

## Appendix 2. Public Comment Responses on Essar Draft SEIS

<b>Borling</b>	
<b>Comment 1:</b>	After reading the Draft Supplemental EIS, one can easily conclude that the mitigative measures previously identified for the project as developed by Minnesota Steel and those proposed by Essar's detailed design changes are adequate to protect human health and the environment. Specifically, the following points can be made about the project modifications as proposed by Essar: no new wetlands are impacted; adequate water supply is available to support the small increase in water demand; the zero surface liquid discharge is maintained; wild rice near Swan Lake will not be impacted; clean burning natural gas is still used for all process heating; air quality standards are met with improved mine plan and installation of best available control technology and efficient operation of the pelletizing furnace; human health and ecological impacts are lower than thresholds that would require any further mitigation; and existing mining and environmental permit monitoring and reporting requirements are adequate to ensure environmental protection/compliance.
<b>Response 1:</b>	Comment noted.

<b>Cimermancic</b>	
<b>Comment 1:</b>	I support the conclusion that the potentially significant environmental impacts have been adequately studied and Essar's proposed modifications provide adequate mitigative measures for the project to move forward as proposed.
<b>Response 1:</b>	Comment noted.

<b>Fond du Lac – Wieks/Jackson</b>	
<b>Comment 1:</b>	The Band continues to have concerns about how the state of Minnesota will fulfill its Regional Haze obligations. The Regional Haze plan submitted by the MPCA to Region 5 – EPA is still under review. At the same time, Table 4.2-12 of this SDEIS shows that this project is expected to result in impacts above the Federal Land Manager’s level of concern at Isle Royale, the Boundary Waters Canoe and Wilderness Area, and Voyageur’s National Park. Several mitigation options are mentioned in the text of the document, and the Band urges the MPCA and the MNDNR to require the maximum amount of reduction available, including the installation of control equipment that may not currently be in use at facilities of this type or in the US.
<b>Response 1:</b>	Comment noted. The air permit cannot be issued without modeling below adverse impacts or incorporation of FLM-approved mitigation. The FSEIS describes the MDA Alternative, submitted to and evaluated by the MNDNR after the DSEIS public comment period. Submittals by the proposer to the MPCA for an air permit application show no adverse impacts from the MDA Alternative to thresholds of concern for Class I areas. The air permit process will provide another opportunity for public comment.

**Fond du Lac – Wieks/Jackson**

<p><b>Comment 2:</b></p>	<p>The Band is concerned about projected increases in releases of hazardous air pollutants (pages 4.3-3 through 4.3-7 of the DSEIS. These increases are due to a number of factors, one of which is the expected increase in production from when this project was initially proposed by MSI. While the projected increase in hydrogen fluoride emissions (an increase of 9495%) is discussed on page 4.3-18, this increase is the only one deemed “noteworthy”. While the text on page 4.3-18 states that all pollutants that are projected to increase by more than 10% went through a screening level assessment, the results of this assessment do not appear to be included in the SDEIS. Some pollutants that are expected to increase by large percentages are as follows: chromium (total) – 72% increase; chromium (hexavalent) – 36% increase; fluorine/fluorides – 877% increase; hydrogen chloride – 72% increase, lead – 40% increase; potassium compounds – 112% increase; sodium carbonate – 92% increase; sulfur dioxide – 64%, sulfuric acid – 55% increase; thallium – 99% increase, tin compounds – 174% increase. In all, total HAPs are projected to increase by 187%.</p> <p>The DSEIS needs to include more detail on these projected increases. The modeling results need to be shown so that reviewers can see and evaluate the projected changes in the individual cancer risks and non-cancer hazard quotients that result from the increases in these pollutants. It would also be helpful if Table 4.3-1 had a column indicating why the increase in emissions is occurring – if it is due to increase production, updated emission factors, etc.</p>
<p><b>Response 2:</b></p>	<p>The text provides only brief summary of the work contained within the Supplemental Human Health Screening-Level Risk Analysis completed by Barr in January 2011. The detailed assessment for all but two of the chemicals identified are presented in Table 7-2 of the Supplemental Human Health Screening-Level Risk Analysis. Table 7-2 provides revised risk estimates using updated estimates of emissions for each chemical except chromium and sodium carbonate. For fluorine and lead, the percent increase is not identical to that determined for the final emission inventory that was also completed in January 2011. However, review of Table 7-2 considered the higher rates provided by the January 2011 emission inventory, as summarized in the comment. In all cases, the increased risks were well below levels of potential concern (HQ less than 1.0 and risk levels less than 1E-5). Only hydrogen fluoride had a risk level that exceeded the criterion of HQ greater than 0.1 that was used to identify chemicals for more detailed assessment in the supplemental risk assessment. That was why it was identified as "noteworthy" on page 4.3-18 of the DSEIS. Regarding chromium, these risks are included in the supplemental risk assessment, as indicated by the grey shading for hexavalent chromium. Regarding sodium carbonate, this is not a hazardous air pollutant that would be assessed for human health toxicity.</p> <p>Page 4.3-3 of the DSEIS provides a summary explanation about the variables leading to changes in the emission inventory: "The differences [in EI estimates] are due to many factors that vary depending on the source and the chemical. These factors can include the proposed increased rate of mining, use of different equipment (such as larger mine trucks or the indurating furnace at the pellet plant), use of improved emission control equipment, and new information on emission control factors." The Supplemental Human Health Screening-Level Risk Analysis is available upon request.</p>
<p><b>Comment 3:</b></p>	<p>Another item of concern is found on page 4.3-12 where the document states that groundwater exposures were not considered in evaluating the impacts of hazardous air pollutants. While people may not ingest appreciable amounts of surface water from area water bodies, they certainly could unknowingly ingest contaminated water from groundwater sources, through their wells.</p>

**Fond du Lac – Wieks/Jackson**

<p><b>Response 3:</b></p>	<p>The potential for impacts to groundwater quantity and quality was addressed in the MSI EIS. Chapter 4.2.3.2 addresses "Potential for Drinking Water Supply Well Impacts", from blasting or dewatering. From this discussion, the nearest private wells draw water from the surficial aquifer above the Biwabik Iron Formation (BIF). The location of these wells is shown on Figure 4.2.1 of the MSI FEIS. The MSI FEIS stated that monitoring wells would be required to be installed between the pits and nearby water supply wells to provide early detection of potential impacts associated with dewatering. The MSI FEIS eliminated tailings basin discharge as a factor in the proposed project. Ingestion of ground water was not identified as a potential pathway in the ESMM Preparation Notice. U.S. EPA (Methodology for Assessing Health Risks Associated with Indirect Exposure to Combustor Emissions, January 1990, US EPA, EPA/600/6-90/003.) found that ground water is an insignificant exposure pathway from combustion emissions. Deep seepage from the tailings impoundment to Swan Lake is evaluated in the screening ecological risk assessment (SLERA). Monitoring chemical constituents in surface waters is part of the existing NPDES Permit. The text that follows is the mitigation text of the MSI FEIS, Chapter 4.2.4.2: "To avoid potential impacts to residential drinking water wells due to dewatering, monitoring wells (piezometers) would be installed between the pits and nearby water supply wells to detect if drawdown is occurring in the surficial aquifer. In addition, MN Statutes (103G.261) identify state water allocation priorities with the number one priority being the protection of 'domestic water supply'. Minnesota Rules (6115.0730) provide requirements for "negotiating a reasonable agreement" between the water appropriations permit holder and an affected party. An example of negotiating a reasonable agreement could include replacing/re-drilling a well that is experiencing impacts due to dewatering." The MSI FEIS also states with regard to the tailings basin seepage, "If the natural soils in the vicinity of the tailings basin are such that they cannot prevent the migration of seepage to surface waters, mitigation measures include the installation of a constructed clay liner or a geosynthetic liner in the seepage collection system ditches. Seepage through bottom of basin to groundwater is addressed in tailings basin State Disposal System (SDS) permit."</p>
<p><b>Comment 4:</b></p>	<p>On pages 4.3-17, it looks as though there may be a typographical error. The first paragraph below the bullet points begins "For all three receptor types ... did not exceed the guideline values of 1E-05 for cancer or 0.1 for non-cancer". In contrast, the text on page 4.3-15 states "Values below 1.0 indicate that exposure is expected to be less than the level that might cause an adverse impact (non-cancer toxicity) in some people". These two values appear to be contradictory.</p>
<p><b>Response 4:</b></p>	<p>In addition to the last sentence above Table 4.3-3, footnote [2] of Table 4.3-3 provides an incremental guideline value = 1.0 for noncancer chronic (child). The DSEIS text will be changed on page 4.3-17 to '1.0 for non-cancer'.</p>
<p><b>Comment 5:</b></p>	<p>While Chapter 5.1.2.1 lists reduction of haze-causing pollutants anticipated in Northern Minnesota, the fact remains that the state is not projected to meet the Uniform rate of Progress needed to achieve the state of no manmade effect on visibility by the year 2064. The led to introduction of the Northeastern Minnesota Plan, in which facilities in this area will work to reduce SO<sub>2</sub> and NO<sub>x</sub> emissions in the area by 20% by 2012 and by 30% by 2018. The Band feels that we cannot afford to become complacent with regard to reaching regional haze goals, and that the ability of industry to meet these goals should not be taken as absolute.</p>
<p><b>Response 5:</b></p>	<p>Comment noted.</p>
<p><b>Comment 6:</b></p>	<p>The Band appreciates Essar's work in attempting to reduce mercury emission through the use of activated carbon control equipment. We would still like to note that any new emissions above 3 pounds per year that are not controlled need to be mitigated, as in the state Total Maximum Daily Loading. This does not appear to be addressed in the DSEIS. Please also note that while increasing stack heights means that less mercury would be deposited locally, the mercury will eventually be deposited somewhere, leaving others to deal with the problem (page 5.3-4).</p>

**Fond du Lac – Wieks/Jackson**

<p><b>Response 6:</b></p>	<p>The TMDL strategy framework goal for the taconite industry is to cumulatively reduce emissions to 210 lb/yr by 2025. The studies, Mercury Control Technology Evaluation, September 2010 (Barr Eng.) and Mercury Control Technology Evaluation (Sept 2010, v2), approved by the MPCA, are available by request. The SEIS Preparation Notice stated that a plan for adhering to the MPCA's October 2009 policy for New or Modified Emission Sources of Mercury would be included in the SEIS. The MPCA policy provides a 6-step process, the last step of which is that the form, HG-01, should be submitted during permitting as the plan for meeting steps 1-5. This form will be submitted by Essar during the air permit process. However, Essar's proposed modifications project does not propose an increase in mercury emissions over what was permitted previously for the MSI project; therefore the guidelines for New and Modified Mercury Air Emission Sources as specified in the plan do not apply. The mercury emissions from the previously permitted project are considered existing, and part of current background conditions. The taconite production industry sector as a whole is required to come up with a proposal to meet the requirements of the plan, which requires a 75% reduction from the numbers listed in the plan. The proposal will be due in 2016. With regard to the approximate doubling in stack height of pellet plant compared to MSI, Figure 5.3-1 shows modeled mercury concentrations at 25 km out to be substantially reduced compared to 15-20 km out (the vicinity of the lakes assessed in Table 5.3-1). The modeling included the stack height.</p>
<p><b>Comment 7:</b></p>	<p>While the Climate Change section does not specifically say so, the Band assumes that this facility will be subject to Greenhouse Gas Best Available Control Technology Requirements. While the USACE has determined that a supplement to the federal EIS under NEPA is not required (because there are no additional wetlands impacts), the Band believes that the new National Environmental Policy Act guidance on assessing climate change within the EIS structure should apply.</p>
<p><b>Response 7:</b></p>	<p>As stated in the SEIS, BACT is being evaluated for GHGs. The FSEIS will provide the BACT information for GHGs as well as the other pollutants for which it is required. Please note the SEIS is a state only environmental review so is subject to MEPA guidance, not NEPA. Although not required, the scope for the SEIS related to climate change generally follows the NEPA guidance and much of the analysis completed complies.</p>
<p><b>Comment 8:</b></p>	<p>The Fond du Lac Band of Lake Superior Chippewa (the Band) hereby submits the following comments on the air quality-related sections of the Essar DSEIS. Comments on other sections of the document may be submitted under separate cover. The Band is concerned with this facility because pollutants emitted from it may affect Band members' usufructuary rights in the Ceded Territories, including hunting, fishing, and gathering rights. First, please ensure that control equipment evaluations include the most up-to-date information available. Some changes may have taken place in the several years since these evaluations were performed for Minnesota Steel, Inc. (MSI).</p>
<p><b>Response 8:</b></p>	<p>A substantial portion of the DSEIS is dedicated to evaluating potential air quality effects. The MSI FEIS technologies were re-evaluated in the DSEIS, with studies produced on alternatives for emission control technology for mercury and BACT for criteria pollutants. The air permit will be based upon the most up-to-date equipment evaluated.</p>

**Grand Rapids Area Chamber of Commerce - Stone**

<p><b>Comment 1:</b></p>	<p>The Grand Rapids Area Chamber of Commerce would once again like to go on record as a strong supporter of the Essar Steel Minnesota Project. We believe that through the review process that has taken place, the modifications proposed by Essar Steel Minnesota will have no additional potential negative impacts on the environment and we would ask that you work diligently to help us bring this project to fruition as rapidly as possible.</p>
<p><b>Response 1:</b></p>	<p>Comment noted.</p>

<b>Harklau</b>	
<b>Comment 1:</b>	Based on the information provided by Essar for the SEIS and the information originally submitted for the EIS, I do not feel there is any information that should negatively impact the ability of Essar to gain approval on the amendments proposed. The West Range cities are excited about this project and look forward to the positive economic impact that it will bring with it.
<b>Response 1:</b>	Comment noted.

<b>Hibbing Area Chamber of Commerce - Fedo</b>	
<b>Comment 1:</b>	<p>I am writing in support of Essar Steel on behalf of the Hibbing Area Chamber of Commerce. Our Chamber Board of Directors and its membership is in full support of the Essar project. Our membership includes over 400 hundred businesses across Minnesota's Iron Range. We believe that the mitigative measures previously identified for the project as developed by Minnesota Steel and those proposed by Essar's detailed design changes are adequate to protect human health and the environment.</p> <p>The following points support our position: No new wetlands are impacted; adequate water supply is available to support the small increase in water demand; the zero surface liquid discharge is maintained; wild rice near Swan Lake will not be impacted; clean burning natural gas is still used for all process heating; air quality standards are met with improved mine plan and installation of best available control technology and efficient operation of the pelletizing furnace; human health and ecological impacts are lower than thresholds that would require any further mitigation; and existing mining and environmental permit monitoring and reporting requirements are adequate to ensure environmental protection/compliance. Please support our conclusion that the potentially significant environmental impacts have been adequately studied and Essar's proposed modifications provide adequate mitigative measures for this very important project to move forward as proposed.</p>
<b>Response 1:</b>	Comment noted.

<b>Houwman / Mollergren</b>	
<b>Comment 1:</b>	<p>What I need is:</p> <ul style="list-style-type: none"> <li>• A Guide for understanding WATER quality/pollution/mercury/clarity, etc. for Snowball Lake. <ol style="list-style-type: none"> <li>1. What is the CURRENT CONDITION of the above? ( I know Itasca C.C. has this information)</li> <li>2. What is the acceptable range of the above conditions?</li> <li>3. Who is doing the testing?</li> <li>4. Who is verifying the testing?</li> <li>5. Where do I get a written copy of the tests to confirm and a person/phone number to contact if I have questions?</li> </ol> </li> </ul>

<b>Houwman / Mollergren</b>	
<b>Response 1:</b>	<p>MN Lake Finder (<a href="http://www.dnr.state.mn.us/lakefind/index.html">http://www.dnr.state.mn.us/lakefind/index.html</a>) provides lake information such as fish, bathymetry, and water levels. The MPCA maintains a website [Environmental Data Access (EDA)] of chemistry data available for waterbodies and website links for comparison to reference links and standards:  <a href="http://www.pca.state.mn.us/index.php/topics/environmental-data/eda-environmental-data-access/eda-surface-water-searches/eda-surface-water-search-text-based.html">http://www.pca.state.mn.us/index.php/topics/environmental-data/eda-environmental-data-access/eda-surface-water-searches/eda-surface-water-search-text-based.html</a>. However, EDA data does not include data collected as a result of permit requirements. These data are available through the MPCA staff who manages the NPDES permit. The current NPDES/SDS Permit MN0068241 for Essar Steel Minnesota includes water quality monitoring requirements for Snowball Lake. The monitoring is conducted 2 times per year for several parameters. It should be noted that the NPDES/SDS program is based on a self-monitoring approach. This approach allows the permittee to collect the required samples, per the permit requirements, but requires all sample analysis to be completed by the certified laboratory. Monitoring data submitted to the MPCA is public information and can be requested from the MPCA at any time.</p>
<b>Comment 2:</b>	<p>I understand this project is important to the economics of the Iron Range.  I understand that Erroneous –{ (Thesaurus U.S. English) mistaken, flawed, wrong, incorrect, invalid, untrue} statement were made in the previous FEIS.  I understand that many assessments won't be complete until permitting.  I live on Snowball lake (60 years +) and have eaten fish from here all my life. For the first time I saw iron ore deposits in the water at my lakeshore property in Spring of 2011.  I may not have the proper wording, but I believe you can understand what I am asking for. If not, please feel free to contact me to discuss.  Even if your answers were written in a previous E.I.S, F.E.I.S. or S.E.I.S., I would like you to restate your answers and tell me again the figures and contact information.</p>
<b>Response 2:</b>	<p>Your concerns are appreciated. Potential violations can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864. MPCA Compliance and Enforcement is looking into this allegation. Potential enforcement actions can result from non-compliance.</p>
<b>Comment 3:</b>	<p>What I need is:</p> <ul style="list-style-type: none"> <li>• A Guide for understanding NOISE levels/pollution etc. <ol style="list-style-type: none"> <li>1. What are the acceptable noise levels?</li> <li>2. Who is doing the testing?</li> <li>3. Who is verifying the testing?</li> <li>4. Where do I get a written copy of the tests to confirm and a person/phone number to contact if I have questions?</li> </ol> </li> </ul>
<b>Response 3:</b>	<p>The MSI EIS addressed blasting and air overpressure and whether or not potential noise would exceed the state noise standards. In the MSI EIS, Table 4.10.4 lists the estimated maximum haul truck sound levels, Table 4.10.5 lists sound levels for the plant and facility, and Table 4.10.7 lists estimated noise levels at various lakes surrounding the mining area. Mitigation actions were identified in the MSI FEIS, and noise was not considered a change in the project for the ESMM modifications. Therefore, noise was adequately addressed. Potential exceedances can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864.</p>
<b>Comment 4:</b>	<p>What I need is:</p> <ul style="list-style-type: none"> <li>• A Guide for understanding AIR quality/pollution/clarity, etc. <ol style="list-style-type: none"> <li>1. What is the Current Condition of the above at Snowball Lake?</li> <li>2. What is the acceptable ranges of the above conditions</li> <li>3. Who is doing the testing?</li> <li>4. Who is verifying the testing?</li> <li>5. Where do I get a written copy of the tests to confirm and a person/phone number to contact if I have questions?</li> </ol> </li> </ul>

<b>Houwman / Mollergren</b>	
<b>Response 4:</b>	The legislative report on state air quality provides valuable background on the status and trends in Minnesota ( <a href="http://www.pca.state.mn.us/yhizb6a">http://www.pca.state.mn.us/yhizb6a</a> ). The MPCA stores air quality data collected at stations throughout Minnesota. The environmental data access (EDA) program provides access to both air emissions (maps and tables), and air concentrations. Online availability is through this web page: <a href="http://www.pca.state.mn.us/ktqh646">http://www.pca.state.mn.us/ktqh646</a> . The EDA with air concentrations is being fixed at the moment; however, concentration data can be obtained from this database by internal staff. Contact Kellie Gavin or Kari Palmer at the MPCA to request air concentration data for specific pollutants in specific locations (or the closest monitor).

<b>Jeffers</b>	
<b>Comment 1:</b>	At the May 2011 meeting, in speaking with a Tribal Rep. and a DNR Rep. I was told that the dust can be detrimental to not only the respiration system but also the cardiovascular system. My wife and I are both heart surgery survivors. The dust from this mine constitutes a double threat to our lives.
<b>Response 1:</b>	Dust can be detrimental, therefore the Federal Clean Air Act and supporting laws in Minnesota are applied to the proposed ESMM project. Chapter 4.2 describes the potential air quality impacts and the mitigation measures to be evaluated for the Air Quality Permit, including implementation of a fugitive dust control plan. Chapter 4.3 describes the assessment performed to identify potential human health risks. Chapter 2.0, page 2.0-8 summarizes air quality regulations and provides references for additional information.
<b>Comment 2:</b>	When I went to the air quality table the DNR had set up to answer questions, I asked about the dust threat to our homes. The young man at the table told me that they had a chart showing wind directions and frequency of wind from various directions, but he really didn't understand it himself. When I pointed out that because of the area topography, the winds from the mine would be funneled to my home. Also, I am southeast of the mine so the north and northwest winds, which are quite common here, would blow the dust right at my home.
<b>Response 2:</b>	Figure 5.3-1 of the DSEIS provides the wind rose and prevailing wind directions and speeds. Indeed, the winds are prevailing from the northwest. Both meteorology and terrain are considered in the ambient air quality analysis which was conducted using the USEPA preferred Air Dispersion Model, AERMOD. Dust and air quality were the most prominent part of the environmental impact analysis. Dust can be detrimental, therefore the Federal Clean Air Act and supporting law in Minnesota is carefully applied to the proposed project. Chapter 4.2 describes the potential air quality impacts and the mitigation measures to be evaluated for the Air Quality Permit, including implementation of a fugitive dust control plan. Chapter 2.0, page 2.0-8 summarizes air quality regulations and provides references for additional information.
<b>Comment 3:</b>	I also asked if the dust would stop at the relocated mine boundary line. It should also be noted that the snow cover on Snowball Lake was covered in red ore dust just from the construction last winter. I guess that dust didn't know where the line was. The boundary they have set is for their convenience and isn't logical from a public safety standpoint. Going back to the original line that ran along Hwy 169 would be better and it should be checked to maybe expand further. Essar Steel will not do anything for public safety, as far as I can see, without being forced. You protect flora and fauna with great tenacity, when are you going to protect the people?

<b>Jeffers</b>	
<b>Response 3:</b>	<p>The 2010-2011 construction activities were previously permitted. The MPCA maintains the Citizen Complaints program for citizens to report incidents that may impact the environment or be in violation of a regulation. The website is <a href="http://www.pca.state.mn.us/index.php/about-mPCA/assistance/citizen-complaints.html">http://www.pca.state.mn.us/index.php/about-mPCA/assistance/citizen-complaints.html</a>. Protection of human health is central to establishing federal regulations. The NAAQS (National Ambient Air Quality standards) in the Clean Air Act require the protection of human health with a margin of safety included. Specifically, the Clean Air Act requires EPA to set NAAQS (40 CFR part 50) for pollutants considered harmful to public health and the environment, and "are requisite to protect the public health " with "adequate margin of safety" and protect sensitive subgroups including the health of "sensitive" populations such as asthmatics, children, and the elderly.</p> <p>MSI FEIS Figure 1.2 shows the project boundary. DSEIS Figures 1-1, 3-1, 4.3-1 and 4.4-1 illustrate the same boundary in the vicinity of Snowball Lake. At Snowball Lake, this boundary is also used for the ambient air boundary in the air quality permit. This boundary was identified at the time of scoping for the MSI EIS and has been in use since then.</p>
<b>Comment 4:</b>	<p>At the March 2010 meeting in Nashwauk, your D.N.R. Rep. stood at the map showing mine locale and my homes location and told me my home was defined as being "in the blast zone" and we would have to be moving. Now your new Rep. at the May 2011 meeting said 500 feet is all we're allowed to say. The County board or someone else needs to address this. What changed? If you won't set reasonable limits on this, what good are you. Your Rep. did say that there are overlapping responsibilities between state agencies and it seems they all want someone else to make a decision. Everyone wants to draw a paycheck, but no one wants to do the job or make the proper decisions.</p>
<b>Response 4:</b>	<p>The MSI EIS addressed blasting and air overpressure and whether or not potential noise would exceed the state noise standards. The assessment used daytime and nighttime standards for residential areas. Mitigation measures identified at that time were a berm along the southern perimeter, purchase of noise reduction packages for haul trucks, compliance with state rules (Minnesota Rules, part 6130.3900, subpart 1(c)) for blasting vibration and overpressure, avoidance of unfavorable conditions, such as low level inversions or wind directions, seismic and air blast monitoring programs, use of test blasts, and inclusion in the state air permit of a requirement for the facility to conform to state noise regulations and implement mitigation measures to bring the facility into compliance, if thresholds are exceeded at nearby residential receptors. Potential exceedances can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864.</p>
<b>Comment 5:</b>	<p>When I asked an Essar Rep. to tell me which homes were being purchased in the Snowball area, he refused to say. When I asked what criteria was met to be included he at first refused to say, but then said "they were on the line". The line he referred to is an arbitrary line which originally ran along Hwy 169 but was moved after it was mentioned that there were several homes in the Snowball area inside the line. The line was redrawn to exclude this area. It's obvious these homes will be in danger and/or unlivable so why isn't the line still at Hwy 169 and everyone North of it taken care of. My neighbor's home is being purchased. I can see it from my house. Essar Reps. say my house isn't included. I am just as much in jeopardy as anyone. I don't believe it is safe or healthy to be here in this close proximity to the mine, yet no one will be up front about why one home is relocated while others are left to suffer in an unlivable situation. We need honest, up front answers.</p>



<b>Jeffers</b>	
<b>Response 5:</b>	<p>The ambient air boundary was established by the original project owners (Minnesota Steel Industries) to comply with Federal and State ambient air quality standards and minimize disturbances to the surrounding community. On the southern boundary of the project near Snowball Lake, MSI worked with preliminary ambient air quality modeling results to establish a line that achieved compliance with ambient standards and disturbed the fewest private properties. Regarding the purchase of private property, once the ambient air quality boundary for the project was established, all private property and homes within the boundary were then slated for purchase. It is not mandatory for Essar to purchase private property outside the ambient air quality boundary.</p> <p>Updated air modeling is being submitted with the air permit amendment application and is incorporated into this FSEIS. The air permit amendment process will provide an additional opportunity for public comment.</p>

<b>Kautto</b>	
<b>Comment 1:</b>	I just got back from a water (unintelligible) in Grand Rapids, at the college, and I wish all of you could have been there to hear what's happening in our environment. We have good, clean water here. ... I'm sorry, it will affect us one way or the other. It's bad enough now, even if the plant isn't there, but heaven help us down the road. Think about it.
<b>Response 1:</b>	Comment noted.
<b>Comment 2:</b>	And I begin to wonder, if we were lied to about this piddly little thing of the road, what is going to happen with the potential environmental effects that are taking place down the road. How is it going to affect my future relatives, our future kids, our future area? ...I am a mile and a half from this project. I'm real concerned, because I think we should all live by the truth and at least be honest. That's the least we can do, not wait 10, 12 years down the road, when things are going the wrong way. It's too late then. Might not even be here, but there's other people who should be, certainly.
<b>Response 2:</b>	Your concerns are appreciated. The SEIS and permits are two mechanisms available to the government to provide oversight prior to the proposed project. During the project, potential violations can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864.
<b>Comment 3:</b>	And also, I am very concerned about the road, County Road 58, being closed, because that's what gets me in and out of my place. And two days ago, we had a meeting, and they told us we could not use that road, and so they built a road in the back so we could get around. It adds four or five miles to us. And I think, well, that's the way it is. And somebody said, yes, that's the way it is. I was gone this winter. When I came back about three weeks ago, we got a letter in the mail from the county board concerning County 58, and I found out that I do have a say in whether the road is going to be closed or not. And that really bothered me, because I feel that the powers that be are lying to us. What's going to happen now is a judge will (unintelligible) next month. We're going to have a meeting, and hopefully we can get to the powers that be and say we're against closing the road. Now, I don't have anything against the company. I'm concerned about closing the road. And somebody told me over here it's a safety, for our safety. And I say, if it's for our safety, then, because of the big trucks and whatever, they can use the road in the back. Let them use the road in the back. Keep our road open so I can get out whenever I want to.
<b>Response 3:</b>	The SEIS was prepared to address changes to the original MSI project. The road use was not identified as part of the SEIS scope, and therefore the SEIS did not discuss roads, traffic, and related infrastructure. The county process will address road closings. For additional information related to CR 58, please see response to comment 4.5-1.

<b>Kautto</b>	
<b>Comment 4:</b>	Don't forget, maybe all of you live farther than a mile and a half from there, even now we're being affected. They're building over there, okay? We do have noise pollution. And, of course, when the plant comes, it's going to be worse.
<b>Response 4:</b>	The MSI EIS addressed blasting and air overpressure and whether or not potential noise would exceed the state noise standards. Potential exceedances can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864.
<b>Comment 5:</b>	I mean, I'm sorry. I feel sad, but I think all of us should be more concerned about what's going on. I look at it, and I'm going to be thinking about what happens to that road, too, next week during our meeting. Hopefully the judge will rule in our favor. I do not know. But thank you.
<b>Response 5:</b>	The SEIS was prepared to address changes to the original MSI project. The road use was not identified as part of the SEIS scope, and therefore the SEIS did not discuss roads, traffic, and related infrastructure. The county process will address road closings. MSI proposed some level of environmental buffer between plant operations and nearby residents for safety and environmental reasons. Consequently, when it was learned that insufficient space was available near the crushing and concentrating plants to locate a pellet plant and steel mill, project developers looked to available land to the north near Itasca County Road 58 (CR 58). An analysis of land required for the pellet plant and steel mill showed that sufficient land was available to develop this part of the project on the south side of CR 58. After completing preliminary ambient air quality modeling, it was clear that land on the north side of County Road 58 would have to be acquired to ensure compliance with ambient air quality standards and achieve acceptable risk thresholds for the human health risk assessment. The ambient air quality boundary was then set which required that a small portion of CR 58 be closed to the public thus removing this section of roadway from the ambient air quality boundary. It is noteworthy that project developers could not purchase the Nashwauk Cemetery that is located adjacent to CR 58. Therefore all of CR 58 from Highway 65 to the cemetery and all of the land at the cemetery are excluded from the project's ambient air quality boundary. MSI also considered public safety and plant security in proposing to close the portion of CR 58 immediately adjacent to the pellet plant and steel mill.
<b>Comment 6:</b>	And don't lie to me. One (unintelligible) just told me, don't worry, Maria, the wind blows that way, away from you. I have lived there in over 30 years, and the wind blows like this (indicating). It doesn't blow one way.
<b>Response 6:</b>	Figure 5.3-1 of the DSEIS provides the wind rose and prevailing wind directions and speeds. The winds are prevailing from the northwest, but can blow from any direction on occasion.
<b>Comment 7:</b>	And somebody said, well, jobs and (unintelligible). My husband used to work for the mine. The mine closed, didn't have a job. He didn't have a job. But is that -- are we at such mercy of this kinds of place that we're going to close our eyes (unintelligible) anything? I mean, yeah, we want jobs, but we want good jobs. We want --and we want people to tell us the truth, not lie to us and then down the road, there we are.
<b>Response 7:</b>	Jobs are an important positive impact of the proposed ESMM project, but the number of jobs will fluctuate between 250 and 500, depending on the year of operation. It is not yet determined whether mining will continue following the 15-year period reviewed for this SEIS, but the DNR recognizes that the potential for mining beyond 15 years is a reasonable assumption given that the amount of ore needed for the first mine plan time period is 310 million tons and the total ore resource identified within the permit to mine boundary is 1.4 billion tons. Additional mining will be subject to modifications to the Permit to Mine and also likely require additional environmental review and permitting under Minnesota Rules part 4410.

**Leech Lake Band of Ojibwe - Malloy**

<b>Comment 1:</b>	The Leech Lake Band of Ojibwe (Band) is providing comments on Essar Steel Minnesota DSEIS in part as official involvement in the permitting process. However, of greater consequence is the Band’s sovereign status and our obligation and ability to protect our people and our environment today and for generations to come. In addition, the Leech Lake Band of Ojibwe has Treatment as an Affected Sovereign/State (TAS) status under Section 106 of the Clean Water Act to protect the health and well-being of the environment and its members by means of protecting wetlands and water resources.
<b>Response 1:</b>	Comment noted.
<b>Comment 2:</b>	<p>The Band is interested in and has been involved in the process of the Essar Steel Minnesota project as it has the potential to impact Leech Lake Band of Ojibwe members and resources both on the Reservation and within the Band’s 1855 Ceded Territory. The project is 28 miles from the Reservation boundary, well within the 50 mile TAS radius. Emissions from this project and the facilities around the Essar mining operation affects areas where Leech Lake Band members hunt, fish, gather, recreate, and live.</p> <p>The Leech Lake Reservation is a federally recognized Reservation located in north-central Minnesota encompassing 865,000 acres, serving 8,050 members, and 12,000 Reservation residents. The Reservation is characterized by an abundance of lakes and rivers (approximately 300,000 acres of surface waters), wetlands (163,000 acres), and forests (over 300,000 acres). The Leech Lake Band of Ojibwe retained and exercise their inherent right to hunt, fish, and gather for subsistence purposes in the 1855 Treaty with the United States government. Resources must be available and safe to utilize for the exercise of these rights. Protection of the Reservation’s environment and trust resources is crucial for the health and welfare of the Reservation population and the traditional, cultural and spiritual well being of the Band.</p>
<b>Response 2:</b>	Comment noted.
<b>Comment 3:</b>	Section 4.1.2.1.1: What is current water chemistry of water planned for dewatering? Even if there are no pollutants from this project added to the surface waters identified for dewatering, there are two considerations that generate downstream effects—current water chemistry and increased flow rates. Higher water flows will have impacts on erosion rates, and subsequently downstream sedimentation rates which will in turn affect habitats.

**Leech Lake Band of Ojibwe - Malloy**

<p><b>Response 3:</b></p>	<p>The MSI FEIS evaluated augmentation water sources and impacts to public waters as a result of stream augmentation. Therefore, this ESMM SEIS does not address the issues of augmentation water quality and flow rates.</p> <p>Pits 1 and 2 (to be used for augmentation water) water chemistry data (except for sodium and manganese) are available for May and June 2005 from the 2005 Water Quality Monitoring Study, Barr Engineering, 2005. Sodium and manganese water quality data were collected for the original MSI project. Average of data collected for Pits 1 and 2 from 1997 through 2000 were used. Total dissolved solids were directly measured.</p> <p>Concentrations in mg/L -          Calcium: 41          Chloride: 8.2          Total dissolved solids: 165          Sulfate: 31          Sodium: 6.2          Magnesium: 19          Nitrate + Nitrite as N: all samples &lt;0.1          Phosphorus: all samples &lt;0.01          Fluoride: 0.15</p> <p>The Pit 5 complex, including Pits 1 and 2, has been naturally outflowing into Oxhide Creek, which is tributary to Swan Lake, since April 1994. These pits will provide the same water and water chemistry for augmentation.</p> <p>Per Chapter 4.5.1.4 Existing Water Quality in Pits 1 &amp; 2, Pit 5 and Hill Annex Mine Pit, page 4-72, from the original MSI FEIS:          "Existing water quality conditions in Pits 1 &amp; 2, Pit 5 and Hill Annex Mine Pit meet applicable state and federal water quality standards. Water quality in the Hill Annex Mine Pit is summarized in the Excelsior Energy NPDES permit application (available on the Minnesota Public Utilities website:  <a href="http://energyfacilities.puc.state.mn.us/documents/16573/Supplement-Part-1(Sec1-1_1-8).pdf">http://energyfacilities.puc.state.mn.us/documents/16573/Supplement-Part-1(Sec1-1_1-8).pdf</a>). Table 1.8-20 on page 204 of the document lists the water quality in the Hill Annex Mine Pit.</p> <p>"Water from these pits may be transferred to Oxhide and/or Snowball (and eventually) Swan Lakes as part of project dewatering and streamflow augmentation... Augmentation water would come from Pits 1 &amp; 2 and from Hill Annex Mine Pit; and none of these waters would have water quality impacts resulting from Minnesota Steel activities."</p> <p>The augmentation plan was designed to minimize downstream geomorphic and stream biotic impacts by emulating natural runoff patterns (see MSI EIS 4-56 to 4-60). Chapter 4.3 Physical Impacts on Water Resources - Non-Wetland, page 4-52, of the original MSI FEIS addresses sedimentation rates.</p>
<p><b>Comment 4:</b></p>	<p>Section 4.1.3.1.2: The water quality monitoring protocol associated with wild rice studies that is described on page 3 of the June 15, 2010 Technical Memorandum Essar Minnesota SEIS -Wild Rice Surveys and Water Quality Monitoring Protocol (Barr Engineering 2010c) would have been nice to see here or as an appendix for easier reference. The third paragraph in this section hardly constitutes providing full information on this topic in the SEIS; makes it tough to provide good commentary too.</p>
<p><b>Response 4:</b></p>	<p>The protocol is available upon request. The level of detail and discussion of mitigation provided in the DSEIS is commensurate with the potential for adverse impacts, and the third paragraph reflects this balance.</p>

**Leech Lake Band of Ojibwe - Malloy**

<b>Comment 5:</b>	Section 4.1.3.1.3: So the existing permit is set to expire in 2012 and there will not have been sufficient time in operations for the conditions set forth in the existing permit to be complied with and yet the only reference to addressing this vis-à-vis the new needed permit is the single line: “The special conditions and monitoring requirements would be evaluated by the MPCA for the next permit reissuance.” Given the amount of preparation that goes into an NPDES/SDS permit application and issuance it is fairly difficult to believe that there has not been some significant discussion if not negotiations or agreements already undertaken between Essar and the MPCA to address this very issue. Such details would be good to provide here in conjunction with the paragraphs from the current permit that were presented.
<b>Response 5:</b>	The permit application for permit reissuance is due for submittal in January 2012. The MPCA and Essar agreed that the company would submit the permit application in November 2011. The application for reissuance will provide additional data and be evaluated when submitted for future permit conditions. Baseline data collected as required by the current permit will also be evaluated at that time. There will be opportunity for public comment prior to permit reissuance. Tribal communities will be given an opportunity to provide feedback prior to public notice.
<b>Comment 6:</b>	Section 4.1.3.2.1: Paragraph 2, line 1 mentions a Stream Augmentation Plan needing to be completed 1 year prior to the completion of dewatering of Pit 5 and the Draper Annex Pit; when is that anticipated to be?
<b>Response 6:</b>	Based on the current effective pumping rate of 4500 gpm, Pit 5 will be empty sometime in the 1st quarter of 2014.
<b>Comment 7:</b>	Section 4.1.3.2.1: Paragraph 2, last line and paragraph 4, last line both refer to plans beyond year 15 regardless of closure or continued operations. This is both good to read and disconcerting. Good to read because the initial sense is of Essar going above and beyond merely their planned operations as far as addressing water appropriations needs; disconcerting because it not only leaves the door open for continued/future operations it is easily read as foreshadowing events to come – and longer term operations considerations do not appear to be addressed elsewhere with regard to environmental impacts.
<b>Response 7:</b>	<p>Future activity beyond the 15-year increment is considered to be a subsequent action, where Minn. Rules part 4410.2000 notes “where it is not possible to adequately address all the project components or stages at the time of the initial EIS, a supplemental EIS must be completed before approval and construction of each subsequent project component or stage.” Under the rule, mining beyond that evaluated in the original EIS or subsequent SEISs will be subject to additional state Environmental Review for the component or stage not yet addressed.</p> <p>DNR recognizes that the potential for mining beyond 15 years is a reasonable assumption given that the amount of ore needed for the first mine plan time period is 322 million tons and the total ore resource identified within the permit to mine boundary is 1.4 billion tons. Additional mining will be subject to modifications to the Permit to Mine and also likely require additional environmental review and/or permitting under Minnesota Rules part 4410. Several permits would presumably need to be modified. The full list of permits that may need to be re-issued or modified is in Chapter 2.0 of the DSEIS.</p>
<b>Comment 8:</b>	How far into the permitted and planned 15 year operations will Essar decide whether or not they are closing or continuing? What plans are in place for studies to show potential longer term effects on the environment if operations are continued? If extending operations past 15 years is a real potential in Essar’s perspective, where are the longer term model and studies results? With as well planned an enterprise as Essar appears to be, it is very difficult to fathom that even 15 years out such studies are not being conducted.

**Leech Lake Band of Ojibwe - Malloy**

<b>Response 8:</b>	Essar's strategy, including for the proposed ESMM project, takes into consideration short and long term market projections; the 15-year mine plan is a response to long term projections. Essar is required to submit a mine operating plan annually to the DNR to ensure that it operates within the parameters of the SEIS and Permit to Mine. The operating plan is used to identify any environmental review and permitting requirements and subsequent studies that must be updated or initiated for continued operations. Typically, but not always, the environmental review process for continued operation would be initiated 3 to 5 years prior to the end of the mine plan time period. In Essar's case, this means that the environmental review and permitting process would be initiated somewhere between Years 10 and 12 of the amended Permit to Mine time period. At that time, a new strategic plan would be developed based on the foreseeable market conditions to serve as the basis of future operations and environmental review. Additional mining beyond 15 years will be subject to modifications to the Permit to Mine and also likely require additional environmental review and/or permitting under Minnesota Rules part 4410.
<b>Comment 9:</b>	All in all the sections directly addressing water issues read as very complete; the several references back to the original FEIS were problematic since said document was not on hand to refer to, however the cross-referencing is beneficial.
<b>Response 9:</b>	Comment noted. Because of its bulk, paper copies of the MSI FEIS were not provided. However, an electronic copy of the MSI FEIS was provided on CD with each mailing of the Essar SEIS and each mailing of the Executive Summary. A link to the MSI FEIS on DNR's website was also provided for downloading the document.
<b>Comment 10:</b>	Of concern remains the issue of longer term operational impact on those aspects that have been looked at for the current planned operational time frame.
<b>Response 10:</b>	Additional mining beyond 15 years will be subject to modifications to the Permit to Mine and also likely require additional environmental review and/or permitting under Minnesota Rules part 4410. Several permits would presumably need to be modified. The full list of permits that may need to be re-issued or modified is in Chapter 2.0.

**Leech Lake Band of Ojibwe - Toft**

<b>Comment 1:</b>	<p>The Leech Lake Band of Ojibwe (Band) is providing comments on Essar Steel Minnesota DSEIS in part as official involvement in the permitting process. However, of greater consequence is the Band's sovereign status and our obligation and ability to protect our people and our environment today and for generations to come. In addition, the Leech Lake Band of Ojibwe has Treatment as an Affected Sovereign/State (TAS) status for locally issued air quality permits and strives to protect the health and well-being of the environment and its members by means of protecting air quality.</p> <p>The Leech Lake Reservation is a federally recognized Reservation located in north-central Minnesota encompassing 865,000 acres, serving 8,050 members, and 12,000 Reservation residents. The Reservation is characterized by an abundance of lakes and rivers (approximately 300,000 acres of surface waters), wetlands (163,000 acres), and forests (over 300,000 acres). The Leech Lake Band of Ojibwe retained and exercise their inherent right to hunt, fish, and gather for subsistence purposes in the 1855 Treaty with the United States government. Resources must be available and safe to utilize for the exercise of these rights. Protection of the Reservation's environment and trust resources is crucial for the health and welfare of the Reservation population and the traditional, cultural and spiritual well being of the Band.</p>
<b>Response 1:</b>	Comment noted.

<b>Leech Lake Band of Ojibwe - Toft</b>	
<b>Comment 2:</b>	The Band is interested in and has been involved in the process of the Essar Steel Minnesota project as it has the potential to impact Leech Lake Band of Ojibwe members and resources both on the Reservation and within the Band's 1855 Ceded Territory. The project is 28 miles from the Reservation boundary, well within the 50 mile TAS radius. Emissions from this project and the facilities around the Essar mining operation affects areas where Leech Lake Band members hunt, fish, gather, recreate, and live.
<b>Response 2:</b>	Comment noted.
<b>Comment 3:</b>	Without the engineering calculations of the quarter scale model it is difficult to fully address some of these air issues as the directly relate to the model's outcome: This has an effect on the Regional Haze concern not just for the Class 1 areas but for the Tribes and Ceded Territories. We support the FLMs in their effort to ensure that the whole project does not degrade the local Class 1 areas.
<b>Response 3:</b>	Comment noted.
<b>Comment 4:</b>	Will the model be able to comply with standards to bring the whole project, not just the taconite plant, to model for Regional Haze compliance? Say for instance that the model does not bring down the values enough to show compliance with the two Class 1 areas, what strategy will be used to revisit the whole facility and decrease emissions from other facility sources?
<b>Response 4:</b>	The indurating furnace has been the focus of NOx emissions reductions because it is approximately 55% of total plant-wide NOx. Air permit preparation could include evaluating other sources for the whole facility if this seems to be feasible for bringing values into compliance with any Class I areas.
<b>Comment 5:</b>	This affects mitigation. The current strategy hasn't changed since Minnesota Steel's original EIS five years ago. With all the changes in operations, SEIS and permits we would like to see the mitigation strategy updated to reflect the proposed operations.
<b>Response 5:</b>	The DSEIS stated the mitigation strategies under consideration for air permit preparation given the available data on facility emissions at that time.
<b>Comment 6:</b>	Though we understand that the BACT is not wholly part of the SEIS, the SEIS does have a potential impact on it. The LLAP is concerned that BACT for the DRI is over five years old and may not truly be BACT anymore. We understand that this may not be able to be changed unless the original DRI proposal is changed. This however is also contingent upon the model calculations.
<b>Response 6:</b>	Under PSD regulations (40 CFR 52.21), BACT is required, for this project, for any unit where there is a proposed modification or change in the method of operation. The proposed modifications are for no change to the DRI as permitted previously. Essar began construction on April 2, 2009 and has maintained a continuous construction program; therefore the BACT analysis for the DRI as previously permitted is still valid.
<b>Comment 7:</b>	We appreciate the use of the larger hauling trucks and would like to encourage Essar to ensure that these vehicles have the latest technology for diesel emission reductions.
<b>Response 7:</b>	Comment noted.

<b>MCEA - Reuther</b>	
<b>Comment 1:</b>	Section 4.1 of the SEIS discusses the project’s impact on water resources and, in particular, wild rice. As noted in our comments from 2007, MCEA is concerned about the water quality impacts of the Essar Steel project. The SEIS makes clear that the project, with the proposed modification, has the potential to result in lasting, degrading impacts on water quality. More information is needed to fully understand the likely lasting effects of the project’s water consumption as well as the impacts from the discharge of pollutants.
<b>Response 1:</b>	The updated water and chemical balance reviewed and reported on in the DSEIS did not find that there would be "lasting, degrading impacts to water quality."
<b>Comment 2:</b>	Availability of Water Resources: The SEIS notes that the proposed modified project will consume much more water than the earlier evaluated and permitted proposal. However, the SEIS does not evaluate the availability of water resources or assess the impacts of the proposed level of consumption on existing resources. Instead, it defers this for later, after the project is up and running. According to the SEIS, an amended appropriation permit “will require Essar to conduct a hydrologic monitoring program in order to re-assess their water consumption needs and re-calculate available surface water and ground water yields.” This SEIS must contain the re-assessment and re-calculation that it seeks to defer. The consumption of water and the availability of water for augmentation to existing water resources is a primary concern raised in earlier comments. (See MCEA Comments on MSI DEIS, April 2, 2007, pp. 2-7).
<b>Response 2:</b>	<p>Incorporation of the dry scrubber and other process changes that conserve water keep the increase in water needs less than it might otherwise have been with the increase in pellet production. The proposed ESMM project has some (about 600 gpm net increase) additional water needs that will be supplied primarily by existing water stored in project area pits , and will not affect the required augmentation rates. The primary impact of additional water consumption would be a reduction in the amount of water remaining in the pits at/ near closure. Essar will be required under their Water Appropriation Permit to continue augmentation after closure. The purpose of the current monitoring program is to collect site-specific data during operations (e.g., during pit dewatering) that could not be collected during the time period of the SEIS. These data will be used during operations and near closure to re-assess the water balance and water availability. The SEIS did not find a basis for amending the Water Appropriation Permit at this time.</p> <p>The procedures relevant to scoping SEIS are contained in Minn. Rules part 4410.3000, subparts 5A and 5B, where the former states: “The scope of a supplement to an EIS must be limited to impacts, alternatives, and mitigation measures not addressed or inadequately addressed in the final EIS.” Chapter 4.5 in the MSI EIS evaluated the potential water quality impacts to water resources, including those effects associated with project-related water appropriations; Chapter 4.3 in the MSI EIS evaluated the physical impacts to water resources. The DNR evaluated the current proposed water balance versus the water balance that was reviewed in the MSI EIS taking into account the difference in projected mine life from 20 years to 15 years.</p>
<b>Comment 3:</b>	Availability of Water Resources: The Department of Natural Resources (“DNR”) states that “it is not known at this time if there will be enough water in Pits 1 and 2 for 15 years of augmentation.” (4.1-20; but see 4.1-7 contending “adequate water sources would still be available to meet the requirements necessary for stream augmentation ...”) The DNR must answer the question before moving any further toward Essar’s project.



<b>MCEA - Reuther</b>	
<b>Response 3:</b>	<p>Water balance modeling of pits, to the extent allowable with existing data, was conducted for the MSI EIS by a team of Barr Engineering and DNR groundwater specialists. The modeling results, especially concerning quantification of groundwater inflow, are believed to be conservative (i.e., more groundwater inflow is expected than was calculated during the modeling process). It will be Essar's responsibility, under permit provisions, to collect additional data during operations to confirm or refine the modeling assumptions and outputs before any water quantity related issues develop.</p> <p>The DNR evaluated the current proposed water balance versus the water balance that was reviewed for the MSI EIS taking into account the difference in projected mine life from 20 years to 15 years. The water quantity needs for the proposed ESMM project are satisfied according to the existing Water Appropriation Permit 2006-0433. Graphs 4.1-1 and 4.1-2 illustrate the modeled results for Pits 1 and 2 water levels. Results show that Pits 1 and 2 will draw down substantially but will not run dry. However, during the project, if it appears that there is a reasonable chance Essar could run out of augmentation water, the DNR would require, through an amended Water Appropriation Permit, necessary data collection and re-modeling of their water balance before Pits 1 and 2 are completely dewatered. Depending on those results, Essar may need to provide a DNR-acceptable contingency plan for continued augmentation.</p> <p>The SEIS did not find a basis for amending the Water Appropriation Permit at this time.</p>
<b>Comment 4:</b>	<p>Availability of Water Resources: The proposed modifications will consume even more water on a shorter time frame, exacerbating the concern that there was not sufficient water for stream augmentation and that the original models made unwarranted assumptions about water availability. Despite this, the SEIS does not model or evaluate the proposed additional water consumption. This omission must be corrected.</p>
<b>Response 4:</b>	<p>Refer to the previous response 3. The water use is similar to what was evaluated in the MSI FEIS. Essar has incorporated water conservation measures throughout their processes beyond what MSI proposed. It is not accurate to state as the commenter did that the additional water consumption was not evaluated for the SEIS.</p>
<b>Comment 5:</b>	<p>Water Management Following Closure and Financial Assurance: The SEIS acknowledges that the pit water balance under the modified project is substantially different upon closure than what was evaluated in the earlier EIS. It notes, for example, that the time required for Pits 1 and 2 to fill following closure could be "greatly extended." It notes that "additional modeling would be needed to predict the time it would take for Pits 1 and 2 (and Pit 5 and proposed Pit 6) to fill and overflow ..." However, the SEIS states that "this additional modeling was not required to be completed for this SEIS."</p> <p>The purpose to the Supplemental EIS is to provide the permitting agencies and the public with sufficient information to evaluate the modified projects and its impacts. The consumption of water resources, the availability of augmentation sources, and the long-term impacts on water quality from this project are central environmental concerns. There is no reasonable basis on which to defer modeling of the rate at which the pits will fill and the need for on-going, long-term water management at the site. "The very purpose of an EIS ... is to determine the potential for significant environmental effects before they occur. By deferring this issue to later permitting and monitoring decisions, the Commissioner abandoned his duty ..." Trout Unlimited v. Minn. Dept. of Agriculture, 528 N.W. 2d 903, (Minn. App, 1995), rev. denied, (Minn. Apr 27, 1995). In any case, DNR has not explained why the additional modeling was not undertaken for this SEIS. See Minn. R. 4410.2500.</p>

**MCEA - Reuther**

<p><b>Response 5:</b></p>	<p>The Permit to Mine includes financial assurance for all activities in the permit including stream augmentation and starting year 1. Issues associated with pit closure would be handled through permitting during operations. Financial assurance is evaluated on at least an annual basis. Each year, the data that has been collected from the previous year is reviewed and used to assess financial assurance. Future activity beyond the 15-year increment reviewed in this SEIS is considered to be a subsequent action, where Minn. Rules part 4410.2000 notes “where it is not possible to adequately address all the project components or stages at the time of the initial EIS, a supplemental EIS must be completed before approval and construction of each subsequent project component or stage.” Under the rule, mining beyond the project parameters evaluated in the original EIS or subsequent SEISs would be subject to additional state environmental review for the component or stage not yet addressed.</p> <p>The MSI FEIS considered water quantity issues with respect to impacts on water resources, including potential water augmentation requirements to maintain surface water flows in potentially affected resources. See MSI FEIS Chapter 4.3 Physical Impacts on Water Resources. The SEIS required an updated water balance to determine whether significant differences in water use were present for the ESMM project relative to the original MSI project; see July 2010 SEIS Preparation Notice, Part III, subparts B.1 and C.2. From this analysis, the DNR determined that water use was similar in scope and magnitude for both the ESMM and MSI projects due to water conservation measures incorporated into the modifications project; see FSEIS Chapters 1.0 and 2.0. In addition, no changes in augmentation sources from those evaluated in the MSI FEIS have been proposed. If such a change is proposed, it will have to be evaluated for any potential state environmental review and permitting requirements.</p> <p>Regarding the time necessary for the pits to refill, such an assessment is a component of ongoing financial assurance requirements under the Permit to Mine. Though the proposed modifications under the ESMM project did not require amendment of the water appropriations permit at this time, the existing permit includes a requirement that an augmentation plan be submitted one year prior to complete dewatering of Pit 5 (and thus the start of mining). The augmentation plan will include an evaluation of water availability in Pits 1 and 2, which is directly affected by the timing of the refill. Therefore, this information will be available prior to potential consequences related to water availability as evaluated in the MSI FEIS.</p> <p>Also see previous responses to MCEA Comments 1, 2, and 3.</p>
<p><b>Comment 6:</b></p>	<p>Water Management Following Closure and Financial Assurance: As MCEA noted in its comments on the original EIS for this project, the Hill Annex pit, which is mentioned throughout the SEIS as an additional source of water, is also the water source for the proposed Mesabi/Excelsior Energy project. The Legislature recently breathed new life into the Mesabi project. <a href="http://www.duluthnewtribune.com/event/article/id/199856/group/homepage/">http://www.duluthnewtribune.com/event/article/id/199856/group/homepage/</a>. It is not clear from the SEIS whether the Hill Annex pit has sufficient water to sustain both projects and what, if any, other alternatives exist.</p>
<p><b>Response 6:</b></p>	<p>A hydrologic study was completed by Barr on the Hill Annex Complex in 1987. Excelsior Energy performed its own Hydrologic Study to confirm the water yield from the Hill Annex Complex. The DNR also has pumping records from when the Hill Annex State Park was pumping the Hill Annex Mine. They pumped approximately 6000 gpm for 5-6 months a year to obtain an elevation between 1210-1220 ft. The annual average rate would be approximately 3000 gpm. Excelsior plans to pump approximately 2000 gpm from the Hill Annex and keep the water level at or above 1250 ft in elevation. Studies to date indicate sufficient water is available to support both projects.</p>

<b>MCEA - Reuther</b>	
<b>Comment 7:</b>	Water Management Following Closure and Financial Assurance: Moreover, as acknowledged in the SEIS, the availability of water resources “would affect the cost for closure” and the amount and type of financial assurance that should be required from Essar. Inexplicably, however, the SEIS defers assessment of the likely need for long-term water management and the evaluation of financial assurance for later. This evaluation must be contained in the SEIS. See, e.g., EPA Region 5 Comments on DNR’s PolyMet DEIS, pp 21-22 (rating DEIS inadequate and stating that the DEIS should discuss financial assurance, estimate bond amounts for closure and reclamation, identify responsible parties, and describe contingency reclamation costs).
<b>Response 7:</b>	The Permit to Mine includes financial assurance for all activities in the permit including stream augmentation and starting Year 1. The SEIS scoping and public comment did not identify financial assurance for discussion, suggesting that the proposed modifications would not significantly affect this issue being addressed in the Permit to Mine. Issues associated with pit closure would be handled through permitting during operations. Future activity beyond the 15-year increment reviewed in this SEIS is considered to be a subsequent action, where Minn. Rules part 4410.2000 notes “where it is not possible to adequately address all the project components or stages at the time of the initial EIS, a supplemental EIS must be completed before approval and construction of each subsequent project component or stage.” Under the rule, mining beyond that evaluated in the original EIS or subsequent SEISs will be subject to additional state environmental review for the component or stage not yet addressed.
<b>Comment 8:</b>	Tailings Basin Seepage: The SEIS takes an enormous departure from the original EIS, stating that “deep seepage” will average only 183 gpm rather than the 758 gpm estimated originally. The SEIS does not explain where the additional 600 gpm under the modified analysis will go, what effect it will have on the size and stability of the tailings pond; or how the recirculation of additional water (if that is the case) impacts the modeled water quality of the tailings pond water.
<b>Response 8:</b>	<p>The revised deep seepage estimate is 199 gpm, and the roughly 600 gpm difference is due to updated water balance modeling and better data, specifically,</p> <ul style="list-style-type: none"> <li>- Site-specific geotechnical data obtained through additional borings;</li> <li>- More advanced modeling (two-dimensional), as a result of increased data availability;</li> <li>- A sensitivity analysis on model results.</li> </ul> <p>The amount of water in the tailings basin is managed for proper settling and dam safety considerations. Too much water means increased dam safety risks; too little means inadequate settling and too turbid water pumped back to the plant and/or the necessity for more external makeup water. Decreased deep seepage has no effect on the size and stability of the tailings basin, rather, it leads to more water recirculated back to the plant and an equivalent reduction in external makeup water demand. This has some effect on the modeled tailings basin water quality concentrations and also affects the facility water balance. Ultimately, these changes are reflected in the water quality modeling results for the tailings basin water as reported in Chapter 4.1 of the SEIS.</p>
<b>Comment 9:</b>	Tailings Basin Seepage: Footnote 1 - We find the use of the phrase “deep seepage” confusing and unnecessary given that it includes all seepage from the tailings basin other than “visible” water that collects at the toe of the tailings basin dam.
<b>Response 9:</b>	Deep seepage is distinguished from lateral seepage because deep seepage would end up as groundwater flow whereas lateral seepage is proposed to be collected along the toe of the exterior dams of the tailings basin and returned to the tailings basin. Deep seepage would not be captured by this system. Page 4.1-20 of the DSEIS, first paragraph of Chapter 4.1.2.2, defines deep seepage. Definitions for deep and lateral seepage are provided in the Acronyms and Definitions section of this FSEIS.

<b>MCEA - Reuther</b>	
<b>Comment 10:</b>	Mitigations for Ground/Surface Water Contamination Are Inadequate: The SEIS makes plain that there is a hydrological connection between the tailings basin and surrounding surface waters and that the collection of polluted water in the tailings pond will, in fact, impact the water quality of surrounding surface waters: "All tailings basin deep groundwater seepage is expected to ultimately reach Swan Lake. Seepage would flow initially to either Pickerel Creek, O'Brien Lake, or directly to Swan Lake." Moreover, the SEIS states that, for a number of pollutants, the concentration of pollution reaching the surface waters increases under the proposed modified project. DNR's SEIS cites the requirements of the Minnesota Pollution Control Agency's ("MPCA") NPDES permit as the mitigation for these surface water impacts. MCEA has reviewed the NPDES permit (MN0068241) and finds that it is wholly inadequate.
<b>Response 10:</b>	The SEIS does acknowledge that seepage or portions of the seepage entering the groundwater would likely end up, at some time, in the surface waters in the vicinity of the tailings basin. The criteria looked at during the MSI EIS and subsequent permit, was to ensure that the operation of the tailings basin be protective of groundwater and to ensure there are no significant negative impacts to surface water as a result of the discharge to groundwater. The SEIS does not provide any new or additional information, compared to the FEIS, which would require a permit modification. In fact, the SEIS states that the estimated seepage to the groundwater, and the resulting mass loading of any pollutants of concern, has been significantly reduced compared to the original project.
<b>Comment 11:</b>	<p>Mitigations for Ground/Surface Water Contamination Are Inadequate: Where there is a hydrological connection between groundwater and surface waters and the collection of polluted water results in a point source discharge to surface waters via the groundwater, an NPDES permit is required. <i>Hernandez v. Esso Standard Oil Co</i> 599 F. Supp. 2d 175 (D.P.R. 2009), as modified by 2009 WL 1586928 (D.P.R. 2009). <i>Northwest Environmental Defense Center v. Grabhorn, Inc.</i> 2009 WL 3672895 *11 (D. Or.); <i>Williams Pipe Line Co. v. Bayer Corp.</i>, 964 F. Supp. 1300, 1320 (S.D. Iowa 1997).</p> <p>The NPDES permit must limit pollutants in the discharge, and cannot be issued if the new discharge will cause or contribute to a violation of water quality standards. 40 C.F.R. § 122.4(d). The NPDES permit cited in the SEIS, which expires July 31, 2012, does not include limits on any of the pollutants contained in the tailings pond water which, the SEIS acknowledges, will reach the surrounding surface waters via the groundwater. In fact, the permit states that it does not authorize a discharge to surface waters of the state with the exception of the discharge of stormwater and mine pit maintenance dewatering flows to the Ann and Sullivan Pits. (ch. 2, ¶ 3.1; ch. 5, ¶1.1). The SEIS however, makes clear that the tailings pond will discharge to surface waters, and the Clean Water Act prohibits that discharge absent an NPDES permit.</p>
<b>Response 11:</b>	The MPCA previously determined that the deep seepage from the tailings basin is not a point source. Impoundments that do not include a direct discharge to surface water and do not have a "discernible, confined, or discrete conveyance" to surface water through subsurface flow would not be permitted under the NPDES program (since it is not a point source), but would be classified as a "disposal system" under Minn. R. 7001.0020(D) and permitted under the SDS program. There has been no new information provided in the SEIS that would require a change in this initial determination. It should also be noted that the estimated deep seepage rate, under both the MSI FEIS and ESMM SEIS, is less than would be allowed if the tailings basin had been built with an engineered liner system (<500 gallons per acre per day).
<b>Comment 12:</b>	Mitigations for Ground/Surface Water Contamination Are Inadequate: The existing permit only requires monitoring of groundwater and surface water impacts. The NPDES permit does not meet the requirements of the Clean Water Act or Environmental Protection Agency's ("EPA") regulations and will not be able to be reissued without the MPCA conducting an analysis of the reasonable potential for pollutants in the tailings pond to cause and contribute to water quality violations and imposing the appropriate limits. 40 C.F.R. § 122.44(d)(1). Moreover, the existing permit, because it does not protect Minnesota's resources from pollution, impairment or destruction, is subject to challenge and invalidation. Minn. Stat. § 116B.10.

<b>MCEA - Reuther</b>	
<b>Response 12:</b>	The monitoring requirements contained in the permit for the tailings basin, both groundwater and surface water, were included in order to verify the results of the environmental modeling conducted for the MSI EIS. Based on those models, groundwater standards were expected to be complied with prior to entering the groundwater table and there were no significant impacts to surface water quality. It was determined at that time, based on no anticipated adverse impacts, that monitoring would be the appropriate verification tool. The permit does include language that reserves the MPCA's right to ask for additional information, including mitigative measures, if the monitoring shows that impacts are occurring or the concentrations of pollutants are trending upwards. The MPCA believes this is a reasonable approach for a project that does not have adverse impacts to water quality.
<b>Comment 13:</b>	Mitigations for Ground/Surface Water Contamination Are Inadequate: Not only does the existing NPDES permit fail to authorize a tailings basin discharge or impose any limits on such a discharge, it fails to provide sufficient authority for requiring mitigations when the discharge occurs. The permit contemplates "corrective actions" that themselves only involve more monitoring. For example, the permit says that "MPCA may require the Permittee to conduct further evaluations of existing geotechnical information, conduct additional geotechnical investigations and/or ground water assessments to demonstrate the adequacy of the existing ground water monitoring program in assessing water quality impacts." (Emphasis added.) Even after the tailings basin is found to cause "adverse changes" to the groundwater, the permit only allows for notice to Essar and a responsive report that "may" consider "additional monitoring, the installation of additional monitoring wells, and/or implementation of other corrective actions."
<b>Response 13:</b>	See previous response to comment 12. In addition, the permit does not attempt to pre-determine what corrective actions would be needed in the future. Corrective actions are yet to be determined and any corrective actions, if necessary, would be based on the type and extent of the impacts that need to be mitigated. Future monitoring will be determined at the time of permit reissuance based on data collected during the permit cycle.
<b>Comment 14:</b>	Mitigations for Ground/Surface Water Contamination Are Inadequate: Meanwhile, the models predict, even with the new assumption of 75% less tailings water seeping into groundwater, that the basin will contribute to the sulfate level in Swan Lake and the Swan River, which already exceed the state water quality standard of 10 mg/L. (The effects of the other pollutants on water quality in surrounding surface waters are not modeled or reported). Again, the MPCA may not permit a new discharge that causes or contributes to an existing water quality violation. 40 C.F.R. § 122.4(d).
<b>Response 14:</b>	<p>The tailings basin does not have a permitted surface water discharge. There is a low seepage volume from the tailings basin (~199 gpm). The company is proposing water reuse throughout the site. The only discharge to the tailings basin is water used to convey tailings to the basin and precipitation. Changes in ground water concentrations would be considered a trigger for potential corrective actions, which in turn would address any potential surface water impacts from the tailings basin. Special conditions have been developed in the existing NPDES/SDS permit which requires corrective actions if there are impacts to ground water that can be attributed to the tailings basin.</p> <p>The ground water and surface water monitoring requirements of the existing permit are sufficient to identify and address incremental seepage and/or increases in sulfate concentrations before seepage can affect wild rice found in the southwest bay of Swan Lake and in the Swan River. Monitoring of the ground water monitoring well network surrounding the basin will be used to identify any increases in sulfate loadings from the tailings basin seepage prior to the seepage reaching surface waters.</p>

<b>MCEA - Reuther</b>	
<b>Comment 15:</b>	Mitigations for Ground/Surface Water Contamination Are Inadequate: The SEIS must be amended to reflect the requirement that Essar’s discharge from the tailings pond to surface waters through groundwater seepage is prohibited absent an NPDES permit. Moreover, the SEIS should explain what limits and terms would be imposed in such a permit to provide real mitigations (i.e., not just additional monitoring) for the expected water quality impacts. DNR is charged with protecting the State’s natural resources, including its surface waters and its wild rice. Now is the time to demand that Essar evaluate ways to avoid, reduce, and mitigate the adverse impacts its activities will have on the State’s shared resources.
<b>Response 15:</b>	See responses to MCEA comments 11, 12, and 13.
<b>Comment 16:</b>	Zero Discharge of Process Water: The SEIS should explain how the zero discharge system functions and whether/how pollutants are removed from the process water. Is the expectation that water with 10- or 15-years of pollutant accumulation will still be used by Essar in its industrial processes? Is this realistic? What would the chemical balance of such water be? What effect will the reuse of polluted process water have on plant equipment efficiency and functioning?
<b>Response 16:</b>	Essar has selected a dry air pollution control system and implemented water conservation measures which have greatly reduced the water demand for concentrating and pelletizing. Chemicals do not “build up” in the water system for concentrating and pelletizing as some fresh water is always being introduced into the system and chemicals do leave the system during pelletizing either through air emissions, with the pellets themselves or in the dust collected in the air pollution control system. These environmental aspects have been evaluated for environmental consequences and mitigation.
<b>Comment 17:</b>	<p>PSD Increments and PM2.5: The SEIS states that the PM2.5 increments, promulgated October 20, 2010, will not apply to the project because Essar intends to submit a complete air permit application to the MPCA prior to October 20, 2011. See SEIS, p. 4.2-7, fn 2. MCEA does not agree with this assertion. Section 165 of the Clean Air Act defines the applicability of its requirements based on when construction commences, not when the permit application is deemed complete. See CAA § 165(a) (prohibiting the construction of major emitting facilities that do not comply with the applicable permitting requirements where “construction is commenced after the date of the enactment of this part ...”). Indeed, when Congress adopted the PSD program, it understood that certain sources might get caught by changing permit requirements and it offered specific “grandfathering” relief only to those sources on which “construction had commenced” before the enactment of the 1977 Clean Air Act Amendments. See CAA § 168(b); see <i>Andrus v. Glover Constr. Co.</i>, 446 U.S. 608, 616-17 (1980) (“Where Congress explicitly enumerates certain exceptions to a general prohibition, additional exceptions are not to be implied, in the absence of evidence of a contrary legislative intent.”); see also <i>NRDC v. EPA</i>, 489 F.3d 1250, 1259 (D.C. Cir. 2007).</p> <p>MCEA understands that the EPA regulation grandfathering compliance with the PM2.5 increment is being challenged and is under review. Essar should be required to show compliance with the PM2.5 increment, and that information should be provided in this SEIS.</p>

<b>MCEA - Reuther</b>	
<b>Response 17:</b>	<p>US EPA's October 10, 2010 PM2.5 rule established several elements of the federal Prevention of Significant Deterioration (PSD) program for PM2.5, including increments. The PM2.5 Rule established three dates that help define when and where PM2.5 emissions will be tracked for increment purposes: the major source baseline date (MaSBD), the trigger date (TD), and the minor source baseline date (MiSBD). The MaSBD is the date after which certain actual emissions changes at major sources consume or expand increment. Only emissions changes associated with construction or that result from a change in method of operation would affect increment at this stage. For PM2.5, the MaSBD is October 20, 2010. The TD is the applicability date for PSD increments and "triggers the increment consumption process nationwide." For PM2.5, this date is October 20, 2011. The MiSBD is the date after which actual emissions changes at all sources consume or expand increment. For PSD pollutants, the MiSBD has historically been set in Minnesota by the submission of the first complete PSD permit application in a baseline area (i.e., county) after the TD, which follows PSD regulations (40 CFR 52.21(b)(14)(ii)).</p> <p>The MaSBD and TD for PM2.5 have been defined by rule to be October 20, 2010 and October 20, 2011 respectively (40 CFR 52.21(b)(14)(i)(c)&amp;(b)(14)(ii)(c)). The MiSBD has not been set because the complete permit application was submitted prior to the TD, and so the baseline concentration has not been established, therefore the ambient air increments from PSD regulations (40 CFR 52.21(c)) do not apply.</p> <p>PCA did review the air quality analyses completed by Essar for the DSEIS and believes that, were the PM2.5 increments currently effective, predicted air quality impacts from Essar's operation would be less than the increments.</p> <p>The commenter's discussion of construction commencement and PM2.5 grandfathering is not applicable to the effectiveness date of PM2.5 increments and potential requirements for an analysis of impacts related to those impacts.</p>
<b>Comment 18:</b>	<p>Visibility Impairment: The SEIS acknowledges that the modification project will increase the project's adverse impact on visibility in Class 1 area. It fails, however to provide the public with an understanding of the extent of the problem and whether mitigations exist that will allow the project to proceed without having adverse visibility impacts on Class 1 areas.</p>
<b>Response 18:</b>	<p>Adverse impacts are identified through the methodology established by the Federal Land Managers for light extinction. The SEIS also identifies that an air quality permit can only be authorized by modeling under the adverse impacts threshold or providing mitigation. Table 4.2-12 in Chapter 4.2.2.4.5 of the DSEIS reports the extent of visibility impacts as peak modeled 24-hour average light extinction values and maximum number of days in a modeled year during which light extinction was modeled at greater than 5% and 10%. These are metrics Federal Land Managers (FLMs) have selected for evaluating Class I area visibility impacts. A more extensive review of visibility modeling methods and results is provided in the Barr study referenced in the DSEIS. In that study, Barr also reports analysis results using other, more current approved screening level modeling methodologies. Those results indicate lower impacts than those reported in the DSEIS. Chapter 4.2.3 describes several possible mitigation measures to reduce visibility impacts and asserts that final FLM approval of the project is contingent upon a successful demonstration of mitigated impacts at a level acceptable to the FLMs.</p>

<b>MCEA - Reuther</b>	
<b>Comment 19:</b>	Visibility Impairment: The visibility analysis is based on the modeled percentage change in light extinction in the Boundary Waters Canoe Area, Isle Royale, and Voyageurs that is attributable to pollution from the Essar facility. It finds that with regard to each Class 1 area, there are one or more days in which the light extinction is increased by greater than 5% due to the Essar project. Indeed, Essar's pollution will make the haze problem in the Boundary Waters more than 5% worse for nearly an entire month (26 days). The analysis does not translate the impact back into pollutant amounts, however. The SEIS should provide the public with information showing the level at which no days of greater than 5% contribution to light extinction in Class 1 area is achieved. How low would NOx, SO2, or PM emissions have to be driven down to ensure no adverse impact? What mitigations are available for Essar to achieve this level? What amount of pollutants need to be offset to achieve no adverse visibility impact?
<b>Response 19:</b>	Mitigation measures listed in the DSEIS were not specifically run through the Class I model. Due to the complexity of the modeling exercise to determine visibility impacts (Calpuff for Class I effects), it is not likely that pollutant levels could be ratio-ed backward to meet specific visibility outcomes. It would be feasible to evaluate specific mitigation/control options through the model to determine their benefit to reducing impacts on visibility. Modeled visibility impacts are influenced by a variety of factors, and due to the model's complexity, evaluations of multiple combinations of those factors would be unreasonably resource intensive. An evaluation of potential results from multiple mitigation scenarios is beyond the scope of the DSEIS. Neither would it add substantial value to the study given that, as stated in Chapter 4.2.3 of the DSEIS, final FLM approval of the project is contingent upon a successful demonstration of mitigated impacts at a level acceptable to the FLMs.
<b>Comment 20:</b>	Visibility Impairment: The SEIS states that "Essar would be required to mitigate [the adverse visibility] impacts before MPCA would issue a revised air permit ..." While the SEIS mentions some potential mitigation measures, there is nothing specific. The SEIS must identify the level of emissions Essar will have to reduce; it then should evaluate whether and how that level of emission reduction is achievable.
<b>Response 20:</b>	The FLMs approved the screening-level analysis for the SEIS, including presenting concentrations in terms of light extinction values compared to background values. Essar will provide further investigations and implementation of mitigating measures as needed to demonstrate Class I visibility impacts below the FLM threshold of concern. Modeled visibility impacts are influenced by a variety of factors, and due to the model's complexity, evaluations of multiple combinations of those factors would be unreasonably resource intensive. An evaluation of potential results from multiple mitigation scenarios is beyond the scope of the SEIS. Neither would it add substantial value to the study given that, as stated in Chapter 4.2.3 of the DSEIS, final FLM approval of the project is contingent upon a successful demonstration of mitigated impacts at a level acceptable to the FLMs.
<b>Comment 21:</b>	Greenhouses Gases and Climate Change. MCEA appreciates the SEIS's discussion of climate change generally and climate change impacts on Minnesota and the project area, as well as the discussion of how expected changes in climate may affect or alter the project itself and the environmental impacts the project is likely to cause.
<b>Response 21:</b>	Comment noted.
<b>Comment 22:</b>	Greenhouses Gases and Climate Change. MCEA submits, however, that additional analysis and evaluation of mitigations, especially the requirement that emissions be avoided or offset, be seriously discussed and considered in the SEIS.
<b>Response 22:</b>	Comment noted. Chapter 5.4.3.1 identifies that carbon offset credits exist as a voluntary market in the U.S., and could be considered at some point in the future for the proposed ESMM project. The project is subject to BACT for GHGs. Additional analyses of mitigation options will be presented in the BACT analysis. The SEIS analysis was performed under the MPCA air permitting guidance for GHG evaluation.



<b>MCEA - Reuther</b>	
<b>Comment 23:</b>	Greenhouses Gases and Climate Change. According to Essar’s calculations, the original MSI project would add 3.9 million tons of CO <sub>2</sub> –eq to the atmosphere each year. With the proposed modifications, that figure jumps to 4.5 million tons of CO <sub>2</sub> -eq per year, an increase of 16%. As noted in the SEIS, avoidance of the most significant adverse effects from climate change will require steep reductions in greenhouse gas (“GHG”) emissions; yet, this project proposes substantial increases in emissions.
<b>Response 23:</b>	Comment noted. The DSEIS identifies efforts underway to reduce GHG emissions (refer to Appendix D of the DSEIS for energy efficiency measures). The Preparation Notice for the SEIS does not identify that the DNR would assign significance to climate change impacts. The Preparation Notice states, "The SEIS will provide information on the project’s potential contribution to GHG emissions. This will include assessment of: 1) changes in GHG emissions; and 2) the project’s energy and GHG efficiency, both of which are subject to MPCA-approved guidance. Greenhouse gas emissions of the project will be quantified and reported in the SEIS as described in MPCA air permitting guidance. The guidance recommends quantification of direct greenhouse gas emissions as well as those generated through the use of energy at the facility. Changes in GHG emissions due to habitat conversion and/or disturbance will also be calculated. The project is subject to BACT for GHGs. Additional analyses of mitigation options will be presented in the BACT analysis.
<b>Comment 24:</b>	The SEIS states incorrectly that “[n]o project-specific requirements exist at this time for a cumulative reduction/mitigation.” In fact, the point to environmental review is to identify environmental impacts that a project causes or contributes to and then identify mitigations that a permitting authority can translate into requirements. Project-specific requirements that mitigate a project’s environmental impacts do exist and must be implemented by the permitting agencies.
<b>Response 24:</b>	The SEIS does not assign significance to climate change impacts. Rather, according to air permitting guidance for addressing GHG emissions, the proposer was asked to evaluate and increase efficiencies in all processes and sources in order to reduce emissions. The company was asked to demonstrate that they reduced emissions, and this continues through the Emissions Inventory reporting and detailed review by the MPCA of information submitted for the air permit application. Measures being identified to reduce GHG and other emissions will translate into permit requirements. Under the Tailoring Rule, BACT for GHGs is also a requirement of the air permit.
<b>Comment 25:</b>	The Minnesota Environmental Policy Act (MEPA), under which this environmental review is conducted, and the Minnesota Environmental Rights Act (MERA) both prohibit projects that cause or are likely to cause pollution, impairment or destruction of Minnesota’s environment where feasible and prudent alternatives exist. Minn. Stat. § 116B.10. Here, the SEIS acknowledges that Essar’s project will add 4.5 million tons of CO <sub>2</sub> -eq to the atmosphere. It likewise notes that this pollution is contributing to global climate change which is causing and is likely to cause pollution, impairment and destruction of many Minnesota resources. There are feasible and prudent alternatives to allowing the additional 4.5 million tons of CO <sub>2</sub> -eq to be emitted, which include both avoidance and mitigation through CO <sub>2</sub> reductions projects (offsets). Where such options exist, the permitting authorities have an obligation to impose them. This SEIS is where such mitigations should be explained to the public and vetted.
<b>Response 25:</b>	As stated in responses to the previous comments, BACT for GHGs will be performed to minimize emissions. This will also be added to the FSEIS, a change to the DSEIS. Under BACT, mitigation options that are technically feasible and are deemed cost-effective are evaluated. The DSEIS identified several mitigation measures, including carbon offsets. Mitigation through the details of the purchase power agreement is treated in response 27. Future permit reissuance will take into account changing state and federal regulations.

<b>MCEA - Reuther</b>	
<b>Comment 26:</b>	Under Minnesota law, the EIS must “identify those measures that could reasonably eliminate or minimize any adverse environmental ... effects of the proposed project.” Minn. R. 4410.2300(I). An EIS must “suggest measures which could be helpful in mitigating any adverse environmental impact caused by the action.” Coon Creek Watershed Dist. V. State Env'tl. Quality Bd., 315 N.W. 2d 604, 605-06 (Minn. 1982). While the SEIS discusses air permitting requirements (e.g., the obligation for Essar to conduct BACT for GHGs) and provides examples of efficiency improvements for the facility, it makes no attempt to identify and suggest measures that ‘could reasonably eliminate’ the annual 4.5 million ton CO2-eq emissions from the project. In particular, the SEIS must evaluate with more specificity GHG reductions that could be achieved through renewable power purchases and carbon offsets.
<b>Response 26:</b>	BACT for GHGs will be performed to minimize emissions. This will also be added to the FSEIS, a change to the DSEIS. Under BACT, mitigation options that are technically feasible and are deemed cost-effective are evaluated. The DSEIS identified several mitigation measures, including carbon offsets. Mitigation through the details of the purchase power agreement is treated in response 27. Future permit reissuance will take into account changing state and federal regulations.
<b>Comment 27:</b>	Essar, as an enormous consumer of electricity, is in a unique position to influence the resource mix of the utility from which it will purchase its electricity. The SEIS should evaluate options in which Essar demands and purchases 100% of its electricity from renewable sources. If not currently feasible because of the existing resource mix of the utility serving the project, other scenarios should be evaluated where an increasing share of the company’s electricity is generated from renewable sources, such as wind, solar or hydroelectricity.
<b>Response 27:</b>	Under MN Statue 216B.40, Minnesota Power (Allete) has exclusive rights to provide power to all persons and entities within the boundaries of the City of Nashwauk, as noted on page B-6 of the DSEIS. Table B-13 ranks Minnesota Power number 5 of 6 using the CO2 Emission Factor. On page B-7, MN Power's renewable energy goal for 2015 is calculated at a 20% decrease from the 2008 emissions reported in the table. MN Power's renewable energy page, <a href="http://www.mnpower.com/powerofone/renewable_energy/">http://www.mnpower.com/powerofone/renewable_energy/</a> , describes the most recent programs they are bringing online for purchase of wind or solar-generated electricity. At future dates during air permit reissuance, MPCA will evaluate all renewables purchasing programs available at the time.
<b>Comment 28:</b>	The timing of this project coincides with the requirement that Minnesota Power study and diversify the mix of resources it will use to meet industrial customer demand. The state permitting agencies and Essar have an opportunity to influence the rate at which renewable displace existing carbon-intensive sources by requiring and committing to the purchase of electricity from renewable sources.
<b>Response 28:</b>	Comment noted. Refer to response 27 and MN Power's renewable energy page.
<b>Comment 29:</b>	Additionally, the SEIS should provide detailed information about the availability and sustainability of carbon offset credits and projects that ‘could reasonably eliminate’ Essar’s direct (scope 1) emissions by reducing CO2 emissions elsewhere. The market for carbon offset credits is very diverse – not all offsets are permanent, quantifiable, verifiable, enforceable or additional. The SEIS is the document in which the availability of valid offset credits should be evaluated. In addition to offset credit markets, Essar could develop and propose offset projects of its own which “could reasonably eliminate” its proposed new CO2 emissions, which will cause and contribute to climate change and its adverse effects on Minnesota’s natural resources.

<b>MCEA - Reuther</b>	
<b>Response 29:</b>	The Chicago Climate Exchange (CCX) offers a voluntary GHG and offset trading platform and could be considered one of the more feasible options for this region. Participants include major corporations, utilities, and financial institutions globally. Unfortunately, the Chicago Climate Exchange will close its doors at the end of the first quarter of 2012. A reporting of the state of voluntary offset markets in the FSEIS is beyond the scope identified in the SEIS Preparation Notice. The MPCA can consider such voluntary private offset programs in proceeding with air permit requirements.
<b>Comment 30:</b>	In sum, the SEIS's discussion of climate change impacts is a welcome improvement over the original EIS. But it lacks a thorough discussion of what is arguably the most important question an environmental review should answer. How can the permitting authority "eliminate or minimize" the project's adverse environmental impacts. There are ways for DNR to accomplish that here, and they should be discussed and vetted in this SEIS.
<b>Response 30:</b>	Comment noted - see responses 23 - 29.

<b>Minnesota Power - McMillan</b>	
<b>Comment 1:</b>	Minnesota Power acknowledges the significant positive socioeconomic impact to the region already resulting from the Essar project construction, and we realize that a larger mine will provide a greater contribution to the West Range economy and will benefit both the public and private sectors.
<b>Response 1:</b>	Comment noted.
<b>Comment 2:</b>	Minnesota Power has reviewed Essar Steel Minnesota's Draft Supplemental Environmental Impact Statement. We'd like to acknowledge and commend the Minnesota Department of Natural Resources (MNDNR) for their thorough environmental review of the Project as demonstrated through the body of work included in the DSEIS. It's clear that the processes in place associated with the planning and public communication of the project provide a great mechanism for obtaining the right feedback. The feedback, combined with a sound plan and appropriate mitigation and management measures will help to ensure that the amended project will be a successful venture and will benefit all Minnesotans.
<b>Response 2:</b>	Comment noted.
<b>Comment 3:</b>	Minnesota Power appreciates the efforts of the MNDNR in leading their comprehensive review process. We look forward to the completion of the permitting process and eventual issuance of the modified and amended permits in such a manner so as to maintain the responsible stewardship of our precious resources.
<b>Response 3:</b>	Comment noted.

<b>Oja</b>	
<b>Comment 1:</b>	After reading the above supplement I feel that Essar Steel Minnesota has studied the potential significant environmental impacts and their proposed modifications do provide adequate mitigative measures. The additional increase in pellet production will provide more economic vitality to northern Minnesota for years to come.
<b>Response 1:</b>	Comment noted.

<b>Palcich</b>	
<b>Comment 1:</b>	How will increased pollution of area watersheds be mitigated (especially for sulfates, mercury, and accompanying trace metals)? Area watersheds are already contaminated by current taconite mining. What are the cumulative impacts of adding more such pollutants to the watershed? What technologies are currently available to begin reducing contamination in already impaired waters? What technologies are available to prevent such contamination by the Essar process?
<b>Response 1:</b>	<p>The MSI EIS addressed cumulative impacts including air particulates, acid deposition, and mercury in Chapter 5.0 Cumulative Effects beginning on page 5-1. Mitigation opportunities are described in every case. For example, Table 5.3.2 summarizes estimated future mercury reductions that could result from voluntary actions and the 2006 Mercury Reduction Act.</p> <p>Essar does not have a surface water discharge from the tailings basin. The company is preventing pollutants from entering the tailings basin by using dry air pollution controls, reusing/recirculating process water and preventing the discharge of wastewater to the tailings basin. The company is installing a seepage collection system at the tailings basin to remove any potential for discharge. Ground water monitoring wells have been installed around the tailings basin to monitor ground water for potential impacts. Surface water monitoring is also required. Modeling suggests there are no anticipated impacts to surface waters from the tailings basin.</p>
<b>Comment 2:</b>	What water resources will be used, and how will this impact area watersheds, well water, etc.? How will this affect future generations?
<b>Response 2:</b>	This issue was adequately addressed in the MSI EIS and was not part of the scope for the ESMM SEIS. In the MSI EIS, Chapter 4.2.2.4 identifies existing municipal water supply wells and numerous private wells in the general area; Chapter 4.2.3 identifies potential environmental consequences to these wells; Chapter 4.2.4 identifies mitigation measures.
<b>Comment 3:</b>	In light of the fact that Minntac is facing an unsolvable problem in trying to release contaminated recycled water into local watersheds, what mitigation plans have been developed by Essar as part of the environmental review process?
<b>Response 3:</b>	<p>Agreed to and potential mitigation measures have been summarized (Executive Summary xxxix) in the DSEIS. For water resources the mitigation incorporated into the proposed ESSM project includes:</p> <ul style="list-style-type: none"> <li>• Adaptive Management;</li> <li>• Special Conditions of existing MSI NPDES/SDS permit, including continued monitoring of ground water, surface waters, and tailings basin influent;</li> <li>• Stream Augmentation Plan per existing Water Appropriations Permit;</li> <li>• Hydrologic Monitoring per existing Water Appropriations Permit;</li> <li>• Maintain zero liquid surface water discharge and water reuse &amp; recycling strategy.</li> </ul>
<b>Comment 4:</b>	How will wild rice be affected?
<b>Response 4:</b>	The ground water/surface water monitoring requirements of the existing permit would be sufficient to identify and address incremental seepage and/or sulfate increases before seepage can affect wild rice. Monitoring of ground water monitoring wells surrounding the tailings basin will be used to identify any increases in loading from tailings basin seepage prior to the seepage reaching surface waters. The potential effects were evaluated using the updated chemical and water balances. The DSEIS states that no adverse impacts to wild rice are anticipated.
<b>Comment 5:</b>	When considering the economic benefits of Essar, was any comparison made between the number of projected mining jobs vs. the number of American jobs that have been outsourced to India? Have any studies been done regarding the impact of exporting our remaining iron resources to foreign countries? Who will ultimately benefit financially when we suffer from a degraded environment?

<b>Palcich</b>	
<b>Response 5:</b>	The SEIS Final Preparation Notice dated July 2010 identified the socioeconomic issues that the SEIS would address: "The SEIS will analyze the general social and economic effects of the proposed modifications project. This will include the direct and indirect effects on local economic development, tax base, and demand for public services. The SEIS will also update the status of the homeowner buyouts required to meet MPCA air permit requirements." The wider impacts associated with outsourcing of American jobs were not included in the scope.
<b>Comment 6:</b>	Has the amount of state and local government subsidy to this project been included in the economic analysis?
<b>Response 6:</b>	Chapter 4.5 presents the results of an economic model for assessing effects of the proposed project on jobs and services. The economic model does not account for any government subsidies.
<b>Comment 7:</b>	How can the amount of CO <sub>2</sub> to be released by Essar be justified when 2011 weather patterns have been so extreme?
<b>Response 7:</b>	Global climate change is likely to have an effect on local weather patterns, but, due to the short-term variability of weather, no particular weather event or particular seasonal pattern for any particular year can be ascribed causally to the long-term atmospheric build-up of GHGs. . Mitigation of CO <sub>2</sub> release is considered with the Air Permit. This is a rapidly changing area of policy and regulation.
<b>Comment 8:</b>	Why is the SEIS using outdated information when referencing CO <sub>2</sub> impacts?
<b>Response 8:</b>	It is unclear what exact DSEIS Chapters are being referenced by the commenter, but it is the intent of the DSEIS to use the latest available information. It is also acknowledged that climate change science is an evolving field.
<b>Comment 9:</b>	Where will the electricity come from?
<b>Response 9:</b>	The electricity will come from Minnesota Power, as discussed in Appendix B of the SEIS (pages B-6 through B-7). The Nashwauk PUC selected MN Power ( <a href="http://www.mnpower.com">www.mnpower.com</a> ).
<b>Comment 10:</b>	How will the increased demand for electricity affect citizen electric bills?
<b>Response 10:</b>	Future estimates for cost of electricity from Minnesota Power were not evaluated in this SEIS.
<b>Comment 11:</b>	How does monitoring suffice in place of detailed technological information regarding mitigation of environmental impacts? The Iron Range taconite industry began in the 1960's (Pilotac becoming Minntac). We are just now beginning to understand the full scale of environmental ramifications. How is it possible to assume that the Essar project will not adversely affect the environment for future generations?
<b>Response 11:</b>	The proposed project has been evaluated in accordance with laws of the State of Minnesota for environmental review. According to the existing process, adverse effects were identified for Class I air but not for other environmental issues. The SEIS is intended to provide information to the public and units of government on the environmental impacts of the proposed project before approvals or necessary permits are issued and to identify measures that could be implemented to avoid, reduce, or mitigate adverse environmental effects. The SEIS is not a means to approve or disapprove a project. Rules for the issuance of permits, including the opportunity for public comment, are another regulatory tool for managing environmental impact.
<b>Comment 12:</b>	It is my conclusion that the environmental analysis on this project is not complete, and that total impacts have not been considered.
<b>Response 12:</b>	Comment noted. Analysis was performed on the data available to date and according to the SEIS scope (July 2010). Permits are written and reissued on a periodic basis to take into consideration new data that becomes available on the operational project.

<b>Palcich</b>	
<b>Comment 13:</b>	How will air emissions that affect Class I areas be mitigated?
<b>Response 13:</b>	The DSEIS presents mitigation measures incorporated into the project and those that may be considered for incorporation to reduce air emission impacts on Class I areas. Modeled visibility impacts are influenced by a variety of factors, and due to the model's complexity, evaluations of multiple combinations of those factors would be unreasonably resource intensive. An evaluation of potential results from multiple mitigation scenarios is beyond the scope of the DSEIS. Neither would it add substantial value to the study given that, as stated in Chapter 4.2.3 of the DSEIS, final FLM approval of the project is contingent upon a successful demonstration of mitigated impacts at a level acceptable to the FLMs.

<b>Prochazka</b>	
<b>Comment 1:</b>	Obviously the project will have impacts on the environment. I feel the economic impact the project will have on the business community and the people working on, at and to support the project will out weight the environmental impact. We love where we live, but this is a tough place to live if you do not have a good job. This project would provide well paying jobs with good benefits hopefully for a long time.
<b>Response 1:</b>	Comment noted.
<b>Comment 2:</b>	I have been following the Essar Project fairly closely. I have been to meetings pertaining to the project and read the EIS. To a normal person the EIS looks like it covers all the areas that need to be covered to protect our environment. The company seems to be working well with the State to make sure they follow the recommendations made by the State. I am not naive that they are wonderful environmentalists, but they seem to be working to do what is necessary to protect the environment as necessary. With the State monitoring the whole project seems like a fair balance for everyone.
<b>Response 2:</b>	Comment noted.

<b>Rich</b>	
<b>Comment 1:</b>	Taconite Tailings Dust and Swan Lake Water Quality Concerns: Especially considering Essar's proposed operational scale. MSI proposed to increase the tailings waste in close proximity to Swan Lake by a factor of 11 compared with the previous Butler Taconite tailings volume now disposed on the site. Essar's new proposed volume would be over 15 times greater than Butler's. Yet even the Butler tailings operation seriously affected Swan Lake water quality and resulted in thousands of tons of tailings entering Swan Lake - issues not even considered in DSEIS.
<b>Response 1:</b>	<p>Tailings basin dust has been considered in the MSI FEIS and ESMM DSEIS. Chapters 4.6.2, 4.6.3, 4.7.2, 4.7.3, and 6.9 of the MSI FEIS and Chapters 4.2, 4.3 and 4.4 of the DSEIS describe air quality BACT, environmental consequences, and mitigation associated with dust including, but not limited to, a fugitive dust control plan.</p> <p>The volume of potential dust generation is directly related to the area of tailings exposed to drying, rather than tailings volume production. The areal extent of the tailings basin was not identified as a project change with potential for adverse effects different from that evaluated in the MSI EIS. Differences are described on page 3.0-12 and are within the areal extent addressed in the existing Permit to Mine.</p>

<b>Rich</b>	
<b>Comment 2:</b>	<p>Taconite Tailings Dust and Swan Lake Water Quality Concerns: The DSEIS persists in the belief that the Essar claim of “zero water discharge” is true. Water is a significant fraction of the tailings slurry and most evaporates from slurry once deposited. The remainder picks up liberated contaminants from the taconite tailings where they flow into Swan Lake through the groundwater. So Swan Lake’s recharge rate is slowed and contamination increases. Ignored in the DSEIS.</p>
<b>Response 2:</b>	<p>Chapters 4.6.2, 4.6.3, 4.7.2, 4.7.3, and 6.9 of the MSI EIS and Chapters 4.2, 4.3 and 4.4 of the DSEIS describes air quality BACT, environmental consequences, and mitigation associated with dust including, but not limited to, a fugitive dust control plan.</p> <p>The constituents modeled for the chemical balance are those expected to be present in the tailings basin water in dissolved form. The constituents modeled include calcium, chloride, fluoride, magnesium, nitrogen, phosphorus, sodium, sulfate, and total dissolved solids. Constituents that were not modeled include those that adsorb extensively to particulates in water or precipitate readily from solution at the concentrations anticipated, or were not identified during the MSI pilot plant study (the pilot plant study is described in Chapter 4.1.2.3 of the DSEIS).</p> <p>Table 4.1-20 of the DSEIS illustrates in-lake Swan Lake sulfate concentration changes as a result of tailings basin deep seepage. This evaluation results in mean sulfate concentration increase in Swan Lake of 0.3 mg/L with mean lake inflows and a range from 0.2 to 0.8 mg/L. This compares to the original MSI project prediction (Swan Lake Nutrient Study) of 3.3 mg/L for mean inflows and a range from about 2 to 7 mg/L. In fact, the reduced deep seepage from the tailings basin under the proposed ESMM project as compared to the original MSI project results in a reduced impact to Swan Lake water quality.</p> <p>The volume from deep seepage is only a small fraction of annual Swan Lake inflow and outflow. The maximum estimated deep seepage rate of 199 gpm (in Year 15) results in an annual volume of 321 acre-feet per year. Mean Swan Lake outflow volume is 44,200 acre-feet per year. Assuming outflow equals inflow, lake inflow from tailings basin deep seepage accounts for less than 0.7% of Swan Lake inflow. A deep seepage of 758 gpm from the original MSI project is equal to an annual volume of 1,223 acre-feet, which represents 2.8% of annual Swan Lake inflow. The reduction in deep seepage to Swan Lake represents a 2.1% reduction in groundwater inflow from tailings basin deep seepage under the proposed ESMM project as compared to the original MSI project. Natural variations in lake outflow (inflow) between wet and dry periods can result in a 33% increase to a 32% decrease in lake inflow, based on Swan Lake values in Table 4.1-20 of the DSEIS.</p> <p>In addition, the reduced tailings basin deep seepage volume to Swan Lake translates into a reduced mass of contaminants, which is reflected in the model results described previously; an increase in sulfate in Swan Lake of only 0.3 mg/L under the proposed ESMM project having reduced tailings basin deep seepage compared to a 3.3 mg/L increase in sulfate in Swan Lake under the MSI FEIS.</p>
<b>Comment 3:</b>	<p>Taconite Tailings Dust and Swan Lake Water Quality Concerns: Since all water for Essar comes from the Swan Lake watershed and its degradation in quality and loss through evaporation reduces affected natural inflow streams too. The rate of water evaporation that would otherwise feed Swan Lake will increase, resulting in a further decrease in Swan Lake water quality. Groundwater contamination from unlined tailings basin runoff will also be significantly higher.</p>

<b>Rich</b>	
<b>Response 3:</b>	Chapters 4.6.2, 4.6.3, 4.7.2, 4.7.3, and 6.9 of the MSI FEIS and Chapters 4.2, 4.3 and 4.4 of the DSEIS describe air quality BACT, environmental consequences, and mitigation associated with dust including, but not limited to, a fugitive dust control plan. Also see response to comment 4.1-5. Water quality in downstream water bodies was not found by the MSI FEIS to be adversely impacted. Deep seepage estimated for the ESMM project is substantially less at 199 gpm than that estimated for the MSI project (758 gpm) so greater impacts would not be expected. In addition, the ESMM tailings basin deep seepage rate is less than the rate allowed by the MPCA for lined systems (also refer to responses to similar comments by MCEA).
<b>Comment 4:</b>	Taconite Tailings Dust and Swan Lake Water Quality Concerns: The expanded tailings discharge rate and lifetime total would cause significant increased impacts for those living around Swan Lake and for Swan Lake itself. They need to be fully quantified and addressed by the FSEIS.
<b>Response 4:</b>	Chapters 4.6.2, 4.6.3, 4.7.2, 4.7.3, and 6.9 of the MSI FEIS and Chapters 4.2, 4.3 and 4.4 of the DSEIS describe air quality BACT, environmental consequences, and mitigation associated with dust including, but not limited to, a fugitive dust control plan. Also see response to comment 4.1-5. Water quality in downstream water bodies was not found by the MSI FEIS to be adversely impacted. Deep seepage estimated for the ESMM project is substantially less at 199 gpm than that estimated for the MSI project (758 gpm) so greater impacts would not be expected. In addition, the ESMM tailings basin deep seepage rate is less than the rate allowed by the MPCA for lined systems (also refer to responses to similar comments by MCEA).
<b>Comment 5:</b>	"Low NOx" Burner and Natural Gas Use Assumptions: "Low NOx" burners were included previously "if feasible" in the MIS FEIS. They were deemed to later to be not feasible by Essar. "Low NOx" persists in this DSEIS anyway. And the previous MIS FEIS required NOx offsets which were not actually available for Class I haze compliance.
<b>Response 5:</b>	Chapter 3.0 describes the technology proposed for the modifications project. Essar continues to meet with MPCA staff and the FLMS are included in all discussions regarding feasible technologies to meet air quality permit requirements. The FSEIS will contain the BACT analysis.
<b>Comment 6:</b>	Low NOx Burner and Natural Gas Use Assumptions: Even though emission savings from them is assumed, the DSEIS does not appear to require Essar to use such burners. If the DNR is going to assume "low NOx" burner use, the FSEIS must require Essar to do so or the massive increase in NOx will drastically decrease the possibility of Class I and local Class II air compliance.
<b>Response 6:</b>	The DSEIS assumes incorporation of Low NOx LE Burners because this is the technology Essar is proposing to incorporate. If the project is changed, Essar would be required to demonstrate that compliance could be achieved with an alternate technology selected. The FLMS and MPCA approved the screening-level analysis for the SEIS. Essar will provide results of further analysis of mitigation measures as needed during air permitting to demonstrate continued Class II standards compliance and Class I visibility impacts at a level acceptable to the FLMS.
<b>Comment 7:</b>	Low NOx Burner and Natural Gas Use Assumptions: Aker indicates a fuel "penalty" of 30% to make the application of Low NOx LE burners viable. Natural gas burner efficiency is always reduced when "low NOx" burners are used. Yet the DSEIS seems to assume decreased natural gas emissions per ton than otherwise expected. I cannot determine in the DSEIS on what basis this value is calculated. Essar's proposed 84% taconite production increase, with lower taconite natural gas burner efficiency and the same DRI steel mill should result in GHG (and also criteria pollutant) increases over the MIS FEIS of at least 60%. Yet the total increase appears to be only (4.5 mmtpy/3.8 mmtpy =) 18%. The basis for this discrepancy should be explained in detail in the FSEIS. If the information was provided by Essar, an independent review of all their energy data appears necessary.
<b>Response 7:</b>	Rigorous review of the emission inventory, including GHGs, was conducted by MPCA staff and continues for submittals made by Essar on behalf of the air permit application. All technical studies identified in the DSEIS are available for review upon request.



<b>Rich</b>	
<b>Comment 8:</b>	Taconite Tailings Dust and Swan Lake Water Quality Concerns: The MIS FEIS tailings basin height was calculated to be 70 to 100 feet above the existing ground level. An increase of 38% in the amount of tailings in the same drainage footprint would potentially result in a pile of silica containing nanodust well over 100 feet high – well above the surrounding tree line, subject to a much higher wind speed and resulting in a much higher than MIS FEIS estimated fugitive dust emission.
<b>Response 8:</b>	Modeled visibility impacts are influenced by a variety of factors, and due to the model’s complexity, evaluations of multiple combinations of those factors would be unreasonably resource intensive. An evaluation of potential results from multiple mitigation scenarios is beyond the scope of the DSEIS. Neither would it add substantial value to the study given that, as stated in Chapter 4.2.3 of the DSEIS, final FLM approval of the project is contingent upon a successful demonstration of mitigated impacts at a level acceptable to the FLMs for Class I areas. Regarding Class II modeling, fugitive dust was considered, with early scenarios run looking at various heights, and the results did not vary significantly. No adverse impacts were modeled for Class II areas. Though this specific height was not modeled for the SEIS, the tailings basin elevation of 1565 will be captured during the final ‘true up’ Class II modeling for the air permit after the ¼ scale test.
<b>Comment 9:</b>	Electric Energy Consumption and Resultant Air Emissions Calculations: The DSEIS states: “Essar reports that energy conservation measures identified during detailed engineering have greatly reduced the electricity demand per ton of pellet. As a result, the incremental increase in electricity required for the increased pellet capacity is 35 MW, which represents only a 10% increase in electricity demand compared to the original MSI project.” The DSEIS also states that the power will come from “existing” electric power plants. And further assumes that the increased air emissions from the “existing” power plants have no impact on the Essar DSEIS emissions. These two assumptions drastically reduce the actual air emission and climate change estimates that otherwise would be made by the DNR. And they are both wrong.
<b>Response 9:</b>	<p>The commenter is referring to response to comments 14l in the Responses to SEIS Preparation Notice Comments, July 2010 (available at <a href="http://files.dnr.state.mn.us/input/environmentalreview/essar/essar_seis_prep_notice_responses_final.pdf">http://files.dnr.state.mn.us/input/environmentalreview/essar/essar_seis_prep_notice_responses_final.pdf</a>), language which was also included in the Executive Summary of the DSEIS (see page xxxvi). Chapter 6.13.2.6 of the MSI FEIS addresses the issue of electrical power supply.</p> <p>Based on current project specifications, the integrated Essar facility will have an annual power demand of 302 MW. This is in contrast to the 450 MW estimated in the MSI FEIS, for a reduction of 48% (see a subsequent response below). In general, the DNR does not agree with the commenter's assertion that the Essar project will cause new power to be generated, or a new facility to be built such that a “connected action” analysis (as defined under Minn. Rules part 4410.0200, subp. 9) is required. Instead, the DNR finds that the ESMM SEIS is accurate in maintaining that power will come from current capacity. The DNR’s detailed response to factual and legal arguments on this topic, which appeared originally as comments on the original MSI FEIS appear in Response to Comment #16d, available here: <a href="http://files.dnr.state.mn.us/input/environmentalreview/minnsteel/feis/comments_response.pdf">http://files.dnr.state.mn.us/input/environmentalreview/minnsteel/feis/comments_response.pdf</a>.</p> <p>In addition, the DNR notes that this topic was not included as a scoping issue in the Final Scoping Decision Document for the MSI EIS or the ESMM SEIS. Analysis of impacts and alternatives in the SEIS were performed consistent with the Final Preparation Notice (July 2010). The scoping period for this SEIS was held through April 12, 2010 with a public scoping meeting held in the city of Nashwauk, MN, on March 25, 2010.</p>
<b>Comment 10:</b>	And nowhere in the DSEIS documentation is the new total electrical energy consumption delineated or the proposed new total of the estimated electrical consumption summarized.
<b>Response 10:</b>	The commenter is referred to response to the previous comment and response to comment 14n in the Responses to SEIS Preparation Notice Comments, July 2010.

<b>Rich</b>	
<b>Comment 11:</b>	<p>The original declared electrical power requirements in the MSI FEIS was 450 MW “from existing sources”. Based on public meeting responses I asked, 250 MW was estimated to be used by the MIS mining and taconite pellet production portion of the project. And the remaining 200 MW was estimated to be used by the “steel mill” portion of the project. Essar seems to attribute no energy savings to the steel mill portion (however in the appendix there is a trivial “0.23 MWh per metric ton of steel throughput” reduction declared). So even though the “crude ore” and taconite production would increase by 84%, Essar’s claimed mining/taconite electric energy use would increase by only <math>((250 \text{ MW} + 35 \text{ MW})/250 \text{ MW} =)</math> 14%. Or another way to view the claim, the electric demand would drop from <math>(250 \text{ MW}/3.8 \text{ mmtpy} =)</math> 65.8 MW/mmtpy to <math>(285 \text{ MW}/7.0 \text{ mmtpy} =)</math> 40.7 MW/mmtpy – a drop of 38%. An extremely large and unrealistic drop.</p>
<b>Response 11:</b>	<p>Estimated power demand was provided in Table 3-6 in the proposer study Climate Change Evaluation, Version 1, September 2010, which is available upon request. Estimated power demand is as follows in MWh/yr (and MW):  Crushing/Concentrating: 542,500 (62)  Pelletizer: 280,000 (32)  DRI: 308,000 (35)  Steel Mill: 1,512,500 (173)  TOTAL: 2,643,000 (302)</p> <p>Compared to the MSI FEIS total power demand of 450 MW, this represents a reduction of <math>[(450-302)/450=]</math> 33%; compared to the MSI FEIS pellet production demand of 250 MW, this represents a reduction of <math>[(250-(62+32+35))/250=]</math> 48%.</p> <p>It appears the original estimated savings of 35 MW [identified in the response to comment 14l in the Responses to SEIS Preparation Notice Comments, July 2010 (available at <a href="http://files.dnr.state.mn.us/input/environmentalreview/essar/essar_seis_prep_notice_responses_final.pdf">http://files.dnr.state.mn.us/input/environmentalreview/essar/essar_seis_prep_notice_responses_final.pdf</a>)], was incorrect. The value of 35 MW and the associated percent will be revised for the FSEIS to the correct values based on the numbers shown here (as reported in the proposer study) and associated calculations.</p> <p>Regarding the other method to calculate the change in electric demand (MW/mmtpy), this calculation would be more complicated based on the combination of pellet types being produced (low flux pellet capacity of 7.0 mmtpy and high flux pellet capacity of 6.5 mmtpy).</p> <p>The incorrect value of 2,649,000 MWh/yr provided on page B-6 of Appendix B of the DSEIS, will also be revised for the FSEIS to the correct value of 2,643,000 MWh/yr.</p>
<b>Comment 12:</b>	<p>Without the Essar claimed savings, the proportional increase in electricity use would average <math>((1.84 \times 250 \text{ MW}) - 250 \text{ MW} =)</math> 210 MW. But they claim 35 MW. So they must claim to “save” <math>(210 \text{ MW} - 35 \text{ MW} =)</math> 175 MW from what they would otherwise need. At 8760 hours per year of operation (unlikely, but most favorable to Essar) that would mean they should prove they can save 1,533,000 MWh per year. The only apparent supporting documentation for such a massive overall electric reduction is provided in the appendices by statements that “Essar Engineering has calculated...”. There was no independent or DNR assessments of the actual energy needs were made.</p>
<b>Response 12:</b>	<p>The 35 MW estimated reduction in power demand is incorrect and will be revised. See the previous response to comment 11.</p>

<b>Rich</b>	
<b>Comment 13:</b>	<p>Without apparent critical review (as I requested in my SEIS scoping comments) Essar claims to reduce energy usage by:  1.8 kWh/ton of crude ore  10.7 kWh/ton of crude ore  2.0 kWh/ton of crude ore  4.5 kWh/ton of crude ore  A total of 19 kWh/ton of “crude ore” energy savings.  And no electric energy reduction per ton in taconite production is claimed by Essar in the DSEIS appendices. If the Essar energy savings estimates are being used the DSEIS should provide “crude ore” tons per year on which it is based. But it doesn’t. However, there is roughly 30% useful pelletable iron oxide and 70% “tailings” in “crude (taconite) ore”. So 7.0 mmtpy of pellets would require about 23 mmtpy of crude ore and result in 16 mmtpy of (dry-basis) tailings for disposal (close to the estimates included in the DSEIS).</p> <p>Essar’s total claimed 19 kWh/ton electric savings is the same as .019 MWh/ton or 19,000 MWh/mmtpy. So using 23 mmtpy estimated “crude ore” mined, this means (19,000 MWh/mmtpy x 23 mmtpy =) 437,000 MWh/yr or only 50 MW of original electric need “saved”. 50 MW saved is no where near the 175 MW savings Essar apparently claims and the DSEIS seems to accept.</p>
<b>Response 13:</b>	<p>The values provided in the comment are not in the DSEIS or references for Chapter 5.4, Cumulative Climate Change. It could be surmised that the four items listed are related to the four energy demand sources cited in Response 11 to Mr. Rich, above. The DSEIS identifies energy savings in Appendix B, GHG Comparisons for Operational Items. The Climate Change Evaluation Report listed in references for Chapter 5.4 is available for review upon request.</p> <p>The 35 MW estimated reduction in power demand is incorrect and will be revised. See response to comment 11.</p>
<b>Comment 14:</b>	<p>Worse, Essar claims elsewhere in the DSEIS appendices that it needs 2,649,000 MWh/yr. (or 302 MW average over an 8760 hour year - again being most favorable to Essar). This number is far below the 485 MW implied by the only 35 MW more used by the DNR.</p>
<b>Response 14:</b>	<p>The 35 MW estimated reduction in power demand is incorrect and will be revised. See response to comment 11.</p>
<b>Comment 15:</b>	<p>At the very least, all the additional electric energy consumption and use related emissions should be increased by 3.5 times in the FSEIS. And the emissions from the new power plant that will be needed included too. Hopefully the DNR will go further and conduct an independent assessment of this and other key environmental impact issues for which Essar provides such key data.</p>
<b>Response 15:</b>	<p>Rigorous review of the emission inventory, including GHGs, was conducted by MPCA staff. All technical studies identified in the DSEIS are available for review upon request. Also see response to comment 9.</p>

<b>Rich</b>	
<b>Comment 16:</b>	<p>My name is Ronald R. Rich. I am all of the following:</p> <ol style="list-style-type: none"> <li>1. President of Atmosphere Recovery, Inc. – an international company that manufactures and installs advanced technology gas air emission analysis and gas control equipment primarily for iron and steel refining and production processes.</li> <li>2. An Aerospace &amp; Mechanical Engineering undergraduate of Princeton University with a specialties in fluid dynamics and climate modeling.</li> <li>3. An Environmental Engineer Master’s graduate of Stanford University with specialties in advanced industrial air and water treatment and mitigation processes.</li> <li>4. Formerly a Minnesota State’s “Alternative Energy Project Manager” with direct taconite industry energy and emissions technology and economic experience as part of my duties.</li> <li>5. Currently considered an international “expert” on conventional and “innovative” iron and steel production methods and emission mitigation technologies.</li> <li>6. A seasonal resident of Swan Lake, whose area water and air quality would be most degraded by Essar’s Minnesota Project.</li> <li>7. A director of the Swan Lake Association.</li> <li>8. A concerned citizen who has repeatedly commented on the inaccurate or incomplete information used during the development of the Minnesota Iron and Steel EIS, and the scope of Essar’s SEIS.</li> </ol> <p>To date most of my MIS and Essar related EIS concerns appear to have been dismissed without appropriate consideration. This time, even if the DNR does not agree with my concerns, I would appreciate full and complete responses to each issue I raise. And if there is any potential confusion about what I may be saying that gives reviewers any excuse to ignore the comments, please contact me first for a more detailed explanation or clarification.</p>
<b>Response 16:</b>	Comment noted.
<b>Comment 17:</b>	<p>Compared with the previous MIS FEIS, Essar apparently proposes to nearly double the size of the taconite mining and production operation (7.0 mmtpy/3.8 mmtpy = 1.84 times) and keep the size of the steel production operation the same. And Essar proposes to (at the least) increase the total amount of ore mined and thus the amount of tailings and other solid and hazardous waste permanently needing disposal by 40% (1.84 x 15 yrs/20 yrs = 1.38 times). In some cases the near doubling of the taconite mining/production operations reflect what appear to be proper relative resource consumption and emissions. However, in many cases the large increase in planned size does not reflect a proper increase and in some cases, indicates a planned decrease in such resource use and emissions without appropriate or sometimes any explanation. I will focus on one clear concern in detail – and for this issue I request a very specific and detailed response. I will briefly summarize other major issues which in my option have not been addressed in the DSEIS either.</p>
<b>Response 17:</b>	<p>The size of taconite mining and production does not necessarily have a linear relationship with resource consumption and emissions. For example, the volume of potential dust generation is directly related to the area of tailings exposed to drying, rather than tailings volume production (also noted in response to comment 4.1-33). The amount of tailings is provided in Table 3-5 of the DSEIS. Also see responses to your additional comments; this comment appears to relate to those.</p>
<b>Comment 18:</b>	<p>I used to say “please consider my comments”. In general they have been dismissed by the DNR. I hope this time a more comprehensive EIS results. Thank you.</p>
<b>Response 18:</b>	Your previous comments are appreciated and were responded to.

<b>Riser</b>	
<b>Comment 1:</b>	<p>Our family has lived in Nashwauk since 1939. We are very upset that the pollution will take our health and ruin our lives.</p>

<b>Riser</b>	
<b>Response 1:</b>	Your concerns are appreciated and your comment is noted.

<b>Rodorigo</b>	
<b>Comment 1:</b>	I support the conclusion that the potentially significant environmental impacts have been adequately studied and Essar's proposed modifications provide adequate mitigative measures for the project to move forward as proposed.
<b>Response 1:</b>	Comment noted.

<b>Ross</b>	
<b>Comment 1:</b>	I want to know who's going to monitor the water in Sucker Lake.
<b>Response 1:</b>	Sucker Lake was reviewed for environmental consequences for the MSI EIS (Chapter 4.3.2.7 and 4.1.2.9 for Little Sucker Lake). Sucker Lake does not receive any discharges from the Essar facility and no water quality impacts were anticipated per the MSI FEIS. Therefore, regarding Sucker Lake, no water quality monitoring requirements are included in the NPDES/SDS Permit MN0068241 for Essar Steel Minnesota.
<b>Comment 2:</b>	You can't tell me that Sucker Lake isn't going to be affected by this plant. I live three-quarters of a mile from this plant, and what's going to happen when production starts?
<b>Response 2:</b>	Sucker Lake was reviewed for environmental consequences for the MSI EIS (Chapter 4.3.2.7 and 4.1.2.9 for Little Sucker Lake). It was determined there would be a negligible change in the average water level in the lake and the water quality would not change perceptibly aesthetically or ecologically. Other chapters addressing environmental consequences related to the water quality of Little and Big Sucker Lakes include 4.3.2, 4.4.1, 4.7.2, and 4.8 in the MSI FEIS. The DSEIS addresses Little and/or Big Sucker Lakes in updated analyses in Chapters 4.3.1, 4.4.2, 5.3.1 and 5.4.2.
<b>Comment 3:</b>	I want to know what the air quality is going to be. My wife has lung disease.
<b>Response 3:</b>	Figure 5.3-1 of the DSEIS provides the wind rose and prevailing wind directions and speeds. The winds are prevailing from the northwest. Dust and air quality were the most prominent part of the environmental impact analysis. Dust can be detrimental, therefore the Federal Clean Air Act and supporting law in Minnesota is carefully applied to the proposed project. Chapter 4.2 describes the potential air pollution and the measures to be evaluated for the Air Quality Permit. Essar has proposed to reduce air pollutant emissions to the range acceptable by federal and state air quality standards.
<b>Comment 4:</b>	And also, who's going to monitor all of this?
<b>Response 4:</b>	The DNR and MPCA prepare and oversee permits that require the permittee to monitor for specific data and comply with regulations.
<b>Comment 5:</b>	The noise, I know the decibels are high. Right now where I live, it's very noisy. When they were blasting, it rattled the windows on my house.
<b>Response 5:</b>	The MSI EIS addressed blasting and air overpressure and whether or not potential noise would exceed the state noise standards. Potential exceedances can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864. Also refer to response to comment M-7.
<b>Comment 6:</b>	They say there's not going to be any noise. Well, when I first moved up to the lake, I don't know if any of you have ever heard snow fall. Well, I have, and it isn't like that anymore.

<b>Ross</b>	
<b>Response 6:</b>	The MSI EIS addressed blasting and air overpressure and whether or not potential noise would exceed the state noise standards. The assessment used daytime and nighttime standards for residential areas. Mitigation measures identified at that time were a berm along the southern perimeter, purchase of noise reduction packages for haul trucks, compliance with state rules (Minnesota Rules, part 6130.3900, subpart 1(c)) for blasting vibration and overpressure, avoidance of unfavorable conditions, such as low level inversions or wind directions, seismic and air blast monitoring programs, use of test blasts, and inclusion in the state air permit of a requirement for the facility to conform to state noise regulations and implement mitigation measures to bring the facility into compliance, if thresholds are exceeded at nearby residential receptors. Potential exceedances can be reported to the MPCA using the Online Citizen Complaints Form or calling 1-800-657-3864.

<b>Thurman</b>	
<b>Comment 1:</b>	I support the Minnesota Steel and Essar's design change.
<b>Response 1:</b>	Comment noted.

<b>Wainionpaa</b>	
<b>Comment 1:</b>	YES, this expansion should go through. Taconite mining and processing has undergone tremendous changes and is environmentally safe. Please allow the permit.....
<b>Response 1:</b>	Comment noted.

<b>Wright</b>	
<b>Comment 1:</b>	I see there are changes to the air quality class 1 Particulates and Visibility. I am aware that there are three houses on our lake that are being bought out by Essar due to the original air quality modeling. How does this effect the rest of us on the lake with an increase in poor air? Will there be new modeling done or are we now going to be included in the zone? Sound, poor air and particulates will be able to travel easily across the lake. This needs to be addressed I am already contending with the noise but refuse to tolerate poor air or particulates to be covering my home. What is the intention of the state going further with this new information? Who will protect the rest of us left here on the lake? I have found it hard to understand how it could effect three houses on the lake but not the rest. Now we are being told the poor air quality will increase, this to me is unacceptable. Please help with any contacts or avenues I need to take to prevent this from affecting my family!
<b>Response 1:</b>	The three houses on Snowball Lake are within the ambient air boundary. This boundary was proposed during scoping of the original MSI EIS and has remained the same. Chapter 4.3 presents the human health risk assessment. Figures 4.3-1 and 4.4-1 show receptor locations for assessing risk. Table 4.3-3 shows potential incremental increased human health risks, and similar results for receptors at different locations on Snowball Lake. The air quality is not presumed to be worse on Snowball Lake on the north side closer to or within the ambient air boundary. Air quality impacts of the MSI and ESMM projects are both below risk levels of significant concern to human health.