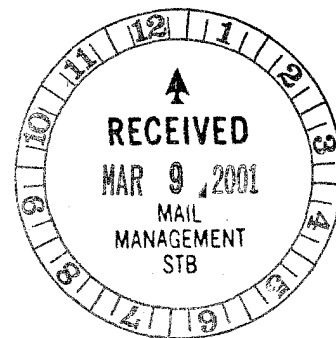


201748

Charles R. Michael, P.E.  
5030 Nicklaus Drive NW  
Rochester, MN 55901 (507) 536-7379



March 6, 2001

Office of the Secretary  
Case Control Unit  
STB Finance Docket No. 33407  
Surface Transportation Board  
1925 K. Street NW  
Washington DC 20423-0001

**ENTERED**  
**Office of the Secretary**

**MAR 12 2001**

**Part of**  
**Public Record**

Attention: Victoria Rutson  
Environmental Project Manager  
Environmental Filing

Re: Draft Environmental Impact Statement  
Powder River Basin Expansion Project  
DM&E Railroad Corporation

Ladies and Gentlemen:

Thank you for the opportunity to provide comment on the subject Draft Environmental Impact Statement. I am a resident of Rochester, Minnesota and provide these comments in the hope that the Surface Transportation Board and the cooperating agencies will carefully consider the issues presented herein and respond affirmatively to the suggestions and requests contained in my comments.

My technical comments are enclosed as a separate document entitled, "Air Quality Comments," and dated February 21, 2001. I am enclosing 10 copies as requested. I am the author of the enclosed comments, am a registered professional engineer with 25 years of environmental analysis experience, and practice in a specialty of air pollution control and air toxics evaluation and analysis. I wish to note that I have not been compensated by any group, organization or entity for the time taken to develop the enclosed comments but have contributed my time and expertise to respond to an issue that I am most familiar with. I am a member of the Olmsted County Environmental Commission, appointed by the Olmsted County Board of Commissioners, and serve as a volunteer in that capacity.

I am well aware that the DM&E, as well as other railroads in the United States, enjoy exclusions, exceptions and exemptions from certain environmental regulations. This regulatory latitude, while broad-based over a host of interstate commerce-related issues, does have its limitations, however. As the comments in the attachment discuss in detail, the proposal before you by the DM&E is quite capable of severely impacting the health and welfare of the residents of Rochester, Minnesota as a result of emissions of not only criteria pollutants but hazardous air pollutants as well.

The DEIS is a well-crafted document whose authors clearly establish valid expectations with regard to air quality issues, but ultimately fail to address them. An example of this failure regards air dispersion modeling in Minnesota wherein the DEIS establishes threshold screening levels, commits to an impact analysis for those pollutants exceeding the screening levels, and leads the reader to believe that an impact analysis was completed while, in fact, no modeling was performed in Minnesota in spite of the fact the the emissions of NO<sub>x</sub> exceed the federal and state threshold by over 650% at a 100 million net ton/year scenario. Of particular concern is the lack of mention in the entire document of the Minnesota Pollution Control Agency – Minnesota's principal environmental regulatory agency – with whom federal authority is vested with regard to air quality issues in Minnesota.

Rochester and Olmsted County, Minnesota are unique in the environmental review of this Project in that they are the only area along the entire proposed DM&E route that possesses a nonattainment air quality region, designated by the USEPA. Because of this nonattainment designation, emissions from this Project – or any project – are more closely scrutinized and the impacts associated with the Project are subject to more intense evaluation.

Designation by the USEPA of this area as a nonattainment area for sulfur dioxide means that the area is in violation of National Ambient Air Quality Standards. The incremental contribution by this Project would serve to further exacerbate this existing condition as well as delay – perhaps indefinitely – the redesignation of the area to attainment. Rochester and Olmsted County have worked hard over the last 10 years to reduce emissions of sulfur dioxide from area sources in a effort to return to attainment status.

Emissions associated with this Project that are of significant concern include sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), particulate matter (PM<sub>10</sub>) and hazardous air pollutants (HAPs). The enclosed comments detail the level of concern with these pollutants. I am further concerned that your consultants and SEA failed to reveal the level of emissions of HAPs as is required for impact analysis. Health effects of HAPs emissions is a crucial issue because Rochester currently exceeds the acceptable health risk benchmark for 1,3-Butadiene – a component of diesel locomotive exhaust. Any additional incremental contribution by this Project would only serve to increase the health risk even further beyond the acceptable limit.

As you are aware, air dispersion modeling was not conducted in Minnesota as required by the Scoping Document. This is a serious omission that must be corrected in the Final EIS. This dispersion modeling is the only available means to predict with any degree of confidence the ambient concentrations of pollutants of concern, and is the only available means of answering the questions posed in the attached comments. Given the level of emissions currently predicted it is clearly incumbent upon the STB to also conduct an Air Toxics Review and health risk assessment, in concert with the Minnesota Pollution Control Agency, in order to quantify the risk to human health in this area as a result of this Project for inclusion in the Final EIS. To not address this crucial question is inconsistent with good public policy and inconsistent with your charge to thoroughly evaluate the environmental impact of this Project. Without this analysis, no reasonable conclusion regarding public health impact can be proffered.

As you are also aware, there exists an increasing national awareness of the health risks associated with diesel locomotive exhaust. The USEPA has recently promulgated emission standards applicable to diesel locomotives and has also issued draft health risk assessments that support the

designation of diesel locomotive exhaust as a carcinogen. Of particular concern in the Rochester and Olmsted County area are emissions of diesel particulate matter (DPM) and federally-regulated hazardous air pollutants (HAPs), specifically including benzene, formaldehyde, 1,3-butadiene and chromium. Each of these chemical compounds are present in diesel exhaust; are considered toxicologically significant by USEPA; and have previously been measured in Rochester at ambient concentrations exceeding acceptable health risk benchmarks as established by USEPA and MPCA.

Thank you once again for the opportunity to comment on this proposed action. If you should have any questions or wish to discuss any of this information, please contact me at your convenience.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Charles R. Michael".

Charles R. Michael, P.E.

5030 Nicklaus Drive NW  
Rochester, MN 55901  
(507) 536-7379

**POWDER RIVER BASIN EXPANSION PROJECT**

**AIR QUALITY COMMENTS**

**Submitted to:**

**SURFACE TRANSPORTATION BOARD  
STB FINANCE DOCKET NO. 33407**

**Prepared  
And Adopted by:**

**OLMSTED COUNTY  
ENVIRONMENTAL COMMISSION**

**Olmsted County, Minnesota**

**February 21, 2001**

**Principal Authors:**

**Charles R. Michael, P.E.  
Thomas M. Paska, P.E.**

**Air Quality Comments**  
Draft Environmental Impact Statement  
Powder River Basin Expansion Project

The following comments have been developed following a review of the Draft Environmental Impact Statement (DEIS) as prepared by the Surface Transportation Board for the Powder River Basin Expansion Project. The comments address air quality issues and concerns only, and are presented in summary order following the sequence of the documents. The quotations as noted are taken directly from the DEIS, with the reference location in the DEIS noted in parenthesis. The comments provided also include a reference where appropriate.

**OBLIGATIONS OF STB**

**DEIS:** “The Surface Transportation Board (STB) regulations require STB’s Section of Environmental Analysis (SEA) to evaluate potential air quality impacts on both the new construction segments in Wyoming and South Dakota, as well as along the other portions of DM&E’s rail system. SEA conducted a detailed analysis of potential air quality impacts along the existing DM&E rail line to be reconstructed in Minnesota.” (Ref. 3.2-21)

**Comment:** The STB failed to conduct a detailed analysis of potential air quality impacts along the existing DM&E rail line to be re-constructed in Minnesota. The Air Quality analysis included in the Draft Environmental Impact Statement (DEIS) contains substantive errors, omissions and misleading conclusions, detailed in the attached comments, that preclude an accurate and informed decision on the part of the STB and cooperating agencies. Further, the absence of an accurate summary of cumulative impacts on the environment (Chapter 5) and the absence of mitigation measures with regard to current violations of federal National Ambient Air Quality Standards (NAAQS) (Chapter 7), which would be further exacerbated by this Project, constitute a prejudicial abuse of discretion on the part of the SEA and the STB, further evidenced by the footnote on page 7-2, to wit:

“In enacting the ICC Termination Act in 1995, Congress intended to facilitate rail line construction. Congress did so by changing the statutory standard from requiring approval, if the agency finds that a project is consistent with the public convenience and necessity, to requiring approval unless the agency finds that the project is inconsistent with the public convenience and necessity. The [Surface Transportation] Board noted that “[u]nder the revised statute, proposed rail constructions are to be given the benefit of the doubt.”

**Comment:** This Project as proposed is inconsistent with the public convenience and necessity and therefore is not entitled to receive the “benefit of the doubt.” This preface to the environmental analysis establishes a bias in favor of the Project proposer, DM&E Railroad Corporation, that precludes a meaningful analysis of the environmental impacts associated with the Project.

**Comment:** The air quality analysis contained in the DEIS is not consistent with the scope and magnitude of this Project. The STB up to this point has never had to evaluate such a large and complex project: “The Dakota, Minnesota & Eastern Railroad Corporation’s (DM&E) proposal to construct new rail facilities into Wyoming’s Powder

River Basin is a complex project. It is the largest and most challenging construction proposal ever before the Board.” (Ref. 6-1)

## SCOPING DOCUMENT

**DEIS:** “The EIS will:

- A. Evaluate rail air emissions for existing rail lines that exceed the Board’s environmental thresholds in 49 CFR 1105.7(e)(5)(I) *[sic]*, in an air quality attainment or maintenance area as designated under the Clean Air Act. The thresholds anticipated to apply to this project include:
  - (1) A 100 percent increase in rail traffic on any segment of DM&E’s existing system.
  - (2) An increase of eight trains per day on any segment of rail line affected by the proposed construction.
- B. Evaluate rail air emissions, if the proposed project affects a Class I or non-attainment area as designated under the Clean Air Act. Thresholds for Class I and non-attainment areas anticipated to apply to this project are as follows:
  - (1) An increase in rail traffic of 50 percent or more or
  - (2) An increase of 3 trains per day or more.
- C. Discuss the net increase in emissions from increased railroad operations associated with the proposed operations over the existing DM&E system...”  
(Ref. Appendix A, p25.)

**Comment:** The DEIS fails to establish its authority for the emission screening methodology, nor does it identify the source of the emission screening levels presented in Table 3.2-1, which are inconsistent with those emission screening levels shown in Appendix E. (Ref. Appendix E.1.1)

**Comment:** The DEIS failed to adequately evaluate rail air emissions for existing rail lines as required by the Scoping Document. The DEIS acknowledges the federal nonattainment status of Olmsted County for SO<sub>2</sub> but failed to evaluate this condition, as obligated, through an impact analysis, air dispersion modeling, evaluation, and mitigation methods. The DEIS is deficient in its analysis of threshold excursions for NO<sub>x</sub> in all counties in Minnesota by failing to provide air dispersion analyses for determination of compliance with NAAQS.

## CLEAN AIR ACT OF 1990

**DEIS:** “SEA compared the results of its [air quality] analysis to the Environmental Protection Agency’s (EPA’s) major source thresholds for stationary sources. This use of threshold screening is consistent with previous SEA studies. EPA’s major source thresholds for stationary sources provide the emissions level for each criteria pollutant at which a stationary source of that pollutant would be required to apply for a major construction or operating permit. No thresholds are currently established for mobile emission sources, such as locomotives.”

**Comment:** By subjecting the Project to environmental analyses consistent with that required for stationary emission sources, the STB also subjects the Project to regulatory review and comment under the provisions of the Clean Air Act of 1990 and Federal Part 70 permit requirements. To subject the Project to environmental analyses consistent with that required for stationary emission sources, and then to fail to conduct adequate air dispersion modeling and health risk assessment, is to disregard real and calculated environmental consequences of the Project to the detriment of public health and welfare. The threat to the public health and welfare by the Project has been demonstrated in the DEIS Air Quality analysis, in particular in Olmsted County, Minnesota where NO<sub>x</sub> emissions are expected to exceed State and Federal Permitting Thresholds by a factor of 6.5, and where SO<sub>2</sub> emissions will exceed not only State Permitting Thresholds but contribute to a continuing exceedance of NAAQS in a county that is classified by EPA as nonattainment for SO<sub>2</sub>.

**Comment:** The DEIS fails to acknowledge that Minnesota has a federally-approved State Implementation Plan (SIP) which contains air quality permit thresholds more stringent than federal requirements, as shown in the following Table AQ-1.

**Table AQ-1**  
**Comparison of Clean Air Act Thresholds**  
**(MPCA and USEPA) to**  
**Proposed DM&E Emissions (tons/year)**

| Pollutant        | Permit Thresholds <sup>1</sup> |       | DM&E Coal Transport <sup>2</sup> |        |         |
|------------------|--------------------------------|-------|----------------------------------|--------|---------|
|                  | MPCA                           | USEPA | 20 MNT                           | 50 MNT | 100 MNT |
| CO               | 100                            | 100   | 30                               | 66     | 126 †   |
| NO <sub>x</sub>  | 100                            | 100   | 155 †                            | 345 †  | 659 †   |
| SO <sub>2</sub>  | 50                             | 100   | 19                               | 41     | 79 ‡    |
| PM               | 100                            | 100   | NR                               | NR     | NR      |
| PM <sub>10</sub> | 25                             | 100   | 7                                | 17     | 32 ‡    |
| Lead             | 0.5                            | 10    | 0.001                            | 0.001  | 0.001   |
| VOC/HC           | 100                            | 100   | 11                               | 24     | 46      |
| Combined HAPS*   | 25                             | 25    | NR                               | NR     | NR      |
| Single HAP       | 10                             | 10    | NR                               | NR     | NR      |

<sup>1</sup>: Source – MPCA Air Quality Rules

†: Exceeds Federal and Minnesota Threshold

<sup>2</sup>: Source – DEIS Tables 3.2-2, 3.2-3, 3.2-4

‡: Exceeds Minnesota Threshold

NR: Not Reported

\*: HAP: Hazardous Air Pollutant

*Note: DM&E emissions estimates were reported to be based on future operational conditions (e.g., Tier 1 locomotives and diesel fuel with sulfur content less than or equal to 26 ppm). Emissions using existing locomotives and fuel were not provided and may be higher.*

**Comment:** The DEIS fails to compare the proposed DM&E emissions to established state and federal permit thresholds to allow the reader to clearly understand the magnitude of the expected exceedances.

**Comment:** Given that portions of Olmsted County are nonattainment for SO<sub>2</sub>, with a Minnesota threshold of 50 tons/year, the Final EIS must identify the maximum number of trains that will be allowed to pass through Olmsted County so as to not exceed the SO<sub>2</sub>

threshold. Furthermore, the operational makeup of the “train” must be defined (i.e., locomotive Tier level, number of locomotives, fuel sulfur content, maximum payload capacity, unit train velocity, etc.), along with the consequences to DM&E for exceeding any allowable thresholds.

## CHAPTER 3 – MINNESOTA

### 3.1.6 – Air Quality

**DEIS:** “The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment.” “[T]he EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called ‘criteria pollutants.’ They include: sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), lead (Pb), and particulate matter (PM). Attainment status was determined for the project area based on the above pollutants. Attainment refers to the concentrations of criteria pollutants in the area being present at or below levels established by the EPA for the protection of air quality. One county in the project area, Olmsted County, is partially non-attainment for sulfur dioxide. That is, sulfur dioxide is found to be above the levels set by the U.S. EPA for the protection of human health and welfare.”

**Comment:** Minnesota’s New Source Review (NSR) Program for Nonattainment Areas, or “Offset” rule, became federally enforceable on May 31, 1994. The rule is found at Minn. R. Ch. 7007.4000-4030. The Offset rule applies to new major sources or major modifications in nonattainment areas (for the pollutant that the area is designated nonattainment), or new major sources or major modifications that would contribute to a violation of the NAAQS in a nonattainment area. In general, new sources wanting to locate in a nonattainment area must go through nonattainment NSR if they have the potential to emit 100 tons/year (tpy) or more of the criteria pollutant for which the area is designated nonattainment. If a facility already located in a nonattainment area (e.g., Olmsted County) wants to do a modification, that facility must go through the nonattainment NSR process if the change would result in a net emission increase in the following amounts as shown on the following Table AQ-2.

**Table AQ-2**  
**Minnesota Nonattainment NSR Thresholds**

| <b>Pollutant</b>  | <b>Minnesota<br/>Allowable Net Emission<br/>Increase (tons/year)<sup>1</sup></b> | <b>Proposed DM&amp;E Emission<br/>Increase in Olmsted County<br/>(tons/year at 100 MNT)<sup>2</sup></b> |
|-------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| CO                | 100                                                                              | 126‡                                                                                                    |
| SO <sub>2</sub> * | 40                                                                               | 79‡                                                                                                     |
| PM <sub>10</sub>  | 25                                                                               | 32‡                                                                                                     |
| Lead              | 0.6                                                                              | 0.001                                                                                                   |
| Ozone             | 40 (as VOCs)                                                                     | 46‡                                                                                                     |
| NO <sub>x</sub>   | 40                                                                               | 659‡                                                                                                    |

<sup>1</sup>: Source – MPCA Air Quality Rules

‡: Exceeds Minnesota Nonattainment NSR Threshold

<sup>2</sup>: Source – DEIS Table 3.2-4

\*Portions of Olmsted County are nonattainment for SO<sub>2</sub>

**Comment:** Table 3.2-3, "Comparison of Emission Increases in Minnesota to EPA thresholds for the 50 million net tons/year" indicates that SO<sub>2</sub> emissions in Olmsted County are expected to increase by an additional 41 tpy (Ref. 3.2-25), thus contributing to a continued violation of the NAAQS in a nonattainment area.

**Comment:** Table 3.2-4, "Comparison of Emission Increases in Minnesota to EPA thresholds for the 100 million net tons/year" indicates that SO<sub>2</sub> emissions in Olmsted County are expected to increase by an additional 79 tpy (Ref. 3.2-25), thus contributing to a continued violation of the NAAQS in a nonattainment area and exceeding the State Permit Threshold of 50 tpy of SO<sub>2</sub>, for which an MPCA Air Quality Permit would be required.

### 3.2.8 - Air Quality

**DEIS:** "SEA performed a system-wide air quality analysis to analyze the potential impacts of the proposed project on air quality resulting from the overall increase in emissions (in tons/year) for sulfur dioxide (SO<sub>2</sub>), hydrocarbons (HC) [see relevant footnote re: VOCs], particulate matter (PM), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and lead (Pb)." (Ref. 3.2-22)

**Comment:** The DEIS applies stationary source thresholds for the criteria pollutant impact evaluation but fails to include any reference to or discussion of Hazardous Air Pollutants (HAPs). Given this approach, the DEIS must also include analysis and impact evaluation for Hazardous Air Pollutants (HAPs). (Ref. 40 CFR §61) The DEIS contains no analysis for HAPs as required by Title III of the Clean Air Act.

**DEIS:** "SEA compared the results of its analysis to the Environmental Protection Agency's (EPA's) major source thresholds for stationary sources. This use of threshold screening is consistent with previous SEA studies. EPA's major source thresholds for stationary sources provide the emissions level for each criteria pollutant at which a stationary source of that pollutant would be required to apply for a major construction or operating permit. No thresholds are currently established for mobile emission sources, such as locomotives." (Ref. 3.2-22)

**Comment:** EPA has established permitting thresholds for HAPs. (Ref. 40 CFR §61) The DEIS contains no analysis for HAPs as required by Title III of the Clean Air Act.

**DEIS:** "...[N]o thresholds are currently established for mobile emissions sources, such as locomotives. Therefore, SEA used the EPA threshold for stationary sources as a reference. If the projected county-wide emissions levels exceed the air quality screening levels shown in Table 3.2-1, then SEA performed a more detailed air dispersion modeling." (Ref. 3.2-22)

**Comment:** The air quality screening levels shown in Table 3.2-1 reflect Federal Permit Thresholds. The Minnesota Pollution Control Agency has established State Permit Thresholds that are less than Federal Permit Thresholds for sulfur dioxide (SO<sub>2</sub>), Fine Particulate Matter (PM<sub>10</sub>), and lead (Pb). In addition, both the Federal Permit Thresholds and State Permit Thresholds establish criteria for Combined HAPs and Single HAPs. (Ref. MPCA Air Quality Permit Rules)

**Comment:** SEA conducted detailed air dispersion modeling only on the new construction proposed in Wyoming and South Dakota even though the projected county-wide emission levels exceeded both the State of Minnesota and Federal Permit Thresholds for nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), CO and PM<sub>10</sub> in Olmsted

County (See Table AQ-1). SEA must conduct air dispersion modeling in Olmsted County including, at a minimum, the following parameters:

- Background (i.e., preconstruction monitoring) ambient concentrations of criteria pollutants and HAPs
- Model inputs specific to Rochester and Olmsted County topography (e.g., canyon effects in downtown Rochester)
- Climate conditions, including wind speed and direction
- Appropriately characterized population for our unique demographics (e.g., medically impaired, elderly, and children)
- Multiple operational scenarios
- Modeled parameters, including but not limited to criteria pollutants; HAPs, including mercury; known diesel locomotive emission constituents and diesel particulate matter (DPM); and fugitive coal dust

**Comment:** Tables 3.2-2, 3.2-3, and 3.2-4, “Comparison of Emission Increases in Minnesota to EPA Thresholds,” includes reference to EPA Federal Permit Thresholds only. (Ref. 3.2-24, 3.2-25) The MPCA has established, through its State Implementation Plan approved by EPA, State Permit Thresholds that are more stringent than Federal Permit Thresholds for sulfur dioxide (SO<sub>2</sub>), Fine Particulate Matter (PM<sub>10</sub>), and lead (Pb). (Ref. MPCA Air Quality Permit Rules)

**DEIS:** “For the 20 and 50 million ton per year options, SEA predicted that only NO<sub>x</sub> emissions would exceed the major source thresholds in several counties.” (Ref. 3.2-26)

**Comment:** Emission increases for the 50 million ton per year option would exceed the Federal and State Permit Threshold for NO<sub>x</sub> of 100 tons/year in all ten affected counties in Minnesota. Emission increases for the 50 million ton per year option would also exceed the State Permit Threshold for SO<sub>2</sub> of 50 tons/year in Blue Earth and Brown County. (Ref. MPCA Air Quality Permit Rules)

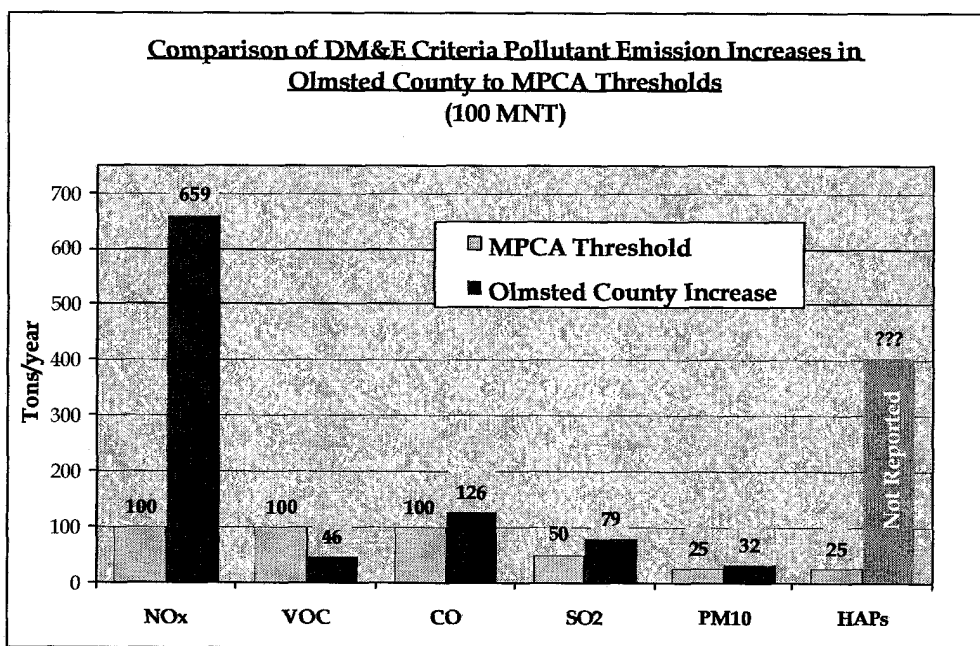
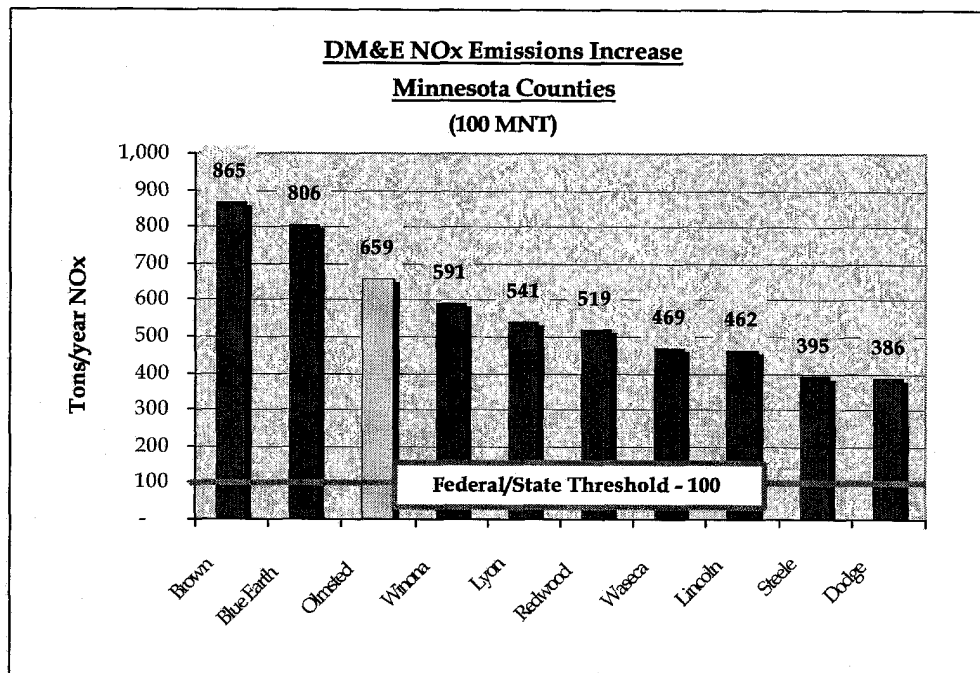
**DEIS:** “For the 100 million ton per year option, SEA predicted NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions would exceed the major source thresholds in several counties.” (Ref. 3.2-26)

**Comment:** Emission increases for the 100 million ton per year option would exceed the Federal and State Permit Threshold for NO<sub>x</sub> of 100 tons/year in all ten affected counties in Minnesota; would exceed the Federal and State Permit Threshold for CO of 100 tons/year in Winona, Olmsted, Blue Earth, Brown and Lyon Counties; would exceed the State Permit Threshold for PM<sub>10</sub> of 25 tons/year in Winona, Olmsted, Blue Earth, Brown, and Lyon Counties; would exceed the Federal Permit Threshold for SO<sub>2</sub> of 100 tons/year in Brown County; and would exceed the State Permit Threshold for SO<sub>2</sub> of 50 tons/year in Winona, Olmsted, Waseca, Blue Earth, Brown, Redwood, Lyon and Lincoln Counties. (Ref. MPCA Air Quality Permit Rules)

**Comment:** Portions of Olmsted County, Minnesota are classified as nonattainment for SO<sub>2</sub> by the EPA. (Ref. MPCA)

**Comment:** Given that NO<sub>x</sub> emissions would exceed both State and Federal Permit Thresholds of 100 tons/year in Minnesota for each scenario envisioned, the Project must submit to review under the Prevention of Significant Deterioration (PSD) provisions of the New Source Review (NSR) program. (Ref. 40 CFR §52)

Figure AQ-1



DEIS: "...[T]herefore, the results of the CALPUFF air dispersion modeling were reviewed to determine if the impacts from the increase in rail traffic would be expected to exceed the National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increments." (Ref. 3.2-26)

**Comment:** PSD review is part of the New Source Review (NSR) program under 40 CFR §52. The NSR program was designed to ensure that new facilities would not threaten air quality and still allow for economic growth. PSD review applies to all major facilities located in attainment areas. Areas in Olmsted County located in the nonattainment area would be subject to NSR under 40 CFR §52. The addition of such a significant increase in SO<sub>2</sub> emissions in Olmsted County would threaten economic growth in the area by preempting other new NO<sub>x</sub>-emitting industries with greater local benefit from locating here. Furthermore, the contribution of DM&E emissions may delay indefinitely the County's compliance with NAAQS and its redesignation as an attainment area.

**Comment:** In all three scenarios evaluated (20, 50, and 100 million net tons/year) the increase in emission of NO<sub>x</sub> attributable to the Project exceeds the State and Federal Permit Thresholds of 100 tons/year. In Olmsted County, as an example, under the 100 million net ton/year scenario, NO<sub>x</sub> emissions are estimated to be 659 tons/year, versus a State and Federal Permit Threshold of 100 tons/year. According to Appendix E (Ref. E.1.6 – Criteria of Significance) only those counties in the vicinity of the Powder River Basin were subjected to the CALPUFF dispersion modeling analysis.

**Comment:** The DEIS is misleading as it informs the reader that detailed air dispersion modeling and analysis was conducted in the counties where emission levels exceeded the air quality screening levels shown in Table 3.2-1. In fact, the only air dispersion modeling that was performed was in northeastern Wyoming and southwestern South Dakota even though criteria pollutant emission increases for the 100 million ton per year option would exceed the Federal and State Permit Threshold for NO<sub>x</sub> of 100 tons/year in all ten affected counties in Minnesota; would exceed the Federal and State Permit Threshold for CO of 100 tons/year in Winona, Olmsted, Blue Earth, Brown and Lyon Counties; would exceed the State Permit Threshold for PM<sub>10</sub> of 25 tons/year in Winona, Olmsted, Blue Earth, Brown, and Lyon Counties; would exceed the Federal Permit Threshold for SO<sub>2</sub> of 100 tons/year in Brown County; and would exceed the State Permit Threshold for SO<sub>2</sub> of 50 tons/year in Winona, Olmsted, Waseca, Blue Earth, Brown, Redwood, Lyon and Lincoln Counties. It appears from the record that the MPCA was never invited to participate in the air quality-related discussions, nor was the MPCA provided the opportunity to review and comment on the air dispersion modeling protocol. (Ref. Appendix E, Draft Technical Support Document, p. 1-1)

**DEIS:** "The NAAQS are an air quality standard established by EPA for the protection of human health and welfare. They provide the maximum allowable concentrations for a pollutant in a particular county, and take into consideration emissions inside and outside the county that could affect the county. The NAAQS for the various pollutants are:

- NO<sub>x</sub>: 100 micrograms/cubic meter (annual average),
- CO: 40,000 micrograms/cubic meter (1 hour average),
- CO: 10,000 micrograms/cubic meter (8 hour average),
- SO<sub>2</sub>: 80 micrograms/cubic meter (annual average),
- SO<sub>2</sub>: 365 micrograms/cubic meter (24 hour average),
- SO<sub>2</sub>: 1,300 micrograms/cubic meter (3 hour average – secondary standard),
- PM<sub>10</sub>: 50 micrograms/cubic meter (annual average),
- PM<sub>10</sub>: 150 micrograms/cubic meter (24 hour average)"

(Ref. 3.2-26)

**DEIS:** "PSD increments are established by EPA. PSD standards have been established which serve to keep areas which have very good air quality from being degraded to NAAQS by allowing only certain increments (increases) above existing background air quality conditions. PSD allowable increments are not the same for all areas of the country. For purposes of allowable increases, areas of the country have been designated as either Class I or Class II." [All affected Minnesota counties are considered Class II] (Ref. 3.2-27)

**DEIS:** "Class II increments have been identified for NO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub> and are:

- NO<sub>x</sub>: 25 micrograms/cubic meter (annual average),
  - SO<sub>2</sub>: 20 micrograms/cubic meter (annual average),
  - SO<sub>2</sub>: 91 micrograms/cubic meter (24 hour average),
  - SO<sub>2</sub>: 512 micrograms/cubic meter (3 hour average),
  - PM<sub>10</sub>: 17 micrograms/cubic meter (annual average),
  - PM<sub>10</sub>: 30 micrograms/cubic meter (24 hour average)"
- (Ref. 3.2-27)

**Comment:** The DEIS does not include the background ambient air quality conditions for any county in Minnesota to which the Class II PSD increments would be applied to determine compliance with the NAAQS, nor does the DEIS provide the projected pollutant-specific incremental increases in ambient air quality concentrations attributable to the Project from which a determination can be made with regard to compliance with the Class II PSD increments shown above.

**Comment:** The DEIS does not allow for the determination of PSD increment consumption in Minnesota for pollutants that exceed permit thresholds (e.g., NO<sub>x</sub>) from which to measure compliance with Class II PSD increment limitations, to determine the human health impacts associated with the incremental increase in ambient concentrations of pollutants, and to determine the remaining allowable increments required for economic growth in the affected areas.

**DEIS:** "The emission rates for Tier 1 (built in years 2002-2004) line haul locomotives..." [were used in this evaluation.] (Ref. Appendix E.1.4)

**Comment:** This use of Tier 1 locomotive emission rates is misleading unless the STB clearly requires DM&E to use only Tier 1 locomotives during operations. If this use of Tier 1 locomotives will not be required then an evaluation of emission factors from Tier 0 locomotives is necessary to adequately evaluate the air quality impacts.

**Comment:** The model or method used to calculate the idling vehicle emissions component underestimates the emission levels of the Project.

**DEIS:** "The emission estimates for NO<sub>x</sub> will be split into NO and NO<sub>2</sub> assuming 90% of the NO<sub>x</sub> emission are associated with NO while the remaining 10% are associated with NO<sub>2</sub> emissions." (Ref. Appendix E, Draft Technical Support Document, p. 3-5)

**Comment:** The DEIS provides no reference for the assumption that only 10% of the NO<sub>x</sub> emissions are NO<sub>2</sub>. The relationship between NO<sub>x</sub>, NO and NO<sub>2</sub> is a non-linear relationship. Current research suggests that the NO<sub>x</sub>:NO<sub>2</sub> relationship is on the order of 5:2 rather than 10:1 as assumed in the DEIS. (Ref. National Environment Technology

Centre, on behalf of the UK Department of the Environment) In that case, the DEIS would have underestimated the impact of NO<sub>x</sub> emissions by a factor of 4. As stated previously, air dispersion modeling was not included for any location in Minnesota thus there can be no evaluation regarding the impact on NO<sub>x</sub> emissions in Minnesota, nor any means with which to measure compliance with applicable Class II PSD increment limitations.

**Comment:** The DEIS is deficient given the absence of evaluation of health impacts from NO<sub>x</sub> and its contribution to increased levels of ground-level ozone. Ground-level ozone, the main harmful ingredient in smog, is produced in complex chemical reactions when its precursors, VOC and NO<sub>x</sub>, react in the presence of sunlight. The chemical reactions that create ozone take place while the pollutants are being blown through the air by the wind, which means that ozone can be more severe many miles away from the source of emissions than it is at the source.

At ground level, ozone can cause a variety of ill effects to human health, crops and trees. Specifically, ground-level ozone induces the following health effects:

- Decreased lung function, primarily in children active outdoors
- Increased respiratory symptoms, particularly in highly sensitive individuals
- Hospital admissions and emergency room visits for respiratory causes, among children and adults with pre-existing respiratory disease such as asthma
- Inflammation of the lung
- Possible long-term damage to the lungs.

(Ref. U.S. EPA, "Nitrogen Oxides: Impacts on Public Health and the Environment," EPA-452/R-97-002, August 1997)

**Comment:** The DEIS is also seriously deficient given the absence of evaluation of health impacts from diesel exhaust, which is a complex mixture of hundreds of constituents in either a gas or particle phase. Among the gaseous components of diesel exhaust that have a toxicologic significance are the aldehydes (e.g., formaldehyde, acetaldehyde, acrolein), benzene, 1,3-butadiene, and polycyclic aromatic hydrocarbons (PAHs) and nitro-PAHs. The particles present in diesel exhaust are composed of elemental carbon, adsorbed organic compounds, and small amounts of sulfate, nitrate, metals, and other trace elements. These particles are highly respirable and are excellent carriers for adsorbed inorganic and organic compounds. The most toxicologically significant compounds that are adsorbed onto the particles include PAHs, nitro-PAHs, and oxidized PAH derivatives. Many of the organic compounds present on the particles and in the gases are known to have mutagenic and carcinogenic properties. (Ref. EPA Health Assessment Document for Diesel Exhaust, EPA/600/8-90/057E, July 2000, SAB Review Draft)

**Comment:** In response to increasing concerns with regard to NO<sub>x</sub> emissions, the USEPA has promulgated emission standards and associated regulatory requirements for the control of emissions from locomotives and locomotive engines as required by the Clean Air Act section 213(a)(5). The primary focus of this rule is the reduction of emissions of oxides of nitrogen (NO<sub>x</sub>). The standards took effect in 2000.

**Comment:** Earlier comments in this document emphasized the absence of HAPs analyses with regard to emission threshold screening and conformance to Minnesota's

SIP. The continued absence of discussion with regard to HAPs and its control from mobile sources further illustrates the failure of the DEIS to adequately characterize the emissions and their related health effects.

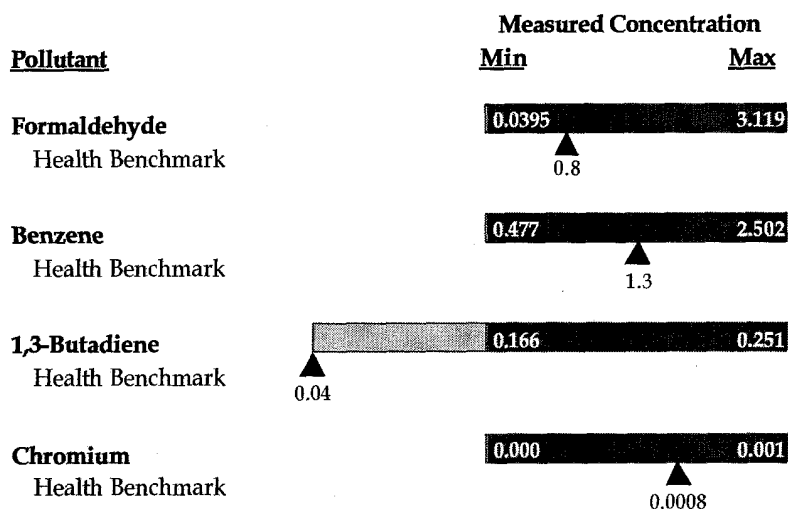
**Comment:** NO<sub>x</sub> is a precursor to the formation of ground-level ozone, which causes health problems such as damage to lung tissue, reduction of lung function, and sensitization of lungs to other irritants, as well as damage to terrestrial and aquatic ecosystems. (Ref. 40 CFR §85, §89, and §92)

**Comment:** On December 20, 2000 the USEPA Administrator signed the Final Rule to Control Emissions of Hazardous Air Pollutants from Mobile Sources. This federal rule regulates Hazardous Air Pollutants (HAPs) from locomotives as well as numerous other mobile sources. These regulations apply to both new and existing mobile sources. This document was noticed in the Federal Register on August 4, 2000. This document is not referenced in the DEIS.

**Comment:** The Minnesota Pollution Control Agency (MPCA), in March 2000, published Air Toxics Guidance Documents in support of their authority to require an Air Toxics Review (ATR). The MPCA may require that a project proposer conduct an ATR. The MPCA has discretion to require that a project proposer conduct an ATR if, in addition to other circumstances, an air emission source (whether stationary, area or mobile) is the cause of significant number of complaints, or is suspected of being an emitter of toxic substances that potentially represents a significant public health risk or environmental risk. This document is not referenced in the DEIS. The following table illustrates that the existing background concentration of pollutants of concern has already exceeded acceptable health benchmarks prior to the contribution of HAPs by DM&E.

**Figure AQ-2**

**Measured Concentration vs. Health Benchmarks**  
**in Rochester (ug/m3)**



*Source: USEPA Cumulative Exposure Project*

**Comment:** Further, in July 2000, the USEPA issued a peer-reviewed draft of its Health Assessment Document for Diesel Exhaust. This revised draft assessment of the possible health hazards from human exposure to diesel exhaust emissions updates three earlier drafts (1999, 1998 and 1994) that were reviewed by the Clean Air Scientific Advisory Committee (CASAC) of the Agency's Science Advisory Board (SAB). The current draft assessment characterizes the possible human health hazards and related exposure-response aspects of those hazards related to environmental exposure to diesel exhaust. This document is not referenced in the DEIS.

**Comment:** Mercury emission reduction is a high priority in Minnesota. The DEIS does not quantify expected mercury emissions from this Project and this omission must be rectified.

**Comment:** The DM&E expansion project as planned would reconstruct the existing railroad line through Rochester and pass in close proximity to persons in such high population density facilities as Charter House, Federal Medical Center, Olmsted Community Hospital, Rochester Methodist Hospital, Mayo Clinic, Park Towers, Fontaine Towers, and St. Mary's Hospital in which a higher than normal population exists whose immune and/or respiratory systems have been otherwise compromised due to other factors. Additionally, several schools are within the vicinity of the Project that would be adversely impacted. Given that NO<sub>x</sub>, as well as a high proportion of the MPCA-regulated air toxics compounds of concern are known to cause health problems such as damage to lung tissue, reduction of lung function, and sensitization of lungs to other irritants, an Air Toxics Review program must be conducted and included as part of the Final EIS (FEIS) to adequately assess these health risks. Source data for the Air Toxics review must be derived from air dispersion modeling conducted specifically for Minnesota conditions and affected populations. All of these data must be integrated into a comprehensive Health Risk Assessment that identifies reasonable and worst case scenarios. This Health Risk Assessment must be consistent with state and federal health risk assessment guidelines, and be included in the Final EIS in order for the STB to make an informed decision.

**Comment:** Following is a summary Table AQ-3 listing NO<sub>x</sub> emissions, by Minnesota County, attributable to the DM&E project, as published in the DEIS. The table also contains a listing of selected Olmsted County facilities that emit NO<sub>x</sub>, and a listing of selected Minnesota facilities that emit NO<sub>x</sub>, as a means of relevant comparison to the emissions predicted for the DM&E. The DEIS predicts that 659 tons/year of NO<sub>x</sub> will be emitted in Olmsted County. Statewide, DM&E's estimated emissions of NO<sub>x</sub> - 5,693 tons/year - would be 33% greater than the total NO<sub>x</sub> emissions from Koch Refinery at Pine Bend.

**Table AQ-3**  
**Comparison of Existing NO<sub>x</sub> Emissions in Minnesota**  
**to Anticipated DM&E NO<sub>x</sub> Emissions**

| <u>Minnesota County</u>                      | <u>Projected NO<sub>x</sub> Increase,</u><br><u>DM&amp;E (100 MNT)</u> |
|----------------------------------------------|------------------------------------------------------------------------|
| Winona                                       | 591 tons/year                                                          |
| Olmsted                                      | 659 tons/year                                                          |
| Dodge                                        | 386 tons/year                                                          |
| Steele                                       | 395 tons/year                                                          |
| Waseca                                       | 469 tons/year                                                          |
| Blue Earth                                   | 806 tons/year                                                          |
| Brown                                        | 865 tons/year                                                          |
| Redwood                                      | 519 tons/year                                                          |
| Lyon                                         | 541 tons/year                                                          |
| Lincoln                                      | 462 tons/year                                                          |
| Total NO <sub>x</sub> increase by DM&E in MN | 5,693 tons/year                                                        |

*Source: PRBE Project DEIS, Table 3.2-4*

| <u>Olmsted County</u>                    | <u>NO<sub>x</sub> Emission Level,</u><br><u>1998 (tons/year)</u> | <u>DM&amp;E vs. Selected</u><br><u>Olmsted County</u><br><u>Facility NO<sub>x</sub> Emissions</u> |
|------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| IBM – Rochester                          | 38 tons/year                                                     | 1722%                                                                                             |
| St. Mary's Hospital                      | 54 tons/year                                                     | 1213%                                                                                             |
| Olmsted Waste-To-Energy Facility         | 110 tons/year                                                    | 597%                                                                                              |
| Franklin Heating Station                 | 199 tons/year                                                    | 332%                                                                                              |
| <b>DM&amp;E Railroad</b>                 | <b>659*</b> tons/year                                            | –                                                                                                 |
| Rochester Public Utilities - Silver Lake | 938 tons/year                                                    | 70%                                                                                               |

*\* Predicted by DEIS*

*Source: MPCA*

| <u>State of Minnesota</u>          | <u>NO<sub>x</sub> Emission Level,</u><br><u>1998 (tons/year)</u> | <u>DM&amp;E vs. Selected</u><br><u>Minnesota Facility NO<sub>x</sub></u><br><u>Emissions</u> |
|------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Northshore Mining Co. – Silver Bay | 2,976 tons/year                                                  | 191%                                                                                         |
| National Steel Pellet Co.          | 3,637 tons/year                                                  | 157%                                                                                         |
| EVTAC Mining Plant                 | 4,055 tons/year                                                  | 140%                                                                                         |
| Koch Petroleum Group – Pine Bend   | 4,275 tons/year                                                  | 133%                                                                                         |
| <b>DM&amp;E Railroad</b>           | <b>5,693*</b> tons/year                                          | –                                                                                            |
| NSP – High Bridge                  | 6,157 tons/year                                                  | 92%                                                                                          |
| NSP – Black Dog                    | 7,396 tons/year                                                  | 77%                                                                                          |
| Hibbing Taconite                   | 8,204 tons/year                                                  | 69%                                                                                          |
| Minnesota Power – Boswell Energy   | 13,283 tons/year                                                 | 43%                                                                                          |
| NSP – Riverside                    | 15,461 tons/year                                                 | 37%                                                                                          |

*\* Predicted by DEIS*

*Source: MPCA*

## **CHAPTER 5 – CUMULATIVE IMPACTS**

### **5.3 – Summary of Cumulative Impacts**

**DEIS:** “The only environmental resource in Minnesota that SEA has determined would experience Significant Long-term Adverse impacts would be noise sensitive and vibration receptors.” (Ref. 5-13)

**Comment:** Given the above comments regarding air quality impacts in Minnesota, the above statement from the SEA constitutes a prejudicial abuse of discretion.

## **CHAPTER 7 – SEA’S PROPOSED ENVIRONMENTAL MITIGATION**

### **7.0 – Introduction**

**DEIS:** “The potential environmental effects SEA identified, both beneficial and adverse, could be substantial.” “...the dramatic increase in the number of trains operating on the existing system (from approximately 3 trains a day to 37) – and the impact caused by construction and operation of a lengthy new rail line through generally pristine areas – would have significant environmental consequences, some of which, such as noise, would be difficult to mitigate.” (Ref. 7-1)

**Comment:** There would exist significant environmental consequences as a result of the predicted continued violation of NAAQS in nonattainment areas of Minnesota in addition to significant environmental consequences as a result of exceedances of both Federal and State Permit Thresholds for criteria pollutants including HAPs. No mitigation measures for these consequences are included in the DEIS.

### **7.8.6 – Air Quality**

**Comment:** This mitigation section contains no mention of, or mitigation measures related to, compliance with NAAQS nor any mention of, or mitigation measures related to, achieving compliance with anticipated exceedances of both Federal and State Permit Thresholds for criteria pollutants and for HAPs.

## **SUMMARY**

The comments and requests for additional information, study, evaluation and impact analyses are justified given the environmental standards already in place in Minnesota, to which other industries must adhere. It is a reasonable request that the health impacts associated with this Project be thoroughly evaluated and communicated to the affected public prior to approval by the STB.