September 17, 2013
Mr. Larry Lynch
Wisconsin Department of Natural Resources
101 S. Webster St.
Madison, WI 53703

VIA EMAIL

RE: Comments on GTAC’s preapplication notice

Dear Mr. Lynch,

Clean Wisconsin submits the following comments on Gogebic Taconite (GTAC)’s preapplication description and notice of intent to apply for a permit to mine iron ore in Iron and Ashland Counties. These comments are intended to supplement oral and written testimony at the Wisconsin Department of Natural Resources (DNR) public hearing held on August 15th, 2013, in Hurley, WI.


Wis. Stat. §295.46 requires a general description of the mining project that forms the basis of the DNR’s analysis under §295.465 for what approvals will ultimately be required for the mining operation, and what information will be necessary for an environmental impact report (EIR) from the applicant, as well as what information will be necessary to enable DNR to process the application for the mining permit in a timely manner (Wis. Stat. §295.465(1)(a)-(c)).

Although Wis. Stat. §295.465 requires the DNR to provide a list of information that an applicant will need to provide for the DNR’s development of an environmental impact statement (EIS), that list is only preliminary in nature. DNR cannot begin its analysis under the Wisconsin Environmental Policy Act (WEPA) until an application is submitted under Wis. Stat. §295.47 and §295.53. Given the magnitude and controversy of the proposed project, the environmental sensitivity of the area, and the fact that the preapplication notice is sparse on details, it should be made clear that GTAC may be required to supplement the information that DNR requests at this stage. Wis. Stat. §295.53(3) states that, “[a]s the applicant provides more information or makes modifications to the proposed mining project, the department may revise the requirements it
specified under §295.465 (1) (b) to ensure the potential environmental effects can be identified in the department’s environmental impact statement.”

**Clean Wisconsin requests that DNR hold a public hearing under Wis. Admin. Code NR 150.21(3) for determining the scope of the EIR and EIS.**

As the Department cannot begin its process under WEPA until the application has been submitted under Wis. Stat. §295.47; and the details of the mining site, operation, and waste site will remain unknown until that time; issues that were not previously identified by the DNR, the applicant, interested federal, state or local agencies, affected Indian tribes, or other interested persons will come to light at that time. As a result, it is important for members of the public to have the opportunity to weigh in on the scope of the EIR and EIS after the application.

Therefore, Clean Wisconsin requests that DNR use its discretion under Wis. Admin. Code NR150.21 to hold a public hearing for issue identification prior to developing an EIS. NR 150 requires DNR to include “affected federal, state and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons in the process of identifying issues for an EIS.” DNR has discretion over the format for including interested parties, and Clean Wisconsin believes that opening this process up to the public to the fullest extent possible is appropriate here.

**Clean Wisconsin requests that DNR require GTAC to provide, at a minimum, the following information with its application in order for DNR to process the application in a timely manner.**

Clean Wisconsin believes that the information submitted by GTAC to date is inadequate, and raises significant concerns about the potential impacts of the mine. GTAC’s submissions reveal, for example, that the company does not have adequate plans for how to deal with the volume of waste rock they are proposing to create, especially if that waste rock contains hazardous materials such as asbestiforms, mercury, arsenic, or sulfides. The preapplication fails to identify the source of electricity or water necessary to operate the mine, also fails to discuss the location of wetlands or other sensitive areas, the presence of endangered species, or even to adequately describe the hydrology of the area. It is clear from the preapplication that GTAC lacks even the most basic information about the mine site or its own plans for the mining operation.

Upon receipt of the preapplication notification as per §295.465, DNR is statutorily required to provide GTAC with a comprehensive list of permits that will be required for the mining operation, as well as a list of all information that will be necessary for DNR to process the application and prepare an EIS. Given that, Clean Wisconsin believes that the level of information in GTAC’s preapplication is unacceptable.

In addition to Clean Wisconsin’s request for DNR to hold the aforementioned hearing, these comments address areas of GTAC’s preapplication notice that raise concern, are inadequate, or are missing altogether. Clean Wisconsin strongly urges DNR to require GTAC to address each of these points before moving forward with the application for a permit to mine.
I. Information on water use

Taconite mining and processing uses a significant amount of water, which has the potential to impact the availability and flow of surface and/or ground water in the area, and therefore the potential to impact ecosystems and water resource availability in the area. These impacts must be fully assessed, and minimized to the fullest extent possible. However more information is required before such an assessment can begin, since GTAC did not provide a detailed operational plan, or specifics on water usage, quantity, or source, making it impossible at this point to determine the extent of potential impacts.

The need for further information from GTAC is exemplified by the range of water usage rates at existing mining operations indicated by the EPA: from 600 to 7,000 gallons per ton for extraction and beneficiation (U.S. Environmental Protection Agency, 1994). Additionally, the limited information submitted by GTAC does not indicate if a closed-loop system will be used, or how efficient such a system may be. If the mine is indeed designed to recycle water, the system design can have considerable variation on the potential environmental impacts of the process. There are significant questions that must be answered regarding the design of the mining and beneficiation process, including: the rate at which water will be recycled, which will affect the amount of water needed to sustain the facility; and the size of water reservoir required, which will affect the amount of water needed at start-up and the potential for environmental impacts from that use or any accident resulting in spillage of that water. Each of these issues will have to be addressed before a mine is permitted.

Regardless of the specific details surrounding the mining site and operations, any surface or groundwater withdrawal will need to meet the standards set forth in Wis. Stat. §295.61 and the Great Lakes Compact, codified at Wis. Stat. §281.346. Both require minimum water conservation measures to be employed. Additionally, as there is little question that “on-site water” will not be adequate to meet the operation’s water needs, the question of where exactly the water will come from will need to be resolved. GTAC must then show that its water use will not significantly affect: flow regimes or water levels in hydrologically attached rivers, streams, or wetlands either directly or through induced hydrogeological changes, water levels or limnological regimes (e.g. thermal stratification and turnover) in hydrologically attached lakes, flows into or out of Lake Superior, or inter-basin transfer of water. The availability of clean water for existing uses in the area must also be protected, including for drinking or irrigation; the Penokee Range is the source of drinking water for the towns of Ashland, Mellen, Highbridge, Marengo, Odanah and Upson.

II. Information on impacts to waters of the state

Wis. Stat. §295.58(2)(b)2 requires DNR to deny a mining permit if it finds that the proposed mining may “reasonably be expected to create… Irreparable substantial environmental damage to lake or stream bodies despite adherence to the requirements of this subchapter.” Further, DNR must find that “the proposed mining is reasonably certain not to result in substantial adverse impacts to public health, safety or welfare.” Wis. Stat. §295.58(1)(a)4.
DNR must also uphold its responsibility under the public trust doctrine to protect waters of the state against adverse environmental impacts. Under this duty, the applicant must demonstrate that its operations will not violate any water quality standards or wetland water quality standards established under Wis. Stat. Ch. 281, will not harm public rights in navigable waters under Wis. Stat. Ch. 30, and will not violate any groundwater quantity or quality standards under Wis. Stat. chs. 280 or 281, or Wis. Admin. Code chs. NR 140 and 820.

Therefore, DNR will have to evaluate the project’s impacts on waters to the state to determine whether the impacts will result in substantial environmental damage to lakes or streams, threaten public health, or violate public rights in navigable waterways. Specifically, GTAC’s proposal is likely to release mercury and arsenic into waters of the state, cause acid mine drainage, entail alterations of navigable waterways and wetlands, and require wastewater discharge permits. Each of these impacts must be thoroughly studied and analyzed to ensure that the project meets the legal standards described above, however the information provided by GTAC in the preapplication is insufficient for such analysis. Some specific areas in which additional information, and subsequent analysis is needed with regard to impacts to waters of the state include:

**Mercury and Toxic Substances**

There is significant potential for the proposed iron mine to cause mercury pollution into area waters through a number of contaminant pathways. These include the potential for mercury pollution to result from the re-mobilization of previously deposited atmospheric mercury due to the surface nature of the proposed mines, the presence of metacinnabar (a mercury sulfide mineral) in the overlying Tyler formation recent confirmed by geologic testing (Bjornerud, et al., 2012), and the potential for further sources of mercury yet to be identified since existing geologic information has not been made public by GTAC, and waste characterization has not yet occurred.

Mercury in the area of the proposed mine, whether re-mobilized, present in the Tyler formation, or from other sources, can reach surface and ground waters primarily through the extraction and processing procedures to be undertaken. Complete information on these procedures, and methods to be employed to prevent mercury pollution, must be provided by GTAC and analyzed by the DNR. Additional pathways for mercury pollution that must also be assessed by the DNR include runoff from the mine site, wastewater or dewatering flow, leaching and drainage from topsoil and waste rock stockpiles, or re-deposition following aerial emissions resulting from various activities. The potential for mobilization of mercury as a result of leaching from waste rock is enhanced by the likely occurrence of acid generation at the site. DNR will need to conduct an extensive assessment of the sum total of potential emissions, as well as an assessment of individual sources within the operation that may require separate permits (e.g. as major point sources).

To approve GTAC’s permit to mine, DNR must also find that the proposed mining is reasonably certain not to result in substantial adverse impact to public health, safety, or welfare, in accordance with Wis. Stat. §295.58(1)4. The requisite corresponding assessment of potential health and welfare impacts will have to include the full range of possible impacts, including
effects of increased mercury loading in regional waters; iron mines in Minnesota are already the largest single source of mercury in the Lake Superior basin, and the single biggest obstacle to be overcome for us to meet the binational targets we have agreed to with Canada, to reduce mercury releases into the basin by 95% in 2015, and to eliminate them entirely by 2020 (Lake Superior Binational Program, 2012). Unfortunately, measures to control mercury emissions from taconite mining are either not available or difficult to implement (Berndt, 2003). GTAC must provide detailed and defensible plans for the prevention of mercury pollution resulting from their proposed activities.

In addition to mercury, there is a significant potential for the pollution of area waters with other harmful or toxic substances. For example, there is evidence of heavy metals including arsenic, copper, and zinc in the area (Bjornerud, et al., 2012), which have the potential to significantly impact sensitive waters and ecosystems in the area surrounding the proposed mine site and downstream of the site. The potential for pollution from these substances must be assessed in a similar manner to the assessment of mercury discussed above. The potential for synergistic impacts from multiple pollutants must also be considered. For example, acidification and the presence of sulfates, another likely pollutant from the proposed mine, have been identified as contributing to the conversion of mercury from inorganic forms to the more dangerous, highly toxic, and bioaccumulative methylmercury form (Hrabik, 2002).

Wastewater
There is little detail provided in the preapplication and notice of intent to mine about the types or volume of wastewater expected to be produced, what pollutants will be present in that wastewater, how the wastewater will be treated, and the manner and location of wastewater discharge. As wastewater discharges will require a wastewater discharge permit under Wis. Stat. ch. 283, GTAC must provide information on, and DNR must conduct assessments of environmental impacts resulting from, areas including:

Stormwater runoff
More information is needed on what stormwater runoff prevention measures will be put into place at the proposed mining site, both during construction and during operation of the proposed facility. If improperly managed, there is significant potential for irreparable environmental impacts from this runoff. These impacts could result from changes in surface water characteristics such as total suspended solids, biological oxygen demand, and pH; as well as from runoff polluting surface waters both with contaminants freed from geological stores (e.g. mercury, arsenic, lead, and sulfates) and with spilled process/ industrial contaminants.

Drainage and dewatering
As precipitation, runoff from surrounding areas, and groundwater infiltration collect in mine pits, there will be a need for significant drainage and dewatering activities. The water that results from these activities must be treated and discharged in a manner that results in minimum environmental impacts. Physical processes (such as increased flowage), chemical processes (such as altered pH), and the presence of contaminants must all be accounted for in determining how to mitigate these impacts.

Process water
As part of the mining and beneficiation activities, there will also be significant discharge of process water. The U.S. Department of Interior, for example, estimated an industry-wide average of water discharge at 8% of water use (Quan, 1988). This could easily amount to billions of gallons of discharge annually, which could be contaminated with any primary pollutants present (e.g. mercury or arsenic) or secondary pollutants generated (e.g. sulfuric acid from exposure of pyritic shale from the Yale member of the Ironwood formation) from the processing of mined materials, both of which must be considered.

**Leachate**

There is a significant potential for waste water to enter local waters as a result of leaching from waste rock and/or tailings piles. This is of particular concern and demands significant analysis due to the potential for acid generation, which can significantly alter the chemical characteristics of sensitive waters, increase mobilization of heavy metals (Jamieson, 2011), and increase methylation of mercury.

**Protection of wild rice waters and sensitive areas**

The proposed mine lies in a region that contains a considerable number of environmentally sensitive and important ecological areas. Substantial additional information is needed, on these areas, as well as subsequent in-depth analysis of potential environmental impacts based on that information, because their protection is paramount: they serve significant roles with regard to public welfare (e.g. providing ecosystem services), and could easily suffer irreparable substantial environmental damage. For example, the proposed Pit 1 location is within close proximity to the Tyler Forks, a state-listed “Exceptional Resource Water.” Additionally, the entire proposed mine site is directly above the Kakagon Sloughs, which is a designated "National Natural Landmark" and "Ramsar Wetland of International Importance." The Sloughs contain the largest remaining wild rice bed on Lake Superior, which the Bad River Band of the Lake Superior Tribe of Chippewa Indians own and depend upon.

Since it is a significant natural resource that is unique to the area, wild rice receives special protection under Wisconsin law. Wild rice is very sensitive to changes in water levels and water quality, such as the presence of sulfates that get into the environment when mining activities disturb natural sulfate deposits; Minnesota’s “Wild Rice Rule” establishes a water quality standard limiting sulfate in wild rice waters to 10 mg/liter in order to ensure that wild rice waters are not damaged by sulfate pollution. Harvesting of wild rice is carefully regulated under Wis. Stat. §29.607, and is also a protected treaty right under the 1837 treaty with the Chippewa Nation. Further, removing or destroying wild rice growing in navigable waters is illegal under Wis. Admin. Code NR 19.09. WDNR must require the applicant to show that its mining operations, and any direct or indirect effects of those operations, will not physically or chemically damage the wild rice resource.

**Hydrogeology**

Also of critical concern is the potential for environmental impacts from changes to surface and ground characteristics, flowage, topography, and hydrogeology that will result from the proposed facility. Unfortunately however, there has not been at this point a comprehensive study done on those characteristics, which could inform an assessment of the environmental impacts. Due to its nature and considerable scope, there is no doubt that the proposed mine will significantly alter...
these aspects of the site, and thereby have significant effects on the waters in the region. The alterations to the natural environment that will take place at the mine site will also increase the potential for erosion, which can cause environmental impacts similar to stormwater runoff, as well as further altering the hydrogeological characteristics of the area.

A comprehensive study and impact assessment of these issues is required, to confirm that the mine is on a suitable site, can be reasonably certain to cause no substantial adverse impacts to public welfare, and will not cause irreparable damage to lakes or streams.

III. Information on mining waste disposal

GTAC has estimated that they will generate 611 million cubic yards of tailings and waste rock at the proposed mine. In order to fully identify the potential for environmental impacts, the practices that will need to be put in place to comply with Wisconsin law, and the permits that will be required of GTAC, there needs to be a significant amount of research and assessment conducted on the materials in the area of the proposed mine and the potential characteristics of any and all waste streams to be generated.

Wis. Stat. §295.58(2) requires DNR to find that GTAC’s waste site feasibility study and plan of operation complies with §295.51. That section sets forth detailed requirements for waste site location, mining waste characterization, waste site feasibility, operation, and demonstrations that the waste site will comply with applicable laws. However, a significant amount of additional information will be needed from GTAC before study to make such a finding could be undertaken.

Although GTAC seemingly intends to characterize much of its waste as “backfill,” perhaps to take advantage of the backfill exemption from nearly all of the mining waste regulation in ch. 295, the DNR may not permit a mine that violates any water quality standards. Additionally, in order for DNR to permit the mine, GTAC will have to show that the mine waste site or leachate from the waste site will not result in a violation of any applicable surface water quality criteria or standards, applicable wetland water quality standards, or applicable groundwater quality standards as per Wis. Stat. §295.51(7)(a).

In fact, waste disposal activities pose one of the largest threats to water quality from the proposed mine. It is well documented that there is potentially acid-generating sulfide rock in the Tyler formation that overlies the iron ore body, confirmed, e.g., through recent testing (Bjornerud, et al., 2012). This material will be removed as overburden during mining, and be thereby exposed to the environment, which will result in acid formation. Furthermore, there is a seam of sulfide mineral in the Ironwood iron formation itself. Specifically, the Yale member of the formation has been identified as having a “3 meter-thick basal unit of pyritic shale” (Cannon, et al., 2008). Exposure of this unit will not only cause acid generation from tailings stored in waste piles, but may also cause acidification of process water. Both the Yale member and the Tyler formation must be explicitly tested for trace elements, contaminants, and the potential to cause acid generation – in addition to the testing of other materials that will be mined or
disturbed as part of the mining process. Furthermore, additional information is needed to determine whether or not the Yale member of the Ironwood formation meets the definition of a ferrous mineral under Wis. Stat. §295.41(18), and therefore whether the mining of that member must be in accordance with Wis. Stat. Ch. 293.

As a result of the presence of these materials, and based on previous experience at other taconite mines, e.g. the Dunka mine in Minnesota (U.S. Environmental Protection Agency, 1994), there is no question that acid will be generated at the proposed mine site. Instead, the questions to be addressed include how much acid will be generated, how the waste rock and other acid sources will be contained to prevent the spread of acidifying substances into the environment, how damaging any leaks or other lapses in containment will be to the environment, how much the generated acids will contribute to the leaching of mercury and other toxics into the water system, and how those toxics will be similarly contained. These questions must be addressed before a mine is permitted.

Regarding toxic materials, there is evidence that the mining activities GTAC proposed have the potential to create hazardous waste, meaning that GTAC will have to comply with the Resource Conservation and Recovery Act under Wis. Stat. §291.05(1). For example, the recent geologic testing done on the Tyler formation confirmed the presence of mercury and arsenic in addition to the acid generating materials previously mentioned (Bjornerud, et al., 2012). Of the toxic materials encountered through mining activities, a portion will be contained within the solid waste stream while a portion will released into the air through the extraction and processing activities at the proposed mine, and a portion will be leached out of the rock and into the water with the help of generated acid. Potential pollutant pathways involving each of these portions must be fully assessed by the DNR.

Finally, in addition to environmental impacts resulting from acidic or toxic leachate from waste disposal, a detailed and defensible plan must be in place to prevent the “[l]andslides or substantial deposition from the proposed mining operation in stream or lake beds” prohibited under Wis. Stat. §295.58(2)(b)3.

IV. Information on air quality

In demonstrating that the proposed mining activities will not result in substantial adverse impacts as per Wis. Stat. §295.58(1)4, the DNR will also have to assess the significant potential impacts from the proposed mine to local and regional air quality. These potential impacts are the result of air emissions throughout the mining process, including extraction, beneficiation, and transport, and include both criteria pollutants (ozone, particulate matter, lead, carbon monoxide, sulfur oxides, and nitrogen oxides) and hazardous air pollutants (e.g. metals). The impacts include not only the well-established health effects of exposure to these pollutants, but also welfare impacts such as impacts on visibility at protected national parks and wilderness areas from the proposed mining activities (see e.g. (U.S. Environmental Protection Agency, 2013)). Similarly, the taconite processing facility will have to show that it will not cause or contribute to an air quality violation of the area if designated a Class I air quality control area, as is currently being pursued by the Bad River Band of the Lake Superior Tribe of Chippewa (Simonson, 2012).
In addition, for DNR to find that GTAC can meet the requirements of Wis. Stat. §295.58(1)4, GTAC will have to overcome the recent data resulting from Minnesota studies tying health problems directly to air emissions from the taconite industry. It has been known for a long time that there are high levels of the asbestos-caused lung disease mesothelioma among taconite workers in Minnesota. In fact, the levels were so high that the Minnesota government commissioned a multi-million dollar study to investigate the cause. In a recent report to the Minnesota legislature, the researchers in fact noted that three important diseases are present in numbers that are higher than expected: mesothelioma (nearly 200%, or three times, higher than expected), lung cancer (higher by 20%) and cardiovascular disease (11%). They went on to say that “the longer people worked in the taconite industry, the higher their risk for mesothelioma. The risk went up by about 3% per year worked...” (Finnegan, Jr., et al., 2013).

While older studies failed to find asbestos around the taconite mines, the more recent studies did find particles in the “amphibole elongate mineral” family, and pointed out that it is difficult to distinguish between asbestos and the other related particles in that family (Finnegan, Jr., et al., 2013). These diseases and studies are directly relevant to the proposed Gogebic taconite mine, because as GTAC pointed out, “the geology [of the Mesabi Iron Range in Minnesota] is similar to the Gogebic Iron Range near Mellen, WI.” A prior geologic assessment of the Gogebic range by (Marsden, 1978) confirms this similarity. It was noted at that time that there was a progressive change in metamorphic grade westward through the range, with amphibole materials similar to those investigated in Minnesota being present near the proposed mine site.

Unfortunately though, the metamorphic patterns were not well known at that time, and more recent studies have not investigated the distribution of the amphibole materials, so it isn’t known whether they are present at the proposed mine site or not.

More research is clearly needed on this issue to protect public health and wellbeing around the proposed Gogebic taconite mine. This research must include testing on all materials potentially disturbed by the mining activities to determine if amphibole elongate minerals are present, and a comprehensive examination of the potential for such emissions to affect public health, including the latest available information on the Minnesota experience.

Finally, GTAC must show that it can comply in all other ways with Ch. 285 and the Clean Air Act, as well as obtaining all necessary air permits. This is true for all activities associated with the proposed mine, including any potential electrical power generation that may occur at the proposed site.

V. Economic information

Wis. Stat. §295.58(1)5 requires DNR to make a finding that the “proposed mining will result in a net positive economic impact in the area reasonably expected to be most impacted by the mining.” In order to support such a finding, DNR must consider many aspects of economic
impact including the environmental remediation that will have to occur to deal with acid mine drainage, asbestiform pollution, or other environmental issues. DNR must consider that any destruction of the natural environment of an area reduces the ability of the land to hold and attract residents and visitors, and that this, along with the inevitable air and water pollution, negatively affects the economy. The tourism industry is heavily reliant on the pristine nature in northern Wisconsin and currently provides 300,000 jobs. There are significantly more job openings in the Great Lakes region from tourism, recreation and agriculture than there are from mining (Vaccaro, et al., 2011).

The economic analysis of the mine that must be independently performed must also take into account shifting economic conditions, including changes in the global and regional supply and demand of iron ore that have led to fluctuating prices and threatened the viability of existing mines in Minnesota (The Dickinson Press, 2013). While an initial estimate of regional jobs associated with a potential mine was created, this estimate was performed when prices and demand for taconite ore was high, and must therefore be revised. Additionally, since the focus of this analysis should be “the area reasonably expected to be most impacted,” DNR must also consider the impacts of regional economic volatility induced by the proposed mine, resulting from those regional and global market shifts as well as other causes; mining jobs are inherently volatile, and have been cited in Minnesota as creating economic instability in an area (Power, 2007).

VI. Other information required for evaluation of the impacts of the mine

GTAC has provided some general references in its preapplication to impacts that will result from the mining activities in various ways, depending on the ultimate design of the mining operation. However, GTAC must provide more complete information on the following details in order for DNR to consider the impacts of the mine. All of this information should be included in GTAC’s Environmental Impact Report, as required under Wis. Stat. §295.53. The list provided in these comments is not exhaustive, but rather highlights some other key concerns with the general impacts of a surface mining project of this magnitude. Other concerns include, but are not limited to:

Vegetation and topsoil removal
- How much vegetation will be removed?
- What “forestry methods” will be used?
- What will the impacts be on Managed Forest Lands currently designated under Wis. Stat. §77.80 et seq.? Does GTAC intend to keep any of the land in the MFL program?
- What is the estimated volume of topsoil that will be removed and stockpiled? Where will it be stockpiled?
- How will GTAC control for erosion from the topsoil stockpile?

Other ecosystem impacts
- What will be the impact of the proposed mine on fisheries, and in particular local trout populations?
● Are there any threatened or endangered species present in the area, for which a takings permit would be required?
● How will the mined area be remediated?

**Wetlands and navigable waterway permits**

- Across the entire mining operation, GTAC will need permits issued under Wis. Stats. Ch. 30 and Wis. Stat. §281.36 for alterations of navigable waterways and wetland disturbance. Even though the mining law seeks to preempt standards found in these chapters, these chapters are delegations of the state’s public trust responsibility. If a permit for filling navigable waterways or wetlands is issued that would otherwise violate ch. 30 or ch. 281, DNR will have violated its public trust responsibility.
- GTAC must provide a complete wetland delineation, alternatives analysis, and mitigation plan as required under Wis. Stat. § 295.60.

**Electricity and natural gas use**

- GTAC must specify exactly how much electricity they anticipate using for the mining operation, drying, pelletizing, pumping, and electric vehicles on site.
- GTAC has stated that “a power plant for the facility has not been proposed.” If this remains true, GTAC must provide information on size of required electrical transmission lines and right-of-ways. Lines will have to be routed very carefully to avoid additional environmental impacts.
- Similarly, GTAC must provide information on the amount of natural gas to be used on site and the size of any required pipeline, and any such pipeline must also be carefully routed.
- If generation facilities are later determined to be necessary or desired, all additional environmental impacts must be taken into account as part of the EIR and EIS, and all required permits must be obtained.

Sincerely,

Elizabeth Wheeler
Staff Attorney, Clean Wisconsin

Tyson Cook
Staff Scientist, Clean Wisconsin
Included by reference:

Berndt, Michael E. 2003. Mercury and Mining in Minnesota. Minnesota Department of Natural Resources.


The Dickinson Press. 2013. US loan may help Australian mine compete with Minn. taconite. August 27.

U.S. Environmental Protection Agency. 2013. Approval and Promulgation of Air Quality Implementation Plans; States of Minnesota and Michigan; Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze; Final Rule.
