



# Minnesota Pollution Control Agency

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December 30, 2011

Mr. Gordon Gray  
Vice President of Development and Technical Services  
Excelsior Energy Inc.  
225 South 6th Street, Suite 1730  
Minneapolis, MN 55402

Dear Mr. Gray:

The Minnesota Pollution Control Agency (MPCA) has received your permit application entitled “Application To The Minnesota Pollution Control Agency For A New Source Review Construction Authorization Permit For Mesaba One And Mesaba Two” (Application), dated November 21, 2011, by Short Elliot Hendrickson, TRC Solutions, and McVehil-Monnett Associates on behalf of Excelsior Energy. Pursuant to Minn. Stat. § 116.03, subd. 2b(d) the MPCA staff reviewed your Application for completeness. The MPCA has also reviewed your Modeling Protocol. Your Application and Modeling Protocol are incomplete and cannot be processed, therefore it is being returned to you because it is either missing required application forms, checklists, components, and/or supporting documents or it is technically inadequate as detailed below and in the attached checklist.

The permit application must be resubmitted with corrections made before the application can be deemed substantially complete. The resubmittal must include a completed copy of the Permit Application Forms. When the corrected permit application is received, it will again be reviewed to determine if the application is complete enough for processing.

Please use the enclosed permit application and modeling checklists to identify the information which is incomplete, and resubmit the revised application. Following is a summary of the more salient (though not all) deficiencies of the application:

1. The ME-01 Continuous Monitoring System Information form is missing.
2. The GI-04 form is missing some stack data such as stack heights and flow rates.
3. The GI-05B form does not include the gasification systems, flares, and tank vent boilers as emission units; all this equipment meets the definition of *emissions unit* at Minn. R. 7005.0100, subp. 10b. Please note that the flares and tank vent boilers are both air pollution control equipment and emissions units because they both reduce emissions (of CO and reduced sulfur compounds) and generate NO<sub>x</sub> emissions in the combustion process.
4. The GI-05B design capacity and maximum fuel input data for the process vents (EU 013 and EU 025) appears erroneous (it appears to be tank vent boiler data).

The GI-07 form is provided in electronic format only (which is acceptable) but the spreadsheet titled 'GI-07' includes only criteria pollutants; another spreadsheet in another section of the electronic application summarizes hazardous air pollutant emissions and sulfur-bearing pollutant emissions but there is no single document/spreadsheet that summarizes all emissions from the entire facility. This somewhat scattered presentation of emissions data does not meet the instructions of the GI-07 form (refer to form GI-07 instructions item 3d).

5. The applicability determination for Compliance Assurance Monitoring (CAM; 40 CFR pt. 64) was made incorrectly for the gasification systems and process vents. The flares and tank vent boilers control emissions from gasification system venting of syngas and process vent emissions, respectively. Emissions from the gasification systems and process vents are subject to Carbon Monoxide (CO) Best Available Control Technology (BACT) limits (even though the application proposes to apply these limits to the control devices (flares and tank vent boilers, respectively)), and controls are needed to meet those limits. Also, uncontrolled CO emissions from each of these sources appear to exceed the 100 ton per year major source threshold. Therefore, each gasification system and process vent system (and their associated control equipment) for each Mesaba phase appears to be subject to CAM.
6. The CD-01 compliance plans do not propose a BACT limit for every pollutant that will be emitted in major or significant quantity by the facility, for every emission source that will or has the potential to emit the pollutant.
7. CD-01 forms are missing for the process vents and the gasification systems.
8. Combustion turbine emissions subject to BACT limits that are proposed to not apply during startup and shutdown must have alternate limits proposed for startup and shutdown. In addition, a defined measurable operating level coinciding with the boundary between startup/shutdown and "normal" operation must also be proposed so that startup/shutdown operation can be distinguished from "normal" operation. Although there is reference to a startup/shutdown/malfunction plan, plan details are not proposed in the application.
9. Auxiliary boilers CD-01 lacks limits to protect all ambient air standards for Sulfur dioxide (SO<sub>2</sub>), Nitrogen Oxides (NO<sub>x</sub>), Particulate Matter smaller than 10 microns (PM<sub>10</sub>), PM Smaller than 2.5 microns (PM<sub>2.5</sub>), and CO.
10. Auxiliary boilers are proposed to be subject to a 25 percent annual capacity factor (ACF) but there is no proposed monitoring to verify compliance with the ACF.
11. Tank vent boiler (TVB) CD-01 requirements from 40 CFR pt. 60 subp. VV should be removed and corresponding requirements from subp. VVa should be placed in the process vent CD-01.
12. TVB CD-01 lacks pound per hour limits to protect 1-hour NO<sub>x</sub>, 24-hour PM<sub>10</sub>, 24-hour PM<sub>2.5</sub>, 1-hour CO, and 8-hour CO National Ambient Air Quality Standards.
13. TVB CD-01 does not propose any CO, PM<sub>10</sub>, and/or PM<sub>2.5</sub> emissions compliance demonstration.
14. No information is provided on what constitutes good combustion practice (GCP) in the CD-01 for any combustion source that uses GCP to meet BACT limits.
15. The building input (BPIPPRM) file is not in the correct format, as the first four lines of the file are missing. Please correct and resubmit.
16. An older version of AERMAP (version 09040) is proposed to be used with AERMOD version 11103.
17. FAR files were not included with the submittal. Please include with reapplication.

If the revised application is for the same project (e.g., applied for a new boiler and the new application is also for a new boiler), and the application type fee is of the same or lesser value, another application fee payment is not necessary. Provide Tracking Number 3749 when prompted on form SCP-01. If the resubmitted application requests a permit for a different project or includes more than the original project, you must include the appropriate fee as determined by form SCP-01. The revised application should be sent to MPCA, Fiscal Services.

If you need application forms, you can find the forms on the MPCA's website at <http://www.pca.state.mn.us/air/permits/forms.html#1>. You can obtain paper copies or assistance in filling out the forms by contacting the MPCA at 651-282-6143 or 1-800-657-3938.

Mr. Gordon Gray

Page 3

Please use project tracking number 3749 in all correspondence with the MPCA pertinent to the returned permit application. If you have any questions concerning this request, please contact Marshall Cole at 507-206-2653 or by e-mail at marshall.cole@state.mn.us.

Sincerely,

Steven S. Pak, P.E.  
Supervisor, Air Quality Permits Unit 3  
Air Quality Permits Section  
Industrial Division

SSP/MC:rm

Enclosures:

1. Permit application
2. Application completeness checklist
3. AQDM PAN-01 form
4. AQDMPRF-01 form

cc: Short Elliot Hendrickson w/enclosures 2 , 3, and 4  
TRC Solutions w/enclosures 2 , 3, and 4  
McVehil-Monnett Associates, Inc. w/enclosures 2 , 3, and 4  
Marshall Cole, MPCA w/out enclosures  
Melissa Sheffer, MPCA w/out enclosures  
Beckie Olson, MPCA w/out enclosures  
AQ File No. 4274 w/enclosures 2 , 3, and 4