

**AIR EMISSION PERMIT NO. 04300002-005**

**IS ISSUED TO**

**Board of Public Works**

Blue Earth Light & Water  
124 East Sixth Street  
Blue Earth, Faribault County, MN 56013

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

Permit Type	Application Date	Issue Date	Action Number
Total Facility Operating Permit	01/29/1999	08/24/1999	001
Administrative Amendment	01/20/2000	03/21/2000	002
Major Amendment	05/03/2002	Application Withdrawn	003
Major Amendment	09/06/2002	03/03/2003	004
Major Amendment	10/18/2004	See below	005

This permit authorizes the permittee to operate and modify 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 defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal; Part 70/Limits to Avoid New Source Review

**Issue Date:** February 15, 2005

**Expiration:** Upon Reissuance of Part 70 Permit (Part 70 Permit Expired 08/24/2004)  
Title I Conditions do not expire.

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Richard J. Sandberg  
Air Quality Permits Section Manager  
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:**

This facility is a small municipal electric generating plant composed of 1 boiler and 6 reciprocating internal combustion engines. The facility provides standby electric generation.

### **AMENDMENT (ACTION 002)**

PER 002 was an administrative amendment to extend the opacity testing deadline for the boilers and generators by 120 days.

### **AMENDMENT (ACTION 003)**

PER 003 was an application to revise Title V modeling requirements that was subsequently withdrawn.

### **AMENDMENT (ACTION 004)**

This major amendment permit action increased the total facility NO<sub>x</sub> emission cap from 225 tons per year to 235 tons per year on a 12-month rolling sum basis, as requested by the Permittee. In addition the opacity testing requirements have been revised so that testing is now on a 60-month frequency, based on past test results and MPCA test frequency guidance. Finally, the permit has been updated to acknowledge the removal of boilers 2 and 3 (EU 002 and EU 003).

### **AMENDMENT (ACTION 005)**

This permit action is a major amendment incorporating requirements for stack height increases and operating hours limits based on the results of Title V NO<sub>x</sub> modeling. The modeling was a state-only requirement and the requirements based on the results of the modeling are not enforceable by the U.S. Environmental Protection Agency Administrator and citizens under the Clean Air Act. The existing 235 ton per year NO<sub>x</sub> limit remains effective and no emission changes are associated with or allowed by this permitting action.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/15/05

Facility Name: Blue Earth Light & Water

Permit Number: 04300002 - 005

**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
Nitrogen Oxides: less than or equal to 470000 lbs/year (235 tons per year) on a 12-month rolling sum basis.	Title I Condition: To limit potential NOx emissions to less than major source levels as defined by 40 CFR Section 52.21
Fuel Usage Records: Maintain records on site of the type and amount of each fuel burned in each emission unit. Daily usage of natural gas and diesel fuel oil shall be determined with fuel meters and recorded each day that fuel is combusted.  By the 15th day of each month, the fuel usage for each emission unit for the previous 12 months shall be summed to obtain the 12-month fuel usage for the emission unit. The 12-month fuel usage shall be used for calculating 12-month rolling sum NOx emissions as required by this permit.	Title I Condition: To limit potential NOx emissions to less than major source levels as defined by 40 CFR Section 52.21
By the 15th day of each month, calculate the previous 12-month rolling sum of NOx emissions. The 12-month fuel usage for each emission unit shall be used in the equation below to determine the rolling 12-month sum of NOx emissions.  [0.10 * (mcf of natural gas used by EU 006)]+ [3.40 * (mcf of natural gas used by EU 004)]+ [0.02 * (gallons of diesel fuel used by EU 006)]+ [0.442 * (gallons of diesel fuel by EU 004)]+ [0.665 * (gallons of diesel fuel used by EU 005)]+ [0.423 * (gallons of diesel fuel used by EU 007, 008, and 009)]+ [0.347 * (gallons of diesel fuel used by EU 011)] = lb NOx per year  mcf = 1000 cubic feet	Title I Condition: To limit potential NOx emissions to less than major source levels as defined by 40 CFR Section 52.21
Stack Parameter Requirements: The Permittee shall not vent emissions through a stack that results in poorer dispersion than produced by the stack parameters listed for each emission unit stack/vent in table 1 titled 'Stack Parameters Relied on for Title V Modeling' in the appendix of this permit.	Minn. R. 7007.0800, subp. 2
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Performance Test Notifications and Submittals:  Performance Tests are due as outlined in GP 002 and EU 006 in Table A of this permit.  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  The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
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

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/15/05

Facility Name: Blue Earth Light & Water

Permit Number: 04300002 - 005

<p>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.</p> <p>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.</p>	<p>Minn. R. 7019.1000, subp. 3</p>
<p>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.</p> <p>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.</p>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 4</p>
<p>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.</p>	<p>Minn. R. 7011.0150</p>
<p>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.</p>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>
<p>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).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
<p>Recordkeeping: 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).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>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.</p>	<p>Minn. R. 7030.0010 - 7030.0080</p>
<p>The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.</p>	<p>Minn. R. 7007.0800, subp. 16</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/15/05

Facility Name: Blue Earth Light &amp; Water

Permit Number: 04300002 - 005

Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/15/05

Facility Name: Blue Earth Light & Water

Permit Number: 04300002 - 005

**Subject Item: GP 002 Reciprocating Engines**

- Associated Items:** EU 004 Engine #1 (Nordberg)  
 EU 005 Engine #2 (Cat 1825 kW)  
 EU 007 Engine #3 (Cat 1600 kW)  
 EU 008 Engine #4 (Cat 1600 kW)  
 EU 009 Engine #5 (Cat 1600 kW)  
 EU 011 Emergency Station Power

What to do	Why to do it
EMISSION LIMITS	hdr
Sulfur Content of Fuel: less than or equal to 0.05 percent by weight for each affected unit (EU 005, EU 007, EU 008, EU 009, and EU 011 are acid rain program affected units).	40 CFR Section 72.7(a)(3); meets requirements of Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained (applies individually to each GP 001 emission unit).	Minn. R. 7011.2300, subp. 1
Operating Hours Limits: The Permittee shall restrict annual operating hours for the following emission units:  EU 004: 3250 hours per year on a 12-month rolling sum EU 005: 3250 hours per year on a 12-month rolling sum EU 011: 500 hours per year on a 12-month rolling sum	Minn. R. 7007.0800, subp. 2 to avoid violation of NO2 Minnesota ambient air quality standard in Minn. R. 7009.0080
OPERATING CONDITIONS	hdr
Burn only pipeline natural gas and low sulfur diesel fuel in EU 004, and low sulfur diesel fuel in EU 005, 007, 008, 009, and 011.	Minn. R. 7007.0800, subp. 2
Stack Height Requirements: The Permittee shall vent emissions from the following emission units from stacks with the following minimum height:  EU 004: 46 feet EU 007: 60 feet EU 008: 60 feet EU 009: 60 feet  The Permittee shall comply with this requirement no later than the date of issuance of this permit (No. 04300002-005)	Minn. R. 7007.0800, subp. 2 to avoid violation of NO2 Minnesota ambient air quality standard in Minn. R. 7009.0080
MONITORING	hdr
EU 004 Fuel Supplier Certification: The Permittee may obtain a certification from the diesel fuel supplier specifying the sulfur content in percent by weight, for each delivery of diesel fuel for EU 004. As an alternative, the Permittee may determine the sulfur content in percent by weight according to 40 CFR Section 72.7(d)(3).	Minn. R. 7007.0800, subp. 4
Average Annual Sulfur Content Determination of Diesel Fuel: The Permittee shall calculate and record the average annual sulfur content of all diesel fuel combusted in EU 005, EU 007, EU 008, EU 009, and EU 011 according to the requirements of 40 CFR Section 72.7(d)(3).	40 CFR Section 72.7(d)(3)
RECORDKEEPING	hdr
Operating Hours Monitoring and Recordkeeping:  Once each day the Permittee shall record the EU 004, EU 005, and EU 011 operating hours for the previous operating day.  By the 15th day of each month, calculate and record the EU 004, EU 005, and EU 011 operating hours for the previous month, and for the previous 12-month period.  Separate records shall be kept for each emissions unit.	Minn. R. 7007.0800, subp. 4 and 5 to avoid violation of NO2 Minnesota ambient air quality standard in Minn. R. 7009.0080
PERFORMANCE TESTING	hdr
Performance Test: due before end of each calendar 60 months starting 03/21/2000 to measure opacity of each emission unit in GP 002.	Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/15/05

Facility Name: Blue Earth Light &amp; Water

Permit Number: 04300002 - 005

**Subject Item:** EU 006 Boiler #4 (6 mmBtu/hr)**Associated Items:** SV 006 Boiler #4 (6 mmBtu/hr)

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
OPERATING CONDITIONS	hdr
Fuels: Burn only distillate fuel oil as defined by ASTM, and pipeline natural gas.	Minn. R. 7007.0800, subp. 2
MONITORING	hdr
Fuel Supplier Certification: The Permittee shall obtain a certification from the distillate fuel oil supplier specifying the sulfur content in percent by weight, for each fuel oil delivery.	Minn. R. 7007.0800, subp. 4
PERFORMANCE TESTING	hdr
Performance Test: due before end of each calendar 60 months starting 03/21/2000 to measure opacity of each emission unit in GP 002.	Minn. R. 7007.0800, subp. 2

**TABLE B: SUBMITTALS**

02/15/05

Facility Name: Blue Earth Light & Water  
Permit Number: 04300002 - 005

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**

02/15/05

Facility Name: Blue Earth Light &amp; Water

Permit Number: 04300002 - 005

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility

**TABLE B: RECURRENT SUBMITTALS**

02/15/05

Facility Name: Blue Earth Light &amp; Water

Permit Number: 04300002 - 005

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 08/24/1999. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 08/24/1999 (for the previous calendar year). The certification shall be submitted on a form approved by the Commissioner, both to the Commissioner and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year starting 08/24/1999 (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

## APPENDIX

Facility Name: Blue Earth Light & Water

Permit Number: 04300002-005

### 1. Stack Parameters Relied on for Title V Modeling

### 2. Cross Reference List for Title IV Affected Units

### 3. New Unit Exemption

### 1. Stack Parameters Relied on for Title V Modeling

stack/vent number	emission unit number	stack height (feet)	flow rate (acfm)	stack diameter (feet)	stack temperature °F	NOx lb/hr
004	EU 004 Nordberg Engine #1	39	13,587	1.60	700	51.68
005	EU 005 Cat 1825 kW Engine #2	46	15,856	1.33	910	84.36
006	EU 006 boiler	60	1,600	1.33	350	0.86
007	EU 007 Cat 1600 kW Engine #3	60	13,839	1.33	934	49.10
008	EU 008 Cat 1600 kW Engine #4	60	13,839	1.33	934	49.10
009	EU 009 Cat 1600 kW Engine #5	60	13,839	1.33	934	49.10
011	EU 011 Emergency Power	38.5	4,312	0.66	881	12.83

### 2. Cross Reference List for Title IV Affected Units

Emission Unit Number	Facility I.D.	Acid Rain Unit Number
EU 005	Engine #2 (Cat 1825 kw)	10
EU 007	Engine #3 (Cat 1600 kw)	7
EU 008	Engine #4 (Cat 1600 kw)	8
EU 009	Engine #5 (Cat 1600 kw)	9
EU 011	Emergency Station Power	11

# 3. New Unit Exemption

For more information, see instructions and refer to 40 CFR 72.7

This submission is  New  Revised

## Step 1

Identify the new unit by plant name, State, ORIS Code (if assigned) and Unit ID#.

Blue Earth Light and Water	MN		7, 8, 9, 10, 11
Plant Name	State	ORIS Code	Unit ID#

## Step 2

List to one decimal place the nameplate capacity of each generator served by the unit. Then total these entries and enter the result.

Unit ID#	MWe
Unit 7:	1.6
Unit 8:	1.6
Unit 9:	1.6
Unit 10:	1.8
Unit 11:	0.5
<b>Total:</b>	<b>7.1</b>

## Step 3

List all fuels currently burned or expected to be burned, by the unit and the percent sulfur content by weight of each.

Fuel (current)	Sulfur Content (current)	Fuel (expected)	Sulfur Content (expected)
#2 Diesel	<0.05%	#2 Diesel	<0.05%

## Step 4

Identify the first full calendar year in which the unit meets (or will meet) the requirements of 40 CFR 72.7(a).

**January 1,** Unit 7: 1995  
 Unit 8: 1995  
 Unit 9: 1995  
 Unit 10: 1996  
 Unit 11: 1999

## Special Provisions

### step 5

Read the special provisions.

- (1) The owners and operators and, to the extent applicable, the designated representative of a unit exempt under 40 CFR 72.7 shall (i) comply with the requirements of 40 CFR 72.7(a) for all periods for which the unit is exempt under 40 CFR 72.7 and (ii) comply with the requirements of the Acid Rain Program concerning all periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.
- (2) For any period for which a unit is exempt under 40 CFR 72.7, the unit is not an affected unit under the Acid Rain Program and 40 CFR parts 70 and 71 and is not eligible to be an opt-in source under 40 CFR part 74. As an unaffected unit, the unit shall continue to be subject to any other applicable requirements under 40 CFR parts 70 and 71.
- (3) For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under 40 CFR 72.7 shall retain at the source that includes the unit records demonstrating that the requirements of 40 CFR 72.7(a) are met. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the Administrator or the permitting authority. Such records shall include, for each delivery of fuel to the unit or for fuel delivered to the unit continuously by pipeline, the type of fuel, the sulfur content, and the sulfur content of each sample taken. The owners or operators bear the burden of proof that the requirements of paragraph 40 CFR 72.7(a) are met.
- (4) On the earliest of the following dates, a unit exempt under 40 CFR 72.7(b), (c), or (e) shall lose its exemption and become an affected unit under the Acid Rain Program and 40 CFR parts 70 and 71: (i) the date on which the unit first serves one or more generators with total nameplate capacity in excess of 25 MWe; (ii) the date on which the unit burns any coal or coal-derived fuel except for coal-derived gaseous fuel with a total sulfur content no greater than natural gas; or (iii) January 1 of the year following the year in which the annual average sulfur content for gaseous fuel burned at the unit exceeds 0.05 percent by weight (as determined under 40 CFR 72.7(d)) or for nongaseous fuel burned at the unit exceeds 0.05 percent by weight (as determined under 40 CFR 72.7(d)). Notwithstanding 40 CFR 72.30(b) and (c), the designated representative for a unit that loses its exemption under 40 CFR 72.7 shall submit a complete Acid Rain permit application on the later of January 1, 1998 or 60 days after the first date on which the unit is no longer exempt. For the purpose of applying monitoring requirements under 40 CFR 75, a unit that loses its exemption under 72.7 shall be treated as a new unit that commenced commercial operation on the first date on which the unit is no longer exempt.

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**DRAFT/PROPOSED AIR EMISSION PERMIT NO. 04300002-005**

This technical support document is for parties interested in the draft/proposed permit and meets the requirements in 40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1. This document provides the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the draft/proposed permit.

**1. General Information**

**1.1. Applicant and Stationary Source Location:**

Owner/Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 4911)
City of Blue Earth Board of Public Works 125 East 6 <sup>th</sup> Street Blue Earth, Minnesota (507) 526-2191 (Curt LaMaack)	Blue Earth Light and Water 124 East 6 <sup>th</sup> Street Blue Earth, Minnesota

**1.2. Description of the Permit Action**

This facility is a small municipal electric generating plant composed of 1 heating boiler and 6 reciprocating internal combustion engines. The facility provides standby electric generation.

**1.3 Description of the Activities Allowed by this Permit Action**

This permit action is a major amendment incorporating requirements for stack height increases and operating hours limits based on the results of title V NO<sub>x</sub> modeling. Completion of the SV 005 height increase from 38.5 feet to 46 feet occurred on October 26, 2004. SV 007, 008, and 009 height will be increased from 38.5 feet to 60 feet by December 2004. The existing 235 ton per year NO<sub>x</sub> limit remains effective and no emission changes are associated with or allowed by this permitting action. The requirements for submittal of a NO<sub>x</sub> modeling protocol and results have been removed because they have been completed.

The modeling is a state-only requirement and the requirements based on the results of the modeling are not enforceable by the EPA Administrator and citizens under the Clean Air Act.



**Table 1. Facility Classification**

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		NOx,	PM, PM <sub>10</sub> , SO <sub>2</sub> , CO, VOC, Pb
Part 70 Permit Program	NOx	CO	PM <sub>10</sub> , SO <sub>2</sub> , VOC
Part 63			HAPs

\* Refers to potential emissions that are less than those specified as major by 40 CFR § 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.

**2. Regulatory and/or Statutory Basis**

Refer to technical support documents for previous permits for applicable regulations not in the scope of this permitting action.

Minnesota State Rules

The facility is subject to Minn. R. 7009.0080 Minnesota Ambient Air Quality Standards

**Table 2. Regulatory Overview of Units Affected by the Modification/Permit Amendment**

EU, GP, or SV	Applicable Regulations	Comments:
EU 004, EU 005, and EU 011 (in GP 001)	Minn. R. 7007.0800, subp. 2 to avoid violation of NOx MAAQS in Minn. R. 7009.0080	Requirements to increase certain stack heights and limit annual operations of certain emission units to ensure emissions do not cause a violation of the Minnesota ambient air quality standard for NO <sub>2</sub> . These are a state-only requirements and are not enforceable by the EPA Administrator and citizens under the Clean Air Act.

**3. Technical Information**

Title V Modeling: This facility conducted title V modeling for NOx. The facility is composed of short stack diesel engines that emit substantial quantities of NOx. Although this facility met the criteria for the revised title V modeling policy from June 2001 that required only a modeling information submittal, the original title V modeling protocol and results requirements were not removed from their title V permit due to the nature of the facility. Modeling results indicated the need to reduce ambient NOx impacts. The ambient impact reduction was accomplished by a combination of raising certain stacks and limiting annual operation of certain engines. Modeling predicts an H1H NOx concentration of 73.97 ug/m<sup>3</sup> including 17 ug/m<sup>3</sup> background (compared to a 100 ug/m<sup>3</sup> annual NOx MnAAQS), when conducted using the following stack parameters:

stack/vent number	emission unit number	stack height (feet)	flow rate (acfm)	stack diameter (feet)	stack temperature °F	NOx lb/hr
004	EU 004 Nordberg Engine #1	39	13,587	1.60	700	51.68
005	EU 005 Cat 1825 kW Engine #2	46	15,856	1.33	910	84.36
006	EU 006 boiler	60	1,600	1.33	350	0.86
007	EU 007 Cat 1600 kW Engine #3	60	13,839	1.33	934	49.10
008	EU 008 Cat 1600 kW Engine #4	60	13,839	1.33	934	49.10
009	EU 009 Cat 1600 kW Engine #5	60	13,839	1.33	934	49.10
011	EU 011 Emergency Power	38.5	4,312	0.66	881	12.83

Community Involvement: The initial information gathering revealed no complaints had been received and there were no known unusual issues involving this facility. As a result, no additional community involvement is warranted for this permitting action.

### **3.1 Periodic Monitoring**

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found for similar units.

Table 3 summarizes the periodic monitoring requirements in the scope of this permitting action, for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

**Table 3. Periodic Monitoring**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
EU 004, EU 005, and EU 011 (in GP 001)	Minn. R. 7007.0800, subp. 2 to avoid violation of NOx MAAQS in Minn. R. 7009.0080 Annual 12-month operating hours limits for EU 004, EU 005, and EU 011	Recordkeeping: Daily records of operating hours; monthly records of monthly and 12-month operating hours for each emission unit	none warranted

### **3.2 Comments Received**

Public Notice Period: December 28, 2004 - January 26, 2005

EPA 45-day Review Period: December 28, 2004 - February 10, 2005

No comments were received from the public or EPA during the respective review periods.

### **4. Conclusion**

Based on the information provided by Blue Earth Light and Water, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 04300002-005 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

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