing sulfide particulates from the mine site will be deposited over an enormous area. (*See*, air deposition modeling by Petitioners' consultants, CRA, TAB 484)

By the same token, no witness contradicted testimony of Petitioners' expert, Dr. John Ejnik, that particulate contaminants would collect in snow during the winter and flood into the rivers in inflated concentrations in April of each year at snowmelt time. (TAB 680, pp. 052439-052441; TAB 675, pp. 051365-051367) Indeed, MDEQ's witness, Michael Koss, a wildlife biologist and DNR water quality specialist, simply agreed to the obvious: "We felt that any contaminants [from the mine] would end up in the water … because contaminants, even if they don't go directly in the water, if they're going to land on the ground surrounding the mining operation, they're going to eventually wash into the creeks and rivers." (TAB 703, p. 056962) (emphasis added)

The record is unrebutted that Kennecott failed to conduct an "Environmental Impact Assessment" for most of the "affected area" as those terms are defined by Part 632.

1. "Affected Area" means an area outside of the mining area with a land surface, surface water, groundwater, or air resources that are determined through an Environmental Impact Assessment to be potentially affected by mining operations within the proposed mining area. MCL 324.63201(b) (Emphasis added)

2. The statute requires an Environmental Impact Assessment for the proposed mining operation that describes the natural and human-made features including, but not limited to, flora, fauna, hydrology, geology, and geochemistry, and baseline conditions in the proposed mining area and the Affected Area that may be impacted by the mining, and the potential impacts on those features from the proposed mining operation. The Environmental Impact Assessment shall define the Affected Area and shall address feasible and pertinent alternatives. MCL 324.63205(2)(b) (Emphasis added)

The repeated use of the terms "potentially affected," "may be impacted," and "potential impacts" makes it clear that the applicant cannot rest on best-case scenarios for mining consequences, but must conduct an assessment that recognizes the potential for human error, the potential for geodynamic miscalculation, the potential for unfiltered releases into the air and spills onto the ground and water, and the potential for collapse of the mine.

Although it was the burden of the permit applicant to demonstrate that its proposed mine would not "pollute, impair, or destroy natural resources," Petitioners' witnesses unequivocally established that the mine, as designed and proposed to be located, will in fact pollute, impair and destroy surrounding natural resources. Petitioners' experts in wildlife biology informed the ALJ of the consequences of sulfide mining for flora and fauna in the affected area:

1. Dr. John Ejnik testified that the entire Salmon Trout River will be polluted from the mine at levels that will destroy aquatic life. (TAB 680, pp. 052433-052447)

2. Dr. David Flaspohler detailed respects in which operations on the immediate physical facility will produce impacts far beyond the property lines or the facility boundary lines:

a. Truck traffic will have an effect on wildlife along the roads. (TAB 675, p. 051358)

b. Road dust generated by heavy traffic on an unpaved road will settle into snow, and affect area wildlife after snow melt. (*Id*., p. 051359)

c. The deposition of heavy metals will be spread over tens of kilometers and enter both land and water. (*Id.*, p. 051364)

d. Water running off the roads and off the facility itself will introduce heavy metals and sulfuric acid into surrounding habitats. (*Id.*, pp. 051368-051369)

e. Pulses of copper, nickel and sulfur in the spring snow melt will enter the Salmon Trout River and be carried all the way "out into Lake Superior." (*Id.*, pp. 051411-051412) (Emphasis added)

f. Not only will the operation of the mine have negative effects extending "for miles from the mine footprint," it is "likely to impair or destroy wildlife in the area of the mine and extending well beyond the property boundaries." (*Id.*, pp. 051416-051417) (Emphasis added)

3. Dr. Paul Adamus testified that at the minimum three-foot drawdown predicted by Kennecott's consultant, Geomatrix, wetlands-dependent plants and animals would totally disappear for an entire one-mile radius. (TAB 674, pp. 051072-051074)

4. Dr. Kerry Woods testified that the wildlife of the Huron Mountain Club, including its birds and large mammals, would all be disrupted by the development of the Eagle mine. (TAB 670, pp. 050254-050261)

5. Dr. Mac Strand testified that a substantial drawdown of groundwater in the upper Salmon Trout River would impair or destroy the River's entire ecosystem. (TAB 678, pp. 052093-052094)

6. Based on published literature showing serious contamination of rivers as much as 40 miles downstream from polluting mine sites, Dr. Strand concluded that the metal contamination of the headwaters will have negative impacts all the way to the river's mouth. (TAB 678, p. 052110)

7. Expert ornithologist Alec Lindsay testified that the proposed mine would almost certainly adversely affect bird populations in both the Yellow Dog Plains and the Huron Mountain Club. (TAB 679, p. 052339)

8. Kennecott's expert, William Taylor, a leading expert in landscape ecology, was insistent that the entire Salmon Trout River needed to be studied in order to understand any part of the Salmon Trout River. (TAB 705, p. 057375) He believes that the entire region must be studied, rather than stopping at boundary

lines, in order to understand the potential effect of human disturbance. (*Id.*, p. 057381) In particular, fish populations and communities must be viewed in the context of the entire watershed. (*Id.*, p. 057389; Appendix I, divider 10)

9. Finally, Kennecott's expert wildlife biologist, Peter Kailing, admitted that he did not conduct an assessment to determine the "affected area," but simply studied the area dictated to him by Kennecott and its consultant, Foth. (TAB 695, pp. 055422-055423)

The section of the PFD addressing flora and fauna suffers from the same odd infirmity as other entire sections: the ALJ recites, without suggesting disagreement, a summary of hundreds of pages of devastating testimony about the expected effects of the mining operation on plant life and wildlife in the Yellow Dog Plains, the McCormick Tract, the property of the Huron Mountain Club, and the waters and shores of the Salmon Trout River, with citation to the record for every word of that testimony (TAB 96, pp. 005357-005389), and then reaches the astounding conclusion, *without* citation to the record and with virtually no explanation that: "The record demonstrates that construction and operation of the mine will not significantly affect any species." (*Id.*, p. 005389) (emphasis in original) This completely unsupported blanket statement is fatal evidence that the ALJ either failed completely to understand or chose completely to ignore the very testimony that constitutes the vast majority of the PFD. Indeed, this tellingly inaccurate and unsupported conclusion that the massive sulfide mining operation would "not significantly affect any species" whatsoever was consistent with the pattern reflected in the PFD to reject or ignore all evidence adverse to the mine, even when that evidence came from testimony of Kennecott's and the MDEQ's own witnesses.

It is equally difficult to square the testimony of the MDEQ's expert, Michael Koss (TAB 96, pp. 005376-005377), with the ALJ's conclusion that there will be no significant effect of mining on any species. Contrary to the ALJ's ultimate conclusion, he specifically notes in the

PFD at pages 135-136 (*Id*., pp. 005376-005377) that Mr. Koss testified about nearby populations of spruce grouse and grey wolves and openly admitted:

- that right-of-ways, including for electrical easements or vehicle passage easements, change the landscape, opening areas that were wooded to open lands (Tr. 34:9637-9638) and

- that contaminants from the mine could ultimately end up in the water, because even if they don't go directly into the water, <u>if they land on the ground surrounding the mine operation, they are going to eventually wash into the creeks and rivers</u>. (Tr/ 34:6961

The severe negative impacts of the proposed mine on flora and fauna are set forth in considerable detail at pages 116-131 of the PFD (TAB 96, pp. 005357-005372). This discussion of testimony from Petitioners' witnesses fully complements the critical testimony of the industry and government witnesses Taylor and Koss.

Testimony by Petitioners' expert in Environmental Chemistry, Dr. John Ejnik, regarding contamination of the Salmon Trout River from particulate deposition on the water, and particularly the surrounding land, was not, and could not be, effectively rebutted by Kennecott or the MDEQ. (TAB 96, pp. 005379-005380)

Rio Tinto's employee, Dr. Adams, tried to chip away at Dr. Ejnik's analysis by arguing that not all of the copper would dissolve in a way that would affect aquatic organisms. His analysis, if valid, would reduce Dr. Ejnik's most conservative values. But by using Kennecott's own 100 or 51 percent numbers for amount of copper reaching the Salmon Trout River (TAB 125), or accepting the testimony of the MDEQ's Koss that eventually <u>all</u> the heavy metal particulate will reach streams and rivers, Dr. Adams' opinion that all aquatic biota will be fully protected would be once again off by orders of magnitude. In any event, it must be obvious that Kennecott's complete refusal to study all the species, aquatic or terrestrial in the affected area

leaves any testimony such as Dr. Adams' about "all aquatic biota" with no support whatsoever in the record. (TAB 96, p. 005381)

Dr. Adams' testimony is also utilized to argue against the compelling testimony regarding the toxic plume which will flow down the Salmon Trout River into Lake Superior. But, again, Dr. Adams cannot and does not deny that "metal concentrations received in the headwaters" will reach Lake Superior, only asserting that they will be diluted by the time they get there. (TAB 96, p. 005382; TAB 696, p. 055989) Finally, while the ALJ seemed to accept Dr. Adams' testimony in its entirety, the PFD recites, and provides no answer to the fact that:

> Dr. Adams's testimony was limited and based on the assumption that particulates will be reduced 85 percent by filtration [the vaguely described and totally untested cloth filter over the 14 foot diameter stack]. Further, he only addressed deposition of copper and nickel. He gave no consideration to the potential adverse impacts on the Salmon Trout River from acid mine drainage. (Tr. 29:6001). He offered no analysis of the likely adverse consequences of the acidification of Salmon Trout waters resulting from deposition of sulfides, nor did he offer an analytical model of his own. Instead, he merely criticized assumptions made by Dr. Ejnik in calculating his model. (Tr. 29:6016)

(TAB 96, p. 005383)

The ALJ acknowledged the testimony of Dr. Flaspohler, including "that physical displacement of wildlife – particularly birds – and noise associated with construction and operation of the mine would have significant deleterious effect on the area," but tried to dismiss all of the testimony of Drs. Lindsay, Strand and Flaspohler with a verbal sweep of the hand, stating: "[N]one of the witnesses offers <u>conclusive testimony</u> on the issue" (TAB 96, p. 005387) (emphasis added), a finding that flies in the face of the testimony but also clearly applies a new, and probably impossible, legal standard to Petitioners' case: the conclusive testimony standard. The ALJ seized on minor concessions made by Petitioners' witnesses on cross-examination – songbird studies are mostly conducted on busy highways, trees can dampen noise, birds bothered

by noise can simply fly away, and blasting will occur only slightly more than once per day – but provides no answer for all of the balance of their testimony. (TAB 693, pp. 051361-051363)

Petitioners urge that appellate review of the PFD consider all of the flora and fauna testimony from pages 116-148 (TAB 96, pp. 005357-005389) to determine whether it could possibly, with any fairness, be weighed against Petitioners. The ALJ's final conclusion, that no rare, threatened or endangered species will be significantly affected by the proposed mine simply has no support in the record. No witness made such a statement and Petitioners' witnesses testified for many days to the exact contrary. The ALJ seemed to believe that Kennecott had studied all the species and found "that the construction and operation of the mine will not significantly affect any species." (TAB 96, p. 005389) Again, that was not even the position of Kennecott and the MDEQ. Their position was that most species did not require any study and none was ever conducted. Kennecott refused to study the impact on Kirtland's Warblers, and the ALJ accepted their point that because this endangered species was not found nesting right on the mine site, there could be no negative impact. But no witness ever said that. Kennecott admits studying no threatened species and no species of special concern, no insects, no fungi, no reptiles, no salamanders, and no plant life other than one endangered species of gentian. (TAB 675, pp. 051384, 051423; TAB 675, pp. 051403-051405) Again, no witness said that these whole families of plant and wildlife would be unaffected; only the ALJ makes that statement in this record. (TAB 96, p. 005389) The record accordingly never rebuts Dr. Flaspohler's testimony that "contrary to the DNR protocols, Kennecott did not, with respect to other rare or threatened species likely to be present, use standard techniques designed to ensure a high probability of locating the species." (TAB 96, p. 005359; TAB 675, pp. 051404-051405)

The narrowness of the species selection on Kennecott's part dovetailed with its decision to narrow the time periods covered by the study. As Dr. Flaspohler testified, Kennecott's sampling was not "performed at appropriate times of the year with respect to several rare or threatened species that are likely to be present." (*Id*., pp. 005359-005360) The 24-month study requirement of the regulations was attacked by Kennecott's witness Kailing. The ALJ appeared to accept Kailing's revised version of the law, noting: "While [Kailing acknowledged] that the assessment did not literally involve a consecutive 24 month study period, he considered the sequential 7 to 8 month survey sufficient." (TAB 96, p. 005371) Kennecott's Kailing unilaterally determined that it was proper to ignore the 24 month study period required by law, and drastically reduce that study period by simply limiting the inquiry to the snow free time of the year. (TAB 694, pp. 055416-055422) This unilateral amendment, elimination of the snow season, as applied to the snowiest region of Michigan, is untenable. The snow season is the best time to inventory by the tracks left in the snow by secretive mammals like bobcat, fishers, moose, and wolves. Koss' testimony, apparently accepted by the ALJ, directly contravenes the abundant testimony of Petitioners' witnesses on the importance of full flora and fauna studies, on a year-round basis, and deems acceptable an unabashed violation of one of Part 632's central requirements. This violation, standing alone, should be found to invalidate the issuance of the mining permit.

B. Groundwater Drawdown Resulting From Mining Will Drain, Impair and Destroy Wetlands

The MDEQ violated Part 632 when it issued the Permit while disregarding *uncontested* evidence that the mine will damage wetlands in the area with likely adverse consequences for the entire Salmon Trout River watershed. ***Every witness agreed that there will be groundwater drawdown.***

> [A] fundamental issue in this case is the sensitivity and importance of the Salmon Trout River and adjacent wetlands above and downstream from the mine site. ***All parties agree that some amount of drawdown of the water table above and around the mine will occur. And all parties agree that there is at least a potential that the drawdown will lower water levels in the reach of the river above the mine and in groundwater-supported wetlands.*** The only question is whether the drawdown will be great enough to impair these resources.

(TAB 96, p 005335) Incredibly, the PFD contains no factual findings or legal conclusions on the impact to downstream wetlands. Uncontroverted evidence demonstrated that there ***will*** be damage to area wetlands, and that damage, involving as it will the headwaters of the Salmon Trout River, will likely adversely impact the entire river.

Kennecott itself presented modeling which projected drawdown "over a concentric area exceeding one mile in diameter." (*Id.*) A newer model prepared for Kennecott by Geotrans, and disclosed during the course of the contested case hearing "concluded that drawdown of the glacial aquifer over the ore body would … rang[e] from 'very near zero *up to a few feet*.'" (*Id.*, p. 005353) In fact, the Geotrans model, as elsewhere noted by the ALJ "showed a drawdown of *eight feet* in the water levels above the ore body, based on a simulation of 60 gpm." (*Id.*, p. 005346) Kennecott's own projections, as varying and uncertain as they are, presage devastating outcomes for the Salmon Trout River.

Most important for present purposes is the fact that uncontradicted evidence established that under any of these projections extensive damage to area wetlands and vernal pools will result. The EIA, acknowledging no such damage, makes no assessment of the flora, fauna, and the other natural features to be potentially affected by the drawdown.

Every expert who testified on the subject, including Kennecott's wetlands expert, agreed that damage to area wetlands would implicate the health of the entire Salmon Trout River. Indeed, the PFD makes that fact plain:

- Dr. Adamus stressed that maintaining the ecological integrity of headwater wetland systems is necessary to protect the entire downstream watershed;

- Dr. Tilton [a *Kennecott* witness] agreed that headwater wetlands are especially important for several reasons, and that maintaining ecological integrity of headwater wetlands "is necessary to protect the quality of the entire downstream watershed."

(TAB 96, pp. 005349-005350) In addition, Dr. Mac Strand, an aquatic ecologist, similarly testified that a substantial drawdown of groundwater in the upper Salmon Trout River would impair or destroy the River's entire ecosystem. (TAB 678, pp. 052094-052095)

All relevant experts agreed that the Salmon Trout, home to the last known breeding population of Coaster Brook Trout in the Upper Peninsula, is heavily fed by the groundwater that would be diminished to an unknown extent by the proposed mining.

All witnesses also agreed that damage to headwater wetlands will impact and damage the entire river. The evidence is uncontradicted because Kennecott's EIA, contrary to all record evidence, chose to ignore potential destruction of groundwater-fed wetlands and the resulting impacts to the Salmon Trout River. For these reasons, the Permit should be revoked.

III. EAGLE ROCK

A. Introduction And Background.

Because of its historic significance as a sacred place of worship to members of the Community and to the *anishinaabe*[7], the legal issues surrounding Eagle Rock are of immense importance to Petitioners and to Native Americans in Michigan. Part 632 and its administrative rules expressly state that an application for a Part 632 Permit ***shall*** include an EIA that carefully assesses the adverse impacts, including, the cumulative impacts, of mining on all natural and human made features, including "places of worship" within the mining area and which

[7] The term "*anishinaabe",* means "first men" and is a Native American reference to a group of Native American peoples of various tribes that have historically lived, and continue to live, in the Great Lakes region of the United States and Canada.

reasonably mitigates those adverse impacts. Kennecott's EIA did not assess Eagle Rock as a place of worship and, concomitantly offered no mitigation in clear violation of Part 632. Kennecott's fatally deficient EIA, and the MDEQ's refusal to enforce Part 632 require that this Court vacate the Permit.

Known by Native Americans as *"migi zii wa sin"* Eagle Rock is a unique geologic feature. It is an imposing jagged rock outcrop rising majestically, some 60 feet at its highest point, from the otherwise flat geography of the Yellow Dog Plain. The undisputed evidence at the administrative hearing established that Eagle Rock has been used as a place of worship by the Community and the *anishinaabe* since time immemorial." (TAB 096, p. 005417) "It is considered by the *anishinaabe* to be marked by the Creator as place of prayer and ceremony, and continues to be a place where members of the Community and the *anishinaabe* tribes conduct religious, sacred and cultural ceremonies, prayers, fasting and vision quests to this day." *Id.*

In a shocking illustration of corporate/government insensitivity and arrogance, Kennecott has proposed, and the MDEQ has approved, blasting the tunnel to the Kennecott mine directly into and beneath Eagle Rock. The ALJ, at TAB 096, pp. 005411-005412 offered a prescient summary of the impact of Kennecott's plan upon *migi zii wa sin* as a place of worship:

> According to Kennecott's application Eagle Rock would be fenced off, precluding any public entry or access. This would also preclude the Native American religious and cultural ceremonies, feasts, praying and other religious activities that regularly occur there. Furthermore, Eagle Rock will be subject to and surrounded by drilling, blasting and the noise and din associated with mining activities. The *anishinaabe* tribes, including KBIC, consider blasting and other mining operations at the base of the outcropping to be a desecration. Even if the surface areas of Eagle Rock were to be "available" to members of KBIC, the Tribe and its members would still consider the blasting and tunneling to be a desecration of their place of worship. Tribal members liken the blasting of a tunnel and mine portal into Eagle Rock to "boring through a public cemetery" or digging up "Calvary Hill."

The Community objected to Kennecott's proposed desecration of Eagle Rock in meetings with representatives of Kennecott in 2006, and again in their oral and written public comments

offered during the Part 632 public comment period. (TAB 096, p. 005412) Additionally, in November 2007, before the Permit was issued, the Community stated its strong objection to the impacts on Eagle Rock during a formal government-to-government consultation between the Community, MDEQ, and the Governor's office. (TAB 705, pp. 057759-057760) Despite its knowledge of Eagle Rock's importance, MDEQ approved the Part 632 Permit and authorized Kennecott's plan to fence off, drill and blast through Eagle Rock without any assessment or consideration of the adverse impacts on Eagle Rock as a sacred place of worship, much less any attempt to provide measures to minimize those impacts as required under Part 632.

Interestingly, the ALJ, who rejected Petitioners' arguments on all other issues in this case, found substantial merit in Petitioners' claims regarding Eagle Rock. He correctly found that Kennecott's "*EIA should have assessed the potential impacts to Eagle Rock as a place of worship,*" yet *"[n]either Kennecott's application nor testimony from Kennecott or the DEQ has ever addressed the potential impacts of mining on Eagle Rock as a place of worship.*" (TAB 096, pp. 005411-005412) After considering the potential impacts, the ALJ offered a sensible and logical proposal for minimizing those impacts:

> "Excavation and drilling in the immediate area of Eagle Rock *will materially affect its use as a place of worship.* This should in some manner be accommodated, and would *best be done so by relocating the adit* [mine portal] *and access to the mine to a location that will not interfere with that function*." *Id.*[8]

That ruling initiated a series of transparent procedural machinations by the MDEQ obviously intended to undo the ALJ's decision. First, then MDEQ Director Steven Chester

[8] Given Kennecott's failure to comply with Part 632, the MDEQ should have simply denied the Permit. The ALJ, however, suggested a reasonable minimization of the impacts to Eagle Rock in accordance with MCL 324.63205(2)(c) and R 425.201(5) – to move the portal/tunnel to another location. Petitioners agree that Part 632 requires that their use of Eagle Rock as a place of worship be accommodated and if denial of the Part 632 Permit is not required, that relocation of the tunnel is appropriate under MCL 324.63205(2)(c) and R 425.201(5).

remanded the case back to the ALJ and ordered the parties to brief the issue of whether Eagle Rock is a "place of worship" under R 425.202(2)(p), and, if so, what the legal impact of that is, and directed the ALJ to issue a Supplemental PFD. That Order ignored the fact that the parties had analyzed those precise issues in their written post hearing briefs, and the ALJ had decided those issues, based on the parties briefs, in the PFD.

After the parties filed detailed (and expensive) briefs in accordance with his Order, but before the ALJ's issuance of a Supplemental PFD, Chester resigned from his position as Director. On January 5, 2010, the Interim Director of MDEQ, James Sygo, appointed MDEQ Senior Policy Advisor, Frank Ruswick, Jr. to serve as the MDEQ's final decision maker in this matter. Just 9 days after receiving his assignment to review and decide the issues (note that there were 42 volumes of transcripts with almost eight thousand pages of testimony, covering some 63 witnesses, and 516 exhibits), Ruswick issued a 22-page FDO that vacated Chester's Remand Order, vacated the directive that the ALJ issue a Supplemental PFD, denied Petitioners' request for oral argument, rejected all of the ALJ's findings and recommendations on Eagle Rock and, having rejected Petitioners claims on all issues, approved the Permits as originally issued without any modification – effectively "rubber-stamping" an approval of an application that clearly violated Part 632.

The State's response to Petitioner's subsequent Freedom of Information Act request reveals that the ALJ had, in actuality, created a draft supplemental PFD that was, because of Ruswick's rush to approve the permit, never issued. (*See*, Petitions for Review)

In reversing the ALJ's rulings on Eagle Rock, Ruswick erroneously held that:

- A purported "stipulation" concerning Petitioners' witnesses' testimony about the significance of Eagle Rock "precludes any consideration of Eagle Rock as a place of worship." (TAB 118, pp. 007401-007402)

- The EIA requirements are not "substantive permitting requirements," and the impacts to Eagle Rock and "measures to reduce or mitigate" those impacts are "outside of the regulatory framework of Part 632." (*Id.*, pp. 007402-007405)

- Kennecott's lease with MDNR ("Lease") allowing Kennecott to develop its mine on State-owned land "controls the impact to Eagle Rock absent any regulatory overlap" with Part 632, and because the impacts to Eagle Rock are beyond the reach of Part 632, Petitioners' challenge constitutes an impermissible "collateral attack" on the Lease. (*Id.*, p. 007405)

- R 425.202(2)(p) "applies only to buildings used for human occupancy all or part of the year," and, therefore, "there is no basis to require the EIA [to] identify and describe [Eagle Rock] as a 'place of worship.'" (*Id.*, pp. 007405-007406)

In his zeal to approve the permits, Ruswick glossed over a host of important factual and legal issues that clearly mandated denial of the Permit. There was no stipulation limiting Petitioners' proofs on Eagle Rock as a place of worship. As the hearing began, none of the parties or the ALJ believed that Petitioners had waived their right to call Community witnesses on this critical issue. In fact, the joint pre-hearing statement which identified the issues to be tried, and was signed by counsel for MDEQ and Kennecott, stated unequivocally that Petitioners would establish that Eagle Rock was a place of worship that should have been assessed in Kennecott's EIA in accordance with the Part 632 Rules. The FDO did not even address this fact (though it had been carefully briefed by Petitioners) and further, did not recognize the fact that the ALJ had carefully analyzed and rejected Respondents' attempts to limit the proofs on Eagle Rock as a place of worship at the hearing (which had also been carefully briefed by Petitioners).

Moreover, contrary to the conclusion in the FDO, the EIA requirements in Part 632 ***are expressly*** "substantive permitting requirements." Part 632 and its Rules state clearly that the department ***shall deny*** a mining permit if the permit application, including the EIA, does not meet the requirements of Part 632. MCL 324.63205(11)-(12), (emphasis added). See also R 425.201(7)-(8). That is precisely the case here, in that Kennecott's EIA did **not** assess impacts to

Eagle Rock and contained none of the identifications, analyses, or minimizations mandated in Part 632 and its Rules. The fact that the MDNR owned the land on which the mine will be constructed and leased it to Kennecott under an entirely different statute than is at issue in this case is of no legal consequence – Part 632 required Kennecott's EIA to assess Eagle Rock, which was not done.

Finally, Ruswick's legal conclusion that an EIA is required only for places of worship that are in a "building used for human occupancy all or part of the year" is indefensibly narrow and runs contrary to the broad language of the Rule. It is especially indefensible when the Part 632 Rules are, as they must be, read a whole. The conclusion is also contrary to applicable legal precedent, public policy and the plain and ordinary meaning of the term "places." The FDO is wrong – and Kennecott's failure to provide an EIA that meets the requirements of Part 632 requires that this Court vacate the Permit.

1. Eagle Rock Has Been Used As A Place Of Worship Since Time Immemorial.

Uncontroverted record evidence establishes that Eagle Rock has been a sacred place of worship and gathering area for members of the Community and other *anishinaabe* tribes since time immemorial. (See, TAB 669, pp. 050181-050182, 050187; TAB 676, pp. 051528-051529) Eagle Rock "has its own spirit." (TAB 669, p. 050182) The *anishinaabe* believe that Eagle Rock is "sacred ground;" there is a unique "connectiveness" to the Creator at and in the vicinity of Eagle Rock due to the presence of *anishinaabe* ancestors and spirits. (TAB 676, pp. 051499-051501)

The *anishinaabe* believe that Eagle Rock has markings that indicate that it is sacred; an indentation on the top of Eagle Rock is believed to be the footprint of *nanaboozho*, the son of the Creator, who brought the Ojibwa people many gifts throughout history. (TAB 676, pp. 051533-

051534, 051545-051546, 051549) These markings indicate that Eagle Rock is a place for the *anishinaabe* to use for religious purposes, including prayer and ceremony. Such places are unique and known to exist at only two other locations across the Midwestern United States and Canada. (*Id*., pp. 051545-051546) Places evidencing markings, such as those present on Eagle Rock, are "very sacred" and are like the Vatican is to Catholics. (*Id., p.* 051546)

Because of its spiritual significance, Eagle Rock is visited regularly by Community members. Community Vice President Susan LaFernier routinely prays and feasts at Eagle Rock with members of the Community's Tribal Council. (TAB 669) Tribal member Jerry Lee Curtis visits Eagle Rock for ceremonial and religious purposes at least three times per year to "lay tobacco down" in prayer to the Creator. (TAB 676, p. 051500) Mr. Curtis testified that tribal members and neighboring tribes periodically erect a sweat lodge on Eagle Rock for purification which he described as similar to the Western concept of baptism. *(Id.*, p. 051497)

Harlan Downwind is not a member of the Community, but is an *anishinaabe* spiritual leader who travels extensively to provide ceremonial and spiritual guidance to *anishinaabe* nations throughout North America. (*Id.*, pp. 051541-051545, 051547) Mr. Downwind first visited Eagle Rock in 2002 to perform sacred ceremonies, fasting and spiritual offerings. (*Id.*, pp. 051547-051548) Since 2002, Downwind has visited Eagle Rock to fast twice per year; these fasts last from two to four days. (*Id.*, p. 051550)

Eagle Rock is unique and irreplaceable to Community members. Mr. Curtis could not have the same religious experience at a location other than Eagle Rock. (TAB 676, p. 051505) Mr. Downwind testified that there is no other place like Eagle Rock. (*Id.,* p. 051553)

2. <u>The Mine Will Desecrate Eagle Rock As A Place Of Worship</u>.

Kennecott's mining operations will involve the drilling and blasting of a "portal" or tunnel directly through Eagle Rock. (TAB 564, pp. 039784, 039787 and Figures 4-2 and 4-7)

Before blasting begins, Kennecott will expose the base of Eagle Rock by removing earth with a bulldozer or excavator. (TAB 686, p. 053736) Numerous large bolts will be drilled into the surface of Eagle Rock, and the rock will be covered with wire mesh and sprayed with "Shock-Crete." (*Id.,* p. 053737) Kennecott will then use explosives to blast a tunnel through Eagle Rock. Steel arches will be installed and these arches will open a gaping hole emanating from the base of Eagle Rock. (*Id.,* p. 053738; TAB 564, p. 039789)

An 8-foot high chain link fence has been constructed around the mine's surface facilities at Eagle Rock as detailed in Figure 4-2 of the Permit application and required by the Part 632 Permit. (TAB 676, pp. 051503-051504; TAB 611, p. 048760; TAB 564, p. 039784; s*ee also* TAB 669, p. 050185). Community members' access to and use of Eagle Rock will be (in fact as of this writing, have been) eliminated by this fence.

Members of the Community offered testimony on the impacts of Kennecott's activities on their cultural, historic and religious uses of Eagle Rock. Fencing will "kill the spirits" at Eagle Rock. (TAB 669, p. 050193) Community members testified that they would not illegally trespass or otherwise breach the fence around Eagle Rock, and that they would thus be precluded from worshipping at the sacred site. (TAB 676, pp. 051503-051504, 051535)

Even if they could access Eagle Rock, the blasting, drilling, and other activities through, under, and around Eagle Rock associated with construction and operation of the mine will destroy Community members' use of Eagle Rock. (TAB 669, p. 050185; TAB 669, p. 050193) The proposed drilling and tunneling constitutes desecration of Eagle Rock, "whether its top, bottom [or] middle," and would affect the spiritual connection there. (TAB 676, pp. 051504-051505) This "total disrespect and desecration of sacred grounds" is equivalent to "digging holes or boring through a public cemetery" (*Id.,* p. 051505) or to digging up Calvary Hill from a

Christian perspective. (*Id.,* pp. 051554-051555) Mr. Downwind testified he would no longer use Eagle Rock after it had been so desecrated. (*Id.)*

3. Petitioners Informed Kennecott And MDEQ That Eagle Rock Was A Place of Worship Before The Permit Was Issued, Yet Kennecott Refused To Assess Or Minimize The Impacts To Eagle Rock.

The Community informed Kennecott and MDEQ of the issues related to Eagle Rock well in advance of the issuance of the Permit. The Community's Historic Preservation Officer, Summer Cohen, testified that she spoke with Kennecott representative John Cherry regarding the significance of Eagle Rock in 2006 (Cohen Dep. p. 38). Both Kennecott and MDEQ were informed of the significance of Eagle Rock during the Part 632 public comment period. (TAB 096, p. 005412) In November of 2007, almost two months prior to MDEQ's issuance of the permit, the Community met with MDEQ, the MDNR and the Governor's Office for a government-to-government consultation on the mine that included a detailed presentation on Eagle Rock as a place of worship and its importance to Native American culture. (TAB 705, pp. 057759-057760) In spite of this, Kennecott's EIA did not assess Eagle Rock as a place of worship or consider an appropriate minimization of the negative impacts of mining. MDEQ also failed to take the Community's concerns seriously. Despite Petitioners' public comments and the government-to-government consultation, the head of MDEQ's mining team, Joe Maki, was never informed of the consultation and was never instructed to consider the place of worship issue. (TAB 699, p. 056439) The record clearly supports the ALJ's finding of fact that *"[n]either Kennecott's application nor testimony from Kennecott or the DEQ has ever addressed the potential impacts of mining on Eagle Rock as a place of worship.*" (*Id.,* p. 005412)

B. ARGUMENT

1. There Was No Stipulation Limiting Petitioners' Evidence On Eagle Rock As A Place of Worship.

As a prelude to his analysis of the Eagle Rock EIA issues, Ruswick decided that an alleged prehearing "stipulation" precluded Petitioners from presenting evidence on Eagle Rock as a place of worship. (TAB 118, p. 007402) While this legal conclusion offered a convenient resolution to a vexing issue for Kennecott and MDEQ, it is erroneous as a matter of law.[9] The FDO ignores obvious facts and circumstances as well as applicable legal precedent that establish that there was no stipulation limiting Petitioners' proofs on Eagle Rock.

A "stipulation" must be construed as a whole, according to its intended purpose, and in light of the surrounding facts and circumstances, *Whitley v Chrysler Corp*, 373 Mich 469, 474; 130 NW2d 26 (1964) and will not be enforced if it does not properly reflect the intention of the parties, *People v Williams,* 153 Mich App 582; 396 NW2d 805 (1986). A stipulation will not be construed so as to give the effect of a waiver of a right not plainly intended to be relinquished. *Id*. In order to be enforceable, a stipulation must evidence a "meeting of the minds" between the parties. *Smith, Hinchman & Grylls Asso Inc v Wayne County Road Comm'n*, 59 Mich App 117, 124; 229 NW2d 338 (1975); *In re Cole Estate*, 120 Mich App 539, 544; 328 NW2d 76 (1982).

In their Response to Kennecott's Motion to Exclude Evidence Regarding Cultural Resources and Treaty Rights filed before the hearing, Petitioners stated that for purposes of the Part 632 case, they would not elicit testimony from Community members regarding cultural resources and treaty rights to address whether any portion of the mining site is listed on any register of historic sites. This agreement was consistent with Petitioners' decision not to contest

[9] Appellate Courts must review agency interpretations of law and legal conclusions, *de novo* without deference to the agency's analysis. *In Re: Complaint of Rovas Against SBC Michigan* 482 Mich 90, 102, 754 NW 2d 259 (2008).

Kennecott's failure to assess Eagle Rock as an historic site listed in the National Registry of Historic Places under MCL 324.63201(i) and R 425.202(2)(ee). Rather, Community witnesses would be called to establish the Community's standing and to show that the Community is an affected federally recognized tribe. See Response, p. 2 (TAB 049, p. 002099)

While they would not contest Eagle Rock as a "historic site" under R 425.202(2)(ee), Petitioners did not regard their understanding regarding Community witnesses as a limitation of their proofs on issues regarding Eagle Rock as a place of worship, under that section of Part 632 requiring an assessment of Eagle Rock as a place of worship – R 425.202(2)(p). Nor did the ALJ. Contrary to the FDO's conclusion, the ALJ's April 9, 2008 order did *not* preclude evidence on Eagle Rock as a place of worship. To the contrary, the ALJ *denied Kennecott's Motion to Exclude without prejudice* subject to Kennecott's ability to renew its objections during the hearing:

> Therefore, the motion is DENIED ***without prejudice*** based on counsel's representations. ***In the event that such evidence which [Kennecott] asks this Tribunal to exclude does surface, the matter may be revisited by renewal of the motion or objection during the hearing***.

(TAB 061, p. 002252) (emphasis added). Early in the hearing on May 7, 2008, during Petitioners' case in chief, Respondents availed themselves of the opportunity to revisit their objection to the testimony regarding worship at Eagle Rock.[10] (See *Id.,* TAB 676, pp. 51506-051516) Petitioners argued that that they had never agreed to limit their proofs on Eagle Rock as a place of worship under R 425.202(2)(p). (*Id.,* pp. 051503-051516) After hearing the parties' arguments, the ALJ overruled Respondents' objections to the admission of the disputed evidence and allowed Petitioners to present testimony on the religious significance and uses of Eagle Rock, adding that "[w]e can argue later whether it's relevant to criteria under [Part] 632." (*Id.,* p.

[10] During the hearing, and consistent with Petitioners' representations, no witness testified regarding a register of historic sites.

051515) Petitioners thereafter presented compelling evidence establishing that Eagle Rock is a place of worship under R 425.202(2)(p). As is evident from the PFD, the ALJ ultimately and correctly concluded that the testimony was relevant to the criteria in Part 632. The FDO conveniently ignored the fact that the "stipulation" issue was fully resolved by the ALJ, who concluded that there was no stipulation limiting proofs on Eagle Rock as a place of worship.

As is noted above, Petitioners went to great lengths, prior to the issuance of the Permit, to express their strong concern over impacts to Eagle Rock as a sacred place of worship. The suggestion that Petitioners intended to waive the presentation of evidence on this critical issue or that there was a "meeting of the minds" on a stipulation limiting Petitioners' proofs on Eagle Rock as a place of worship is absurd. To the contrary, the record reveals that Kennecott, MDEQ, and even the ALJ knew of Petitioners' intention to call Community witnesses on this issue and to vigorously pursue the issue. For example, after the alleged stipulation and during the *de bene esse* deposition of the Community's Tribal Historical Preservation Officer, Summer Cohen, taken on April 25, 2008 (prior to the hearing but after the alleged stipulation), Petitioners' counsel stated for the record that Ms. Cohen was being called *"in relation to the question of whether or not Eagle Rock is a place of worship within the meaning of Section 2(p) of Rule 202."* (Summer Cohen Dep. at 8). In response, Kennecott's counsel renewed their objection and stated that the issue would be raised to the ALJ. (*Id.*) This dispute at Ms. Cohen's deposition is clear evidence that there was no "meeting of the minds" and no intention by Petitioners to limit their evidence.[11]

[11] The FDO incorrectly states that because of the so-called stipulation, neither MDEQ nor Kennecott offered any evidence concerning the religious and cultural significance of Eagle Rock. (TAB 118, p. 007404) This illustrates Ruswick's failure to carefully review the administrative record and carefully consider Petitioner's arguments. The record reveals that parties submitted witness lists prior to the hearing on March 7, 2008 which was well in advance of the administrative hearing and prior to witness discussions that led to the alleged "stipulation." Neither Kennecott nor the MDEQ listed any witness that could have challenged the Community's evidence on Eagle Rock as a place of worship. Neither Kennecott nor MDEQ ever intended to contradict Petitioner's evidence on this issue—in fact there was no

Just three days later on April 28, 2008, the parties presented the ALJ with a Joint Pre-Hearing Statement. This statement, provided in accordance with a pre-hearing scheduling order, was prepared jointly by the parties and *signed by counsel for Kennecott and MDEQ*. The Joint Pre-Hearing Statement was an unequivocal expression of Petitioners' intent to present proofs on Eagle Rock as a place of worship:

> … Petitioners will show that issuance of the permit or the activities the permit allows violate many specific requirements of Part 632 and its implementing rules, including but not limited to:
>
> … The ***environmental impact assessment failed to identify migi zii wa sin (Eagle Rock) as a place of worship*** for Native Americans pursuant to **R 425.202(2)(p)** and failed to analyze potential impacts on *Migi zii wa sin* from mining activities pursuant to R 425.202(1)(a)(iii).

(TAB 072, pp. 003166, 003168)

Clearly, based on the pre-hearing statement, there was no agreement to limit Petitioners' evidence on Eagle Rock. In fact, the opposite is true – the parties agreed that "place of worship" ***would*** be an issue in the contested case.[12] [13].

---

way they could do so. Moreover, as is noted, MDEQ and Kennecott had ample time, almost 3 months, to call a witness to rebut the Eagle Rock testimony. They elected not to do so.

[12] A stipulation may also be abandoned or disaffirmed. *Kimball v Bangs,* 321 Mich 394, 414; 32 NW2d 831 (1948). Assuming *arguendo* that a stipulation on Eagle Rock as place of worship existed previously, the joint prehearing statement constituted an abandonment of any prior agreements both by Petitioners (who never agreed in the first place) and by Respondents who acknowledged that the presentation of evidence on this issue would be a part of Petitioners' case.

[13] In a judicial setting, joint pretrial statements, executed by the parties, frame the issues and govern the issues to be tried. See e.g., *Thomas v Gray,* 19 Mich App 90, 93; 172 NW2d 50 (1969) (citing 2, Honigman & Hawkins, MCR Ann. (2d ed.) pp. 7-8) In an analogous case, the Court of Appeals rejected an argument that a defendant had been surprised at trial by an allegedly new breach of contract claim. The Court observed that "[r]easonable notice that the plaintiff intended to assert the claim at trial was provided to defendants in the parties' final pretrial order." *Winiemko v Valenti*, 203 Mich App 411, 414; 513 NW2d 181 (1993). Likewise, the Joint Pre-Hearing Statement executed and jointly filed by the parties in this case provided clear and unequivocal notice to Respondents that Eagle Rock as a place of worship would be a central issue in the administrative hearing. Again, the FDO simply ignored the events prior to the hearing, including the prehearing statement, in its rush to enforce the non-existent stipulation.

Because there was no meeting of the minds among the parties to exclude testimony regarding Eagle Rock as a "place of worship," and certainly no intention by Petitioners to waive the right to call witnesses on this critical issue, the FDO's decision must be reversed.

2. The EIA Requirements In Part 632 *Are* Substantive Requirements And Kennecott's Failure To Assess Eagle Rock As A Place Of Worship And To Provide Measures That Would Reasonably Minimize The Adverse Impacts of Mining Are Clear Violations Of Part 632 That Require Denial Of The Mining Permit.

The FDO erroneously decided, as a matter of law, that the EIA requirements in Part 632 are not "substantive" requirements and that measures to reduce or mitigate impacts to features listed in Rule 202(2)(p) are outside the regulatory framework of Part 632. There is no support for these legal conclusions.[14] To the contrary, the EIA requirements in Part 632 ***are*** "substantive requirements" and Kennecott's failure to meet those requirements mandates denial of the Permit. Part 632 requires an application for a mining permit to provide an EIA describing the natural and human made "features" in a "proposed mining area" and the "affected area" that may be impacted by the mining operation MCL 324.63205(2)(b). Eagle Rock is a "place of worship" under R 425.202(2)(p) and, in any event, is a "condition or feature" within the mining area that must be assessed in an EIA (discussed in more detail *infra*). Pursuant to R 425.202(1)(a), Kennecott's EIA was required, therefore, to include the following with respect to Eagle Rock as a place of worship and as a feature of historic, cultural and religious significance:

> (i) An *identification and description of the condition or feature* as it currently exists within the mining area and the affected area.

[14] Ruswick's legal conclusion is not binding on this court and, given its conflict with the legislative intent surrounding Part 632, should be rejected. *In Re: Complaint of Rovas Against SBC Michigan, supra*, 482 Mich at 104. This is especially true in this case, which involved the first agency interpretation of Part 632 and its Rules. An agency's initial interpretation of new legislation is not considered as persuasive as a longstanding interpretation and, in any case, is not entitled to judicial deference. (*Id.* at 107)

(ii) An *identification of the proposed mining activities that may impact the condition or feature, and the process or mechanism through which the impact may occur.*

(iii) An *analysis of the potential impacts of proposed mining activities on the condition or feature* and, where applicable, the effects of the condition or feature on the proposed mining activities.

(iv) A *reference to the measures proposed to be taken under the mining, reclamation, and environmental protection plan to reduce or mitigate the potential impacts, and the predicted effects of those measures*. If the measures are not required under part 632 of the act, then the environmental impact assessment shall identify other statutes or regulations, if any, under which the measures are required.[15]

(v) A *map or maps and appropriate photographs, with any necessary explanatory documents or notations, showing the affected area for the condition or feature*, and a description of the basis for determining the affected area.

R 425.202(1)(a) (emphasis added). In addition, Kennecott's EIA was required to include "[a]n *analysis of the potential cumulative impacts* on each of the conditions or features … from all proposed mining activities and through all processes or mechanisms," and "[a]n *analysis of feasible and prudent alternatives* for the mining activities consistent with the reasonable requirements of the public health, safety, and welfare." R 425.202(1)(b)-(c) (emphasis added).[16]

Kennecott's EIA does not even *identify* Eagle Rock as a place of worship of cultural, historic, and religious significance, much less assess any impacts to Eagle Rock in that regard,

[15] Kennecott's failure to reasonably minimize impacts to Eagle Rock as required under MCL 324.63205(2)(c) is discussed later in this Brief.

[16] A recent decision of the United States Court of Appeals for the Ninth Circuit, decided in June, *Te-Moak Tribe of Western Shoshone of Nevada v. US Dep't of Interior*, --- F.3d ----, 2010 WL 2431001 (CA 9 2010), offers important guidance on the burden to establish "impacts" in an environmental assessment under the National Environmental Policy Act. In the case, the government argued that the Plaintiffs had not proven that "cumulative impacts" would occur to an outdoor Native American place of worship (a mountain) as a result of mining activities. The Court held that the tribes did not have to prove that cumulative impacts "would occur." Rather, they needed only to show a potential for cumulative impacts: "to hold otherwise would require the public, rather than the agency, to ascertain the cumulative impacts of a proposed action." (*Id.,* p 10) Applying NEPA, the Court concluded that the "cumulative impacts" analysis was inadequate and it remanded the matter for additional agency review. Likewise, Kennecott's failure to provide a "cumulative impacts analysis" as required in R 425.202(1)(b) requires this Court to vacate the Permit.

describe any mitigation measures, or evaluate feasible and prudent alternatives to the mining activities that will impact Eagle Rock. As the ALJ found: *"Kennecott and, as a consequence, DEQ, did not properly address the impact on the sacred rock outcrop known as Eagle Rock as a place of worship covered by Part 632 Rules."* (TAB 096, p. 005417) Put simply, Kennecott relied on its erroneous belief that it could ignore Eagle Rock.

The result of Kennecott's failure to provide an EIA that meets the requirements of Part 632 is clear – the Permit should have been denied and the MDEQ Permit approval must be vacated. Part 632 provides that:

> (11) Subject to subsection (10), the department *shall approve a mining permit if it determines both of the following:*
>
> (a) *The permit application meets the requirements of this part*.
>
> (b) The proposed mining operation will not pollute, impair, or destroy the air, water, or other natural resources or the public trust in those resources, in accordance with part 17 of this act. In making this determination, the department shall take into account the extent to which other permit determinations afford protection to natural resources….
>
> (12) The department ***shall deny a mining permit if it determines the requirements of subsection (11) have not been met.***

MCL 324.63205(11)-(12), (emphasis added). See also R 425.201(7)-(8) (same).

As discussed above, Kennecott's EIA does not meet the requirements of MCL 324.63205(11), and the Part 632 Permit must, therefore, be vacated under MCL 324.63205(12) and R 425.201(8).[17]

[17] The ALJ also found (TAB 096, p. 005413), and Petitioners agree, that Kennecott's EIA violates R 425.202(2)(x) because it does not identify or assess impacts to Community members' "land uses and land access" on Eagle Rock and elsewhere within the "mining area" (within the footprint of the mining operations, see MCL 324.63201(h)) and the affected area (outside the footprint of the mining operation, see MCL 324.63201(b)). See also MCL 324.63205(2)(b), (EIA must identify and assess impacts on features and conditions in both "the proposed mining area and the affected area…"). Unchallenged testimony on the record establishes that members of the Community and other *anishinaabe* tribes frequently access and use Eagle Rock and the surrounding "mining area" and "affected area" for worship, hunting, fishing, gathering of berries and medicines, and other activities such as the use of springs for

Additionally, and independently of the EIA requirement, Kennecott's application was required to reasonably minimize adverse impacts on Eagle Rock and its failure to do so requires denial of the Permit. MCL 324.63205(2)(c) provides in relevant part that an application must include a mining, reclamation and environmental plan that reasonably minimizes the actual and potential adverse impact of mining:

> A mining, reclamation, and environmental protection plan for the proposed mining operation, including beneficiation operations, *that will reasonably minimize the actual and potential adverse impacts on natural resources, the environment, and public health and safety within the mining area and the affected area.*

The "reasonable minimization" requirement of MCL 324.63205(2)(c) applies to and requires minimization of the adverse impacts of Kennecott's construction and mining operation on Eagle Rock. Kennecott's permit application does not meet that requirement for the following reasons.

a. <u>The Cultural, Religious, And Social Conditions Associated With Eagle Rock Are Features Of The "Environment," And Adverse Impacts To Those Conditions Are Not "Reasonably Minimized</u>."

The ALJ correctly recognized that the uses and significance of Eagle Rock to members of the Community and other *anishinaabe* tribes are considered features of the "environment:"

> …if something is brought forward by third parties during the environmental review that is clearly *an important feature of the environment* within the purpose of the rule, that feature should be covered in the EIA. In this case, the EIA should have assessed *the potential impacts to Eagle Rock as a place of worship and to the use of Eagle Rock for that purpose.*

---

drinking water, and that those activities will be impacted by mining operations. (*See, e.g.*, TAB 669, pp. 050179-050180, 050183) The ALJ correctly found, and the FDO did not address, the simple fact that: "Kennecott has not assessed tribal land uses at Eagle Rock and in the vicinity of the mining and affected areas," and while "the EIA acknowledges that the area is currently used for recreational purposes, . . . [it] does not specifically address the uses of the area by members of [the Community] and other Anishnabe [sic] tribes." (TAB 096, p. 005413) Therefore, because Kennecott's EIA does not identify those "land uses and land access" or evaluate impacts to them, describe any mitigation measures, or evaluate feasible and prudent alternatives with respect to those impacts on "land uses and land access," Kennecott's EIA violates Part 632 and its rules, and the Permit must be vacated on this basis as well.

(TAB 096, p. 005413) (emphasis added) This legal conclusion is consistent with the plain and ordinary meaning of the term "environment," which is not defined under Part 632. Reference to dictionary definitions[18] demonstrates that the plain and ordinary meaning of the term "environment" encompasses not only physical conditions and surroundings such as Eagle Rock itself, but also social, cultural, and religious conditions such as Eagle Rock's use as a place of worship and its historic and cultural significance:

- Webster's Third New International Dictionary of the English Language Unabridged (1993) defines "environment" to include "the surrounding conditions, influences, or forces that influence or modify as: … the aggregate of social and cultural conditions (as customs, laws, language, religion, and economic and political organization) that influence the life of an individual or community." *Id.* at 760 (emphasis added).

- *The Random House Dictionary of the English Language* (1983) defines "environment" to include "the aggregate of *surrounding things, conditions, or influences*, esp. as affecting the existence or development of someone or something." *Id.* at 477.

Under the plain and ordinary meaning of the term "environment," adverse impacts to social, cultural, and religious surroundings, features and conditions are impacts to the "environment." Therefore, "impacts to Eagle Rock as a place of worship and to the use of Eagle Rock for that purpose" are impacts to the "environment" that must be "reasonably minimized" under MCL 324.63205(2)(c)[19] and the conclusion in the FDO is simply wrong.

[18] Because "environment" is not defined, it is appropriate to consult dictionary definitions to determine the meaning of that term. *City of Royal Oak,* 257 Mich App at 642; MCL 8.3a.

[19] The decision in *Poletown Neighborhood Council v Detroit*, 410 Mich 616; 304 NW2d 455 (1981), which held that under the Michigan Environmental Protection Act ("MEPA") "the term 'natural resources' does not encompass a 'social and cultural environment,'" does not affect this conclusion. *Poletown* interpreted only the term "natural resources," *i.e.*, whether a "social and cultural environment" is itself a "natural resource," and not the term "environment." Moreover, given that *Poletown* is a MEPA case, it is only relevant (if at all) to the incorporation of MEPA's prohibition against "pollution, impairment, and destruction" of natural resources under MCL 324.63205(11)(b), and is not relevant to determining the scope of the "reasonable minimization" requirement of MCL 324.63205(2)(c) insofar as impacts to the "environment" are concerned.

Moreover, to the extent the meaning of the term "environment" in MCL 324.63205(2)(c) is ambiguous (which it is not),[20] "[w]hen two statutory provisions have a common purpose, the terms of the provisions should be read *in pari materia*." *Witt v Seabrook*, 210 Mich App 299, 302; 533 NW2d 22 (1995) (applying *in pari materia* to define a statutory term as it was defined under another statute serving a similar purpose).[21] Under this doctrine the term "environment" should be construed in accordance with other provisions of NREPA[22] requiring assessment and management of environmental impacts.

Part 54 of NREPA is instructive in this regard. Under Part 54, before providing financial assistance for projects related to public waterworks systems, MDEQ must conduct an environmental impact statement if MDEQ determines based on the environmental assessment that a project will have significant adverse impacts on *inter alia*, cultural resources, including "cultural resources, and "areas of recognized scenic, recreational, agricultural, archeological or historic value."[23] For purposes of adverse impact assessment and management under Part 54, therefore, an assessment of "environmental" adverse impacts clearly encompasses adverse impacts to social, cultural, historical, and religious conditions. The term "environment" in MCL

[20] It is only necessary to apply the principles of statutory construction if the term "environment" is *ambiguous*. *Mull v Equitable Life Assur Soc* of US, 444 Mich 508, 522 n 14; 510 NW2d 184 (1994) ("The doctrine of *in pari materia* is simply an interpretative tool to be used in determining the meaning of ambiguously worded statutes") (emphasis added). Here, "environment" has a plain and ordinary meaning that clearly fits within the structure and purpose of Part 632 and the Rules, and, therefore, is *not* ambiguous.

[21] Again, however, it is only necessary to do so if the term "environment" is ambiguous. *Mull v Equitable Life Assur Soc of US,* 444 Mich 508, 522 n 14; 510 NW2d 184 (1994) ("The doctrine of in pari materia is simply an interpretative tool to be used in determining the meaning of **ambiguously** worded statutes") (emphasis added). Here, "environment" has a plain and ordinary meaning that clearly fits within the structure and purpose of Part 632 and the Rules, and, therefore, is not ambiguous.

[22] Natural Resources and Environmental Protection Act, MCL 324.3101 *et seq*.

[23] See also Drinking Water Revolving Fund Project Plan Preparation Guidance, Mich Dep't of Envtl Quality, Dec 2008, at 26-29 (instructing applicants to evaluate environmental impacts including historical, archaeological, geological, cultural, or recreational, and human, social, and economic impacts).

324.63205(2)(c), which similarly relates to the minimization of adverse impacts to the "environment" that are identified through an EIA, should be read *in pari materia* with Part 54 and construed so as to encompass such conditions.[24] Thus, impacts to "Eagle Rock as a place of worship and to the use of Eagle Rock for that purpose," which must be assessed in an EIA, must also be "reasonably minimized."[25]

This understanding of the relationship between Part 632's EIA and "reasonable minimization" requirements is further supported by the fundamental principle of statutory construction that statutes and rules must be interpreted in the context of a single purpose and intent and with the purpose of harmonizing the individual sections of a statute or rule with that of the enactment as a whole. *Metropolitan Council 23, American Federation of State, County and Muncipal Employees, AFL-CIO v Oakland County*, 409 Mich 299, 317-318; 294 NW2d 578 (1980). Viewing Part 632 as a whole, it is clear that the EIA requirement, which under MCL 324.63205(2)(b) requires assessment of a mining operation's "*potential impacts*" on relevant conditions and features, is directly related to and serves as the foundation for the requirement

[24] NEPA also provides that impacts to cultural, historic, and social considerations are "environmental" impacts. See e.g., 40 CFR §1502.16 (an EIS must evaluate direct and indirect "effects" of an action and also "[u]rban quality, historic and cultural resources"); 40 CFR §1508.8 ("Effects include: … ecological…, aesthetic, historical, cultural, economic, social, or health, whether direct, indirect, or cumulative"); *South Fork Band Council of Western Shoshone of Nevada v United States Dep't of Interior*, 588 F.3d 718 (CA 9, 2009) (noting that EIS considered a proposed mine's impact on tribal members' religion, cultural resources, land use and access, recreation, and social and economic values); *Davis v Mineta*, 302 F3d 1104 (CA 10, 2002) (finding the environmental assessment for a highway construction project inadequate in its evaluation of increase in noise and its impact on residences, churches, parks, and businesses, and cumulative impacts including the demolition or moving of numerous historic structures); *Hanly v Mitchell*, 460 F2d 640 (CA 2, 1972) (enjoining project until agency properly considered impacts to the quality of the human environment).

[25] For the same reason, NEPA's environmental impact statement ("EIS") requirements are not analogous in this context. While it is true that courts have held that NEPA's EIS requirements are merely "procedural" and do not themselves require any mitigation of identified impacts, see *Robertson v Methow Valley Citizens Council*, 490 US 332, 350; 109 S Ct 1835 (1989), that is only the case because, unlike Part 632, NEPA does not contain any affirmative requirement to reasonably minimize or otherwise mitigate impacts. Here, MCL 324.63205(2)(c) clearly requires reasonable minimization of impacts.

that a mining, reclamation, and environmental protection plan "reasonably minimize the *actual and potential adverse impacts* on natural resources, the environment, and public health and safety" under MCL 324.63205(2)(c). The structure of Part 632 thus requires the conclusion that the terms "natural resources, the environment, and public health and safety" in MCL 324.63205(2)(c) be broadly construed to encompass the "potential impacts" required to be assessed under MCL 324.63205(2)(b).

Kennecott's failure to provide a mining plan that "reasonably minimized" adverse impacts to Eagle Rock as a place of worship of cultural, historical, and religious significance and MDEQ's failure to enforce the requirements of Part 632 require this Court to vacate the Permit.

b. <u>The Adverse Impacts To Eagle Rock Are Adverse Impacts To The "Environment" And A "Natural Resource" And Are Not "Reasonably Minimized</u>."

In addition to being a part of the "environment," Eagle Rock is also a "natural resource.[26]" MCL 324.63205(2)(c), therefore, explicitly applies to adverse impacts to Eagle Rock itself. The record unquestionably demonstrates that Kennecott's operations will directly and adversely impact Eagle Rock. None of the adverse impacts from fencing, blasting, bolting, etc. were evaluated in the EIA as required by MCL 324.63205(2)(b) and R 425.202(1)-(2) and none were "reasonably minimized" as required by MCL 324.63205(2)(c). Those adverse impacts to Eagle Rock will prevent any use of, and will desecrate it as a sacred place. Because

[26] Michigan courts recognize that earth materials such as rock are "natural resources." See, e.g., *Nemeth v Abonmarche Dev Inc*, 457 Mich 16, 34; 576 NW2d 641 (1998) (stating Court of Appeals had "acknowledged that sand is a natural resource"); *Preserve the Dunes, Inc v Mich Dep't of Envtl Quality*, 264 Mich App 257, 259; 690 NW2d 487 (2004) *(per curiam)* (affirming trial court decision that "recognized that sand is a natural resource"); *Silva v Ada Twp*, 416 Mich 153; 330 NW2d 663 (1982) (zoning restrictions on gravel mining and silica sand mining were zoning restrictions preventing extraction of "natural resources"). Indeed, Part 632 itself recognizes that earth materials such as ore, soil, and rock are "natural resources." See MCL 324.63205(11)(b) (stating that for purposes of MEPA standard under that subsection, "excavation and removal of nonferrous metallic minerals and of associated overburden and waste rock, in and of itself, does not constitute pollution, impairment, or destruction *of those natural resources*" (emphasis added).

those impacts were never identified, much less minimized, the plan violates MCL 324.63205(2)(c) and the Permit must be vacated.

The FDO suggests that the adverse impacts to cultural or religious features are beyond the reach of MCL 324.63205(2)(c). (TAB 118, pp. 007403-007404) As demonstrated by the foregoing, those impacts, which directly result from Kennecott's adverse impacts to an environmental feature and natural resource (Eagle Rock), are directly relevant to determining whether impacts to that environmental feature and natural resource have been "reasonably minimized" as required by MCL 324.63205(2)(c). They are in no sense beyond the reach of Part 632. Rather, they are, by legislative fiat, directly relevant to permitting, and a failure to provide a mining reclamation and environmental protection plan that reasonably minimizes the adverse impacts of mining must, in accordance with MCL 324.63205(11)(a) and (12), be vacated.

The FDO also offers the gratuitous observation that because Part 632 purportedly cannot be read to encompass impacts to Eagle Rock, the lease between Kennecott and MDNR controls those impacts and Petitioners cannot "collaterally attack" the lease. Again, the premise of this assertion, that Part 632 does not encompass impacts to Eagle Rock, is plainly wrong. Moreover, this case is not a collateral challenge of the Kennecott/MDNR lease. That lease was executed under a separate statute by a different state agency. Rather, this case is a direct challenge to Kennecott's failure to provide an EIA in compliance with Part 632.

3. Eagle Rock Is A "Place Of Worship" Under R 425.202(2)(p), And, In Any Event, Is A Condition Or Feature That Must Be Assessed In An EIA.

Eagle Rock is a sacred place of worship with immense historical, cultural and religious significance to members of the Community and other *anishinaabe* tribes. The FDO's legal

conclusion[27] that places of worship are limited to "buildings used for human occupancy part or all of the year" is an affront to Native Americans who are citizens of the United States who enjoy a constitutionally protected right to worship their Creator and who have used Eagle Rock as a place of worship since time immemorial.[28]

Petitioners agree with the ALJ that Eagle Rock is a "place of worship" as that term is used in R 425.202(2)(p),[29] which states that:

> Rule 202. (1). The environmental impact assessment required under R 425.201(1)(c) ***shall include, but is not limited to, the following:***
>
> (p) Residential dwellings, *places* of business, *places* of worship, schools, hospitals, government buildings, or other buildings used for human occupancy all or part of the year.

(Emphasis added).

Because the term "places of worship" is not defined in Part 632 or its rules, that term "should be accorded its plain and ordinary meaning, considering the context in which the words are used," and dictionary definitions may be consulted to determine that "plain and ordinary meaning." *City of Royal Oak v Southeastern Oakland County Resource Recovery Authority*, 257 Mich App 639, 642; 669 NW2d 322 (2003) (citations omitted); see also, MCL 8.3a.[30] The legal

---

[27] Again, MDEQ's legal conclusion is not binding on this court and is not entitled to judicial deference. *In Re: Complaint of Rovas Against SBC Michigan,* 482 Mich at 104. This is especially true in this case, which involved the first agency interpretation of the Part 632. An agency's initial interpretation of new legislation is not entitled to the same measure of deference as is a longstanding interpretation. *Id.* at 107.

[28] Indeed, the government's failure to recognize, and its decision to authorize an invasion of the Community member's religious practices at Eagle Rock is, itself, a violation of the Establishment Clause in the First Amendment in the United States and Michigan Constitutions. *See, e.g.*, *Bear Lodge Multiple Use Ass'n v Babbit*, 2 F Supp 2d 1448, 1454 (D Wy 1998), *aff'd on other grounds,* 175 F3d 814 (CA 10 1999).

[29] TAB 096, pp. 005412-005413

[30] "Principles of statutory interpretation apply to the construction of administrative rules." *Ford Motor Co v City of Woodhaven*, 475 Mich 425, 448; 716 NW2d 247 (2006).

conclusion of the ALJ in the PFD that the term "places of worship" as used in R 425.202(2)(p) includes "discrete outdoor areas as well as buildings used as places of worship"[31] is entirely consistent with the plain and ordinary meaning of the term "place" and the context in which the term "place of worship" is used. Further to the ALJ's analysis, a legion of other dictionaries support the conclusion that the plain and ordinary meaning of the term "place" includes "outdoor areas" and is not, as the PFD erroneously determined, limited to "buildings used for human occupancy":

- *The American Heritage College Dictionary* (3rd ed. 2000) defines "place" to include "A building **or an area** set aside for a specified purpose." *Id.* at 1043 (emphasis added).

- *Webster's Third New International Dictionary of the English Language Unabridged* (1993) defines "place" to include "a building **or locality** used for a special purpose." *Id.* at 1727 (emphasis added) (citing, as an example of that usage, a "place of worship").

- *The Random House Dictionary of the English Language* (1983) defines "place" to include "a space or spot, set apart or used for a particular purpose: ***a place of worship***." *Id.* at 1099 (italics in original).

- *Random House Webster's College Dictionary* (2005) defines "place" to include "a building, **location, etc.**, set aside for a specific purpose; ***a place of worship***" *Id.* at 938 (Emphasis added, italics in original).

These definitions establish that the ordinary usage of the term "place" includes buildings *and other areas* (*i.e.*, not just buildings) that are used for specific purposes, including worship. The ordinary meaning of "places of worship," therefore, clearly includes outdoor areas that are used for worship. Eagle Rock is certainly such a place, just as Stonehenge is for Druids, Calvary Hill is for Christians, and the Ka'ba (a building not intended for human occupancy) is for Muslims.

[31] TAB 096, p. 005412.

Black's Law Dictionary also supports this plain and ordinary meaning of the term "place of worship." Although the term "place of worship" is not defined in *Black's*, the term "place of business," which also appears in R 425.202(2)(p), is defined to mean "[a] *location* at which one carries on a business." *Black's Law Dictionary,* 1266 (9th ed. 2009) (emphasis added). The term "location," in turn, is defined as "[t]he specific place or position of a person or thing." (*Id.* at 1024) Consistent with these definitions, a "place of worship" is simply a "specific place or position" at which one engages in worship – which is consistent with the ALJ's finding that the rule's use of the terms "places of business" and "places of worship" includes "discrete outdoor areas" used for those purposes.[32]

Outdoor places have long been recognized as places of worship and as possessing cultural, historical, and religious significance to Indian Tribes and to other religious groups.[33] In fact, it has long been the policy of the United States to recognize and protect access to places sacred to Native American tribes:

> On and after August 11, 1978, it shall be the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian ... including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

American Indian Religious Freedom Act of 1978, 42 U.S.C. §1996.

---

[32] TAB 096, p.005412. Indeed, Black's further recognizes the existence of "public worship," which includes "[w]orship in a public place, without privacy or concealment." *Black's Law Dictionary,* 1747 (9th ed. 2009).

[33] See, most recently *Te-Moak Tribe of Western Shoshone of Nevada*, *supra*, pp. 9-10, concluding that an environmental assessment for a proposed mine project in Nevada that failed to adequately assess "cumulative impacts" on a mountain used, "since time immemorial" for prayer, meditation and worship by the Te-Moak and Western Shoshone tribes was inadequate; *Bear Lodge Multiple Use Ass'n*, *supra* (upholding the constitutionality of the National Park Service's Final Climbing Management Plan that provided for a voluntary rock climbing ban on Devils Tower, a sacred site for many Indians, during the culturally significant month of June), aff'd on other grounds, 175 F3d 814 (CA 10 1999); and *Kerrville Independent School District v SW Texas Encampment Ass'n,* 673 SW2d 256 (Tex App 1984) (upholding a jury's determination that a 64-acre tract known as "Mount Wesley" was a "place of worship" for Methodists and, thus, was entitled to exemption from ad valorem taxes).

Simply put, Petitioners' contention and the ALJ's legal conclusion that the plain and ordinary meaning of "places of worship" encompasses outdoor areas merely reflects logic and common sense.

The FDO offers the legal conclusion that a so-called "catch-all" provision in R 425.202(2)(p), namely: "or other buildings used for human occupancy all or part of the year," controls the analysis and limits the enumerated "places" identified in the Rule to those that are used for human occupancy. This narrow and limiting perspective runs contrary to the broad language in R 425.202. The language of the Rule that: "The environmental impact assessment required under R 425.201(1)(c) ***shall include, but is not limited to, the following:"*** is a clear directive that an applicant, and MDEQ, must take a broad approach to the features and conditions that must be assessed in an EIA. In other contexts, the Michigan Supreme Court has interpreted the term "including but not limited to" be an expression of an intent that a broad, not limiting, construction be used in interpreting the statutory language that follows. *In re Forfeiture of $5,264*, 432 Mich 242, 253, n. 7; 439 NW2d 246 (1989).

Additionally, the FDO's conclusion that the so-called "catch-all" phrase somehow modifies the terms "places of business" and "places of worship" so as to require that they be "buildings" used for those purposes, ignores the very purpose of such phrases in legal writing. The phrase "or other buildings used for human occupancy all or part of the year" is intended to bring a host of other, unspecified conditions within the scope of Rule 202. It does not modify the earlier phrase – it merely "catches all" other conditions. This was the conclusion of the Court of Appeals in *Patterson v Allegan County Sheriff*, 199 Mich App 638, 640; 502 NW2d 368 (1993), where, in interpreting a phrase within the Freedom of Information Act, the Court held: "The

phrase 'or other means of recording or retaining meaningful content' at the end of MCL 15.232(e) is a catchall, not a modifier."

If the rule's drafters intended the limitation on "places" as proposed in the FDO, they could have included language to that effect, for example, by utilizing the term "house of worship"[34] or "buildings used for worship." Instead of "houses" or "buildings," however, the rule utilizes the more expansive and unambiguous term "places." In *Pohutski v City of Allen Park*, 465 Mich 675; 641 NW2d 219 (2002), the Michigan Supreme Court expressed a cardinal rule of statutory construction:

> When parsing a statute, we presume every word is used for a purpose. As far as possible, we give effect to every clause and sentence. "The Court may not assume that the Legislature inadvertently made use of one word or phrase instead of another."

Id. at 683-684. To find that "places of worship" are limited to buildings would ignore and render meaningless the deliberate use of the term "places" of worship instead of "houses" or "buildings" of worship in R 425.202(2)(p), in violation of this cardinal rule. In contrast, interpreting "places of business" and "places of worship" to include outdoor areas in accordance with their plain and ordinary meaning does not in any way render the phrase "or other buildings used for human occupancy all or part of the year" in R 425.202(2)(p) meaningless. The use of the term "other" in this context simply serves to distinguish "buildings used for human occupancy" from the immediately preceding clause "government *buildings*."[35]

---

[34] "House of worship" is defined as a "building devoted to religious worship; a church, temple, chapel, etc." *The Random House Dictionary of the English Language* (1983), p. 689. See also *Webster's Third New International Dictionary of the English Language Unabridged* (1993), p. 1096-1097 ("house of worship" is a "temple, church").

[35] The conclusion that the clause "other buildings" does not limit the items specifically enumerated in R 425.202(2)(p) to "buildings" is further supported by the fact that, in addition to "places of worship" and "places of business," the rule also enumerates "dwellings," a term that is also not limited to "buildings" under its ordinary meaning. *See, e.g.*, *The American Heritage College Dictionary* (3rd ed. 2000), p 428 (a "dwelling" is a "place to live in; an abode"); *The Random House Dictionary of the English Language Unabridged* (1983), p 445 (a "dwelling" is "a building *or place of shelter* to live in"); *Random House*

Finally, to the extent additional construction of R 425.202(2)(p) is appropriate (which is not the case), "words grouped in a list should be given related meaning" under the doctrine of *noscitur a sociis*. *Griffith v State Farm Mutual Auto Ins Co*, 472 Mich 521, 533; 697 NW2d 895 (2005). The list of conditions and features in R 425.202(2)(p) have a related meaning: they all address places, including certain outdoor places, where people congregate. It is not necessary to limit "places of worship" to buildings to preserve that meaning.

The *noscitur a sociis*[36] doctrine also mandates that a particular phrase must be evaluated in the context of the overall statutory scheme. This further supports the conclusion that "places of worship" are not limited to "buildings":

> … the emphasized language does not stand alone, and thus it cannot be read in a vacuum. Instead, "[i]t exists and must be read in context with the entire act, and the words and phrases used there must be assigned such meanings as are in harmony with the whole of the statute …."

G.C. Timmis & Co v Guardian Alarm Co, 468 Mich 416, 421; 662 NW2d 710 (2003) (quoting *Arrowhead Dev Co v Livingston Co Rd Comm'n*, 413 Mich 505, 516; 322 NW2d 702 (1982)). When considered as a whole, Part 632 and its rules plainly demonstrate that R 425.202(2) is merely an illustrative list of conditions and features that *must* be assessed in an EIA, not a *limitation* on the scope of the conditions and features that must be assessed in an EIA, and that an EIA must assess all potentially impacted conditions and features regardless of whether they are expressly listed in the rule.[37]

Webster's College Dictionary (2005), p 383 (a "dwelling" is a "building *or other place* to live in; place of residence; abode") (emphasis added).

[36] The term *noscitur a sociis*, literally means "One who is known by his companions." Under the doctrine, "the meaning of questionable or doubtful words or phrases in a statute may be ascertained by reference to the meaning of other words or phrases associated with it." Black's Law Dictionary, *supra*.

[37] As the ALJ properly held, Part 632 and its rules clearly require assessment of impacts upon *all* potentially impacted natural and human made features and conditions within the mining area and affected

Petitioners also note that any exercise in statutory construction must result in a "reasonable construction that best accomplishes the statute's purpose." *Adams Outdoor Advertising, Inc v Charter Twp of Canton*, 269 Mich App 365, 371; 711 NW2d 391 (2006) (citations omitted). And although a court "may consider a variety of factors and apply principles of statutory construction, [it] should also always use common sense." (*Id.*) A finding that Eagle Rock is a place of worship clearly implements the purpose of R 425.202(2), which is quite simply to require a thoughtful assessment of impacts upon features and conditions impacted by a mining operation. In that regard, the reference in R 425.202(2)(p) to "places" of worship simply recognizes that people (including members of the Community) engage in worship at outdoor locations, and that those activities may be impacted by mining operations just as activities in an enclosed church or temple may be. Similarly, the Rule's use of the term "places of business" recognizes that business is often conducted in outdoor areas, as for example at outdoor markets, and that such areas may also be impacted by mining operations just as an enclosed store or market may be. In contrast, there is no logic to support the proposition that only impacts on human activities taking place within a *building* require assessment of impacts in an EIA.

Finally, Petitioners maintain and the ALJ correctly found, that the scope of the conditions and features required to be assessed in an EIA is not limited to the items expressly listed in R 425.202(2), and, therefore, Kennecott was required to assess Eagle Rock in its EIA regardless of whether Eagle Rock is a "place of worship" under R 425.202(2)(p). (TAB 096, p. 005413)

---

area, not only those features and conditions that are expressly listed in R 425.202(2). (TAB 096, p. 005413) See also MCL 324.63205(2)(b) (requiring EIA to assess impacts on "natural and human-made features, *including but not limited to*, flora, fauna, hydrology, geology, and geochemistry … in the proposed mining area and the affected area that may be impacted by the mining, and the potential impacts on those features from the proposed mining operation"); R 425.202(2) (requiring assessment of impacts on "natural and human made conditions and features *including, but not limited to*," the conditions and features expressly listed in the rule) (emphasis added). In addition, R 425.202(1), which prescribes the general contents of an EIA, provides that "[t]he environmental impact assessment required under R 425.201(1)(c) *shall include, but is not limited to*, the following…" (emphasis added).

The Part 632 Rules unambiguously require an EIA to assess *all* conditions and features that may be impacted by a mining operation. See MCL 324.63205(2)(b) (requiring EIA to assess impacts on "natural and human-made features, *including but not limited to*,…hydrology, geology, and geochemistry … in the proposed mining area and the affected area that may be impacted by the mining, and the potential impacts on those features from the proposed mining operation"); R 425.202(2) (requiring assessment of impacts on "natural and human-made conditions and features *including, but not limited to*," the conditions and features expressly listed in the rule) (emphasis added). The FDO conveniently ignored this aspect of the PFD and the arguments that Petitioners raised in that regard. Because Eagle Rock does not have to be a "place of worship" under R 425.202(2)(p) in order to be a "condition or feature" that must be assessed in an EIA, the FDO's finding that "there is no basis to require the EIA identify and describe the feature as a 'place of worship'" is legally erroneous and must be reversed. Kennecott's failure to assess and minimize impacts to Eagle Rock required denial of the Permit.

Given their effort to inform Kennecott and MDEQ of the importance of Eagle Rock as an historic and sacred place of worship, Petitioners, and especially the Community, rightly expected Kennecott and the MDEQ to carefully assess Eagle Rock in strict compliance with Part 632. Instead, Kennecott has successfully evaded the express requirements of Part 632, and, worse, the state agency charged with enforcing Part 632, MDEQ, has enabled Kennecott by glossing over and ignoring Part 632's mandates. As is evident from the foregoing, Kennecott has not complied with the substantive Part 632 EIA requirements. Under Part 632 a failure to provide an application that meets these requirements ***must*** be denied. Because MDEQ refused to do so, this Court must intervene and MDEQ's approval of Kennecott's Permit must vacated.

IV. SURFACE WATER CONTAMINATON

Kennecott's permit application does not meet the requirement of Part 632[38] that the mining plan include "provisions for the prevention, control, and monitoring of acid-forming waste products and other waste products from the mining process so as to prevent leaching into groundwater or runoff into surface water." MCL 324.63205(2)(c)(v) (emphasis added).

Acid rock drainage ("ARD"), a toxic solution of sulfuric acid and heavy metals, is formed when the sulfides in the ore oxidize as a result of exposure to air and water. (TAB 677, pp. 051885-051886) Its formation cannot be prevented and mitigation attempts have *never* proven fully effective at any mine site in the world; once the chemical reaction begins it is essentially irreversible. (TAB 677, pp. 051886-051888) The effects of ARD on watersheds are devastating, destroying fisheries, flora and fauna for the length of rivers it pollutes.

Pathways for ARD to enter surface water, directly and through groundwater, are abundant at this water-rich site. The Yellow Dog and Salmon Trout Rivers wrap around the mine site and flow to Lake Superior. The associated wetlands, directly above the proposed mine, are extensive.

Currently, groundwater at the mine site feeds both the Salmon Trout and the Yellow Dog Rivers, primarily through cold-water seeps along the edge of the Yellow Dog Plains. Kennecott's mine plan would substantially re-plumb this regional hydrology.

Kennecott's plan anticipates that hundreds of thousands of gallons of water will flow into the mine daily, resulting in up to eight feet of drawdown over a one to two mile radius around the mine. (TAB 096, pp. 005335, 005343-005344) This water will be pumped out of the mine into a waste water treatment plant ("WWTP") and will either be stored in holding ponds or injected

[38] Kennecott's failure specifically to meet the groundwater permit requirements was the subject of Petitioners' Part 31 contested case and is addressed in Petitioners' Brief in Case No. 10-268-AA. The instant section focuses on surface water and groundwater/surface water interfaces ("GSI") pollution.

into groundwater approximately one quarter mile from the mine site through the treated water infiltration system ("TWIS"). From there, water percolates into naturally occurring groundwater and empties into the East Branch of the Salmon Trout River via seeps at the edge of the Plains. Water and ARD collected from the temporary development rock storage area ("TDRSA") would also be treated, pumped into groundwater through the TWIS and end up in the Salmon Trout River and Lake Superior.

Quantities of storm water and snow at the site will be significant. The region routinely receives over 15 feet of snow per year. (TAB 682, p. 052875) When the snow melts, contamination pulses will drive pollutants into the river each spring. (TAB 680, pp. 052443-052444) Storm water (and snow) will be collected and separated into contact water basins (CWBs) or non-contact water basins (NCWB). Water and snow from the NCWBs will be allowed to seep into the ground and any over-topping will empty directly in to the Salmon Trout River; no monitoring of the non-contact water is required or planned, unless it over-tops. (TAB 682, p. 052838) Water from the CWBs will be routed to the water treatment plant, to the TWIS, into groundwater, and eventually into the Salmon Trout River and Lake Superior.

Petitioners demonstrated in the contested case that:

- The WWTP uses untested technology,
- The WWTP is not equipped to effectively treat anticipated inflow,
- Untreated or insufficiently treated waste water will reenter the Salmon Trout River, impacting water chemistry, temperature, water quality and plant and animal life in the whole riparian system, and
- Groundwater and surface water are at extreme risk of exposure to ARD.

A. **ARD Has Been Grossly Underestimated.**

The PFD section entitled "Geochemistry and ARD or ACID Mine Drainage ("AMD")" contains more than 20 pages of detailed testimony and referenced exhibits critical of the mine application and its underlying consulting work, with citation to the record virtually sentence-by-sentence. (TAB 96, pp. 005298-005320) What follows is approximately five pages of response to these criticisms, ignoring most of them, and with no citations to the record whatsoever. (*Id*, pp. 005321-005326) A fair reading of the PFD itself, with respect to the critical subject of the risks of ARD, which gave rise to Part 632 in the first place, illustrates that its conclusions were not based on the record as a whole.

Dr. Ann Maest, a geochemist, National Academy of Sciences panel member and widely published scholar, testified without rebuttal:

1. That 85-90 percent of mines like this one violate water quality standards. (TAB 096, p. 005304)

2. That in 64 percent of cases, water quality violations are due to failed mitigation, *i.e*., that mechanisms "designed to prevent contamination from reaching the environment failed to fully perform that function." (*Id.*) A relevant example is Kennecott's own Green's Creek mine in Alaska, in which Kennecott predicted it would take 500 years before acid drainage formed, when in fact it formed in less than 20 years. As a result of the Green's Creek mine, the nearby streams have elevated sulfide and zinc levels, and the seeps have high pH levels and elevated concentrations of copper, lead, selenium, zinc and sulfates. (*Id.*) The mitigation measures at Green's Creek are similar to those proposed for Eagle Mine. (*Id.*)

3. The Eagle deposit has among the highest sulfide content of any mine in the world. (TAB 096, p. 005305) The deposit contains considerable iron sulfide which will cause iron to coat the surface of any limestone used to neutralize the acidity. (*Id.*, p. 005306) In fact, introducing limestone can be a detriment to neutralization, causing arsenic, selenium and antimony to be leached out of the solution. (*Id.*)

4. Dr. Maest predicted severely worse water quality at the end of mining than did Kennecott (TAB 096, p. 005307), mainly owing to misjudgments by Kennecott as to rock particle size and the quantity of development rock and unmined ore. (*Id.*) She predicts three orders of magnitude higher than Kennecott for aluminum, 400 times greater concentrations of cadmium, and five times the concentrations of

copper predicted by Kennecott. She notes, again without rebuttal, that "even Kennecott's predictions for nickel in the underground mine exceed all Michigan standards." (*Id.*)

5. Dr. Maest explained how Kennecott's under-predictions would affect, and require redesign of the wastewater treatment plant. (TAB 096, p. 005309)

The PFD provides no record-supported response to most of these concerns. Indeed, much of the testimony of MDEQ's and Kennecott's own experts cited by the ALJ undercuts his conclusions. For example,

1. The MDEQ's Environmental Quality Analyst, Margie Ring, studied the temporary development rock storage area, but was unable to say whether the TDRSA would fail in the event of a 50- or 100-year storm event. (TAB 096, p. 005298) She has never worked with acid mine drainage, but "she agreed that it can be a serious environmental problem and that the Yellow Dog Plains is an environmentally sensitive area." (*Id.*, p. 005299)

2. The MDEQ's outside geochemist, Dr. Ted Eary, admitted that "he has no expertise in assessing the effectiveness of the mitigation plans designed to minimize potentials for acid drainage." (TAB 096, p. 005299) He did no modeling, collected no data and has never gone to the proposed mine site. (*Id.*) He was never provided with the most recent geochemical analysis performed by Kennecott's geochemist Mark Logsdon. (*Id.*) Eary "conceded that upon mine reflooding there will be reactive rock in the walls of the mine as well as the potential for metal leaching." (*Id.)*

3. Kennecott's geochemist Mark Logsdon was unfamiliar with Michigan's sulfide mining law and admits to no expertise in "mine design, waste water treatment plant design, predicting effects on the environment outside the mine area, or environmental impacts on flora and fauna." (TAB 096, p. 005300) Nonetheless, Logsdon "is aware of mines having water quality problems with stockpiling waste rock" (*Id.*) and has concluded that "up to 80 percent of the development rock that is produced [at Eagle] should be expected to be potentially acid generating." (*Id.*) Finally, in direct contradiction to Kennecott's representation and the ALJ's conclusion (discussed in the Crown Pillar section) that the crown pillar rock will be essentially dry, Logsdon acknowledged that there is "going to continue to be water circulating downward recharging through the crown pillar" and portions of the crown pillar will remain at a high level of saturation. (*Id.*, p. 005301)

Ultimately, the PFD contains a summary of the voluminous testimony adverse to Kennecott's acid rock drainage predictions, reproduced here verbatim:

- Kennecott's predictions of water quality are based on unrepresentative data that does not include sufficient samples of high sulfide ore which would tend to have the most robust ARD reaction and release the most metals into water.

- Kennecott's predictions did not account for "disseminated" ore that will not be removed during mining or placed in the TDRSA, which again resulted in Kennecott's underestimating the potential for the generation of acid and leaching of metals in the TDRSA and in water in the mine during the mining operation.

- Kennecott will not be able to effectively separate ore from non-ore materials, and, therefore, more acid-generating waste rock will report to the TDRSA and be left in the mine than be (sic) assumed by Kennecott in its predictions.

- Longer-term kinetic leach testing results that became available after submission of the [mine permit application] show that some rock sample[s] may have more potential to generate acid and leached metals than assumed by Kennecott in the analysis submitted with the application.

- Water percolating to the crown pillar will cause leaching of metals and other contaminants, and Kennecott should add these incremental levels of contaminants to its water quality predictions for water in the mine during mining.

- The particle size Kennecott used to model the water quality of any leachate in the TDRSA (10 cm) does not accurately represent the real distribution of potential rock particle sizes, many of which will be smaller and, therefore, have greater surface area than Kennecott assumed, which, in turn, provides an opportunity for greater release of metals into the TDRSA leachate.

- Kennecott failed to properly account for the total tonnage of development rock which would be stored in the TDRSA and placed back into the mine during and after mining.

- The preliminary estimate of mine water inflow of 180 gpm used by Kennecott in its calculations, as opposed to its more recent revised estimates of 75 (or 60+ gpm), resulted in a dilution and understatement of the potential contaminant concentrations in mine water during mining.

(TAB 096, p. 005320)

The succeeding pages of the PFD, deal in cursory fashion with this summary testimony, addressing some points, omitting others, and making no comment on the highly critical testimony cited above. In a total *non sequitur*, the section concludes: "Therefore, in sum, I find

there is no evidence to support the proposition that ARD or AMD is likely to occur." (*Id.*, p. 005326) Clearly, the ALJ's finding is unsupported by the record as a whole.

B. Water In The Reflooded Mine Will Exceed Michigan's Water Quality Standards And Threatens To Pollute Groundwater And Surface Water.

When mining is complete, Kennecott intends to fill the resulting voids with water ("reflooding"), theoretically to prevent further oxidation of the remaining sulfides in the cavities. Kennecott's permit application fails to satisfy the requirements of MCL 324.63209(8) because it does not demonstrate that it can achieve the required level of reclamation for the affected area (as Petitioners have shown it to be or by Kennecott's own description), nor that it will meet Part 632's ban on "perpetual care" especially given the very poor quality of water in the re-flooded mine and Kennecott's stated plans to "pump and treat" groundwater. MCL 324.63209(8).

1. Water in the reflooded mine will exceed water quality standards.

Dr. Maest, who regularly works for the U.S. EPA, modeled Kennecott's predicted water quality in the mine post-closure. The levels of contaminants she found were uniformly higher than Kennecott's results. (TAB 678, p. 051950) The different outcomes stem from Kennecott's unrealistically low predictions of exposed surface area and leaching, as well as its failure to consider reactivity and contamination resulting from ore left in the mine or in the development rock. (*Id.*, pp. 051950-051952) These faulty assumptions led Kennecott to faulty conclusions of artificially low contaminant levels.

Comparison of predicted mine water quality at the end of mining to relevant standards

	Units	Stratus Consulting (75 gpm inflow)	Geochimica[a] (180 gpm inflow)	Part 201	Part 22 standards	MCL	SMCL	MCLG
TDS	mg/L	**561**	–				500	
Aluminum	µg/L	**4,950**	4.0	300	150		50 to 200	
Beryllium	µg/L	**3.22**	–	4	2	4		4
Cadmium	µg/L	**11.9**	0.08	5	2.5	5		5
Cobalt	µg/L	**362**	18	40	20			
Copper	µg/L	**11,400**	2.1	1,400	500	1,300 (TT)	1,000	
Lead	mg/L	**135**	0.03	4	2	15 (TT)		0
Nickel	µg/L	**15,500**	**1,770**	100	50			
Sulfate	mg/L	**394**	28	250	250		250	

MCL = maximum contaminant level; SMCL = Secondary MCL; MCLG: MCL Goal. TT = Treatment technique. See U.S. EPA, 2007.

a. Geochimica, 2006, Table 2; - = not estimated.

(TAB 525, p. 039351; slide 16) The "Stratus Consulting" column contains Dr. Maest's predictions; the "Geochemica" column contains Kennecott's prediction.

For aluminum, Dr. Maest's predictions indicate three orders of magnitude higher than Kennecott's predictions. (TAB 678, p. 051951) Copper, which is present in high concentrations in the waste rock, was predicted by Kennecott at 2.1 micrograms per liter, with Dr. Maest's results indicating 11 micrograms per liter. Even Kennecott's predictions for nickel in the underground mine exceed any of Michigan's standards. (*Id.*) Kennecott's sulfate prediction is very low, even as low as background sulfate concentrations in much of the groundwater in the United States. (*Id.*) Dr. Maest predicts sulfate concentrations of almost 400 milligrams per liter, exceeding Michigan standards. (*Id.*)

Dr. Maest developed an estimate of water input through the crown pillar that would enter the underground mine during operations. (*Id.*, p. 051959) The results indicate a pH of 5.75, aluminum of .6 mg per liter, copper at 1.3 mg per liter, nickel 57 mg per liter and sulfate at 337 mg per liter. (*Id.*)

Dr. John Coleman, whose research has focused on resource distribution and modeling (TAB 681, p. 052759), discovered that the data used in Kennecott's modeling for water quality in the re-flooded mine significantly conflicts with data in the text of Kennecott's application. (*Id.*, p. 052786) Dr. Coleman obtained Kennecott's model from MDEQ and ran that model using exactly the values contained in Kennecott's application text. (TAB 681, p. 052804 and TAB 409, pp. 036656-036657) He concluded, using Kennecott's own data, that *it is highly likely that the groundwater quality standards in Part 632 would be easily exceeded by several-fold*. (*Id.*, pp. 052814-052815) *Using the values from Kennecott's application text in Kennecott's own model, most parameters exceed Part 201 standards*. (*Id.*, p. 052804 and TAB 409, pp. 036656-036657) The corrected values are at least one to two orders of magnitude higher when the inputs were corrected to reflect the application text input data. (*Id.*)

It is also highly likely that contaminated water from the reflooded mine will escape from the mine through faults and other weaknesses in the rock walls and roof. These zones of weakness and water transport were discussed by witnesses for all parties. Figure 4 of Appendix B-1 to Kennecott's EIA details numerous faults and dikes in the area of the mine, some running for several miles in length. (TAB 676, pp. 051577-051578) Figure 21 of Appendix B-8 to the EIA shows a dike that is in direct contact with the Salmon Trout River and surrounding wetlands, likely offering a direct conduit between the overlying surface water and the underlying bedrock. (*Id.* pp. 051583-051584 and 051639) Kennecott's Exhibit 214 (see, TAB 225 and 676,

pp. 051606-051607) suggests the existence of faults through the mine and ore body at several levels. MDEQ's own expert, Dr. David Sainsbury, criticized Kennecott for not considering the effect of a "discrete sub-vertical fault plane that intersects the Eagle deposit." (Attachment C; TAB 683, p. 053136; TAB 359, pp. 026412, 026347-026348) Even in the face of contradictory evidence from its own application and witnesses, Kennecott maintained that none of these features conduct significant amounts of water.

2. Part 632's Prohibition On Reclamation Schemes Requiring Perpetual Care Was Not Met.

Part 632's reclamation requirements prohibit a reclamation scheme that requires perpetual care. MCL 324.63209(8). The Part 632 Rules also require that the mining, reclamation, and environmental protection plan include "evidence satisfactory to the department that ... [b]oth the mining area and the affected area shall be reclaimed to achieve a self-sustaining ecosystem appropriate for the region that does not require perpetual care following closure." R 425.204(b)(vi) (emphasis added).

Kennecott's plan fails to meet this requirement for at least two reasons. First, contaminated water will accumulate in the mine workings after mining ends. Kennecott plans to operate its water treatment plant to pump this water out, treat it, and inject it back into the mine until the water in the upper levels[39] of the mine is clean enough to prevent impact on the alluvial aquifer. However, Kennecott does not know how long this will take, and has not shown that the need will not be "perpetual." Furthermore, in predicting the quality of water in the mine post-closure, Kennecott consistently chose modeling values that would result in greater dilution and predictions of cleaner water, even though it rejected those same values within its application. (TAB 681, p. 052799) As a result, a reasoned determination that the mine will not require

[39] Kennecott has no plans and is not required to monitor or treat the lowed bedrock aquifer.

perpetual care is impossible and Kennecott has not complied with the "no perpetual care" standard despite the ALJ's conclusion to the contrary. (TAB 096, p. 005416)

Second, surface subsidence or crown pillar collapse at this site could create a situation requiring water treatment for an unforeseeable time into the future. No one knows the full extent of the potential impacts of subsidence because Kennecott has never submitted that required information. Once again, without this information the ALJ could not have made a reasoned determination based on the whole record that the mine would not require perpetual care. (*Id.*)

C. Kennecott Failed To Comply With Applicable Statutes And Regulations.

Part 632 specifically requires that Kennecott "comply with all other applicable tribal, federal, or local statutes, regulations, or ordinances." MCL 324.63209(9). In the contested case proceeding Petitioners repeatedly asserted Kennecott's obligations:

(a) to obtain a National Pollution Discovery Elimination System ("NPDES") permit for discharges of waste water into the Salmon Trout River system pursuant to Section 402 of the Clean Water Act ("CWA"), 33 USC 1342;

(b) to comply with the CWA's "anti-degradation" rules; and

(c) to monitor the groundwater-surface water interface ("GSI") as required by R 425.406(4).

1. The Mine Requires A NPDES Permit For Discharges To The East Branch Of The Salmon Trout River.

Pursuant to Section 402 of the Clean Water Act ("CWA"), a National Pollutant Discharge Elimination System ("NPDES') permit is required for any facility that discharges pollutants to navigable surface waters of the United States. 33 USC 1342.

In most states, the U.S. Environmental Protection Agency has authority over CWA permitting. In Michigan, however, implementation of the CWA is delegated to the state (MDNRE). Because of this delegation, and Part 632's mandate of compliance with all additional

applicable statutes and rules (MCL 324.63209(9)), this Court's appellate review of the Part 632 mining permit encompasses MDEQ's failure to apply CWA standards to the mining operation.

Congress intended the broadest possible regulation of United States waters. *See United States v Rivera Torres, 826 F2d 151, 154 (CA 1 1987) (citing Conference Report on Section 2770,* reprinted in *1 A Legislative History of the Water Pollution Control Act Amendments of 1972, at 178); US v Texas Pipe Line Co*, 611 F2d 345, 347 (CA 10 1979). In light of Congress's purpose in enacting the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," the scope of this regulation encompasses discharges that end up in surface waters of the United States. *Solid Waste Agency of Northern Cook County v United States Army Corps of Engineers,* 531 US 159; 121 S Ct 675, 680 (2001)(quoting 33 USC § 1251(a)).

The direct discharge of water from Eagle mine's water holding basins into the Salmon Trout River is regulated by the CWA. It is well established that where mine water runs into streams, as it will in this case, a NPDES permit is required. Courts have held mining operations subject to regulation as point sources, even when the means of conveying pollutants are strictly natural phenomena, such as rainfall or gravity. For example, in *Sierra Club v Abston Constr Co*, 620 F2d 41 (CA 5 1980), the Court held that coal seams exposed by mining operations could be a point source of pollution when rainfall carried pollutants to navigable waters:

> Nothing in the Act relieves miners from liability simply because the operators did not actually construct those conveyances, so long as they are reasonably likely to be the means by which pollutants are ultimately deposited into a navigable body of water. Conveyances of pollution formed either as a result of natural erosion or by material means, and which constitute a component of a mine drainage system, may fit the statutory definition and thereby subject the operators to liability under the Act.

Id., at 45. This is analogous to the situation at Eagle, where water holding basins (at which no monitoring of water quality will occur until there is a release, after the fact) are anticipated by Kennecott to overflow into the Salmon Trout River. (TAB 682, p. 052840)

Similarly, a facility must obtain a NPDES permit for indirect discharges into surface waters when the discharges come from the facility as a point source. The record unequivocally demonstrates that water from the mine will indirectly discharge to the East Branch of the Salmon Trout River via groundwater. (TAB 697, p. 056962 and s*ee, United States v Earth Sciences, Inc*, 599 F2d 368, 373 (CA 10 1979))

Case law confirms that groundwater discharges necessitate an NPDES permit where, as in this case, it is undisputed that groundwater discharges will reach surface waters. (TAB 702, p. 056962) In *Rapanos v United States*, 547 US 715, 779; 126 S Ct 2208, a plurality decision, Justice Kennedy expressed the view that wetlands sharing a "significant nexus" with surface waters of the United States are within the jurisdiction of the CWA. Justice Kennedy opined that such a nexus exists when the waters in question (groundwater in the case at bar), "significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable." (*Id.* at 780) Therefore, he reasoned that "certain water-bodies could conceivably constitute both a point source and a water." (*Id*. at 772) In this case, the groundwater which is fed by the mine's Treated Water Infiltration System qualifies as a point source that should be regulated under the CWA.

The interpretive history of the CWA demonstrates that Congress intended to regulate discharges into hydrologically connected groundwater which adversely affects surface water. In *Idaho Rural Council v Bosma*, 143 F Supp 2d 1169, 1180 (D Idaho 2001), the Court held "that the CWA extends federal jurisdiction over groundwater that is hydrologically connected to

surface waters that are themselves waters of the United States." *See also, Washington Wilderness Coalition v Hecla Mining Co*, 870 F Supp 983, 990 (ED Wash 1994) (*"*[s]ince the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit.*").* Similarly, in *Quivira Mining Co v EPA*, 765 F2d (CA 10 1985), the Tenth Circuit held that the CWA gave the EPA authority to issue NPDES permits to regulate discharges from a uranium mining company into normally dry arroyos in New Mexico. The Court reasoned:

> [S]urface flow occasionally occurs, at times of heavy rainfall, providing a surface connection with navigable waters independent of the underground flow. *Additionally, the waters of the [arroyos] soak into the earth's surface, become part of the underground aquifers, and after a lengthy period, perhaps centuries, the underground water moves toward eventual discharge at Horace Springs or the Rio San Jose.*

Id., at 129 (emphasis added). *See also, Sierra Club v Colorado Refining Co*, 838 F Supp 1428, 1434 (D Colo 1993).

2. Kennecott's Planned Eagle Mine Activity Will Violate The Anti-degradation Rules

Michigan Administrative Code Rule 323.1098 (the "anti-degradation rule")[40] is a prohibition on new releases of certain constituents including some predicted to be released at the Eagle mine. The proposed mine, if constructed, operated and maintained as permitted, will violate the anti-degradation rule. Therefore, MDEQ violated the anti-degradation rule and MCL 324.63209(1) by approving the mining permit and not requiring Kennecott to comply with the anti-degradation rule.

A 2005 letter from the MDEQ Water Bureau Permit Section Chief to Kennecott officials concluded that Kennecott's proposed groundwater discharge "is anticipated to result in a new

[40] The anti-degradation rule is part of the Clean Water Act and therefore is delegated to Michigan's enforcement and application.

loading of pollutants, specifically mercury, to the surface waters of the state" and "*requires compliance with Water Quality Standards*." (TAB 614; Appendix 1, divider 12) The letter goes on to state that "*we believe that Rule 323.1098 applies to this activity*." Rule 323.1098 addresses any activity "that is anticipated to result in a new or increased loading of pollutants by any source to surface waters of the state and for which independent regulatory authority exists requiring compliance with water quality standards." (R 323.1098) Despite MDEQ's unequivocal determination to the contrary, the PFD concluded that NPDES, and consequently, anti-degradation protection, was not required. (TAB 096, p. 005417-005418)

3. The Mine Plan's Failure To Include GSI Monitoring Violates R 425.406(4).

The mining and groundwater permits issued to Kennecott do not require monitoring of surface water quality, even at the groundwater/surface water interface (GSI) where Kennecott's waste water enters the Salmon Trout River. (TAB 704, pp. 057170-057171; TAB 705, pp. 057789-057790) It is undisputed that Kennecott's waste water will enter the East Branch of the Salmon Trout River via "seeps" that drain directly into the river (TAB 704, pp. 057170-057171, 057173-057174; TAB 705, p. 057749). Part 632 rules and the CWA require that this water be monitored at any point near where it enters surface water. The need to monitor is even more acute given that the MDEQ staff recommended that surface water quality standards apply to the GSI. (TAB 705, pp. 057785-057786) (That recommendation was rejected by MDEQ and the ALJ without plausible explanation. For instance, staff recommended a 1.3 ng per liter limit for mercury, but the Permit contains a limit of 2.1 ng per liter. (*Id.*, p. 057787) Cadmium, copper and silver all have higher limits than the limits that were recommended by DEQ staff for GSI protection. (*Id.*, p. 057788) *Some constituents included in the groundwater permit do not actually have any limits.* (*Id.*, p. 057788-057789)

Somehow, the ALJ failed to address this problem, even though the violation of R 425.406(4) requiring that "surface water monitoring sites shall be designed and located to adequately assess the impact of a specific mining activity on surface water" is incontrovertible. The Permit should be revoked because Kennecott's permit application does not include any surface water monitoring at the GSI of its discharges.

V. OTHER DISPOSITIVE OMISSIONS OF THE MINING PERMIT APPLICATION

A. The Application Did Not Contain A Contingency Plan That Meets The Requirements Of Section 63205(3).

The Sulfide Mining Act requires that the permit application contain "[a] contingency plan that includes an assessment of the risk to the environment or public health and safety associated with potential significant incidents or failures..." MCL 324.63205(2)(d) (emphasis added)

The PFD's third conclusion of law claims that Kennecott's mine plan includes a "host of contingencies, including for unplanned crown pillar subsidence." (TAB 096, p. 005415) However, this conclusion directly contradicts the MDEQ Mining Team Coordinator's and Kennecott's own testimony, and completely ignores overwhelming inconsistent evidence in the record, including the conclusion of a mining engineer who has worked in over 500 mines, that "there are no contingency plans for things like a crown pillar collapse in the mine application or in Kennecott's testimony." (TAB 697, p. 057882) This evidence, and much more like it, is never addressed in the PFD.

Mr. Maki, the MDEQ Mining Team Coordinator and head of the Mine Application Review Team, testified that the section of Kennecott's permit application addressing contingencies and contingency measures contains: no contingency plan for subsidence or crown pillar failure; no contingency plan for catastrophic events or wastewater treatment plant closure for a substantial period of time; no contingency for significantly increased inflow to the mine; no

contingency, should the MVAR air filtering system not work; and that there is no contingency addressing contaminated water leaking into aquifers from the underground mine. (TAB 699, pp. 056305-056309, 056176, 056178; TAB 670, pp. 056508-056509) Finally, Maki admitted that essentially, the "contingency plan" for water quality protection really just requires additional monitoring and that in fact "[he] wouldn't call monitoring a contingency plan." (TAB 670, pp. 056508-056509) Evidence in the record shows that the MDEQ conceded that contingency plans were absent from the application and permit, but the PFD concludes exactly the opposite with no explanation. (TAB 096, p. 005415)

The Permit includes no contingency plans for the most predicted and potentially fatal failures, turning a blind eye to perhaps the most important mechanism for protecting humans and the environment. For these reasons, the Permit should be revoked.

B. The Application Did Not Include A Reclamation And Environmental Protection Plan For The Affected Area As Defined In The Act, As Required By Section 63205(2)(c).

The Sulfide Mining Act requires that the application include:

> A mining, reclamation, and environmental protection plan for the proposed mining operation, including beneficiation operations, that will reasonably minimize the actual and potential adverse impacts on natural resources, the environment, and public health and safety within the mining area *and the affected area.*

MCL 324.63205(2)(c) (emphasis added) It further provides that:

> Both the mining area *and the affected area* shall be reclaimed and remediated to achieve a self-sustaining ecosystem appropriate for the region that does not require perpetual care following closure and with the goal that the affected area shall be returned to the ecological conditions that approximate premining conditions subject to changes caused by nonmining activities or other natural events.

MCL 324.63209(8) (emphasis added)

Kennecott's permit application did not include any plan for reclamation or environmental protection for any area outside of its fenced area – *i.e.,* the mining area. Rather, Kennecott's

permit application states in Section 7 that its reclamation will merely consist of "restoring approximately 90 acres of surface area and the underground mine workings." (Appendix I, divider 5; TAB 123, p. 007517; *see also* TAB 096, p. 005260) As noted elsewhere in this brief, the 90 acres to which the application refers is the mine site itself and does not include the vast geographic area for miles around that will be negatively affected, as required by statute.

The PFD's fourth conclusion of law misstates and misapplies the law regarding reclamation and remediation of a sulfide mining operation. The PFD does not even mention the applicable provision, MCL 324.63205(2)(c), and interprets MCL 324.63209(8), contrary to the specific words of the statute, as merely requiring that a permit applicant provide a reclamation and remediation plan for the "mine site." (TAB 096, p. 005416) The plain, unambiguous language of § 63209(8) obviously requires more – it requires a reclamation and remediation plan for "[b]oth the mining area *and the affected area.*"

Since Kennecott's permit application did not include a reclamation and environmental protection plan which conformed to the statute's requirements, the Permit was improperly granted and should be revoked.

C. The Application Did Not Include Information That Demonstrates That All Methods, Materials And Techniques Proposed To Be Utilized Are Capable Of Accomplishing Their Stated Objectives In Protecting The Environment, As Required By Section 63205(2)(c)(ii).

Section 63205(2)(c)(ii) requires that the application include "information which demonstrates that all methods, materials, and techniques proposed to be utilized are capable of accomplishing their stated objectives in protecting the environment…" MCL 324.63205(2)(c)(ii)

It is undisputed that no information of any kind was included in Kennecott's permit application concerning the method, materials and techniques to be employed in controlling emissions of toxic particulate matter from the exhaust stack ("MVAR"). Kennecott's permit

application did not propose any filter or control on the MVAR stack. However, after public comment expressing concern over the impact of uncontrolled heavy metal and sulfide emissions, Kennecott announced that it would not be averse to adding a fabric filter system, which it claimed would reduce emissions of such matter by 85%. (TAB 096, p. 005330) At no time, not even during the contested case hearing, was any evidence produced to back up Kennecott's claim and there is no record that manufacturer's specifications have ever been seen by the MDEQ, the ALJ or anyone else. (*Id*.) It was admitted that such a system must be custom designed and has never been tried before. (*Id*., p. 005332)

Because the efficacy of Kennecott's proposed methods, materials and techniques is unproven and in many instances, untested, the Permit violates Part 632. In the most egregious cases, Kennecott has not even revealed what methods, materials and techniques it plans to use to achieve protection of Michigan's natural resources. Therefore, the Permit should be revoked.

D. The Application Did Not Include An Analysis Of Cumulative Impacts Of Mining Activity On The Affected Area, As Required By Section 63205(2)(b) And R 425.202(1)(b)

Part 632 and implementing regulations require that an applicant's EIA include an analysis of the cumulative impacts of all mining-related activities on the potentially affected environment. Kennecott performed no such analysis. Given that Kennecott failed to assess the full "affected area," it is true, *a fortiori*, that "potential cumulative impacts" across the potentially "affected area" were ignored altogether. The application's silence on this critical requirement is a fatal defect. Instead of performing a cumulative impacts analysis, Kennecott complained that such an analysis is relatively new to science. But it is not for MDEQ to rewrite the statute because Kennecott finds this provision inconvenient. In the absence of the required analysis, issuance of this mining permit was unlawful.

For each of the listed features identified in the Act, an applicant's EIA, must specifically include an assessment of the cumulative impacts of mining activities on that feature. The assessment must include:

> An analysis of the potential cumulative impacts on each of the conditions or features ... within the mining area and the affected area from all proposed mining activities and through all processes or mechanisms. The analysis shall consider additive effects, and the assessment of significant interactions between chemical and physical properties of any discharges, with reference to the physical and chemical characteristics of the environment into which the discharge may be released.

R 425.202(1)(b) (Emphasis added). "'Cumulative impact' means the environmental impact that results from the proposed "mining activities" when added to other past, present, and reasonably foreseeable future activities." R 425.102(1)(h).

> 'Mining activity' means any of the following activities for the purpose of, or associated with, mining: (i) Clearing of land; (ii) Drilling and blasting; (iii) Excavation of earth materials to access or remove ore; (iv) Beneficiation; (v) Reclamation; (vi) Transportation of overburden, waste rock, ore, and tailings; (vii) Storage, relocation, and disposal of overburden, waste rock, ore, and tailings within a mining area, including backfilling of mined areas; (viii) Storage and transportation of chemical reagents; (ix) Construction of water impoundment and drainage features; (x) Construction of haul roads; (xi) Construction of utilities or extension of existing utilities; (xii) Withdrawal, transportation, and discharge of water.

R 425.103(1)(a) (Emphasis added). Nowhere in Kennecott's mining application can there be found an analysis even remotely resembling an analysis of the cumulative impacts of these explicitly listed "mining activities."

The ALJ acknowledged that "Section 63205(2)(b) and Rule 202 govern the content and data-collection requirements for the EIA required to be included with mine permit application. In particular, an EIA …must include a cumulative impacts analysis." (TAB 96, p. 005416) And the PFD candidly describes the testimony of Dr. David Flaspohler, a forest ecologist, as noting that "neither Dr. Koss nor Dr. [sic] Kailing made any effort to assess the cumulative environmental impacts of mining operations, which is necessary if the goal is to apply the best available

science. (Tr. 41:8410, 8455-8456)"[41] (TAB 096, p. 005375; *See also* TAB 675, p. 051395) As also noted by the ALJ, Dr. Flaspohler gave illustrations of how cumulative impact analysis works.

> Dr. Flaspohler explained that all of these various effects - chemical impacts, physical impacts, and biological impacts - must be studied together in order to assess the likely cumulative impact of the mine on the biological communities that surround it. (Tr. 7:1371-1373). Illustratively, bird populations will be impacted by a number of factors, including soil acidification, changes in plant communities (and consequent changes in invertebrate communities), and the introduction of commensals (which may both modify invertebrate populations and directly prey upon birds and bird nests). (Exhibit P632-143. Slide 10, 18, App. 5; Tr. 7:1373-1374, 1381-1382). Soil acidification, for example, can result in a reduction in the populations of land snails and isopods, upon which some songbirds depend in order to produce sufficient calcium for viable egg shells. (Tr. 7:1374-1376).
>
> Dr. Flaspohler also provided an illustrative description of the cumulative impacts that mine operations are likely to have on local amphibian populations. (Tr. 7:1377-1379; Exhibit P632-143, slide 16, App. 5).

(TAB 096, p. 005362, citing TAB 675, pp. 051390-051401, TAB 511, pp. 039293, 039296 and 039298-99) In omitting a cumulative impact analysis Kennecott again failed to demonstrate that the mine will not pollute, impair or destroy natural resources, because in order "to understand the effect of something, an activity at this proposed mine. ... you need to take a realistic look at how ... the variety of potential impacts could cumulate in their effect on the ecosystem and on individual species." (TAB 96, p. 005375; Appendix II, Tr. 41:8410-8411)

Dr. Flaspohler testified that you cannot look at the various kinds of impacts that the mine will create by analyzing each of the causal factors one at a time: "…When habitats change, whether it's physically, chemically, or the composition of the community changes, the animals experience those things collectively, not as individual sequential disruptions … Ecological research is trying to look at not just individual effects, but cumulative effects, because that …

[41] One item missing from the electronic Record is Volume 41 of the transcript containing extensive rebuttal testimony of Petitioners' witness Dr. Flaspohler. Cited pages have been added at the end of Appendix II.

better reflects the reality of how species' ecological systems work." (TAB 675, P. 051391) (Emphasis added)

And while we probably did not need an expert witness to tell us that the EIA fails to analyze cumulative impacts as required by law, that was Dr. Flaspohler's explicit testimony. (TAB 675, p. 051413) Neither the MDEQ nor Kennecott made any effort at the administrative hearing to explain away the total absence of any analysis in the EIA of potential cumulative impacts of the proposed mining operation.

Adopting language from Kennecott's Post-Trial Brief virtually verbatim, the ALJ held that there is no such thing as cumulative impacts analysis:

> There is no generally accepted scientific protocol for evaluating cumulative impacts, but the only evidence in the record is that best practice is to accumulate as much data about individual stressors as practicable and to use the data to reach conclusions regarding overall potential impacts. Kennecott followed that best practice in preparing its EIA.[42]

(TAB 096, p. 005416) This finding is legally indefensible because the statute plainly requires a cumulative impacts analysis – not the "accumulat[ion of] as much data about individual stressors as practicable." The finding is also impossible to square with the record, in which Kennecott's own experts (who, unlike Mr. Kailing, have extensive experience in the field) vouched for and explained cumulative impacts analysis. For one, Kennecott's terrestrial toxicology expert, Dr. Kaputska, discussed at some length both the conceptual and the practical components of cumulative impacts analysis. (TAB 698, pp. 055876-055881)

Even more telling, however, was the testimony of Kennecott's witness, Dr. William Taylor, a leading expert and author in the field of landscape ecology. Dr. Taylor provided the

[42] See Kennecott's Closing Argument And Proposed Findings Of Fact And Conclusions Of Law. (TAB 087, p. 003457) It is noteworthy that in adopting this argument as his own conclusion the ALJ did choose to omit Kennecott's record citations, which invoked the testimony of Kennecott witness Peter Kailing. That testimony was strongly and appropriately objected to, as Mr. Kailing's ONLY knowledge of the subject was based on a 'literature review.' (TAB 695, pp. 055400-055401)

tribunal with an overview of what a cumulative impact assessment would entail. After describing the use of satellite imagery to look at large data sets and come up with patterns of impacts on animal life (TAB 705, p. 057378), Dr. Taylor gave the following testimony:

> Q. If you're trying to study the cumulative impacts of let's say, a mining operation on the area depicted in this map, the old growth forest, the mountains, the three river systems, the McCormick Tract and so forth, what sort of disciplines are brought to bear to study cumulative impacts?
>
> A. Depends on what sort of disturbance is being – occurred. Certainly you would have individuals that would be looking at spatial analysis, so geographers. You'd have ones that if there was humans involved, you'd have sociologists or political scientists. You would have foresters, you'd have land managers in a broad sense. So you would have foresters, you could have interpreters, you could have biologists, communications people. It depends on what your impact is. It's very broad.

(TAB 705, p. 057378)

He further testified that from a landscape ecology standpoint, one would look at what the cumulative impacts are on the whole region, rather than stopping at boundary lines in studying the potential effect of human disturbance. (TAB 705, p. 057381) Fish populations and communities must be viewed in the context of the entire watershed. (*Id.*, p. 057389) Although fish clearly respond to local conditions, habitat quality is influenced by activities and conditions that may occur far from the stream. (*Id.*, p. 057388) In Michigan, neglect of cumulative impact concepts has caused brook trout populations to suffer and the Michigan Grayling to become extinct. (*Id.*, p. 057383)

All of this testimony was referenced in the PFD. (TAB 096, p. 005370) Dr. Taylor was actually simply fleshing out the scientific basis for the "cumulative impacts" requirements of the statute. Kennecott chose to ignore both the statute and the guidance of its own expert spokesman.

The ALJ's second finding on this issue is simply incomprehensible. Without citation, he states that "Kennecott's EIA … includes a cumulative-impacts analysis." (TAB 096, p. 005416) A reader will search the EIA in vain for any such analysis, and the uncontradicted evidence establishes that no such analysis was performed.

VI. THE ALJ ERRONEOUSLY IMPOSED THE BURDEN OF PROOF REGARDING ADVERSE ENVIRONMENTAL IMPACTS ON PETITIONERS, WHEN PART 632 PLAINLY PLACES THAT BURDEN ON THE APPLICANT

Part 632 places the burden of showing that all regulatory requirements have been met squarely on the permit applicant. MCL 324.63205(3). Thus, the applicant must affirmatively show that the mine will meet every statutory requirement under Part 632, including the requirement that the mine will not pollute, impair or destroy natural resources. MCL 324.63205(11)(b).

The ALJ concludes that *Petitioners* failed to carry their "burden of persuasion" with respect to demonstrating that the mine *will* "pollute, impair or destroy" wetlands under MEPA. (TAB 096, p. 005414-005415) The PFD further mistakenly places the burden of proof on Petitioners under Part 632 with respect to adverse impacts on bird populations. For example, the PFD holds for Kennecott on the grounds that "none of [Petitioners'] witnesses offered *conclusive* testimony of the issue." (TAB 096, p. 005387) (emphasis added) Imposing the burden of proof on Petitioners – let alone the imposition of an unprecedented and impossible standard of "conclusive" proof – is a plain violation of Part 632 requiring reversal.

VII. THE FDO WAS MADE UNDER HIGHLY IRREGULAR AND PREJUDICIAL CIRCUMSTANCES IN VIOLATION OF APPLICABLE LAW INCLUDING BUT NOT LIMITED TO THE MICHIGAN ADMINISTRATIVE PROCEDURES ACT AND THE DUE PROCESS CLAUSES OF THE UNITED STATES AND MICHIGAN CONSTITUTIONS

The FDO was made under highly irregular and prejudicial circumstances and is in violation of applicable law, including, but not limited to, MCL 24.281 and 24.285, R 324.2, and the Due Process Clauses of the United States and Michigan Constitutions.[43] The eleventh-hour Order of Delegation and issuance of the FDO by an MDEQ "senior policy advisor," only nine days after entry of the Order of Delegation, were legally improper and clearly calculated to dispose of the contested case with a pre-ordained result before a new MDNRE Director (and, therefore, a new final decisionmaker) was named. In support of this dispositive issue, Petitioners refer to, adopt and incorporate by reference the argument and authorities set forth in their Part 31 Brief, Section IV, A.

VIII. THE ALJ IMPROPERLY TREATED POST-APPLICATION CORRESPONDENCE, REPORTS, CONTESTED CASE EVIDENCE, AND CONDITIONS INCLUDED IN THE PERMIT AS "CURING" DEFECTS AND OMISSIONS IN THE MINING PERMIT APPLICATION.

The ALJ treated post-application correspondence, reports, and contested case evidence as constituting "amendments" to the application. These *de facto* "amendments" were never subjected to public comment or public hearings in contravention of MCL 324.63205(6)-(8), the holding of *Sierra Club v DEQ*, 277 Mich App 531; 747 NW2d 321 (2008) and all applicable authorities. In support of this dispositive issue, Petitioners refer to and adopt the arguments and authorities set forth in their Part 31 Brief, Section IV, B, 1.

The most extreme version of the wholly unauthorized device of post-application amendments, which Kennecott proposed and the MDEQ and the ALJ accepted, was that the ALJ explicitly authorized Kennecott to revise its mine design and plan <u>while it was mining</u>, as a prospective way in which to cure the litany of unanswered criticisms that still existed at the time of the contested case. (TAB 096, p. 005245) This final, extreme, version of the latitude granted

[43] US Const Am XIV, §1; Const 1963, art I, §17.

to this applicant to continue changing, and promising to change, the way in which it actually intends to extract the ore body under the Salmon Trout River not only eliminated any further public oversight, it will take Petitioners completely out of the process which the statute envisioned. Kennecott now has *carte blanche* to mine more or less of the sulfide ore, conceivably using ever-changing methods, with no review by Petitioners' experts possible, and only theoretical review by the agency, which insists it has no expertise in such matters. This entire approach is unacceptable, illegal under the statute, and highly risky to the future of this project and the natural resources placed in jeopardy by this proposed sulfide mine.

IX. THE FDO WAS THE PRODUCT OF ADDITIONAL INCURABLE ERRORS REQUIRING REVERSAL OF THE MDEQ'S ISSUANCE OF THE PERMIT.

Additional reversible error, requiring revocation of the Permit, includes the following:

1. The PFD incorporated factual and legal conclusions directly contradicted by the overwhelming preponderance of its own factual findings as prohibited by *Lopez v Mich Dept of Social Services*, 76 Mich App 505; 257 NW2d 143 (1977) and all applicable authorities. For example, the PFD's conclusion that Petitioners failed to establish a *prima facie* case is in direct conflict with its Findings of Fact, which were supported in their entirety by the record and established each and every element of Petitioners' *prima facie* case.

2. The activities permitted under Kennecott's permit fail to satisfy the requirements of MCL 324.63209(1) because those activities violate other parts of the Act including Michigan's Water Legacy Act (MCL 324.32721).

3. NREPA's Part 303, Wetlands Protection Act, prohibits conduct that drains surface water from a wetland without a permit from MDEQ, MCL 324.30304(d), and the proposed mine, if constructed, operated and maintained, will draw down the surface water of wetlands adjacent to or on the surface of the mine site in violation of Part 303 and MCL 324.63209(1).

4. The ALJ committed unlawful procedural error in excluding Exhibit 11 to the *de bene esse* deposition of David Sainsbury from the record in the contested case hearing and sustaining Respondents' objections to the exhibit based on lack of foundation, hearsay, and lack of opportunity to cross-examine, when the transcript of the deposition shows that there was no basis for either objection, resulting in material prejudice to Petitioners.

CONCLUSION

Petitioners are mindful of the number of significant appellate issues raised in this Brief and appreciative of the opportunity to address three of these issues – instability of the proposed mine, statutory insufficiency of the Environmental Impact Assessment, and destruction of Eagle Rock as a place of worship – in some detail. These grave deficiencies in the mine permit application and the mine design itself stand in dramatic contrast to the environmentally protective and substantively specific provisions of Part 632 of NREPA and the Sulfide Mining Administrative Rules promulgated thereunder.

The Statute and Rules were established to ensure responsible mining practices and vigilant protection of the ecosystems surrounding any proposed sulfide mining operation. The requirements enumerated in this Brief are manifestly not generalized or discretionary provisions inviting flexible interpretation and conduct by mining companies or regulators. Perhaps recognizing the reality, if not the profound depth, of the MDEQ's lack of experience and expertise in sulfide mining, the Legislature required that explicit proof be provided up front that any sulfide mining operation to be conducted in the State of Michigan would avoid the ruinous practices of sulfide mines elsewhere. Held explicitly to the strictures of the Statute and Rules, even a mining company with Kennecott's troubling legacy of collapse and pollution could theoretically be regulated to mine responsibly in Michigan.

Unfortunately, the temptation to save money by accessing the ore body from nearby Eagle Rock instead of, for example, tunneling to the ore from outside the Yellow Dog Plains, and to destabilize the mine by removing most of the ore, instead of leaving enough rock mass in conventional pillars to support the mine, has proven too great for Kennecott to resist. These dangerous shortcuts, coupled with the demonstrably cozy relationship between the mining

company and the regulators that led to destroyed documents and overlooked omissions in the application, have thus far effectively destroyed the intent of Part 632.

Petitioners are aware that comparisons to the Gulf oil spill have become commonplace among advocates for better government oversight in many sectors. The comparison here, however, could not be more apt. Petitioners are foremost made up of concerned citizens of Michigan's Upper Peninsula. They did not invent the devastating criticisms of MDEQ's own experts like Sainsbury and Blake, predicting collapse of the Eagle mine, nor did they orchestrate the testimony of Respondents' witnesses like Taylor, Koss, and Maki himself, admitting that required contents of the mining application have been entirely omitted. Rather, Petitioners have reacted to the information and opinions generated by Kennecott and MDEQ with sincere alarm and urgent concern that the proposed mine really may collapse, that Eagle Rock really will be destroyed forever as a place of worship, that acid rock drainage and heavy metal pollution really may destroy the Salmon Trout River and impair Great Lakes water quality.

Of course MDNRE and Kennecott will respond in their Briefs that they produced witnesses and theories to counter the points emphasized here by Petitioners and that the hearing officer sided with them in a lengthy Proposal for Decision. With all due objectivity, however, no quantum of defensive rhetoric, accumulated rebuttal by paid experts, or reliance on the thin and unsupported "conclusions" of the ALJ can outweigh the core facts of environmental jeopardy and statutory omissions described in this Brief and for the most part corroborated by the factual content of the PFD itself.

The future of the Salmon Trout River is at great risk. The destruction of Eagle Rock as a place of worship is intended and underway. The absence of baseline environmental information to assess the impending environmental risks is evident on the face of the mining application.

The risks posed by potential mine collapse to the ecosystem located above the ore body and indeed to the miners who might someday labor underground remain unanswered and unsolved by the company and the regulators.

If this mine were to proceed as designed and if the entire project were to go forward under a mining application which is determinedly violative of the requirements of Part 632, the likelihood is overwhelming that the approval of this mine will be seen someday, in retrospect, as an enormous and tragic missed opportunity. There is no doubt that a revised mine application can, with a modest expenditure of time, money and attention to detail be resubmitted in compliance with the Sulfide Mining Statute. A more difficult question is whether a revised application can demonstrate that the Eagle mine, with its inherently risky location beneath a pristine trout stream, its saturated and fragmented "roofing" material, and its intersection with unstable geologic formations can ultimately be mined in a way that is safe for both humans and natural resources. The answer, as to this particular ore body, is probably not. But the first step to answering that question is the revocation of the existing Permit with the opportunity granted to Kennecott to improve its "very, very poor," (Professor Parker) indeed "sloppy" (MDEQ's Dr. Blake) application. The letter and spirit of Michigan's groundbreaking sulfide mining statute require no less.

RELIEF SOUGHT

Based upon the full record, Petitioners request that this Court hold unlawful and reverse the Final Determination and Order granting Kennecott a Nonferrous Metallic Mining Permit for the Proposed Mine, and vacate the Permit pursuant to MCL 324.63205(11)(a) and (b) and (12) and Rule 425.201(8), and for such other relief as the Court deems just under the circumstances.

HOOPER, HATHAWAY, PRICE,
BEUCHE & WALLACE

Dated: July 20, 2010

BY: _____

Bruce T. Wallace (P24148)
William J. Stapleton (P38339)
Angela L. Jackson (P53930)
Counsel for National Wildlife Federation, Huron Mountain Club and Yellow Dog Watershed Preserve, Inc.
126 South Main Street
Ann Arbor, MI 48104
(734) 662-4426

Co-Counsel:
F. Michelle Halley (P62637)
Co-Counsel for National Wildlife Federation and Yellow Dog Watershed Preserve, Inc.
NATIONAL WILDLIFE FEDERATION
P.O. Box 914
Marquette, MI 49855
(906) 361-0520

John R. Baker (P10366)
Counsel for Appellant Keweenaw Bay Indian Community
16429 Beartown Road
Baraga, MI 49908
(906) 353-4106

Eric J. Eggan (P32368)
Joseph M. Polito (P25313)
Counsel for Keweenaw Bay Indian Community
HONIGMAN MILLER SCHWARTZ AND COHN
222 North Washington Square, Suite 400
Lansing, Michigan 48933-1800
(517) 377-0736