



Minnesota Pollution Control Agency

May 4, 2006

Mr. William Cole Storm
Minnesota Department of Commerce
Energy Facility Permitting
85 7th Place East - Suite 500
St. Paul MN 55155-2198

RE: Minnesota Pollution Control Agency Comments on the **DRAFT** LEFGP Site, HVTL Route and Pipeline Route Permit Application, Mesaba Energy Project proposed by Excelsior Energy, Inc. PUC Docket No. 05-94-PPS-Excelsior Energy-Mesaba

Dear Mr. Storm:

Pursuant to agreements with the Minnesota Department of Commerce (DOC), the Minnesota Pollution Control Agency (MPCA) staff has reviewed the pertinent sections of the draft LEFGP Site, HVTL Route, and Pipeline Route Permit Application submitted by Excelsior Energy for the Mesaba Energy Project.

The draft site application was delivered to the MPCA on April 4, 2006; on April 6, 2006, the MPCA received disks which contained air dispersion modeling and air emissions risk analysis information. MPCA staff could not open certain files due to either incompatibility to our system or security measures put in place by Excelsior Energy. These files became accessible on or about April 17, 2006. Since much of MPCA's review centers around the information contained in the disks, staff was not able to examine data until two weeks into our 30 day review period. Also hampering MPCA's review is the fact that we have not received applications for the Air Emissions Permit and the National Pollutant Discharge Elimination and State Disposal System (NPDES/SDS) Permit. These applications contain data and assumptions that are necessary for the MPCA to verify and validate the emission rates and other data provided in the site application. Excelsior Energy had hoped to deliver this document by April 18, 2006, as stated in their April 4, 2006, letter. MPCA has not received these applications to date. Unfortunately, as a result of not receiving information in a timely fashion, MPCA staff was not able to verify inputs and validate much of the data contained in the site application.

The MPCA staff will continue to work with Excelsior Energy and their consultants to obtain information needed and to verify and validate information as it is received. However, since the agreement between DOC and MPCA states that review will be provided by May 4, 2006, we submit the following comments.

Mr. William Cole Storm
Page 2

Comments regarding Air Emissions information provided in draft site application

Section 3.4, Air Pollutants Emissions

1. "Flux Materials" are listed on the left hand side of figures Figures 3.1-1 and 3.1-2, although MPCA staff cannot find in the application what these materials are.
2. An emission rate is missing in the middle of page 135.
3. All criteria pollutants are quantified, as are hazardous air pollutants.
4. Page 169 and page 175 reference Appendix 5 that contains the air emission application. It is not attached and the MPCA has not received an Air Emissions Permit application to date.
5. The MPCA believes that the draft site application should address Carbon Dioxide (CO₂) emissions. This discussion should include a comparison of the proposed technology with conventional plants burning carbon based fuels and be presented in CO₂ emissions per megawatt hour. The discussion should also address carbon sequestration.

Comments on the additional electronic material provided on air emissions :

Air permitting staff reviewed emissions data after being able to access information on the disks on April 18, 2006. During this review, they noticed that information regarding emission factors and sources from which they were derived were missing and requested this information from Excelsior Energy's consultants on April 21, 2006. This information arrived in the late afternoon on April 28, 2006. With comments being due to DOC by May 4, 2006, this is not enough time for the MPCA staff to verify that calculations and methodology used are correct, and that all proposed emission factors are acceptable.

Comments regarding Air Dispersion Modeling

The Prevention of Significant Deterioration (Class I and Class II) submittals appear complete. The company and MPCA will work with the Federal Land Managers (FLMs) to assess the Class I (far field) increment and visibility results. Preliminary visibility impacts may be of concern to the FLMs. The modeling sections of the risk assessment also appear complete. Since verification of the dispersion modeling inputs is dependent upon verifying the air emission information and calculations, validation of the modeling inputs and results is not complete.

Comments regarding Air Emissions Risk Analysis

There are many components to the Air Emissions Risk Analysis (AERA). For ease of understanding, each component will be listed separately. Additional documentation has been requested to explain the methods and reasoning behind many of the submittals. These requests have been documented in emails to SEH and are enclosed with this letter.

Acute and Subchronic risk estimates using the "ERER"

This submittal was complete. Validation of technical inputs and other data cannot be completed until the air emission factors are validated by MPCA staff (as mentioned above). The dispersion modeling for the risk assessment also needs to be validated.

Mr. William Cole Storm
Page 3

Industrial Risk Assessment Program

A list of deficiencies relating to this submittal can be found in an April 20th email to SEH consultants. Validation of the analysis cannot be done until the inputs are corrected.

Mercury Fish Consumption

A draft version of the Mercury Fish model was used to estimate risks from the consumption of mercury. Please use the final version of the Mercury Fish Consumption Model, which has updated inputs and will increase the accuracy of the analysis.

Mercury Emissions

Provide emissions data supporting expected removal efficiencies for mercury. The Eastman Gasification system was demonstrated to remove greater than 95 percent mercury emissions over its long term operation. Why does this proposal claim only a 90 percent removal of mercury?

Comments concerning water issues:

Section 1 Table 1.8-1 List of Permits Potentially Required to Construct and Operate

According to the table, Excelsior Energy will be applying for a 404 Clean Water Act Permit from the Army Corps of Engineers to cover the "discharge or dredged or fill material to waters of the U.S.". It is important to note that while the 404 Permit covers the physical act of dredging that the disposal of any dredged material is covered under the NPDES/SDS program and therefore Excelsior Energy will have to submit the NPDES/SDS permit application attachment form for the disposal of dredged material to the MPCA. The form can be found at <http://www.pca.state.mn.us/publications/forms/wq-wwwm7-26.doc>

Section 2.5.4.1 Proposed Gas Pipeline Route

Excelsior Energy proposes to construct, own, and operate two 12-inch or one 24-inch diameter gas pipeline(s) to supply natural gas to the West Range Site. The proposed pipeline would tap the existing 36-inch Great Lakes Pipeline approximately 13 miles south of the designated site. Under Minnesota state rules, any entity proposing to test the structural integrity of a pipeline that results in a discharge to Waters of the State must apply for authorization under the NPDES/SDS program. This comment is also applicable to any other gas pipelines that Excelsior plans to hydrostatically test. However, it appears that all of the other proposed pipelines will be constructed, owned, and operated by existing natural gas entities that would already have NPDES/SDS coverage for these activities.

Section 2 Table 2.7.2 Summary of Unavoidable Effects and Mitigative Measures

The section of the table devoted to effects and measures unique to the West Range Site erroneously identifies the surface water currently receiving the discharge from Hill Annex Mine Pit (HAMP) as Swan Lake. NPDES/SDS permit MN0030198 issued to Minnesota Department of Natural Resources (MDNR) identifies the receiving water for the discharge from HAMP as "Unnamed Creek to Upper Panaca Lake". It is important that Excelsior Energy acknowledge that the discharge from HAMP is to Upper Panaca Lake which eventually flows to Swan River at a point downstream of Swan Lake.

Mr. William Cole Storm

Page 4

Section 3.4.2.2.2 Cooling Tower Blowdown and Table 3.4.-21 Preliminary West Range Wastewater Discharge Composition

According to the draft site application, a portion of the effluent will be discharged to the Canisteo Mine Pit and a portion to Holman Lake with the volume of water discharged to Holman Lake controlled such that the total mass of mercury discharged to the Swan River watershed (the sum of any future discharge from HAMP to Upper Lake Panaca and the discharge from the facility to Holman Lake) will be no greater than the mass currently permitted to be discharged to the watershed from the HAMP in NPDES/SDS permit MN0030198. While it is important to limit the mass of mercury discharged to the Swan River, and while it is equally important that the discharge meet the water quality standard of 6.9 ng/L, the driving factor for the ultimate mercury limit in an NPDES/SDS permit for the proposed facility may be the concentration of sulfate in the discharge and the potential for the formation of methyl mercury in the receiving water(s) rather than the mass of mercury currently discharged from MDNR activities at the HAMP or the concentration of mercury to be discharged to Holman Lake from the facility. Table 3.4-21 includes a mean sulfate concentration of 1180 mg/L. This discharge concentration represents a significant load of sulfate to the receiving water particularly if the discharge is at all susceptible to anaerobic conditions likely to lead to the formation of methyl mercury. Excelsior Energy should be cognizant of this risk and avoid routing the discharge through any wetlands that may be characterized by an anaerobic habitat. Furthermore Excelsior Energy should view the 6.9 ng/L water quality mercury limit as an upper limit. The Swan River and the ultimate receiving water for the proposed discharge, the Mississippi River, are both under fish consumption advisories due to mercury levels in fish tissue. Depending on the concentration of sulfur in the discharge, it is possible that the NPDES/SDS permit will include a limit for methyl mercury rather than, or in addition to, a total mercury limit. This issue will need to be addressed through the remainder of the Environmental Impact Statement (EIS) and permitting processes.

Table 3.4-21 includes a concentration of 0.5 mg/L of phosphorus being discharged to Holman Lake from the facility. Excelsior Energy should be aware that in accordance with the Annandale-Maple Lake Court Decision (currently being appealed by the MPCA to the Minnesota Supreme Court), the MPCA is not authorized to issue NPDES/SDS permits to any new source/discharge in the Mississippi River Basin above Lake Pepin until a phosphorus TMDL is implemented. As previously communicated to Excelsior Energy, MPCA staff have been advised by the legal council handling the Annandale-Maple Lake case for the Attorney General's office that the discharge of phosphorus from the proposed facility to Holman Lake represents a new source regardless of the current discharge to the watershed covered under MN0030198, and therefore is subject to the court decision.

Section 3.6.2.1.1 Water Intakes and Pumping Systems and 7.6.2.1.4 Prairie River

The draft site application acknowledges that the cooling water intake structures associated with the facility must be compliant with 316(b) of the Clean Water Act for new facilities. In accordance with these regulations, Excelsior Energy is required to either design the intake structure such that the intake flow is commensurate with a closed cycle facility and reduce the through-screen velocity below 0.5 feet per second (fps) or demonstrate through a Comprehensive Demonstration Study (CDS) that the cooling water intake structure is designed in such a way that it results in impingement and entrainment levels equivalent to levels achievable at a closed cycle

Mr. William Cole Storm

Page 5

facility. In addition to satisfying these design requirements, Excelsior Energy must limit intake flow from rivers to less than 5 percent of the mean annual flow or 25 percent of the 7Q10 flow, whichever is the lesser and ensure that the withdrawal of cooling water does not disturb the thermal stratification of lakes. According to the draft site application Excelsior Energy plans to design the intake structure such that through-screen velocity is below 0.5 fps. They also plan to limit the withdrawal of cooling water from the Prairie River to 25 percent of the 7Q10 or 5.5 cubic feet per second. However, it is unclear in the draft site application whether Excelsior Energy plans to satisfy the 316(b) requirements by designing the intake structure to withdrawal a volume of cooling water commensurate with a closed cycle facility or if they plan to complete a CDS to show that the proposed design ensures impingement and entrainment at levels achievable at a closed cycle facility. Furthermore it is unclear how Excelsior Energy plans to ensure that the intake structure in the Canisteo Mine Pit will not disturb the thermal stratification of the pit. The final site application as well as the NPDES/SDS application should clarify how they plan to satisfy those requirements.

Section 3.6.2.2.5 West Range Site Process Water Discharge Outfalls

The draft site application indicates that both the Canisteo Mine Pit and Holman Lake surface water discharge points will be submerged. How will discharge samples required for compliance with the NPDES/SDS program be collected if the outfall points are submerged?

Section 3.6.4.1 West Range Domestic Wastewater System and Section 7.6.5.3 Adequacy of Taconite-Bovey-Coleraine WWTF

Excelsior Energy proposes to dispose of domestic wastewater generated at the facility at the Coleraine-Bovey-Taconite (CBT) Wastewater Treatment Plant (WWTP). The facility would be connected via 10,000 foot of 12-inch gravity sewer pipeline, a pump station, and 2,400 feet of force main to the City of Taconite's main pump station, located in the northeast corner of the City. According to the draft site application, the existing CBT WWTP has the capacity to take the 7,500 gallons per day that Excelsior Energy estimates it may generate. The draft site application acknowledges that the CBT collection system struggles with excess flow as a result of inflow and infiltration (I/I). Since 1999 the City of Taconite's main pump station has experienced six unique flows events that resulted in bypass conditions. Bypass flows at the main Taconite pump station discharge to a settling basin formerly used by the Cleveland-Cliffs Iron Company and eventually to Holman Lake. Bypass events are direct violations of the CBT NPDES/SDS permit MN0053341. While it is true that the additional 7,500 gallons per day that Excelsior Energy would add to the collection system would not result in a significant burden to the existing WWTP under normal operating conditions, it is clear that the CBT collection system (particularly the collection system upstream of the main pump station in the City of Taconite) is in need of attention. At the very least it is prudent to recommend that Excelsior Energy in conjunction with the cities of Coleraine, Bovey, and Taconite undertake an I/I study to determine the most urgent need for upgrades to the collection system and what resources are needed to complete the identified upgrades. In addition to completing an I/I study and upgrades assessment, Excelsior Energy needs to cooperatively engage the cities of Coleraine, Bovey, and Taconite in a discussion regarding the need to construct additional sludge treatment capacity at the WWTP. The CBT WWTP has historically had to haul some of their wastewater sludge to the wastewater treatment plant in Grand Rapids due to limitations at their own WWTP. The additional flow and subsequent solids load at the CBT WWTP underscores the need to invest in upgrades to the existing solids treatment infrastructure.

Mr. William Cole Storm

Page 6

Section 7.6.4.3 NPDES/SDS Construction Storm Water Permitting

According to the draft site application Best Management Practices (BMPs) will be followed in accordance with the NPDES/SDS Permit and MPCA BMP Manual, 2000. Please note that in November 2005 MPCA released a new version of the Storm Water Manual that can be found at the MPCA website at <http://www.pca.state.mn.us/publications/wq-strm8-14.pdf>. The storm water pollution prevention plan and BMPs for the Excelsior Energy facility should be prepared in accordance with the new manual.

Section 7.6.4.4.1 Surface Water Quality Standards

Please see above comments related to mercury on 3.4.2.2.2 Cooling Tower Blowdown and Table 3.4.-21 Preliminary West Range Wastewater Discharge Composition.

The draft site application states that discharge of Total Dissolved Solids (TDS) and hardness will be acceptable with the use of a mixing zone. Without specific information on the individual dissolved ions and their contribution to overall TDS, discharge rates, and size of the proposed mixing zone, it is not possible to comment on the validity of this statement. Excelsior Energy needs to provide more specific information on this topic in the NPDES/SDS permit application in order for MPCA staff to draw any conclusions on the application of mixing zones for TDS and/or hardness.

Section 7.6.4.4.2 Impaired Waters

Please see comments related to mercury and phosphorus above on Section 3.4.2.2.2 Cooling Tower Blowdown and Table 3.4.-21 Preliminary West Range Wastewater Discharge Composition.

According to the draft site application Excelsior Energy will avoid discharges of turbidity through the use of a contained conveyance to Holman Lake and a well designed discharge structure. Does Excelsior Energy have data supporting this claim? Has a turbidity pilot test using the proposed discharge structure been performed? What are the expected levels of turbidity?

The draft site application assumes that the proposed facility will be allocated all or most of the phosphorus and mercury load currently authorized to be discharged by the MDNR from HAMP under MN0030198. Is the MDNR planning to request that MN0030198 be terminated? If not, are they planning to request a reduction in their permit limits?

Comments on Completeness

Detailed comments on the water balance and water quality impacts for the proposed facility are not possible at this time because the MPCA has yet to receive an NPDES/SDS permit application from Excelsior Energy. It is particularly important that the NPDES/SDS permit application submittal include an evaluation of the expected mercury, sulfate, hardness, phosphorus, suspended and dissolved solids, and temperature in the surface water discharge. It is also important that the application address the potential for mercury methylation as a result of the discharge to both the Canisteo Mine Pit and Holman Lake. Furthermore the application should address how the cooling water intake structure for the Canisteo Mine Pit will ensure that the thermal stratification of the mine pit is not disturbed.

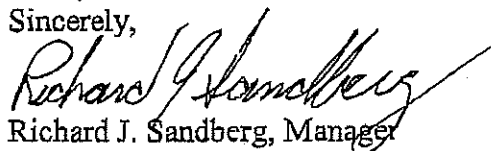
Mr. William Cole Storm
Page 7

Additional Comments

The transmission line route for the preferred west site would be about 10 miles, hooking up to the Blackberry substation. Similarly, the east site transmission line would hook up to the Forbes substation. MPCA understands that the existing transmission system may be able handle the additional megawatts from phase 1 of the project, but substantial upgrades to other substations and transmission lines are needed to allow for utilization of phase 2. Since the site application and EIS cover both Phase 1 and 2, a discussion of these substantial upgrades should be included in the site application and EIS.

Please contact Susan Heffron at (651) 297 1766 if you have questions regarding our comments. We would be happy to meet with you regarding these comments and MPCA's further evaluation of the Mesaba project.

Sincerely,



Richard J. Sandberg, Manager
Air Quality Permits Section
Industrial Division

RJS/SH:lao

Enclosures: E-mails requesting information

- cc: Kristen Applegate, MPCA
- Vanessa Niemi, MPCA
- Chris Nelson, MPCA
- Jenny Reinertsen, MPCA - Duluth
- Katrina Kessler, MPCA
- Richard Newquist, MPCA
- Shelly Burnman, MPCA
- Don Smith, MPCA
- Susan Heffron, MPCA

Heffron, Susan

From: Niemi, Vanessa
Sent: Wednesday, May 03, 2006 12:12 PM
To: Heffron, Susan
Subject: FW: IRAP Emission files

For reference

-----Original Message-----

From: Niemi, Vanessa [mailto:Vanessa.Niemi@state.mn.us]
Sent: Monday, April 17, 2006 2:11 PM
To: Tom Henning; Niemi, Vanessa
Cc: bobevans@excelsiorenergy.com; gchojnacki@sehinc.com; Burman, Shelley; Heffron, Susan; Niemi, Vanessa
Subject: RE: IRAP Emission files

Thanks Tom!
I was able to open the file thus far.

Vanessa

-----Original Message-----

From: Tom Henning [mailto:thenning@sehinc.com]
Sent: Monday, April 17, 2006 2:03 PM
To: Niemi, Vanessa
Cc: bobevans@excelsiorenergy.com; gchojnacki@sehinc.com; Burman, Shelley; Heffron, Susan; Niemi, Vanessa
Subject: RE: IRAP Emission files

Attached is the basemap file. Please let me know if you have difficulty using the file.

Thomas A. Henning, PE, CHMM
SEH
809 North 8th Street, Suite 205
Sheboygan, WI 53081
Office: 920.452.6603 ext 1#
Mobile: 920.207.0721
Fax: 920.452.6035
www.sehinc.com
(See attached file: Figure X.X-X WR Plant Stack Buffers 11x17 L.bmp)

"Niemi, Vanessa"

<Vanessa.Niemi@st

ate.mn.us>

To

"Tom Henning"

04/17/2006 01:29 <thenning@sehinc.com>, "Niemi,

PM Vanessa"

<Vanessa.Niemi@state.mn.us>

<bobevans@excelsiorenergy.com>,
<gchojnacki@sehinc.com>, "Heffron,
Susan" <Susan.Heffron@state.mn.us>,
"Burman, Shelley"
<Shelley.Burman@state.mn.us>

Subject

RE: IRAP Emission files

Hi Tom!

I hope that you had a pleasant and dry holiday.

I didn't get an email with the map file. I also didn't try to see the map using the old version of IRAP. For now I'm going to stick to the new version.

Just an FYI to all of you, the staff at MPCA are meeting weekly to make sure that things are flowing well on our end. The meeting this week is tomorrow. If you have anything that you would like passed on to the group you may want to contact Susan and she will tell everyone in tomorrow.

Thanks for the files Tom! I'll review them tomorrow and let you know if there are any issues. Vanessa

-----Original Message-----

From: Tom Henning [mailto:thenning@sehinc.com]

Sent: Monday, April 17, 2006 10:51 AM

To: Niemi, Vanessa

Cc: bobevans@excelsiorenergy.com; gchojnacki@sehinc.com; Heffron, Susan

Subject: Re: IRAP Emission files

Vanessa,

Attached are the emission files your requested. We formatted them as you wished.

Based on our discussion from last Friday, have you been able to access the Basemap for IRAP? If not, I'll send another version.

Thomas A. Henning, PE, CHMM
SEH
809 North 8th Street, Suite 205
Sheboygan, WI 53081
Office: 920.452.6603 ext 1#
Mobile: 920.207.0721
Fax: 920.452.6035
www.sehinc.com

(See attached file: AERA Emissions.xls)(See attached file: 1CTGannualwoDF1-24-06.csv)(See attached file: 1FLRannualwoDF1-24-06.csv) (See attached file: 1TVBannualwoDF1-24-06.csv)

"Niemi, Vanessa"
<Vanessa.Niemi@state.mn.us>
To "Tom Henning" <thenning@sehinc.com>
04/13/2006 02:01
CC PM <bobevans@excelsiorenergy.com>, "Heffron, Susan" <Susan.Heffron@state.mn.us>, <gchojnacki@sehinc.com>
Subject IRAP Emission files

Hello again Tom!

I'm still working on the IRAP files and I'm getting ready to import emissions. Can you send me the chemical specific emissions by source category? They must be in g/sec. I'd also like them in .CSV format.

Also, I have a list of other issues and questions. My thought is to send you pressing questions and comments immediately. From what I understand we (MPCA) will send you a list of everything at the end of the 30 days that will include comments that you have already received. We are still working out logistics, but I would be happy to hear your preferences for communication. For Susan's sake, as the coordinator, I'm making sure she is copied on all of my correspondence.

Thanks so much!
Vanessa Niemi

Minnesota Pollution Control Agency
Research Scientist II
520 Lafayette Road No.
St. Paul, MN 55155-4194

Office: 651.296.7597
Fax: 651.297.7709

Message

Heffron, Susan

From: Niemi, Vanessa
Sent: Wednesday, May 03, 2006 12:12 PM
To: Heffron, Susan
Subject: FW: print protected documents

In case you need it.

-----Original Message-----

From: Niemi, Vanessa
Sent: Tuesday, April 18, 2006 11:10 AM
To: Jackson, Anne; Heffron, Susan; Burman, Shelley; Brooks, Ned; Swain, Edward
Subject: FW: print protected documents

Hope this helps.

-----Original Message-----

From: Robert Evans [mailto:BobEvans@excelsiorenergy.com]
Sent: Tuesday, April 18, 2006 10:27 AM
To: Niemi, Vanessa; Tom Henning
Cc: Heffron, Susan; Burman, Shelley
Subject: RE: print protected documents

Document with password removed. Can't be too careful. Can we?

From: Niemi, Vanessa [mailto:Vanessa.Niemi@state.mn.us]
Sent: Tuesday, April 18, 2006 10:05 AM
To: Tom Henning
Cc: Heffron, Susan; Burman, Shelley; Robert Evans
Subject: print protected documents

Tom,

There are several files in the documents you sent us, among them the Hg-2003 Form, that are print protected in their PDF format. Can you please send us a different version of the Hg-2003 document? I don't have a list of any of the other documents at this time that are print protected. I can work on that for the final comments.

Thanks!
Vanessa

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vanessa.niemi@pca.state.mn.us

Message

Heffron, Susan

From: Niemi, Vanessa
Sent: Wednesday, May 03, 2006 12:12 PM
To: Heffron, Susan
Subject: FW: Mesaba - IRAP

-----Original Message-----

From: Niemi, Vanessa
Sent: Thursday, April 20, 2006 4:00 PM
To: gchojnacki@sehinc.com; Tom Henning
Cc: bobevans@excelsiorenery.com; Burman, Shelley; Heffron, Susan; 'hillary.carpenter@health.state.mn.us'
Subject: Mesaba - IRAP

Hi Gloria!

I have some more questions:

IRAP issues

- 1 What are the receptor locations? I need the x/y coordinates for IRAP. If I've missed them in the files, just point me in the right direction!
- 2 You will also need to submit a maximum receptor location. I think that it might automatically do that for you.
- 3 There really isn't a need to re-submit the regular AERA results using the look-up tables. Those show really high risks because crude, screening level dispersion is used. Since that can be difficult to explain to the public, it is often easier to not include that. However, if you would like to do that to eliminate your COPC list that is within AERA Guidance. Just carry over the chemicals that exceed the thresholds.
- 4 I believe that we do have some fate and transport files for the chemicals not included in IRAP. I will send those files to you.
- 5 Also remember to use the inhalation and oral toxicity values that are either in the RASS or in the spreadsheet (oral) that I send you.
- 6 You mention specifically "trout streams" being assessed. Have you actually looked at all fishable waterbodies? Please specify in the document.
- 7 The residential receptors (and hobby farm) should also include chicken and egg consumption unless there are ordinances prohibiting chicken farming or information that this is not a potential future exposure scenario.
8. I'm also curious if you know why the child cancer risk for fish consumption is less than the adult? Just curious here.
- 9 I'm still making sure that Diamond Lake is the appropriate lake to assess. It seems so at this point.

Chemical Issues

1. we'll need additional information supporting your claim about the absence of dioxins and furans. This discussion will need to be coordinated with Jenny Reinertson.
2. I'd like more information on your assumption that 30% is the appropriate value for percent of hexavalent chromium from total chromium.
3. I may want some more details on the risk drivers. We can talk more about that later.
4. Where did your chemical without IHB list come from?

Qualitative

- 1 Did the neighborhood information look at 3km?
2. for the facilities near the property you provide zip codes, but not distances.
3. Are you using current or old buffer distances? You can keep the old buffer distances since that was the guidance at the time that you started the project. However it may be useful to use the new ones, as they are more consistent. It is your choice.

Fish Consumption pathway
Still under review

Message

ERER

1 Because of potential claims to that name "ERER" we are now calling this assessment Q/CHI. Q = emissions (I think) and CHI is Critical Health Index. If you could change that in the document we would greatly appreciate it.
2. I'm still reviewing this. I've had some difficulty figuring out what was done and need to look through the modeling files.

Thanks Gloria! Please email or call with any questions or concerns.
Vanessa

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520 Lafayette Road No.
St. Paul, MN 55155-4194

Office: 651.296.7597
Fax: 651.297.7709
vanessa.niemi@pca.state.mn.us

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Message

Heffron, Susan

From: Reinertsen, Jenny
Sent: Friday, April 21, 2006 4:17 PM
To: 'Tom Henning'; 'gchojnacki@sehinc.com'
Cc: 'bobevans@excelsiorenergy.com'; Heffron, Susan; 'Smith, Don A.'; Niemi, Vanessa; Reinertsen, Jenny
Subject: RE: Mesaba Emission Calculation Questions

Tom and Gloria,

I have developed an initial set of questions/information/documentation needs that I have regarding the emission calculations. Once you answer them, I can hopefully finish my review. They are attached. Possibly some of the information is contained in the material that you have sent so far, but I haven't found it. I am still reviewing the pile fugitive calculations, and may have questions regarding those, as well.

Let me know if you have questions regarding any of my requests.

Thanks much,

Jenny Reinertsen
218/723-4760

Additional information needed regarding the Mesaba Project emission calculations:

App X1A CTG

1. Please submit test data that shows that the NO_x, CO, PM₁₀, VOC and SO₂ values can be met.
2. Please provide calculations of lb/hour from the CTG from the ppm data for NO_x, CO, VOC, and PM₁₀.
3. Provide the makeup of the syngas. Include any constituent present at greater than 1%. From this show calculations of exhaust gas flow at theoretical air, and at 15% O₂. My calculations do not show 38,000 scf@15% O₂/mmBtu as you state on Appendix X2-H, but I may not have the gas constituents correct. Accordingly, my lb/hour values calculated from the ppm values you give do not match yours.

App X1B TVI

1. What is the Tank Vent Boiler and how will it be used?
2. Please define short term and long term hours.
3. Is it correct that maximum capacity of the boiler will be 65 mmBtu/hour but normal operation will be at 15 mmBtu/hour?
4. Please provide the copies of the data for the emission factors for the tank vent boiler

App X1C Aux Boiler

1. Please provide the data for the emission factors for the auxiliary boiler.
2. Is the maximum heat release the same as the heat input?

App X1D Flare

1. The sulfur in syngas (ppm) doesn't match that burned in the CTG. Please explain.

App X1F Emergency Engines

1. Please use 500 hours per year in your calculations for the emergency generators. This is as per EPA guidance; let me know if you would like a copy of the guidance document. You can choose to use 100 hours per year, but that will then need to be a permit limit.

Fugitive Emissions

1. For the truck traffic emissions you assumed a vehicle weight of 20 tons in the calculations and also assumed that the trucks would hold 20 tons of slag. The truck weight used in the calculations should be 40 tons when full, then.

App S2-E Fugitive HAPs Emission Summary

1. Please provide analysis information that shows that the gases (raw, sour, product, etc.) have the constituent content given on AppX2E Fugitive HAPs Page 9 of 12.
2. How was the list for chemicals to test for developed?

App X2-B Combustion Turbine HAPs

1. Please provide copies of the pages from the NETL Report that shows the values that you used for emission factors.
2. For those values based on Wabash River test data, please provide copies of the test report summaries showing the results of the tests.
3. You assumed no dioxin/furan emissions even though AP42 Section 1.1 predicts the existence of them. Please explain the reasoning for this.