

AIR EMISSION PERMIT NO. 15100038- 004

IS ISSUED TO

PowerMinn 9090, LLC
2295 Corporate Boulevard, Suite 222
Boca Raton, FL 33431

And

Fibrominn LLC
301 Oxford Valley Road, Suite 704A
Makefield Executive Quarters
Yardley, PA 19067

for the

Fibrominn Biomass Power Plant
900 Industry Drive
Benson, Swift County, MN 56215

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

<u>Permit Type</u>	<u>Application Date</u>	<u>Action Number</u>
Total Facility Operating Permit	August 28, 2001	001
Administrative Amendment	May 6, 2004	002
Administrative Amendment	NA	003
Administrative Amendment	December 14, 2004	004

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Administrative Amendment to a Federal Pt 70 and 72/Major for NSR
Issue Date: February 9, 2005
Expiration: January 2, 2008
Title I Conditions do not expire.

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

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

The total facility permit authorized construction and operation of a biomass power plant in the city of Benson, Swift County, consisting of one boiler, fueled principally with poultry litter. Vegetative biomass may also be burned. The facility will generate an average of 50 megawatts (MW) of electricity for export and will have a peak electrical export capacity of 55 MW.

Emissions from the boiler will be controlled by: a baghouse/spray dryer to control particulates, sulfur dioxide, sulfuric acid mist, and hydrochloric acid. Selective non-catalytic reduction will be used to control nitrogen oxides. Good combustion practices are used to control carbon monoxide and volatile organic compounds.

The project was subject to preconstruction review requirements under the federal New Source Review program (40 CFR Section 52.21) for particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds and sulfuric acid mist. The project was also subject to preconstruction review under the National Emission Standards for Hazardous Air Pollutant Sources program, 40 CFR Section 63, subp. B for hydrochloric acid.

Permit Action 002 (Administrative Amendment):

This permit action extends the 18 month deadline for commencing construction from May 25, 2004, until July 15, 2004.

Permit Action 003 (Administrative Amendment):

Permit Action 002 was to extend the 18 month deadline for commencing construction until July 15, 2004. Inadvertently, the deadline in the permit was set at June 15, 2004, rather than July 15, 2004, as it should have been. This permit action extends the 18 month deadline for commencing construction from June 15, 2004, until July 15, 2004.

Permit Action 004 (Administrative Amendment):

Permit Action 004 changes the owner of the facility to PowerMinn 9090 LLC out of Boca Raton, Florida. The operator will continue to be Fibrominn LLC out of Yardley, Pennsylvania.

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant
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Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item:	Total Facility
What to do	Why to do it
This source is subject to U.S. EPA's Acid Rain Program, codified at 40 CFR Part 72. Some of the Acid Rain Program's requirements are included in Tables A and B for MPCA tracking purposes. All other Acid Rain Program requirements are referenced in the appendices.	40 CFR Part 72
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, or B.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Fugitive Emissions Control Plan: The Permittee shall submit a fugitive emissions control plan within 60 days of the date of permit issuance for review and approval by the Commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
ODOR CONTROL MEASURES	HDR
The odor control measures specified below are state only requirements and are not enforceable by the EPA Administrator or citizens under the Clean Air Act	
The following odor control measures shall be followed:	Minn. R. 7007.0800, subp. 2
1. All poultry litter shall be processed, handled, and stored indoors. The building used for processing, handling, and storage of poultry litter shall be tightly closed, and ventilated so that all air, gases, and air or gas-borne material are treated by incineration or other effective means before discharge into the open air.	
(continued from above) 2. Poultry litter delivery trucks arriving at the facility will be covered. Trucks used to deliver poultry litter to the facility will be clearly marked and identified so that any problems with particular trucks can be recognized and quickly resolved.	Minn. R. 7007.0800, subp. 2
3. The number of doors open at any given time will be a function of the overall volumetric flow of air from the fuel receipt and storage area. Prior to initial start-up of the facility, a report will be submitted to the agency, based on the final facility design, which will be used to determine the number of doors that can be open during specific operating scenario's. The number of doors open at any one time will be based on the criteria established in this report.	
4. Poultry litter delivery trucks will be washed prior to leaving the facility.	
(continued from above) 5. At least once per day, a site odor assessment shall be performed. The odor assessment will include site inspection to monitor housekeeping practices, operating procedures, and will include site perimeter walks. Records, including the presence of odors, will be maintained documenting each site inspection.	Minn. R. 7007.0800, subp. 2
6. If there exists the presence of odors, immediate steps will be taken to determine the source of the odors, and corrective action shall be taken. Records shall be kept documenting the source of the odors, and the corrective action taken.	
(continued from above) 7. If the daily site odor assessment is performed for 30 consecutive days after initial startup, and problematic odors are not detected, the site odor assessment may be performed once per week.	Minn. R. 7007.0800, subp. 2
8. The Permittee shall have a designated staff person responsible for taking phone complaints from neighboring residences and businesses. The name or title of the staff person shall be made publicly available, as well as the appropriate phone number to call.	
(continued from above) Each time the company receives a complaint, the following information shall be recorded: A. Date and time of the complaint B. Nature of the complaint C. Wind direction and temperature at the time of complaint D. Steps taken to assess the source of the odor problem E. Any corrective action taken F. A statement as to whether or not the odor issue was resolved.	Minn. R. 7007.0800, subp. 2
A summary of complaints received and the resolution shall be submitted to the Agency once per month. The report is due on the 15th of the month for the preceding month. If no complaints are received for 3 consecutive months, the reporting frequency may be reduced to quarterly. If no complaints are received for 2 consecutive quarters, then the reporting frequency may be semi-annual, and submitted with the deviations report.	
Hydrogen Sulfide: less than or equal to 0.05 parts per million by volume, in the ambient air.	Minn. R. 7009.0080
NON-APPLICABLE REGULATIONS	hdr
The Agency has determined that the facility is not subject to Minnesota's Waste Combustor Rule, applicability at Minn. R. 7011.1215. This is based on the variance from the rule granted with issuance of the total facility permit. The final determination for the variance is attached to the technical support document for the permit.	Minn. R. 7007.1800.A.(2)

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Fibrominn Biomass Power Plant

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<p>The Agency has determined that the facility is not subject to the federal New Source Performance Standard codified at 40 CFR 60, Subp. Da. The applicability statement at 40 CFR 60.40a(a)(1) specifies that the subpart applies to electric utility steam generating units "that are capable of combusting more than 73 megawatts (250 mmBtu/hr) of fossil fuel..."</p> <p>The design heat input rate for natural gas/propane shall not exceed 73 megawatts (250 mmBtu/hr.)</p>	<p>Minn. R. 7007.1800.A.(2)</p>
<p>DISPERSION MODELING</p>	<p>hdr</p>
<p>Fibrominn will construct a fence around the site consistent with the revised permit application dated August 15, 2002. Fibrominn may alter the configuration of the fence if it demonstrates through dispersion modeling, performed according to Air Emission Permit 15100038-001, compliance with all standards and increments applicable to the project.</p>	<p>Minn. R. 7009, 40 CFR Pt. 50, 40 CFR 52.21</p>
<p>Fibrominn will construct all stacks consistent with the revised permit application dated August 15, 2002. Fibrominn may alter the height of any stack if it demonstrates through dispersion modeling, performed according to Air Emission Permit 15100038-001, compliance with all standards and increments applicable to the project.</p>	<p>Minn. R. 7009, 40 CFR Pt. 50, 40 CFR 52.21</p>
<p>ON-SITE ROAD SILT LOADING MEASUREMENT</p>	<p>hdr</p>
<p>1. Within 180 days of initial startup, measure the silt loading on the facility's on -site paved roads. Follow the notification and reporting requirements applicable to stack emissions testing given above in this table. The measurements shall be made according to the applicable ASTM method, and shall be agreed upon between the Agency and Fibrominn prior to the testing. The testing is for information gathering purposes.</p> <p>2. If the measured silt loading is less than the silt loading assumed in the dispersion modeling, no further action is required.</p>	<p>Minn. R. 7009</p>
<p>3. If the measured silt loading is more than the silt loading assumed in the dispersion modeling, Fibrominn may re-model according to air emission permit 15100038-001. Model results are due 45 days after the submittal of the results of the silt measurements.</p> <p>4. If the dispersion modeling shows compliance with all standards and increments, no further action is required.</p> <p>5. If the modeling does not show compliance with ambient standards, Fibrominn will propose and implement controls, (sweeping, flushing, vacuuming, etc.) If the measured silt loading is such that it is clear that dispersion modeling would not yield modeled compliance with all applicable requirements, Fibrominn may proceed directly to the proposal and implementation of mitigative controls. The proposal for controls and/or dispersion modeling results are due 45 days after the silt content measurements test results submittal.</p>	<p>Minn. R. 7009</p>
<p>6. Within 60 days of implementing the controls, Fibrominn will re-test the on-site roads for silt content. Again, all notifications and reporting shall be in accordance with those required for stack emissions testing.</p> <p>7. If the silt content is less than the silt content used in the modeling that demonstrated compliance with all standards, no further action is required.</p> <p>8. If the silt content is greater than the silt content used in the modeling that demonstrated compliance with all standards, repeat steps 3-7.</p>	<p>Minn. R. 7009</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

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Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

Subject Item: GP 001 Continuous Emission Monitors

- Associated Items:** MR 001 O2 Monitor (stack)
 MR 002 NOx Monitor
 MR 003 SO2 Monitor (stack)
 MR 005 O2 Monitor (inlet to SDA)
 MR 006 CO Monitor
 MR 007 SO2 Monitor (inlet to SDA)

What to do	Why to do it
Installation Notification: due 60 days before installing the continuous emissions monitoring system. The notification shall include plans and drawings of the system.	Minn. R. 7017.1040, subp. 1
CEM Certification Test: due 60 days after achieving maximum capacity but no later than 180 days after initial startup.	40 CFR Section 60.13(b); 40 CFR Section 75.4(b)
CEMS Certification Test Pretest Meeting: due 7 days before CEMS Certification Test.	Minn. R. 7017.1060, subp. 3
CEMS Certification Test Plan: due 30 days before CEMS Certification Test.	40 CFR Section 60.7(a)(5); 40 CFR Section 75.62 and 75.20
CEMS Certification Test Report: due 30 days after CEMS Certification Test	40 CFR Section 75.63; Minn. R. 7017.1080, subp. 1,2,4
CEMS Certification Test Report - Microfiche Copy: due 105 days after CEMS Certification Test.	Minn. R. 7017.1080, subp. 3
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain all of the information required by 40 CFR Pt. 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2; 40 CFR pt. 60, App. F; section 3
CEMS QA/QC: The owner or operator of an affected facility is subject to the performance specifications listed in 40 CFR 60, Appendix B and shall operate, calibrate, and maintain each CEMS according to the QA/QC procedures in 40 CFR pt. 60, Appendix F and 40 CFR pt. 75, Appendix B as amended and maintain a written QA/QC program available in a form suitable for inspection.	40 CFR 75.21
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar half year (two successive QA operating quarters) following CEMS Certification Test. Conduct the RATA in accordance with 40 CFR pt. 75, Appendix B. If the RATA results indicate a relative accuracy of 7.5% or less, the next RATA is not required for four successive QA operating quarters.	40 CFR pt. 60, Appendix F, section 5.1.1; Minn. R. 7017.1170, subp. 5
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA) .	Minn. R. 7017.1180, subp. 2
Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar quarter in which the CEMS RATA was conducted.	Minn. R. 7017.1180, subp. 3
CEMS Daily Calibration Error (CE) Test; conduct daily CE testing on all CEMS required by the Acid Rain Program in accordance with 40 CFR pt. 75, Appendix B.	40 CFR pt. 75, Appendix B, section 2.1
Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.	40 CFR Section 60.13(e), Minn. R. 7017.1090, subp.
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130; 40 CFR Section 60.7(f)
Records of Startup, Shutdown, or Malfunction: Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7(b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

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The owner or operator of an affected facility may submit electronic quarterly reports for SO ₂ , NO _x , and opacity in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the MPCA. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR Pt. 60, Subp. Db was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.	40 CFR Section 60.49b(v)
Linearity and Leak Check Test; due before end of each operating calendar quarter following CEMS certification test. Conduct a quarterly linearity test on CEMS required by the Acid Rain Program in accordance with 40 CFR pt. 75, Appendix B.	40 CFR pt. 75, Appendix B, section 2.2
Linearity Test Results Summary: due 30 days after end of each operating quarter following linearity and leak check test if performed.	Minn. R. 7017.1180, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

Subject Item: EU 001 Biomass Boiler

- Associated Items:** CE 001 Ammonia or Urea Injection
 CE 003 Wet Limestone Injection (SDA)
 CE 004 Fabric Filter - High Temperature, i.e., T>250 Degrees F
 MR 001 O2 Monitor (stack)
 MR 002 NOx Monitor
 MR 003 SO2 Monitor (stack)
 MR 004 Opacity Monitor
 MR 005 O2 Monitor (inlet to SDA)
 MR 006 CO Monitor
 MR 007 SO2 Monitor (inlet to SDA)
 SV 001 Boiler

What to do	Why to do it
<p>EMISSION LIMITS</p> <p>Unless otherwise noted, the emission limits below apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup, shutdown, or malfunction periods are limited to 3 hours per occurrence.</p> <p>The startup period commences when the affected facility begins the continuous burning of biomass and does not include any warmup period when the facility is combusting natural gas or propane, and no biomass is being fed into the boiler.</p> <p>The use of biomass solely to provide thermal protection of the grate or hearth during startup when biomass is not being fed to the boiler is not considered to be continuous burning.</p>	<p>hdr</p>
<p>Total Particulate Matter: less than or equal to 0.02 lbs/million Btu heat input based on three runs that are between 60 and 120 minutes in length.</p>	<p>Title I Condition: 40 CFR 52.21(j), BACT emission limit also meets the requirements of 40 CFR 60.43b(c)</p>
<p>Particulate Matter less than 10 micron: less than or equal to < > lb/mmBtu, based on three runs that are between 60 and 120 minutes in length.</p> <p>The Permittee shall propose limits after completion of the Performance Tests required below. Permit conditions below require the completion of an initial stack performance test within 180 days of initial startup, and then quarterly thereafter until the company has completed a total of five tests. The proposed emission limit shall be submitted within 45 days of the submittal of the final test results.</p>	<p>Title I Condition: 40 CFR 52.21(j), BACT emission limit</p>
<p>Opacity: less than or equal to 20 percent on a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity.</p>	<p>40 CFR 60.43b(f)</p>
<p>Sulfur Dioxide: less than or equal to 0.07 lbs/million Btu heat input or 80% control, whichever is least stringent based on a 24-hour daily geometric average emission concentration or a 24-hour daily geometric average percent reduction.</p>	<p>Title I Condition: 40 CFR 52.21(j), BACT emission limit</p>
<p>Nitrogen Oxides: less than or equal to 0.16 lbs/million Btu heat input based on a 30 day rolling average. This limit applies at all times including periods of startup, shutdown, or malfunction. The 30 day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30 day period.</p> <p>A new 30 day rolling average emission rate is calculated each steam generating unit operating day.</p>	<p>Title I Condition: 40 CFR 52.21(j), BACT emission limit, also meets the requirements of 40 CFR 60.44b(l)</p>
<p>Nitrogen Oxides: less than or equal to the following during any 30-day rolling average period that both biomass and natural gas/propane are burned:</p> $E_o = [(0.10 \cdot H_{go}) + (0.20 \cdot H_r)] / (H_{go} + H_r)$ <p>where: E_o is the NO_x emission limit in lb/mmBtu H_{go} is the heat input from combustion of natural gas/propane and H_r is the heat input from combustion of any other fuel (biomass)</p>	<p>40 CFR 60.44b(l)</p>
<p>Carbon Monoxide: less than or equal to 0.24 lbs/million Btu heat input based on a 24-hour daily average.</p>	<p>Title I Condition: 40 CFR 52.21(j), BACT emission limit</p>
<p>Hydrochloric acid: less than or equal to 0.034 lbs/million Btu heat input or 95% control, whichever is least stringent.</p>	<p>Title I Condition: 40 CFR 63.43(b), MACT emission limit</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

When measuring emissions for the purposes of demonstration of compliance with an emission limit, either by stack performance testing or continuous monitoring, the data may be rounded to the same number of significant digits as the emission limit prior to compliance determination.	hdr
OPERATING REQUIREMENTS	hdr
Fuel use limited to: natural gas, propane, poultry litter, and other biomass. Acceptable biomass fuels include: -Agricultural Crops; -Herbs, Nuts, By-products, or Waste; -Vegetable Oils, By-products, or Waste; -Crop Field Residue or Field Processing By-products; -Shells, Husks, Hulls, Seed, Dust, Screenings and Other Agricultural Processing By-products; -Agricultural Feedstock Residues and By-products; -Cultivated Grasses or Grass By-products; -Wood and Wood Waste, Including Wood Processing By-products; -Animal Manures and Wastes, Processed or Unprocessed;	Minn. R. 7007.0800, subp. 2
The above may be on or off-specification. Wood must be untreated wood, and does not include wood that has been painted, stained, or pressure treated (i.e. CCA, PCP, creosote.)	Minn. R. 7007.0800, subp. 2
(continued from above) Acceptable biomass fuels do not include: -peat -waste oil -farm chemicals -pesticide containers -contaminated soil -demolition waste, except for untreated/unstained/unpainted clean wood -treated wood (CCA, PCP, painted and stained) -contaminated feedstock* -contaminated agricultural grains* -waste from farms from an open dump -tire derived fuel, tires -non agricultural industrial process wastes *contaminated means it is no longer fit for its intended use due to contact with some chemical	Minn. R. 7007.0800, subp. 2
Natural gas and propane usage is limited to less than 20% of total heat input, on a 3-year average as is specified under 40 CFR 72.6 (b)(7).	40 CFR 72.6(b)(7)
Start Of Construction: due before 07/15/2004	40 CFR 63.43(g)(4)
During start-up from a cold furnace, use auxiliary fuel (natural gas or propane) to achieve combustion chamber operating temperatures.	Minn. R. 7007.0800, subp. 2
MONITORING REQUIREMENTS	hdr
Measure opacity, and all SO ₂ , NO _x and CO ₂ emissions in accordance with 40 CFR 75.10.	40 CFR 75.10(a)
Install, operate and maintain a device to continuously measure and record the inlet temperature to the particulate control device. This monitoring equipment shall be operational at the time of boiler startup.	Minn. R. 7007.0800, subp. 2
Install, operate and maintain a sulfur dioxide emission monitor prior to the sulfur dioxide control equipment, and after the control equipment, in the stack. The monitoring system shall be capable of determining emissions in units of lb/mmBtu on a 24-hour daily geometric average, and reduction efficiency on a 24-hour daily geometric average.	Title I Condition: To monitor compliance with BACT emission limit
Install, operate, and maintain an emission monitor for carbon monoxide emissions. The monitoring system shall be capable of determining emissions on a lb/mmBtu basis, on a 24-hour daily average.	Title I Condition: To monitor compliance with BACT emission limit
Install, operate, and maintain an emission monitor for nitrogen oxides emissions. Specifications for the operation of the monitoring equipment are in 40 CFR Part 75 and 40 CFR 60.48b(c), (d), (e), (f), and Appendix B. The monitoring system shall be capable of determining emissions on a 30-day rolling average in lb/mmBtu.	40 CFR 60.48b

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

Install, operate, and maintain an emissions monitor for opacity emissions. Specifications for the operation of the monitoring equipment are in 40 CFR 60.48b(c), (d), (e), (f), and Appendix B. The monitoring system shall determine opacity in percent, and be capable of determining 6-minute averages.	40 CFR 60.48b
CONTROL EQUIPMENT OPERATING REQUIREMENTS	hdr
Sulfur Dioxide: greater than or equal to 80 percent control efficiency when emissions are more than 0.07 lb/mmBtu. Compliance will be based on a 24-hour daily geometric average reduction.	Title I Condition: 40 CFR 52.21(j), BACT limit
Hydrochloric acid: greater than or equal to 95 percent control efficiency when emissions are more than 0.034 lb/mmBtu.	Title I Condition: 40 CFR 63.43(b) MACT limit
PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 60 days after achieving maximum capacity but no more than 180 days after initial startup, for particulate matter and opacity. Compliance for particulate matter is determined as is specified in 40 CFR 60.46b(d).	40 CFR 60.46b(d) 40 CFR 60.8
Initial Performance Test: due 60 days after achieving maximum capacity but no more than 180 days after initial startup for PM10.	Title I Condition: Testing to establish BACT emission limit
Performance Test: due 30 days after end of each calendar quarter following Initial Performance Test for a period of four quarters for PM10. Five tests are required in all. Proposed PM10 emission limits are due 45 days after submission of the results of the fifth test. (See recordkeeping and reporting requirements below.)	Title I Condition: Testing to establish a BACT emission limit
Initial Performance Test: due 60 days after achieving maximum capacity but no later than 180 days after initial startup, for nitrogen oxides and sulfur dioxide. Compliance is determined by monitoring the emissions from the steam generating unit for 30 successive operating days as is specified in 40 CFR 60.45b and 40 CFR 60.46b.	40 CFR 60.46b(e) 40 CFR 60.8
Initial Performance Test: due 180 days after Initial Startup for HCl (emissions and % reduction).	Title I Condition: Testing to show compliance with MACT limit and to develop a correlation between SO2 monitor output and HCl emissions and reduction efficiency
Performance Test: due 30 days after Initial Performance Test for a period of four quarters for HCl (emissions and reduction). Test results for emission rate and reduction efficiency shall be compared to the emissions data obtained during all tests for the purposes of correlating HCl emission rate and reduction efficiency with SO2 monitor readings. Five tests are required in all. A proposed indicator range of the SO2 monitors is due 45 days after submission of the results of the fifth test. (See recordkeeping and reporting requirements below.)	40 CFR 64.4(d)
Performance Test: due 180 days after Initial Startup to measure mercury emissions at the inlet and outlet of the spray dryer/fabric filter. The testing is for information gathering purposes. The testing shall be performed annually thereafter, until a total of 5 emissions tests has been completed.	Minn. R. 7007.0800, subp. 2
Performance Test: due 180 days after Initial Startup to measure PCDD/PCDF (total) emissions. The testing is for information gathering purposes. If tested emissions are greater than 13 ng/dscm @ 7% O2 the company shall make operational changes to its air pollution control equipment and shall re-test within 105 days of the performance test. Such operational changes shall not adversely impact the ability of the company to comply with any other condition of this permit and shall not be inconsistent with the design or manufacturer's instructions of any equipment installed at the facility.	Minn. R. 7007.0800, subp. 2
During the performance test for PCDD/PCDF (total), continuously measure the inlet temperature to the particulate control device. Following completion of the most recent performance testing, operate the facility at a particulate control device inlet temperature no greater than 17 degrees C above the maximum demonstrated 4-hour block arithmetic average temperature measured during the most recent testing.	continued from above
NOTIFICATIONS	hdr
See Table B for notifications required.	hdr
RECORDKEEPING AND REPORTING	hdr
Record and maintain records of the amounts of fuel combusted during each day, and calculate the annual capacity factor individually for natural gas/propane and biomass. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.	40 CFR 60.49b(d) alternative

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

<p>The daily amount of biomass burned may be deduced by:</p> <ol style="list-style-type: none"> 1. measuring steam output and calculating total heat input 2. calculation of natural gas/propane heat input by metering 3. subtracting natural gas heat input from total heat input. 	<p>40 CFR 60.49b(d) alternative</p>
<p>Maintain records of the opacity.</p>	<p>40 CFR 60.49b(f)</p>
<p>Maintain records of the following information:</p> <ol style="list-style-type: none"> (1) Calendar date. (2) The average hourly nitrogen oxides emission rates (expressed as NO₂ in lb/mmBtu, measured or predicted), (3) The 30-day average nitrogen oxides emission rates in lb/mmBtu heat input calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days. (4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under Section 60.44b, with the reasons for such excess emissions as well as a description of the corrective actions taken. 	<p>40 CFR 60.49b(g)</p>
<p>(continued from above)</p> <ol style="list-style-type: none"> (5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken. (6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data. (7) Identification of the F factor used for calculations, method of determination, and type of fuel combusted. (8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system. (9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3. (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1. 	<p>40 CFR 60.49b(g)</p>
<p>(continued from above)</p> <p>The above information shall be submitted with the excess emission reports required for the continuous emission monitors, each quarter by the 30th day of the month following the monitored calendar quarter.</p>	<p>40 CFR 60.49b(i) and (g)</p>
<p>The owner or operator of an affected facility may submit electronic quarterly reports for SO₂, NO_x, and opacity in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the MPCA. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60, Subp. Db was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.</p>	<p>40 CFR 60.49b(v)</p>
<p>PM₁₀ Emission Limit: due 45 days after submission of the 5th performance test at the facility for PM₁₀. The submittal shall include: the proposed PM₁₀ limit; and a summary of the performance test results.</p>	<p>Title I Condition: to establish BACT emission limit for PM₁₀ under 40 CFR 52.21(j)</p>
<p>HCl emission rate and correlation curve: due 45 days after submission of the 5th performance test at the facility for HCl. The submittal shall include: the proposed SO₂ CEM operating range that assures compliance with the HCl limit and reduction requirement; a summary of the performance test results, and concurrently taken SO₂ CEM data.</p>	<p>40 CFR 64.4(d)</p>
<p>CAM REQUIREMENTS</p>	<p>hdr</p>
<p>Proper maintenance: At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.</p>	<p>40 CFR 64.7(b)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

<p>Continued operation: Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data.</p>	<p>40 CFR 64.7(c)</p>
<p>Response to excursions or exceedances: (1) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range,</p>	<p>40 CFR 64.7(d)</p>
<p>Documentation of need for improved monitoring: After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the part 70 or 71 permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.</p>	<p>40 CFR 64.7(e)</p>
<p>REPORTING AND RECORDKEEPING REQUIREMENTS SPECIFIED BY CAM</p>	<p>hdr</p>
<p>Submittal of reports of any required monitoring is required at least every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 70.5(d) of this part.</p> <p>The semiannual deviations report in the total facility section of this permit satisfies this requirement.</p>	<p>40 CFR 64.9(a) and 40 CFR 70.6(a)(3)(iii)</p>
<p>Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. The permitting authority shall define "prompt" in relation to the degree and type of deviation likely to occur and the applicable requirements.</p> <p>The total facility requirements for notifications of deviations endangering human health satisfy this requirement.</p>	<p>continued from above</p>
<p>Semi-annual deviations reports shall also include:</p> <p>i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;</p> <p>(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and</p> <p>(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.</p>	<p>continued from above</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

<p>General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).</p> <p>(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.</p>	<p>40 CFR 74.9(b)(1) and (2)</p>
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TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

Subject Item: CE 004 Fabric Filter - High Temperature, i.e., T>250 Degrees F

Associated Items: EU 001 Biomass Boiler

What to do	Why to do it
<p>Pressure Drop: greater than or equal to <X> inches of water column and less than or equal to <Y> inches of water column.</p> <p>The specified range of pressure drop shall be submitted with the stack emissions test results required for testing to be performed within 180 days of initial startup. All technical information used to develop the appropriate pressure drop range shall be submitted with the proposed range.</p>	40 CFR 64.3(a)(2)
<p>Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. Records of pressure drop must be done at least four times per hour while the unit is in operation.</p> <p>The pressure drop measuring device shall be operational at the time of boiler startup.</p>	40 CFR 64.9(b) and 40 CFR 64.3(b)(4)
<p>Bag Leak Detection System: reportable level greater than <></p> <p>The specified reportable level for baghouse leak detection shall be submitted along with the information submitted in support of the proposed emission limit for Particulate Matter less than 10 micron. The baghouse leak detection level shall be developed during the Initial Performance Test for PM10 and subsequent quarterly performance tests required by this permit under the EU001 Requirements Table. All technical information used to develop the appropriate baghouse leak detection level shall be submitted with the proposed reportable level. The level shall be established in accordance with EPA's "Fabric Filter Bag Leak Detection Guidance", (EPA-454/R-98-015).</p>	40 CFR 64.3(a)(2)
<p>Recordkeeping for Bag Leak Detection System: The permittee shall record the time and date of each bag leak detection reading. Upon establishment of the reportable level for baghouse leak detection, the permittee shall record whether or not the recorded reading is above the reportable level for baghouse leak detection. Records of bag leak detection must be completed a minimum of one cycle of operation for each 15-minute operating period.</p>	40 CFR 64.9(b) and 40 CFR 64.3(b)(4)
<p>The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation.</p>	Title I condition: to maintain compliance with the particulate and PM10 BACT emission limit.
<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"> - visible emissions exceeding the opacity limit are observed; - bag leak detection readings exceed the reportable level for bag leak detection; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. <p>Corrective actions shall return the pressure drop to within the permitted range, return the bag leak detection level to below the reportable level for baghouse leak detection, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.</p>	40 CFR 64.7(d)
<p>Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for continuously measuring and daily recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.</p>	Minn. R. 7007.0800, subp. 4 and 40 CFR 64.7(b) and (c)
<p>Monitoring Equipment: The Permittee shall install, operate, calibrate, and maintain a bag leak detection system in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in the EPA's guidance document, "Fabric Filter Bag Leak Detection Guidance." The bag leak detection system must be capable of detecting particulate matter emissions at levels on one-tenth or less of the particulate matter or particulate matter less than 10 micron limit, whichever is less. The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor and must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over the reportable level for baghouse leak detection is detected.</p>	Minn. R. 7007.0800, subp. 4 and 40 CFR 64.7(b) and (c)
REPORTING	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

<p>With the semi-annual deviations report due for the facility (specified in Table B), the following shall be included:</p> <p>(i) Summary information on the number, duration and cause (including unknown cause if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;</p> <p>(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and</p> <p>(iii) For the Bag Leak Detection System, summary of the date, time, and duration of each alarm, the time corrective action was initiated and completed, a brief description of the cause of the alarm, and the corrective action taken.</p>	<p>40 CFR 64.9(a)(2)</p>
<p>The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.</p>	<p>Minn. R. 7007.0800, subp. 14</p>
<p>INSPECTION AND MAINTENANCE</p>	<p>hdr</p>
<p>The Permittee shall perform an external inspection of the baghouse monthly. The Permittee shall perform an internal inspection at least annually, or at a greater frequency if the baghouse manufacturer recommends such. The Permittee shall correct or repair any abnormal condition identified in the inspection as required.</p>	<p>Minn. R. 7007.0800, subp. 4, 5 and 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

Subject Item: MR 004 Opacity Monitor

Associated Items: EU 001 Biomass Boiler

What to do	Why to do it
Installation Notification: due 60 days before installing the continuous opacity monitoring system.	Minn. R. 7017.1040, subp. 1
COMS Certification Test: due 60 days after achieving maximum capacity but no later than 180 days after initial startup.	Minn. R. 7017.1050, subp. 1; 40 CFR Section 60.8(a)
COMS Certification Test Plan: due 30 days before COMS Certification Test.	Minn. R. 7017.1060, subp. 1 & 2
COMS Certification Test Pretest Meeting: due 7 days before COMS Certification Test.	Minn. R. 7017.1060, subp. 3
COMS Certification Test Report: due 45 days after COMS Certification Test.	Minn. R. 7017.1080, subp. 1, 2 & 4
COMS Certification Test Report - Microfiche Copy: due 105 days after COMS Certification Test	Minn. R. 7017.1080, subp. 3
<p>Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment.</p> <p>Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.</p>	Minn. R. 7017.1090, subp. 1; 40 CFR Section 60.13(e)
COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily. The COMS must be adjusted whenever the calibration drift (CD) exceeds twice the specification of PS-1 of 40 CFR 60, Appendix B.	Minn. R. 7017.1210, subp. 2; 40 CFR Section 60.13(d)
COMS Calibration Error Audit: due before end of each calendar half-year following COMS Certification Test. Conduct three point calibration error audits at least 3 months apart but no greater than 8 months apart. Filter values used shall correspond to approximately 11%, 20%, and 37% opacity.	Minn. R. 7017.1210, subp. 3
COMS Calibration Error Audit Results Summary: due 30 days after end of each calendar half-year following COMS Calibration Error Audit.	Minn. R. 7017.1220
COMS Monitoring Data: Owners or operators of all COMS shall reduce all data to 6 minute averages. Opacity averages shall be calculated from all equally spaced consecutive 10-second (or shorter) data points in the 6 minute averaging period.	Minn. R. 7017.1200, subp. 1, 2 & 3; 40 CFR Section 60.13(e)(1); 40 CFR Section 60.13(h)
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130
QA Plan Required: Develop and implement a written quality assurance plan which covers each COMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1.	Minn. R. 7017.1210
The owner or operator of an affected facility may submit electronic quarterly reports for SO ₂ , NO _x , and opacity in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the MPCA. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60, Subp. Db was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.	40 CFR 60.49b(v)

TABLE B: SUBMITTALS

02/17/05

Facility Name: Fibrominn Biomass Power Plant
Permit Number: 15100038 - 004

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. The notification shall include: - The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility, and - The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on biomass and natural gas or propane. Initial startup shall have occurred when the facility begins burning biomass.	EU001
Notification of the Date Construction Began	due 30 days after Start Of Construction	EU001
Testing Frequency Plan	due 60 days after Initial Performance Test for PM, and HCl emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU001

TABLE B: RECURRENT SUBMITTALS

02/17/05

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038 - 004

What to send	When to send	Portion of Facility Affected
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Initial Startup of the Monitor (Submit Deviations Reporting Form DRF-1 as amended). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	MR004
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Initial Startup of the Monitor The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions. Also included will be the information listed in 40 CFR 60.49b(g), and listed under recordkeeping and reporting requirements under EU001.	GP001
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 01/02/2003 . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 30 days after end of each calendar year starting 01/02/2003 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX MATERIAL

Facility Name: Fibrominn Biomass Power Plant

Permit Number: 15100038-004

Standard Requirements

Permit Requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
 - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
 - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
 - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - (ii) Have an Acid Rain Permit.

Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR parts 74, 75, and 76.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR parts 74 and 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each affected unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

- (1) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
 - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
 - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

- (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - (ii) All emissions monitoring information, in accordance with 40 CFR part 75;
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Insignificant Activities Required to be Listed:

Minn. R. 7007.1300, Subp. 3

A. Space heaters fueled by propane or natural gas

E.2. Urea storage tank (v.p. < 1 [psia@60](#) f with capacity less than or equal to 10,000 gallons)

E.2. Diesel fuel tank

G. Laboratory water testing

G. Laboratory fuel testing

H.4. Welding Equipment

I.2. Individual emission units with potential to emit less than 2 tpy CO and/or less than 1 tpy NO_x, SO₂, PM, PM₁₀, VOC or Ozone:

- a. fuel receiving and storage (backup odor control vent)
- b. ash handling, storage and outloading
- c. lime storage silo
- d. cold cleaner, degreaser, located in maintenance shop
- e. boiler treatment chemicals solids handling
- f. cooling tower

J. Fugitive emissions from roads and parking lots

Minn. R. 7007.1300, Subp. 4. B.

Cooling Towers

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 15100038-004

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 4911)
OWNER: PowerMinn 9090 LLC 2295 Corporate Boulevard Boca Raton, FL 33431 OPERATOR: Fibrominn LLC 301 Oxford Valley Road, Suite 704A Makefield Executive Quarters Yardley, PA 19067	Fibrominn Biomass Power Plant 900 Industry Drive Benson, MN 56215 Swift County
Contact: Mr. Terrence Walmsley, Environmental Affairs Manager (Operator Address) Phone: (215) 321-4866 ext. 102	

1.2. Description of the Permit Action

The facility is an existing biomass power plant consisting of one boiler, fueled principally with poultry litter. Vegetative biomass may also be burned. The facility will generate an average of 60 megawatts of electricity and will have a peak electrical export capacity of 55 MW.

Emissions from the boiler will be controlled by : a baghouse/spray dryer to control particulates, sulfur dioxide, sulfuric acid mist, and hydrochloric acid. Selective non-catalytic reduction will be used to control nitrogen oxides. Good combustion practices are used to control carbon monoxide and volatile organic compounds.

1.3 Description of the Activities Allowed by this Permit Action

An administrative amendment application was received December 14, 2004 in accordance with Minn. R. 7007.1400, subp. 1(E) to request a change of ownership for the facility from the City of Benson to PowerMinn 9090, LLC, which will lease the facility to Fibrominn.Steel. A copy of the request for the name change is included as attachment 1 to this TSD.

2. Conclusion

Based on the information provided by PowerMinn 9090 LLC, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 15100038-004 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Bonnie Nelson (permit writer/engineer)
Fred Jeness (peer reviewer)

Attachments: 1. Ownership change documentation