



**Testimony of Elizabeth Wheeler, Staff Attorney  
Gogebic Taconite Pre-application and Bulk Sampling plan  
DNR public hearing, Hurley, WI  
August 15, 2013**

Thank you for the opportunity to comment today.

I am here today to speak about Clean Wisconsin's concerns with GTAC's pre-application notice and bulk sampling plan. Since this is the first of only two required public hearings for the entire project under the new iron mining law, we felt it was necessary to speak up at this hearing and identify issues not only with the items in front of the DNR, but to help outline our hopes for the decision-making process moving forward. Clean Wisconsin will be supplementing today's testimony with more detailed, written comments before the end of the comment period.

The iron mining law permits bulk sampling activities to collect data for "sampling and analysis related to geophysical, geochemical, groundwater, and surface water conditions, as well as any other data or studies necessary to prepare an application for a mining permit, including the mining plan, reclamation plan, mining waste site feasibility study and plan of operation, or any other approval required for the proposed mining. Clean Wisconsin urges the DNR to require or encourage GTAC to collect data relating to as many of these potential impacts to the greatest amount possible during bulk sampling.

**Clean Wisconsin has the following specific concerns and questions about the bulk sampling plan.** GTAC's bulk sampling plan is sparse on the required information, and GTAC has not provided DNR with adequate response to the issues that DNR has raised with the bulk sampling plan to date.

In fact, GTAC responded to DNR's request for information by rescinding their plan altogether and proposing an entirely new plan, without directly addressing DNR's concerns. GTAC maintains that if their "plan B" does not give them enough information for bulk sampling, they will revert to "plan A." However, GTAC has failed to do the necessary analysis on either plan to move forward.

While the idea to sample from existing piles of waste rock is generally a less ecologically disruptive plan than digging new samples, the permit application GTAC submitted leaves us with many unanswered questions. The existing piles are still an established environment, with vegetation, wildlife and hydrogeology that has been undisturbed for 53 years. GTAC's submittal contains no information on what the potential impacts are from exposing those materials (especially any potential acid generating rock) to the environment or what GTAC will do to mitigate those potential impacts. Similarly, their application does not identify what vegetation or species will be removed in the bulk sampling process and what will be done with any removed materials.

GTAC evades questions about the environmental impacts to the bulk sampling sites with sweeping, assumptive statements that since the sites were disturbed some 53 years ago, and there were "no

environmental impacts” resulting from that disturbance, this disturbance would similarly create “no environmental impacts.” Simply failing to identify adverse environmental impacts doesn’t mean there aren’t any, and just because the sites were disturbed 53 years ago doesn’t mean that they have not become an integral part of the current ecosystem, e.g. by providing habitat and impacting the hydrogeology of the area. The plan fails to provide DNR with the required information on this count.

DNR has specifically raised concerns about the potential of asbestos or asbestos-like materials being released at the site. GTAC completely evades this question by stating that similar rock formations do not contain asbestos in Minnesota. However, the most recent studies from Minnesota are revealing alarming data regarding mesothelioma rates in the population that is exposed to the mine. DNR cannot approve this mine if there is a substantial threat to public health, safety, and welfare. The potential for asbestos or asbestos-like materials to be present at the mine site must be further investigated.

GTAC submitted no plans to control dust from the bulk sampling process and have left the door open to blast additional material without adequately responding to DNR’s concerns about what this process might look like. The bulk sampling plan contains no real plan to mitigate groundwater or stormwater runoff or erosion control from bulk sampling, and fails to address concerns about acid-creating rock and asbestos.

GTAC also did not specify the extent of adverse impacts to the scenic or recreational areas, or any plans to avoid or minimize those adverse effects to the extent practicable, they simply mentioned cordoning off the areas – again, not meeting the requirements.

Finally, their failure to provide a plan for dealing with sulfide minerals, if encountered, does not meet the statutory requirements. GTAC has responded to these concerns by stating that they aren’t sampling the Yale member of the formation that is known to contain pyritic shale. However this does not guarantee there won’t be any sulfides in the disturbed rock. Disruption of any rock in this area should be treated with caution, as the potential to create acid mine drainage on the mine site, which is bordered by Exceptional Resource Waters, is very real. GTAC’s application does not meet the statutory requirements on this point and should be rejected.

### **Specific concerns with the preapplication**

The intent of the preapplication is to provide DNR with enough information to inform GTAC what permits, baseline studies, and other information for an environmental impact statement will be required for the mining project. However, GTAC has not provided enough information for the DNR to be able to make that determination.

While the preapplication has identified many issues within the project boundary, GTAC continues to submit the bare minimum required amount of information required. This preapplication provides vague ideas and broad concepts that leave the public’s questions unanswered about key issues like water usage, acid mine drainage potential and water quality, and few specifics. We hope that this is not a glimpse of what we can expect from GTAC as this project continues– evasiveness, generalities, and submitting the least possible information in order to keep the public in the dark. We encourage the DNR to require GTAC to provide information that will help the public understand the project’s impacts better rather

than being secretive and dismissive of the crucial information that is necessary to evaluate their project in a detailed manner.

As the process moves forward, DNR will need to be vigilant about the information GTAC submits. The Penokee Range is a pristine area, with 16,000 acres of wetlands, forests, and sand dune ecosystems, and the headwaters of the Bad River which ultimately empties into Lake Superior. The area around the river is home to waterfowl, songbirds, and thriving fish populations and 72 rare and endangered plants and animals. It is also home to Class A trout streams like Tyler Forks and Ballou Creek; high-quality wetlands; spectacular parks, such as Copper Falls State Park; and national forests, including the Nicolet and Chequamegon national forests.

Clean Wisconsin submits the following specific concerns regarding the project:

### **Concerns about mercury and arsenic**

Since GTAC began discussing their mining plans, we have known that 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.

The preapplication confirms these concerns about mercury contamination. Testing by Marcia Bjorenrud has confirmed the presence of mercury and arsenic in the Tyler formation adjacent to the iron formation. GTAC will be excavating this material as part of their mining, because it overlays the iron deposit. The toxic materials will then be released into the air through the extraction and processing activities at the proposed mine, and will be leached out of the rock and into the water with the help of the acid mine drainage that will occur. DNR must be vigilant in making sure these materials are contained and there is no danger to the public.

### **Concerns about acid mine drainage**

#### **GTAC must conduct extensive testing for acid-generating rock, studies regarding waste storage and the potential for runoff.**

There is no longer a question about whether acid will be generated at the site GTAC mine site. The project boundaries identified in the preapplication are documented to contain pyritic shale both in the over-burden and in the iron formation itself. This pyritic shale can generate acid and lead to acid mine drainage. The characterization of the waste rock will thus be one of the most important investigations that will be made in this application process. Testing by the USGS has already identified the Yale member of the iron formation as having “3 meter-thick basal unit of pyritic shale.” Avoiding testing that member during the bulk sampling process will only delay the availability of additional information. While Marcia Bjorenrud and many others testified about the presence of pyritic shale during debates about the iron mining law, those concerns were generally dismissed at the time because lawmakers didn’t know the project boundaries and weren’t willing to “speculate” that acid mine drainage was an issue. It is now clear that this will be an issue, and likely one of the most critical aspects of the application moving forward.

## **Waste Volume**

GTAC estimates that they will generate 611 million cubic yards of tailings and waste rock at the proposed mine – waste rock that contains acid-generating material, toxic elements like mercury and arsenic, and may even contain asbestos-like mineral particles.

**This is enough to bury the entire city of Green Bay under 10.5 feet of waste, or to put the entire city of Milwaukee 6 feet under.**

The only question now is how GTAC will propose to control this acid mine drainage and the massive volumes of waste and whether the plan will adequately protect northern Wisconsin's wildlife, plant life, aquatic life and drinking water from devastating contamination.

## **Concerns about asbestos-like materials**

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.

The results of that study have only started to come back recently, but even the preliminary results have been enough to tie health problems directly to the taconite industry. 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...”

While older studies in Minnesota 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.

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 Ralph Marsden 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. It is similarly unknown if those materials are present in the rock targeted for bulk sampling by GTAC.

Precaution and more research is clearly needed on this issue to perform DNR's obligation to protect public health and wellbeing around the proposed Gogebic taconite mine.

## **Volume and source of water withdrawals**

**GTAC must study the feasibility of obtaining water from each possible source that they have identified in the preapplication.**

Taconite mines can use up to 1,900 gallons of water per ton of ore for everything from watering down roads to processing the taconite. Water use will obviously vary by site, and some of it is recycled. But any drawdown of groundwater will have a far-reaching impact on the area. Homeowners could see their lakefront properties turn into mud-front properties, as has happened in central Wisconsin due to excessive water pumping. Public and private wells quality and quantity can be impacted by mine-related water pumping.

In their pre-application, GTAC was completely ambiguous with regards to their water needs, and where that water will come from. Instead, they merely stated:

“The water supply may be sourced from stormwater runoff and pit water stored with the drainage control system. If on-site water is not adequate to meet the quantity of water needed to operate, the off-site sources of water will be investigated. Other sources of water could be existing well fields, new groundwater wells, or public water supplies”

**In addition to the above concerns, Clean Wisconsin raises the following concerns with the mining proposal as described:**

**Filling lakes, rivers, streams and wetlands**

Filling waterways significantly compromises the hydrogeology of an area. Habitat will be lost, and flood waters will be left to flow elsewhere.

**Impacts to threatened or endangered species**

The area in question is home to Piping Plover, Trumpeter Swan, Yellow Rail, Bald Eagle, wood turtle, and ram’s-head lady-slipper orchid.

**Compromising the quality of drinking water**

The Penokee Range is the source of drinking water for Ashland, Mellen, Highbridge, Marengo, Odanah and Upson, and threats of toxic pollution to the water that people rely on is unacceptable.

**Destruction of wild rice beds**

Wild rice is especially sensitive to water levels and sulfate pollution, two major concerns with mining in northern Wisconsin. The area hosts the largest natural wild rice bed in the Great Lakes basin, which has been harvested by the Bad River tribe for centuries. In Minnesota, many hold mining responsible for ruining downstream rice beds.

**Air Pollution**

Pelletizing facilities from taconite mining also produce fugitive dust, which can contain asbestos, silica and other toxic compounds. Pelletizing plants can also emit toxic air pollutants such as chromium, arsenic, lead, cobalt, and manganese. Chronic exposure to arsenic can cause lung cancer, while long-term exposure to arsenic and lead can lead to central nervous system, blood pressure and kidney disorders.

### **Need for energy source and transmission lines**

GTAC's preapplication indicates that the amount of electricity required for the operation is not available from the local infrastructure. At a minimum, the preapplication indicates that a new substation, transmission lines, and a natural gas pipeline will be required. These infrastructure needs will have impacts beyond the mine site. If new transmission lines are required, there will be impacts to private property, possible corridor issues, and possible additional wetlands impacts.

As you evaluate this pre-application and bulk sampling plan, please remember that DNR does not have to rely solely on the information GTAC has provided. While there is no doubt that the new iron mining law severely limits the DNR's role in reviewing a mining application, there is still room within the new law to seek independent evaluations and solicit additional studies and information.

We have been following this project and the company's successful efforts to change Wisconsin's iron mining laws to favor their project. Clean Wisconsin is not opposed to mining in Wisconsin, but this company's efforts to create a self-described Christmas wish list of mining regulations has us concerned about their intentions to put profits over the health of people and our natural resources. We will continue to monitor this project and the points of decision-making to ensure that no project is approved that will jeopardize our clean air or clean water, and to evaluate how the new law is being implemented.

Now that we have seen GTAC's preapplication, it is clearer than ever that there are very real threats that will come from this mine. Since GTAC first started speaking about their intention to mine the Penokee Hills, Clean Wisconsin has been outspoken about the potential public health and environmental concerns of such an operation. Now the identification of the exact project boundaries in the preapplication allows us to evaluate the geology of the exact mining site, and confirms that risks surrounding asbestos-like minerals, mercury and acid mine drainage are very real. The DNR, the public, and advocacy groups like ours must proceed with the greatest respect for the geology of this area and be vigilant about uncovering ALL the available data, not just conceptual information provided by GTAC.