

**AIR EMISSION PERMIT NO. 12300053-005**

**IS ISSUED TO**

**Metropolitan Council**

**METROPOLITAN WASTEWATER TREATMENT PLANT**

2400 Childs Road

St. Paul, Ramsey County, MN 55106

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):

Permit Type	Application Date	Issue Date	Action #
Total Facility Operating Permit	December 13, 1995	March 13, 2001	001
Major Amendment	January 14, 1999	November 15, 2002	002
Application withdrawn	N/A	N/A	003
Major Amendment	May 19, 2003	June 28, 2004	004
Moderate Amendment	August 08, 2006	See Below	005

This permit supersedes permit number 12300053-004 and authorizes the permittee to operate and modify the stationary source at the address listed above. 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:** Federal; Pt 70/Limits to Avoid NSR

**Moderate Amendment Issue Date:** February 5, 2007

**Expiration:** March 13, 2006\*  
Title I Conditions do not expire.

\* The Permittee can continue to operate this facility after the expiration date of this permit per the provision under Minn. R. 7007.0450, subp. 3 (Title V Re-issuance application received on September 16, 2005).

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

for Brad Moore  
Commissioner  
Minnesota Pollution Control Agency

TDD (for hearing and speech impaired only): (651) 282-5332

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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 Metropolitan Wastewater Treatment Plant is an advanced secondary wastewater treatment facility with a nominal design capacity of 250 million gallons per day. The plant is located on the east bank of the Mississippi River at mile 836, just east of downtown St. Paul. It is the principal sewage treatment facility for the Minneapolis and St. Paul metropolitan area serving more than 80 percent of the area's sewer population, as well as commercial, institutional, and industrial wastewater generators. Solids removed in the wastewater treatment process are managed through incineration, which is the primary source of air emissions from the facility. In addition, small amounts of scum from the treatment process and activated carbon from odor control systems are also incinerated. Emissions also result from operation of heating boilers, emergency generators, ash and materials handling, spray painting for maintenance, and aeration of the wastewater in the treatment process.

**PERMIT ACTION 005 DESCRIPTION:**

This is a moderate amendment to authorize the use of two 2,000 kW diesel temporary generators, which will provide emergency power for the effluent pump station at the MWWTP. Each year, the diesel generators will be rented and used, if needed, during the flooding season. Each year, the diesel generators will be returned to the rental company when they are no longer needed. Each diesel generator will vent to its own stack, and will provide only emergency back-up service and will not be operated in prime power or peak-shaving service.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-1

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 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**

<b>What to do</b>	<b>Why to do it</b>
Unless otherwise specified in this permit, the following conditions apply to the total facility.	Minn. R. 7017.1004, subp. 1(A) regarding state testing and monitoring requirements; 40 CFR 60.11(f) as applicable
<b>A. OPERATIONAL REQUIREMENTS</b>	hdr
Occurrence of the Exceedance: due 30 days after end of each year following Performance Test for HAP metals, volatile HAPs, and HCl, the Permittee shall implement the Tier 1, 2 or 3 procedures if the test results indicate HAP metals in excess of 0.065 lb/dry ton of sludge charged, volatile HAPs in excess of 0.034 lb/dry ton of sludge charged, or HCl in excess of 0.1 lb/dry ton of sludge charged. The Tier 1, 2, and 3 procedures are attached as Appendix II and are made part of this permit.	Title I Condition: Monitoring for limit to avoid classification as a major source under 40 CFR 63.2
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
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. Such concealment includes, but is not limited to, the use of gaseous dilutants to achieve compliance with a visible emissions standard, and the piecemeal carrying out of an operation to avoid coverage by a standard that applies only to operations larger than a specified size.	Minn. R. 7011.0020; 40 CFR 60.12 as applicable ; 40 CFR 61.19 as applicable
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, nor subject to the citizen suit provisions of section 304 of the Clean Air Act, 42 U.S.C. section 7604.	Minn. R. 7030.0010 through Minn. R. 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
The Permittee shall not make changes that increase, from any emission point listed in Appendix III, the PM-10 emission rate (whether in lb/ton, lb/mmBtu, lb/hr, or gr/dscf), or alter the stack parameters listed in Appendix III in such a way as to deviate from the building wake effects assumed in the PM-10 computer modeling underlying this permit without first obtaining a major permit amendment demonstrating that the ambient PM10 concentrations will not increase. For the stacks listed in Appendix III, the following activities are considered to change PM-10 emissions or to deviate from significant modeling assumptions: a. decrease in exit gas velocity b. decrease in exit gas temperature c. reduction in stack height d. increase in stack diameter e. any construction or modification of structures that increase effective structure dimensions in such a way as to deviate from the building wake effect assumed in the underlying PM-10 modeling.	Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y; Minn. R. 7007.1500, subp. 1(B)
Solids Content: less than or equal to 37 percent by weight averaged over each calendar month. This limit only applies to sludge generated from the two centrifuges installed in 2002. This limit only applies to sludge generated from the two centrifuges installed in 2002 that is being fed to the Multiple Hearth Incinerators.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21
<b>B. PLANS</b>	hdr
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. For each piece of equipment that is not yet operational at the time of permit issuance, draft O & M plans no later than 180 days following initial startup of that piece of equipment.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J) regarding quality assurance procedures

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-2**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Fugitive Control Plan: Revised plan due 180 days after initial startup of the third fluidized bed unit. 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. The permittee may be required to amend the control plan and/or install and operate particulate matter ambient air monitors if the Commissioner determines that the operation of the stationary source, together with other sources of particulate matter, creates conditions under which the Minnesota ambient air standard for particulate matter might be exceeded.	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. 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Episode Emission Reduction Plan: Submit to the commissioner an episode emission reduction plan to be implemented at the facility or stationary source in the event of a declaration by the commissioner of an air pollution episode. The plan shall be submitted to the commissioner within 90 days of the designation of the area as having exceeded the alert levels in Minn. R. 7009.1060, Table 1, following all requirements found in Minn. R. 7009.1000 to 7009.1110.	Minn. R. 7009.1000 through 7009.1110
Hydrogen Sulfide Ambient Monitoring: The Permittee shall establish a hydrogen sulfide monitoring network to measure the ambient concentration of hydrogen sulfide to verify that Minnesota Ambient Air Quality Standards are not being violated. The Permittee shall monitor for 12 continuous months. The network must be in place and operating by no later than January 15, 2007. A Hydrogen Sulfide Monitoring Plan created to monitor the facility as described in this permit shall be submitted to the MPCA and approved before the network can be constructed. The permittee shall draft the plan pursuant to "Exhibit M - Ambient Air Monitoring Procedures For Determination Of Compliance" in Appendix 4 of this permit. The plan shall include:	Minn. R. 7007.0800, subp. 2; Minn. R. 7009.0060
CONTINUED - Monitoring at or near as practicable to the Worker 4 Receptor and Worker 8 Receptor locations as identified on Figure 1 of the Air Toxics Review Addendum, Air Toxics Acute Hazard Analysis, Metropolitan Wastewater Treatment Plant Solids Processing Improvement Project, March 13, 2001. - Concentrations and averaging times appropriate for determining compliance with the State Ambient Air Quality Standards in Minn. R. 7009.0800. - An overall sampling period of at least 12 consecutive months for each monitor. This is a state-only requirement and is not enforceable by the EPA Administrator, nor subject to the citizen suit provisions of section 304 of the Clean Air Act, 42 U.S.C. section 7604.	CONTINUED Minn. R. 7007.0800, subp. 2; Minn. R. 7009.0060
C. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
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) regarding times of operation
D. PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A or B. As provided in Minn. R. 7017.2020, subp. 2, the Permittee may conduct performance testing required by this permit as included in an approved performance test plan.	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 Notification: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1; 40 CFR 60.7(a)(6) regarding advance notice, as applicable; 40 CFR 60.8(d) regarding advance notice, as applicable; 40 CFR 60.154(d) regarding notification, as applicable; 40 CFR 61.13(c) as applicable; 40 CFR 61.53(d)(3)
Performance Test Plan: due 30 days before each performance test. Draft the plan pursuant to Minn. R. 7017.2030, subp. 2 & 3 A single test plan can be submitted for all testing required in each calendar year.	Minn. R. 7017.2030, subp. 2; Minn. R. 7017.2030, subp. 3; 40 CFR 61.13(e) as applicable
Performance Test Pretest Meeting: due 7 days before each performance test. (7 days before the first Performance Test scheduled for each calendar year of testing). See Table B for additional performance testing requirements.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test, whether or not the test data indicates compliance with the applicable emission limits or operating conditions and whether or not the test was completed according to the approved test plan.	Minn. R. 7017.2035, subp. 1; Minn. R. 7017.2035, subp. 2 regarding the 45-day submittal; 40 CFR 60.8(a) regarding performance test reports, as applicable

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-3**

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Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2 regarding microfiche submittal
<b>E. MONITORING REQUIREMENTS</b>	hdr
<b>E.01. General monitoring requirements</b>	hdr
Monitoring: Conduct all monitoring in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A or B.	Minn. R. ch. 7017
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment which have manufacturer's calibration procedures and check the accuracy of meters and monitors which cannot be calibrated. If the accuracy of equipment that cannot be calibrated is outside of recommended manufacturers specifications, it must be replaced. Any requirements applying specifically 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 and/or B, 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)
Continuous Operation: CEMS and COMS and all other monitors required by this permit 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 or COMS or any other monitors required by this permit 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 60.13(e) as applicable; Minn. R. 7017.1090, subp. 1; Minn. R. 7007.0800, subp. 2
<b>E.02. CEMS requirements</b>	hdr
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 regarding CEMS
CEM Certification Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup nor later than 90 days after the due date of the first excess emissions report required for the CEMS.	40 CFR 60.13(b) as applicable; Minn. R. 7017.1050, subp. 1
CEMS Certification Test Pretest Meeting: due 7 days before CEMS Certification Test.	Minn. R. 7017.1060, subp. 3 regarding CEMS Pretest Meeting date
CEMS Certification Test Plan: due 30 days before CEMS Certification Test.	Minn. R. 7017.1060, subp. 1 & 2; 40 CFR 60.7(a)(5) regarding CEMS, as applicable
CEMS Certification Test Report: due 45 days after CEMS Certification Test, consistent with the requirements of Minn. R. 7017.1080, subp. 4.	Minn. R. 7017.1080, subp. 1, 2, & 4; 40 CFR 60.13(c)(2) regarding CEMS, as applicable
CEMS Certification Test Report - Microfiche Copy: due 105 days after CEMS Certification Test.	Minn. R. 7017.1080, subp. 3 regarding CEMS
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 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2; 40 CFR 60, App. F, section 3
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEMS Certification Test. Follow the procedures in 40 CFR pt. 60, Appendix F as applicable.	40 CFR 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
Cylinder Gas Audit (CGA): due before end of each calendar quarter following CEMS certification test. A CGA is not required during any calendar quarter in which a RATA was performed.	40 CFR pt. 60, Appendix F, section 5.1.2; Minn. R. 7017.1170, subp. 4
Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar quarter following Cylinder Gas Audit (CGA).	Minn. R. 7017.1180, subp. 1
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. 7007.0800, subp. 5; Minn. R. 7017.1130; 40 CFR 60.7(f) regarding CEMS records, as applicable
<b>E.03. COMS requirements</b>	hdr
Installation Notification: due 60 days before installing the continuous opacity monitoring system.	Minn. R. 7017.1040, subp. 1 regarding COMS

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-4**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

COMS Certification Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup nor later than 90 days after the due date of the first excess emissions report required for the COMS.	Minn. R. 7017.1050, subp. 1; 40 CFR Section 60.8(a); 40 CFR Section 60.13(c)
COMS Certification Test Pretest Meeting: due 7 days before COMS Certification Test.	Minn. R. 7017.1060, subp. 3 regarding COMS Pretest Meeting date
COMS Certification Test Plan: due 30 days before COMS Certification Test.	Minn. R. 7017.1060, subp. 1 & 2; 40 CFR 60.7(a)(5) regarding COMS, as applicable
COMS Certification Test Report: due 45 days after COMS Certification Test, consistent with the requirements of Minn. R. 7017.1080, subp. 4.	Minn. R. 7017.1080, subp. 1, 2 & 4; 40 CFR 60.13(c)(2) regarding COMS, as applicable
COMS Certification Test Report - Microfiche Copy: due 105 days after COMS Certification Test.	Minn. R. 7017.1080, subp. 3 regarding COMS
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
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
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. 7007.0800, subp. 5; 40 CFR 60.7(f) regarding COMS records, as applicable
<b>F. RECORDKEEPING</b>	hdr
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)
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 strip-chart recordings for continuous monitoring instrumentation, electronic data 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)
State Implementation Plan Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of the required monitoring, sample, measurement, or report that corresponds with a "Title I Condition: State Implementation Plan for PM10" requirement.	Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y
Sludge Solids Content: Record the average sludge solids content for each calendar month. This limit only applies to sludge generated from the two centrifuges installed in 2002 that is being fed to the Multiple Hearth Incinerators.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21
<b>G. REPORTING</b>	hdr
(see also Performance Testing Requirements and Monitoring Requirements)	hdr
Emissions 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, Minn. R. 7019.3020 through Minn. R. 7019.3030
Operation changes. In any shutdown, breakdown, or deviation covered by Minn. R. 7019.1000, subpart 1, 2, or 3, the owner or operator 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
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

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-5**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

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
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
Request for Information Response: by no later than November 15, 2005. Submit modeling data as specified in MPCA guidance for Modeling Information Requests for NOx. This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
Submit all information required to be submitted to EPA under 40 CFR 60.4(a) to the MPCA address shown in the introduction to Table B of this permit.	40 CFR 60.4 as applicable
<b>H. CONSTRUCTION</b>	hdr
The Permittee shall not construct or install any PM-10 emission units not included this permit without first obtaining a major permit amendment.	Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp. Y; Minn. R. 7007.1500, subp. 1(B)
<b>I. TRANSITION FROM EXISTING TO NEW EQUIPMENT</b>	hdr
For equipment included in Permit Number 12300053-001 that is not included in this permit, the Permittee shall comply with the conditions in Permit Number 12300053-001 until the equipment to which those conditions apply is retired.	Minn. R. 7007.0800, subp. 3 regarding previously-permitted equipment
The Permittee shall permanently retire two of the Multiple Hearth incinerators (EU008-EU013) within 180 days of the Initial Startup of each Fluidized Bed Incinerator (EU035-EU037).	40 CFR 52.21(b)(3)(viii) regarding replacement incinerators; 40 CFR 51, Appendix S.II.A.6(vi) regarding replacement incinerator
The Permittee shall permanently retire one existing Auxiliary Boiler (EU014-EU015) within 180 days of the Initial Startup of each replacement Auxiliary Boiler (EU042-EU043).	40 CFR 52.21(b)(3)(viii) regarding replacement boilers; 40 CFR 51, Appendix S.II.A.6(vi) regarding replacement boilers
<b>J. MISCELLANEOUS</b>	hdr
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)
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
<b>K. DEFINITIONS</b>	hdr
Initial Performance Test: A test required under 40 CFR 60.8.	40 CFR 60.8 regarding the definition.
NFE: "Not Federally Enforceable", meaning that this is a state-only requirement and is not enforceable by the EPA Administrator, nor subject to the citizen suit provisions of section 304 of the Clean Air Act, 42 U.S.C. section 7604.	Minn. R. 7007.1750 regarding the meaning of federal enforceability
PM-10: Particulate Matter < 10 micron, as defined in Minn. R. 7005.0100, subp. 30a	Minn. R. 7005.0100, subp. 30a
WESP: Wet Electrostatic Precipitator	Minn. R. 7007.0800, subp. 2
H2S: Hydrogen sulfide	Minn. R. 7007.0800, subp. 2
FBI: Fluidized Bed Incinerator	Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-6**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item: GP 003 Emergency Generators**

**Associated Items:** EU 020 Emergency Generator 1  
 EU 021 Emergency Generator 2  
 EU 022 Emergency Generator 3  
 EU 023 Emergency Generator 4  
 EU 024 Emergency Generator 5  
 EU 025 Emergency Generator 6  
 EU 044 Emergency Generator 8  
 EU 054 Temporary Emergency Generator 9  
 EU 055 Temporary Emergency Generator 10

What to do	Why to do it
These requirements apply separately to each unit listed in GP 003 unless otherwise noted.  If the temporary emergency generators (EU 054 and/or EU 055) were manufactured after April 1, 2006, they are subject to 40 CFR pt. 60, subp. IIII. These additional requirements are listed in Appendix B to the permit.	hdr
<b>EMISSION LIMITS</b>	hdr
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input as measured by the sulfur content of the fuel not to exceed 0.5% by weight. Diesel fuel specifications meet the 0.5% sulfur content limit.	Minn. R. 7011.2300, subp. 2
Sulfur Content of Fuel: less than or equal to 0.05 percent by weight as certified by vendor.  Limit applies only to EU 044.	Title I Condition: To avoid classification as a major modification under 40 CFR 52.21
<b>OPERATIONAL REQUIREMENTS</b>	hdr
Fuel Usage: Diesel only, by design.	Minn. R. 7005.0100, subp. 35a; Minn. R. 7007.0800, subp. 2
Operating Limitations: Emergency usage, maintenance, training, or testing purposes only.	Minn. R. 7007.0800, subp. 2
Hours of Operation: less than or equal to 500 hours per year based on a 12-month rolling sum.  The U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators", dated September 6, 1995, limits operation to 500 hours per year.	Minn. R. 7007.0800, subp. 2
<b>RECORDKEEPING</b>	hdr
Recordkeeping - Hours of Operation: The Permittee shall maintain documentation of hours of operation for each unit listed in GP 003.	Minn. R. 7007.0800, subps. 4 & 5
Recordkeeping: The Permittee shall record the date, length of time, type of fuel, and reason for each use for each unit listed in GP 003.	Minn. R. 7007.0800, subps. 4 & 5
Obtain and retain fuel supplier certification to demonstrate compliance with sulfur content of fuel. Certification from the fuel supplier includes the name of the oil supplier and a statement from the oil supplier stating that the oil complied with the definition of distillate oil. Applies only to EU 044.	Title I Condition: To avoid classification as a major modification under 40 CFR 52.21

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-7**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 004 Ash Handling Systems**Associated Items:** EU 019 Local Exhaust Control Ash Loadout

EU 048 Ash Loadout Transporters

EU 049 Coal Ash Transporters

EU 050 Quicklime Transporter

SV 023

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.005 grains/dry standard cubic foot . Applies to each stack/vent individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Minn. R. 7011.0715, subp. 1(A); Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2
Particulate Matter < 10 micron: less than or equal to 0.005 grains/dry standard cubic foot . Applies to each stack/vent individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity using 6-minute Average . Applies to each stack/vent individually.	Minn. R. 7011.0715, subp. 1(B)
TESTING REQUIREMENTS	hdr
Performance Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup to measure Total Particulate Matter and PM-10 emissions.	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-8**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item: GP 006 Fluidized Bed Incinerators (EU035, EU036, EU037)****Associated Items:** CE 028 Fabric Filter - High Temperature, i.e., T>250 Degrees F

CE 029 Venturi Scrubber

CE 030 Electrostatic Precipitator - High Efficiency

CE 031 Fabric Filter - High Temperature, i.e., T&gt;250 Degrees F

CE 032 Venturi Scrubber

CE 033 Electrostatic Precipitator - High Efficiency

CE 034 Fabric Filter - High Temperature, i.e., T&gt;250 Degrees F

CE 035 Venturi Scrubber

CE 036 Electrostatic Precipitator - High Efficiency

CE 048 Other

CE 049 Other

CE 050 Other

EU 035 Fluidized Bed Sewage Sludge Incinerator 1

EU 036 Fluidized Bed Sewage Sludge Incinerator 2

EU 037 Fluidized Bed Sewage Sludge Incinerator 3

SV 039

SV 040

SV 041

What to do	Why to do it
A. EMISSION LIMITS	hdr
Emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable 40 CFR 60 emission limit for particulate matter and opacity. (The term "startup" is defined in this permit. The terms "shutdown" and "malfunction" are defined in 40 CFR 60.2)	40 CFR 60.8(c) regarding excess emissions
A.01. Particulate Matter	hdr
A.01.a. NSPS and State Performance Standard Particulate testing	hdr
Front-half Particulate Matter: less than or equal to 1.30 lbs/ton dry sludge input. Limit applies to each unit EU035 to EU037 individually.	40 CFR 60.152(a)(1); Minn. R. 7011.1310, item A
A.01.b. Limit taken to avoid PSD	hdr
Front-half Particulate Matter: less than or equal to 2.57 lbs/hour . Limit applies to each unit EU035 to EU037 individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21
A.02. PM-10	hdr
Particulate Matter < 10 micron: less than or equal to 2.01 lbs/hour . Limit applies to each unit EU035 to EU037 individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y; Minn. R. 7007.0800, subp. 2
A.03. Lead	hdr
Lead: less than or equal to 0.0097 lbs/ton of dry sludge charged. Limit applies to each unit EU035 to EU037 individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21
A.04. Opacity	hdr
Opacity: less than 20 percent opacity using 6-minute Average. Limit applies to each unit EU035 to EU037 individually.	40 CFR 60.152(a)(2); Minn. R. 7011.1310, item B
A.05. Hydrochloric acid	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**
**A-9**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Hydrochloric acid: less than or equal to 0.1 lbs/ton of dry sludge charged. Limit applies to each unit EU035 to EU037 individually. OR THE PERMITTEE MAY CHOOSE THE ALTERNATIVE BELOW Alternative Limit - Hydrochloric acid: less than or equal to 5.76 tons/year as a 12-month rolling sum for all FBIs combined, based on dry tons of sludge incinerated and HCl emission factor from the most recent performance test results.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2
A.06. Mercury	hdr
Mercury: less than or equal to 0.0036 lbs/ton of dry sludge charged. Acceptable methods of measuring mercury include performance testing at the stack or sludge analysis (12-month rolling average). Limit applies to each unit EU035 to EU037 individually. (NFE)	Minn. R. 7007.0800, subp. 2
Mercury: less than or equal to 3200 grams per 24-hour period for all incineration units combined.	40 CFR 61.52(b)
PERMANENT MERCURY LIMITS. In amending, modifying, or reissuing a facility's air emissions permit which contains a provision that restricts mercury emissions from the facility, the commissioner shall, at a minimum, continue that permit restriction at the same level unless the applicant demonstrates that no good cause exists to do so. (NFE)	Minn. Stat. 116.85, subd. 1a(e)
A.07. Volatile HAPs	hdr
HAPs - Volatile: less than or equal to 0.034 lbs/ton of dry sludge charged, measured by Method 18. Limit applies to each unit EU035 to EU037 individually. OR THE PERMITTEE MAY CHOOSE THE ALTERNATIVE BELOW Alternative Limit - HAPs - Volatile: less than or equal to 1.98 tons/year as a 12-month rolling sum for all FBIs combined, based on dry tons of sludge incinerated and Volatile HAPs emission factor from the most recent performance test results.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2
A.08. Metal HAPs	hdr
HAP-Metal: less than or equal to 0.065 lbs/ton of dry sludge charged. Limit applies to each unit EU035 to EU037 individually. This limit is for all metal HAPs combined, including Lead. OR THE PERMITTEE MAY CHOOSE THE ALTERNATIVE BELOW Alternative Limit - HAP-Metal: less than or equal to 3.72 tons/year as a 12-month rolling sum for all FBIs combined, based on dry tons of sludge incinerated and the Metal HAPs emission factor from the most recent performance test results. This limit is for all metal HAPs combined, including Lead.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2
B. OPERATIONAL REQUIREMENTS	hdr
At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, in accordance with 40 CFR 60.11(d) and 40 CFR 61.12(c). Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the commissioner which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source.	40 CFR 60.11(d); 40 CFR 61.12(c)
No changes shall be made in the operation which would potentially increase emissions above the level determined by the most recent performance test, except as allowed by the Total Facility portion of this permit following formal review of a subsequent performance test on the same unit.	40 CFR 61.53(d)(4) regarding operational restrictions
B.01. Operational limits	hdr
B.01.a. Combustion temperature	hdr
Temperature: greater than or equal to 1200 degrees F using 8-hour Block Average for a minimum retention time of 0.3 second measured in the outlet of the FBI, utilizing auxiliary fuel burners if needed to maintain temperature. Limit applies to each unit EU035 to EU037 individually.	Minn. R. 7011.1310 regarding temperature minimums
B.01.b. Sludge charging	hdr
Process Throughput: less than or equal to 38325 tons/year using 12-month Rolling Sum of dry sludge. Limit applies to each unit EU035 to EU037 individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21. Limit taken to avoid classification as a major source under 40 CFR 63.2
Process Throughput: less than or equal to 130 tons/day using 24-hour Block Average of dry sludge. Limit applies to each unit EU035 to EU037 individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S
Process Throughput: less than or equal to 315 tons/day using 24-hour Block Average of dry sludge. This limit applies to the combined throughputs of EU035 to EU037.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-10**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Process Throughput: less than or equal to the 1-hour dry sludge feedrate using 24-hour Block Average, set pursuant to Minn. R. 7017.2025, subp. 3 and subp. 3a, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. Limit applies to each unit EU035 to EU037 individually.	Minn. R. 7017.2025, subp. 3; Minn. R. 7017.2025, subp. 3a
Process Throughput: less than or equal to the 1-hour wet sludge feedrate using 8-hour Block Average, set pursuant to Minn. R. 7017.2025, subp. 3 and subp. 3a, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. Limit applies to each unit EU035 to EU037 individually.	Minn. R. 7017.2025, subp. 3; Minn. R. 7017.2025, subp. 3a
FBI Charging: MCES shall incinerate only conditioned sewage sludge, including spent activated carbon and scum.	Minn. R. 7007.0800, subp. 2
B.01.c. Auxiliary Fuel Usage	hdr
The Permittee shall burn only natural gas or distillate fuel oil as auxiliary fuel. No gaseous, liquid, semi-solid, or solid wastes shall be used as auxiliary fuel.	Minn. R. 7007.0800, subp. 2
B.02. Trigger level (Trigger levels, if exceeded, initiate a requirement for corrective action. The trigger levels themselves are not limits, and there is no penalty for exceeding them.)	hdr
B.02.a. Front-half Particulate Matter Trigger level	hdr
Front-half Particulate Matter trigger level: In its O&M Plan, the Permittee shall establish a trigger level for Front-half Particulate Matter emissions. The trigger level shall reflect the physical capabilities of the process and control equipment to limit emissions, and shall be used to indicate if the process and control equipment are operating properly. If a performance test demonstrates an exceedance of the trigger level, the Permittee shall report the exceedance in the Performance Test Report. (NFE)	Minn. R. 7007.0800, subp. 16(J)
B.02.b. Particulate Matter < 10 micron Trigger level	hdr
Particulate Matter < 10 micron trigger level: In its O&M Plan, the Permittee shall establish a trigger level for Particulate Matter < 10 micron emissions. The trigger level shall reflect the physical capabilities of the process and control equipment to limit emissions, and shall be used to indicate if the process and control equipment are operating properly. If a performance test demonstrates an exceedance of the trigger level, the Permittee shall report the exceedance in the Performance Test Report. (NFE)	Minn. R. 7007.0800, subp. 16(J)
B.02.c. Opacity trigger level	hdr
Opacity trigger level: 10 percent opacity, applied to each unit EU035 to EU037 individually. If the opacity trigger level exceedance is sustained for more than 30 consecutive minutes (except during periods of startup and shutdown) the permittee shall immediately initiate an investigation to determine and correct the cause of the elevated opacity. The Permittee shall log any investigation and corrective action. (NFE)	Minn. R. 7007.0800, subp. 16(J)
B.02.d. Mercury trigger level	hdr
If mercury emissions exceed 1,600 g per 24-hour period for all FBIs combined, demonstrated by sludge sampling according to 40 CFR 61.54, the Permittee shall monitor mercury emissions at intervals of at least once per year by use of Method 105 of appendix B for sludge sampling. The results of monitoring shall be reported and retained according to 40 CFR 61.54 (f) and (g) for sludge sampling. This permit condition is in addition to the other mercury performance testing required by this permit.	40 CFR 61.55(a)
B.03. Emissions exceedances documented in a test report.	hdr
If the FBI's tested emissions exceed permit requirements based on the results of the performance test, the Permittee shall do the following, unless the FBI owner or operator notifies the commissioner within 14 days after the FBI owner or operator receives the performance test report that the owner or operator can show reason for rejecting the data: (NFE)	Minn. Stat. 116.85, subd. 3
CONTINUED: As soon as reasonably possible following discovery (but no later than 24 hours), orally report the exceedance to either the assigned MPCA enforcement staff or permitting staff. (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 3
CONTINUED: Immediately undertake appropriate repairs or modifications to return the FBI to compliance.	CONTINUED. Minn. Stat. 116.85, subd. 3; 40 CFR 60.11(d) regarding good operation; 40 CFR 61.12(c) regarding good operation
CONTINUED: Conduct another performance test or shut the FBI down. If the FBI cannot demonstrate compliance within 60 days of the report of initial exceedance, the FBI shall be shut down on the 61st day after the report of the exceedance. The performance test shall be conducted and the test report received within those 60 days. (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-11

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

CONTINUED: If FBI shutdown was required due to noncompliance as noted above, the Permittee may restart the FBI for the purposes of compliance testing, provided that at least a 10-day notification has been provided to the MPCA. The Permittee is allowed to operate the non-compliant FBI until the completion of the test, after which the FBI must be shut down. The FBI may be restarted only after the Permittee receives notice from the MPCA that it has achieved compliance with the emissions standards or restarts for the purpose and duration of additional testing after further repair or operational changes. (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 3
B.04. Operator Training	hdr
Operator Training: The Permittee shall implement a training schedule to provide training to the FBI operators. Conduct initial training prior to Initial Startup. (NFE)	Minn. R. 7007.0800, subp. 16(J)
Personnel who shall be trained. The training program shall train personnel who have responsibilities which affect air emissions from a FBI. (NFE)	Minn. R. 7007.0800, subp. 16(J)
Personnel must be trained prior to assuming new job-related activities affecting air emissions. (NFE)	Minn. R. 7007.0800, subp. 16(J)
Operator training shall address the following issues: A. a summary of the applicable state rules, federal regulations, and other requirements to the activities described in the facility's air emissions permit; B. a description of basic combustion theory applicable to the facility's FBIs; C. procedures for feeding sludge and other materials; D. FBI start-up, shutdown, and malfunction procedures; E. procedures for maintaining proper combustion air levels; F. procedures for operating the FBI within the emission limits established in the permit; G. procedures for responding to periodic upset or off-specification conditions; H. procedures for monitoring FBI emissions; I. procedures for reporting and recordkeeping; J. timetables and procedures for routine inspection and maintenance of equipment affecting air emissions; and K. procedures for activating communications and alarm systems (NFE)	Minn. R. 7007.0800, subp. 16(J)
The permittee shall update the operator training materials to reflect changes in operating procedures. The permittee shall make the updates at least once a year. (NFE)	Minn. R. 7007.0800, subp. 2
C. TESTING REQUIREMENTS	hdr
C.01. General performance testing	hdr
Provide: (1) Sampling ports adequate for test methods applicable to each source. (2) Safe sampling platform(s). (3) Safe access to sampling platform(s). (4) Utilities for sampling and testing equipment. (5) Any other facilities that the Administrator needs to safely and properly test a source.	40 CFR 60.8(e) as applicable; 40 CFR 61.13(d) as applicable
Dry sludge charging rate. With each performance test, determine the dry sludge charging rate in accordance with Minn. R. 7011.1325, subp. 3	Minn. R. 7011.1325, subp. 3
Wet sludge charging rate. With each performance test, determine the wet sludge charging rate in wet tons per hour. This requirement applies to each unit EU035 to EU037 individually.	Minn. R. 7017.2025, subp. 2
C.02. Particulate Matter, PM-10, and Opacity Performance Testing	hdr
Initial Performance Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup to measure particulate matter and opacity emissions. This timetable applies to each unit EU035 to EU037 individually.	40 CFR 60.8(a) regarding performance test timetable
Performance Test: due before end of each calendar year following Initial Startup to measure PM emissions. This schedule applies to each unit EU035 to EU037 individually. Testing frequency may be relaxed from once a year to once every three years according to the following equation and conditions: $X = T / A \times 100\%$ A = most stringent particulate matter emission limit in this permit T = particulate matter emission measured during test If X is less than or equal to 60% for two or more consecutive years, then the test frequency may be reduced to once every three years. If a subsequent performance test results in X greater than 60%, the testing frequency shall revert back to the original yearly basis until subsequent yearly testing produces two consecutive tests meeting the above criteria for a three-year test frequency. The Permittee shall conduct performance testing on at least one different FBI every calendar year.	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-12**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Performance Test: due before end of each calendar year following Initial Startup to measure PM10 emissions. This schedule applies to each unit EU035 to EU037 individually. Testing frequency may be relaxed from once a year to once every three years according to the following equation and conditions: $X = T / A \times 100\%$ A = most stringent PM-10 emission limit in this permit T = PM-10 emission measured during test If X is less than or equal to 60% for two or more consecutive years, then the test frequency may be reduced to once every three years. If a subsequent performance test results in X greater than 60%, the testing frequency shall revert back to the original yearly basis until subsequent yearly testing produces two consecutive tests meeting the above criteria for a three-year test frequency. The Permittee shall conduct performance testing on at least one different FBI every calendar year.	Minn. R. 7017.2020, subp. 1
If after 30 days notice for an initially scheduled performance test for particulate or opacity, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, notify the commissioner as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the commissioner by mutual agreement.	40 CFR 60.8(d) regarding changes after the 30-day notice
Conduct PM-10 tests in accordance with Minn. R. 7017.2060, subp. 4.	Minn. R. 7017.2060, subp. 4
Conduct Particulate Matter and Opacity tests according to the requirements of this permit and Minn. R. 7017.2001 to 7017.2060.	Minn. R. 7011.1325, subp. 1
Test methods and procedures for particulate matter. Comply with the test methods and procedures found in Minn. R. 7011.1325.	40 CFR 60.154; Minn. R. 7011.1325
PERFORMANCE TEST METHODS Utilize the following methods: A. Method 1 for sample and velocity traverses; B. Method 2 for volumetric flow rate; C. Method 3 for gas analysis; and D. Method 5 for concentration of particulate matter and associated moisture content (without condensibles).	Minn. R. 7011.1320; 40 CFR 60.154(b)(2) regarding methods
Sampling time for Method 5. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.015 dscm/min (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the agency.	Minn. R. 7011.1325, subp. 2; 40 CFR 60.154(b)(2) regarding sampling minimums
Each performance test for particulate matter shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the commissioner's approval, be determined using the arithmetic mean of the results of the two other runs.	40 CFR 60.8(f)
During the initial performance test for particulate matter and opacity, the sludge rate monitor, wet scrubber pressure drop, oxygen monitor, FBI temperature monitor, and auxiliary fuel flow monitor required by 40 CFR 60.153(a)(1) through (b)(4) must be installed and operating, and the daily sludge sampling and analysis procedures required under 40 CFR 60.153(b)(5) must be performed.	40 CFR 60.154(d) regarding operating parameters
Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test for particulate matter and opacity.	40 CFR 60.8(c) regarding nonrepresentative testing conditions
For the Initial Performance Test for opacity, opacity shall be measured by conducting observations in accordance with Reference Method 9, pursuant to the conditions described in 40 CFR 60.11(e)(1) through (3). The minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test. Include the results in the test report. This timetable applies to each unit EU035 to EU037 individually.	40 CFR 60.154(b)(6); 40 CFR 60.11(b); 40 CFR 60.11(e)
Record the continuous opacity monitoring data produced during the Initial Performance Test and furnish the commissioner a written report of the monitoring results along with Method 9 and Initial Performance Test results	40 CFR 60.11(e)(4)
C.03. Mercury testing	hdr
C.03.a. Mercury performance testing	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-13**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Performance Test: due before end of each calendar quarter following Initial Startup to measure mercury emissions. This schedule applies to each unit EU035 to EU037 individually. Testing frequency may be relaxed to once every three years according to the following equation and conditions: $X = T / A \times 100\%$ A = most stringent mercury emission limit in this permit T = mercury emission measured during test If X is less than or equal to 50% for three consecutive years, then the test frequency may be reduced to once every three years. If a subsequent performance test results in X is greater than 50%, the testing frequency shall increase to a yearly basis until subsequent yearly testing produces a test meeting the above criteria for a three-year test frequency. Notify the commissioner of all changes to the mercury testing schedule. The Permittee shall conduct performance testing on at least one different FBI every calendar year. (NFE)	Minn. Stat. 116.85, subd. 1a(b) regarding 3-month testing; Minn. Stat. 116.85, subd. 1a(c) regarding relaxed testing; Minn. Stat. 116.85, subd. 1a(d); Minn. R. 7017.2020, subp. 1
In the Performance Test Report for the first Performance Test (conducted before end of the first quarter following Initial Startup), include the level of mercury control achieved through use of the mercury additive. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding mercury control
Measure mercury emissions using Method 101A in 40 CFR 61, Appendix B.	40 CFR 61.53(d)(2)
During mercury performance testing, the minimum sample volume shall be 1.7 dscm and the minimum sample run time shall be one hour.	40 CFR 61.53(d)(4) regarding representative sampling
Records of mercury emission test results and other data needed to determine total mercury emissions shall be retained at the source and shall be made available, for inspection by the commissioner for a minimum of 5 years.	40 CFR 61.53(d)(6); Minn. R. 7007.0800, subp. 5(C) regarding mercury records
For each run, the performance test report shall include pounds per hour mercury additive feedrate and the average temperature at the location where mercury additive is introduced in the flue gas stream. This requirement applies to each unit EU035 to EU037 individually. (NFE)	Minn. R. 7007.0800, subp. 2
C.03.b. Sludge testing for mercury	hdr
C.03.b.(1) Sludge testing requirements under 40 CFR 61, Subpart E	hdr
Comply with the following conditions:	40 CFR 61.53(d)(1)
CONTINUED. Use Method 105 of 40 CFR 61, Appendix B	CONTINUED. 40 CFR 61.54(a)
CONTINUED. Conduct a sludge test within 90 days of startup	CONTINUED. 40 CFR 61.54(a)(2)
CONTINUED. Mercury Sludge Sampling Test Notification (written): due 30 days before Sludge Sampling Test	CONTINUED. 40 CFR 61.54(b)
CONTINUED. Sample sludge in accordance with 40 CFR 61.54(c).	CONTINUED. 40 CFR 61.54(c)
CONTINUED. Measure mercury emissions in accordance with 40 CFR 61.54(d)	CONTINUED. 40 CFR 61.54(d)
CONTINUED. No changes in the operation of a plant shall be made after a sludge test has been conducted which would potentially increase mercury emissions above the level determined by the most recent sludge test, until the new emission level has been estimated by calculation and the results reported to the commissioner.	CONTINUED. 40 CFR 61.54(e)
CONTINUED. All sludge samples shall be analyzed for mercury content within 30 days after the sludge sample is collected. Each determination shall be reported to the commissioner by a registered letter dispatched within 15 calendar days following the date such determination is completed.	CONTINUED. 40 CFR 61.54(f)
CONTINUED. Records of sludge sampling, charging rate determination and other data needed to determine mercury content of wastewater treatment plant sludges shall be retained at the source and made available, for inspection by the commissioner for a minimum of 5 years.	CONTINUED. 40 CFR 61.54(g); Minn. R. 7007.0800, subp. 5(C) regarding mercury records
CONTINUED. Report: due 30 days after end of each calendar half-year after Initial Startup of any FBI. (The report shall contain the results of monthly mercury sampling of the mixed sludge charged to the FBIs).	CONTINUED. Minn. R. 7007.0800, subp. 4
C.03.b.(2) State sludge sampling requirements	hdr
The permittee shall sample, handle, prepare and analyze the sludge cake for mercury content once per month in accordance with the procedures described in 40 CFR 61.54(c)(1), Method 105 in appendix B - Determination of Mercury in Wastewater Treatment Plant Sewage Sludges. (NFE)	Minn. R. 7007.0800, subp. 2
The permittee shall collect and analyze samples of the plant influent for a 14 day period within the first month of each calendar quarter to determine the mercury concentration and mass load. (NFE)	Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-14**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

C.03.b.(3) Alternative to mercury performance testing	hdr
The Permittee may, at its own discretion, pursue the following procedure as an alternative to performance testing to determine mercury in air emissions. This schedule applies to each unit EU035 to EU037 individually. (The Permittee must also continue to comply with the mercury measurement requirements of 40 CFR 61, Subpart E.) (NFE)	Minn. Stat. 116.85, subd. 1a(b) regarding testing alternatives
CONTINUED. Using performance test data and sampling data as needed, derive (if possible) a method to calculate mercury stack emissions by correlating mercury emission rates, mercury control additive feedrates, and sludge mercury concentrations. (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 1a(b) regarding testing alternatives
CONTINUED. After twelve consecutive quarters of mercury performance testing have been completed, submit the mercury emission rate calculation method to the commissioner for approval. The mercury emission rate calculation must provide a reasonable estimate of mercury emissions to be acceptable. (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 1a(b) regarding testing alternatives
CONTINUED. Upon approval by the commissioner, monthly sludge sampling and analysis combined with mercury control equipment operating parameters will be used to determine mercury emissions as an alternative to mercury performance testing. (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 1a(b) regarding testing alternatives
CONTINUED. Report: due 30 days after end of each calendar half-year following Initial Startup (The report shall contain the monthly mercury sample analysis of the mixed sludge charged to the FBIs, the quarterly plant influent sample analysis, and the estimated mercury emissions to the air.). (NFE)	CONTINUED. Minn. Stat. 116.85, subd. 1a(b) regarding testing alternatives
C.04. Other performance testing	hdr
Performance Test: due before end of each calendar year following Initial Startup for Metals (antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium). The tests shall be conducted at an interval not to exceed 18 months between test dates. This timetable applies to each unit EU035 to EU037 individually. Testing frequency may be relaxed from once a year to once every five years according to the following equation and conditions:	Minn. R. 7017.2020, subp. 1
CONTINUED $X = T / A \times 100\%$ A = most stringent HAP-Metal emission limit in this permit T = HAP-Metal emission measured during test If X is less than or equal to 60% for two or more consecutive years, then the test frequency may be reduced to once every five years. If a subsequent performance test results in X greater than 60%, the testing frequency shall revert back to the original yearly basis until subsequent yearly testing produces two consecutive tests meeting the above criteria for a five-year test frequency. The Permittee shall conduct performance testing on at least one different incinerator every two years. This permit condition does not supercede any other mercury testing requirements in this permit.	CONTINUED Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each calendar year following Initial Startup for Volatile HAPs, measured by Method 18. The tests shall be conducted at an interval not to exceed 18 months between test dates. This timetable applies to each unit EU035 to EU037 individually. Testing frequency may be relaxed from once a year to once every five years according to the following equation and conditions:	Minn. R. 7017.2020, subp. 1
CONTINUED $X = T / A \times 100\%$ A = most stringent Volatile HAPs emission limit in this permit T = Volatile HAPs emission measured during test If X is less than or equal to 60% for two or more consecutive years, then the test frequency may be reduced to once every five years. If a subsequent performance test results in X greater than 60%, the testing frequency shall revert back to the original yearly basis until subsequent yearly testing produces two consecutive tests meeting the above criteria for a five-year test frequency. The Permittee shall conduct performance testing on at least one different FBI every two years.	CONTINUED Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each calendar year following Initial Startup for Hydrogen Chloride (HCl). The tests shall be conducted at an interval not to exceed 18 months between test dates. This timetable applies to each unit EU035 to EU037 individually. Testing frequency may be relaxed from once a year to once every five years according to the following equation and conditions:	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-15**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

<p>CONTINUED</p> <p><math>X = T / A \times 100\%</math></p> <p>A = most stringent Hydrogen Chloride emission limit in this permit</p> <p>T = Hydrogen Chloride emission measured during test</p> <p>If X is less than or equal to 60% for two or more consecutive years, then the test frequency may be reduced to once every five years. If a subsequent performance test results in X greater than 60%, the testing frequency shall revert back to the original yearly basis until subsequent yearly testing produces two consecutive tests meeting the above criteria for a five-year test frequency.</p> <p>The Permittee shall conduct performance testing on at least one different FBI every two years.</p>	CONTINUED Minn. R. 7017.2020, subp. 1
Performance Test: due 180 days after Initial Startup to measure dioxins and furans, pursuant to Minn. R. 7017.2060, subp. 7, on at least one of the units EU035 to EU037. (NFE)	Minn. R. 7007.0800, subp. 2
D. MONITORING REQUIREMENTS	hdr
(see also Testing Requirements)	hdr
D.01. Requirement to install and operate	hdr
Monitors for oxygen, opacity, sludge charging rate, wet scrubber pressure drop, auxiliary fuel flow, FBI outlet temperature, and FBI bed temperature shall be installed and operational prior to conducting performance tests under 40 CFR Sec. 60.8.	40 CFR 60.13(b)
Install monitors for sludge charging rate, wet scrubber pressure drop, auxiliary fuel flow, FBI outlet temperature, and FBI bed temperature such that representative measurements of process parameters from the affected facility are obtained.	40 CFR 60.13(f) for monitors other than CEMS and COMS
Monitoring Data: Reduce all oxygen, sludge charging rate, wet scrubber pressure drop, auxiliary fuel flow, FBI outlet temperature, and FBI bed temperature monitor data to 1-hour averages, in accordance with 40 CFR 60.13(h). 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.	40 CFR 60.13(h) regarding continuous monitoring systems other than COMS
D.01.a. Sludge charging rate monitor - install and operate	hdr
Install, calibrate, maintain, and operate a flow measuring device which can be used to determine either the mass or volume of sludge charged to the FBI. The flow measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5$ percent over its operating range. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(a)(1) for the need to have a monitor; Minn. R. 7011.1315, item A
D.01.b. Wet Scrubber Pressure Drop monitor - install and operate	hdr
Install, calibrate, maintain and operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the Wet Scrubber. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within $\pm 250$ pascals ( $\pm 1$ inch water gauge). This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(b)(1) for the need to have a monitor
D.01.c. Oxygen CEMS - install and operate	hdr
Install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content of the FBI exhaust gas of each FBI. The oxygen monitor shall be located upstream of any rabble shaft cooling air inlet into the FBI exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of $\pm 5$ percent over its operating range. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(b)(2) regarding the need to have a monitor
CEMS Monitor Design: Each oxygen CEMS shall be designed to complete a minimum of one cycle of sampling, analyzing, and data recording in each 15-minute period.	40 CFR 60.13(e)(2)
D.01.d. Temperature monitor - install and operate	hdr
Install, calibrate, maintain and operate temperature measuring devices in the bed of the FBI. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5$ percent over its operating range. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(b)(3) regarding the need to have a bed monitor
Install, calibrate, maintain and operate temperature measuring devices in the outlet of the FBI. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5$ percent over its operating range. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(b)(3) regarding the need to have an outlet monitor
D.01.e. Fuel flow monitor - install and operate	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-16**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Install, calibrate, maintain, and operate a device for measuring the auxiliary fuel flow to each FBI. The flow measuring device shall be certified by the manufacturer to have an accuracy of $\pm 5$ percent over its operating range. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(b)(4) regarding the need to have a monitor
D.01.f. Opacity monitor - install and operate	hdr
Emissions Monitoring: The owner or operator shall use a COMS to measure opacity emissions. This requirement applies to each unit EU035 to EU037 individually.	Minn. R. 7017.1006
COMS Monitoring Data: COMS shall reduce all data to 6 minute averages, calculated from all equally spaced consecutive 10-second (or shorter) data points in the 6 minute averaging period.	40 CFR 60.13(e)(1); 40 CFR 60.13(h) regarding opacity averages; Minn. R. 7017.1004, subp. 1(A)
D.01.g. Carbon monoxide monitor - install and operate	hdr
CEMS Installation: Install a carbon monoxide CEMS to measure emissions from each FBI as an indicator of good combustion and destruction of volatile HAPs. This requirement applies to each unit EU035 to EU037 individually. (NFE)	Minn. Stat. 116.85, subd. 1 regarding the need to have a monitor; Minn. R. 7017.1006
Monitoring Data: Reduce all carbon monoxide monitor data to 1-hour averages. 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.	Minn. Stat. 116.85, subd. 1 regarding continuous measurements; Minn. R. 7017.1160
D.02. Monitor Certification	hdr
CEM Certification Test: due 90 days after Quarterly Report (i.e., the first excess emissions report required for the CEMS) but not later than 30 days after the Initial Performance Test. Follow the Performance Specifications listed in 40 CFR pt. 60, Appendix B.	40 CFR 60.13(c) regarding CEMS; 40 CFR 60.13(f) regarding CEMS; Minn. R. 7017.1050, subp. 1 regarding CEMS
COMS Certification Test: due 90 days after Quarterly Report (i.e., the first excess emissions report required for the COMS) but not later than 30 days after the Initial Performance Test. Follow the Performance Specifications listed in 40 CFR pt. 60, Appendix B.	40 CFR 60.13(c) regarding COMS; 40 CFR 60.13(f) regarding COMS; Minn. R. 7017.1050, subp. 1 regarding COMS
D.03. QA/QC	hdr
D.03.a. Wet Scrubber Pressure Drop monitor - QA/QC	hdr
Calibrate the Wet Scrubber Pressure Drop monitor on an annual basis in accordance with the manufacturer's instructions.	40 CFR 60.153(b)(1) for annual calibration
D.03.b. CEMS QA/QC	hdr
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F shall be used to determine out-of-control periods for CEMS.	40 CFR 60.153(b)(2) regarding daily calibration; 40 CFR pt. 60, Appendix F, section 4.1; 40 CFR 60.13(d)(1) regarding CEMS; Minn. R. 7017.1170, subp. 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 as amended and maintain a written QA/QC program available in a form suitable for inspection.	40 CFR pt. 60, Appendix F; 40 CFR 60.13(a) regarding CEMS
D.03.c. Opacity monitor - QA/QC	hdr
COMS 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 COMS according to the QA/QC procedures in Minn. R. 7017.1210	40 CFR 60.13(a) regarding COMS; Minn. R. 7017.1210
Clean the optical surfaces exposed to the effluent gases prior to performing the zero and span drift adjustments, except that for systems using automatic zero adjustments the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.	40 CFR 60.13(d)(1) regarding COMS
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. A span value of 60, 70, or 80 percent opacity must be used unless an alternative span value is approved by the commissioner. 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 60.13(d)
D.04. Continuous monitor operation	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-17**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Continuous Operation: The carbon monoxide 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.	Minn. Stat. 116.85, subd. 1 regarding continuous operation; Minn. R. 7017.1090, subp. 1 regarding the CO CEMS
Continuous Operation: All oxygen, opacity, sludge charging rate, wet scrubber pressure drop, auxiliary fuel flow, FBI outlet temperature, and FBI bed temperature monitors shall be in continuous operation during all periods of emission unit operation. This includes periods of emission unit start-up, shutdown, or malfunction. Exceptions include continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, and other periods allowed by this permit. Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.	40 CFR 60.13(e); 40 CFR 60.153(a)(1) for sludge monitor continuous operation; 40 CFR 60.153(b)(3) regarding continuous outlet temperature monitoring; 40 CFR 60.153(d) regarding exemptions for sludge feedrate and outlet temperature
D.04.a. Continuous FBI bed temperature monitor operation	hdr
Except as allowed by this permit, the temperature monitoring devices at the FBI bed shall be operated continuously and data recorded during all periods of operation of the FBI.	40 CFR 60.153(b)(3) regarding continuous monitoring of the bed
If the particulate matter emission rate measured during the most recent performance test is less than or equal to 0.38 g/kg of dry sludge input (0.75 lb/ton), the Permittee shall not be required to comply with monitoring temperature at the FBI bed, nor its associated recordkeeping. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(d)(2); 40 CFR 60.153(d)(3) regarding incinerator bed temperature records; Minn. R. 7007.0800, subp. 2
D.04.b. Continuous fuel flow monitor operation	hdr
The auxiliary fuel flow measuring device shall be operated continuously and data recorded during all periods of operation of each FBI.	40 CFR 60.153(b)(4) regarding continuous fuel flow monitoring; Minn. R. 7007.0800, subp. 2
D.05. Sewage sludge testing	hdr
D.05.a. Access to sludge	hdr
Provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained.	40 CFR 60.153(a)(2); Minn. R. 7011.1315, item B
D.05.b. Sludge sampling	hdr
Sludge Sampling: Except as allowed by this permit, collect and analyze a grab sample of the sludge fed to each FBI once per day. The dry sludge content and the volatile solids content of the sample shall be determined in accordance with Part 2540 G., "Standard Methods for the Examination of Water and Wastewater", 20th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.	40 CFR 60.153(b)(5)
If the particulate matter emission rate measured during the most recent performance test is less than or equal to 0.38 g/kg of dry sludge input (0.75 lb/ton), the Permittee shall not be required to comply with daily sampling and analysis of sludge, nor its associated recordkeeping. This requirement applies to each unit EU035 to EU037 individually.	40 CFR 60.153(d)(2); 40 CFR 60.153(d)(3) regarding sludge analysis records; Minn. R. 7007.0800, subp. 2
E. RECORDKEEPING	hdr
Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR 60.7(b); Minn. R. 7019.0100, subp. 1
Recordkeeping: The Permittee shall record the average sludge feed rate during all periods of FBI operation for each FBI, in wet tons per hour.	Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp. Y; Minn. R. 7007.0800 subp. 4(B) and 5(C)
Recordkeeping: The owner or operator must retain records of all carbon monoxide 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. (NFE)	Minn. Stat. 116.85, subd. 1 regarding recordkeeping
Recordkeeping: Maintain a file of all measurements, maintenance, reports and records required under 40 CFR 60.7(f) for at least five years.	40 CFR 60.7(f); Minn. R. 7007.0800, subp. 5(C) for the 5-year requirement
Retain at the source and make available, upon request, for inspection by the commissioner for a minimum of five years, records of emission test results and other data required by 40 CFR 61.13(g) needed to determine mercury emissions.	40 CFR 61.13(g); Minn. R. 7007.0800, subp. 5(C) for the 5-year requirement

**TABLE A: LIMITS AND OTHER REQUIREMENTS**
**A-18**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Except as allowed by this permit, retain the following information and make it available for inspection by the Administrator for a minimum of five years: (1) a record of the measured pressure drop of the gas flow through each Wet Scrubber (2) A record of the measured oxygen content of each FBI exhaust gas (3) A record of the rate of sludge charged to each FBI, the measured temperatures of each FBI, the auxiliary fuel flow to each FBI, and the total solids and volatile solids content of the sludge charged to the FBI	40 CFR 60.153(c); Minn. R. 7007.0800, subp. 5(C) for the 5-year requirement
Maintain a record of the identity of all personnel who have received training and the number of training hours. The records shall be provided to the commissioner on demand. (NFE)	Minn. R. 7007.0800, subp. 2
<b>F. REPORTING</b>	hdr
(see also Operational Requirements, Performance Testing Requirements, and Monitoring Requirements)	hdr
<b>F.01. Semiannual Deviations report</b>	hdr
In addition to the requirement found elsewhere in this permit, include the following in the Semiannual Deviations Report:	40 CFR 60.155(a)
CONTINUED. A record of average scrubber pressure drop measurements for each period of 15 minutes duration or more during which the pressure drop of the scrubber was less than, by a percentage specified below, the average scrubber pressure drop measured during the most recent performance test. The percent reduction in scrubber pressure drop for which a report is required shall be determined as follows:	CONTINUED 40 CFR 60.155(a)(1)
CONTINUED (i) For each FBI that achieved an average particulate matter emission rate of 0.38 kg/Mg (0.75 lb/ton) dry sludge input or less during the most recent performance test, a scrubber pressure drop reduction of more than 30 percent from the average scrubber pressure drop recorded during the most recent performance test shall be reported.	CONTINUED 40 CFR 60.155(a)(1)(i)
CONTINUED (ii) For each FBI that achieved an average particulate matter emission rate of greater than 0.38 kg/Mg (0.75 lb/ton) dry sludge input during the most recent performance test, a percent reduction in pressure drop greater than that calculated according to the following equation shall be reported: $P = -111E + 72.15$ where P=Percent reduction in pressure drop, and E=Average particulate matter emissions (kg/megagram)	CONTINUED 40 CFR 60.155(a)(1)(ii)
CONTINUED. A record of average oxygen content in each FBI exhaust gas for each period of 1-hour duration or more that the oxygen content of the FBI exhaust gas exceeds the average oxygen content measured during the most recent performance test by more than 3 percent.	40 CFR 60.155(a)(2)
If the average particulate matter emission rate measured during the Initial Performance Test of an FBI exceeds 0.38 g/kg of dry sludge input (0.75 lb/ton of dry sludge input), include in the Semiannual Deviation Report for each calendar day that a decrease in scrubber pressure drop or increase in oxygen content of exhaust gas is reported a record of the following:	40 CFR 60.155(b)
CONTINUED. Scrubber pressure drop averaged over each 1-hour FBI operating period.	CONTINUED. 40 CFR 60.155(b)(1)
CONTINUED. Oxygen content in the FBI exhaust averaged over each 1-hour FBI operating period.	CONTINUED. 40 CFR 60.155(b)(2)
CONTINUED. Temperatures of the bed and outlet of FBIs averaged over each 1-hour FBI operating period.	CONTINUED. 40 CFR 60.155(b)(3)
CONTINUED. Rate of sludge charged to the FBI averaged over each 1-hour FBI operating period.	CONTINUED. 40 CFR 60.155(b)(4)
CONTINUED. FBI auxiliary fuel use averaged over each 8-hour FBI operating period.	CONTINUED. 40 CFR 60.155(b)(5)
CONTINUED. Moisture and volatile solids content of the daily grab sample of sludge charged to the FBI.	CONTINUED. 40 CFR 60.155(b)(6)
<b>F.02. Initial notifications</b>	hdr
<b>G. CONTROL EQUIPMENT</b>	hdr
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99.9 percent	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99.4 percent collection efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-19**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

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The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Lead: greater than or equal to 96.5 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
H. DEFINITIONS	hdr
FBI: Fluidized bed incinerator	Minn. R. 7007.0800, subp. 2
MERCURY ADDITIVE: The material added to the flue gas stream for the purposes of controlling mercury emissions, such as activated carbon.	Minn. R. 7007.0800, subp. 2
STARTUP (or start-up): the setting in operation of an affected facility for any purpose. For the Fluidized Bed Incinerators startup occurs when sludge charging is resumed after a period of at least three hours when no sludge had been charged.	Minn. R. 7007.0800, subp. 2; 40 CFR 60.2 regarding "startup" definition
INITIAL STARTUP: For the Fluidized Bed Incinerators, initial startup occurs when sludge is first burned in the incinerator for any reason.	Minn. R. 7007.0800, subp. 2
CONTINUOUS EMISSION MONITORING SYSTEM or CEMS includes Oxygen monitoring systems, Carbon Monoxide monitoring systems, and any other systems subject to the definition in Minn. R. 7017.1002, subp. 4.	Minn. R. 7017.1002, subp. 4
CONTINUOUS MONITORING SYSTEM: The total equipment, required under the emission monitoring sections in 40 CFR 60, Subpart O, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. This includes monitors for oxygen, opacity, sludge charging rate, wet scrubber pressure drop, fuel flow, fluidized bed incinerator outlet temperature, and fluidized bed incinerator bed temperature.	40 CFR 60.2 regarding continuous monitoring system
MONITORING DEVICE: The total equipment, required under the monitoring of operations sections in 40 CFR 60, Subpart O, used to measure and record (if applicable) process parameters.	40 CFR 60.2 regarding monitoring device

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-20

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 007 Auxiliary Boilers**Associated Items:** EU 042 Auxiliary Boiler 3

EU 043 Auxiliary Boiler 4

SV 046

SV 047

What to do	Why to do it
A. EMISSION LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 15.37 lbs/million pounds of steam. This requirement applies to each unit individually. OR THE PERMITTEE MAY CHOOSE THE ALTERNATIVE BELOW Alternative Limit - Particulate Matter < 10 micron: less than or equal to 25.82 lbs/calendar day applies to each unit individually AND less than or equal to 3.37 tons/year using 12-month Rolling Sum of both units combined. This limit shall be calculated as follows.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR section 52.1230; 40 CFR pt. 52, subp.Y
CONTINUED Daily emissions (lbs/day) = (Eng * SPng) + (Efo * SPfo)  Where: Eng = particulate matter < 10 micron emission rate of natural gas from the most recent performance test (lbs PM10/lb steam)  SPng = actual daily steam production while burning natural gas (lbs steam/calendar day)  Efo = particulate matter < 10 micron emission rate of fuel oil from the most recent performance test (lbs PM10/lb steam)  SPfo = actual daily steam production while burning fuel oil (lbs steam/calendar day)  This requirement applies to each unit individually.	CONTINUED Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR section 52.1230; 40 CFR pt. 52, subp.Y
CONTINUED 12-month emissions (tons/year) = 12-month sum[((E1ng * M1SPng) + (E1fo * MSP1fo) + (E2ng * M2SPng) + (E2fo * MSP2fo))/2000]  Where: E(i)ng = particulate matter < 10 micron emission rate of natural gas from the most recent performance test (lbs PM10/lb steam)  MSP(i)ng = actual steam production for the given month while burning natural gas (lbs steam/month)  E(i)fo = particulate matter < 10 micron emission rate of fuel oil from the most recent performance test (lbs PM10/lb steam)  MSP(i)fo = actual steam production for the given month while burning fuel oil (lbs steam/month)  2000 = conversion factor (lbs/ton)  This requirement applies to both emission units combined.	CONTINUED Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR section 52.1230; 40 CFR pt. 52, subp.Y
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This requirement applies to each unit individually.	40 CFR 60.43c(c)
The opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.	40 CFR 60.43c(d); 40 CFR 60.8(c) regarding excess emissions; 40 CFR 60.11(c)
B. OPERATIONAL REQUIREMENTS	hdr
Fuel Use: Only natural gas and distillate fuel oil shall be burned as fuel.	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21; Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; 40 CFR 60.42c(e)
Distillate fuel oil may be burned only as a backup fuel when natural gas is unavailable. Economics cannot be an argument for the facility to choose to burn distillate fuel oil in lieu of natural gas. (NFE)	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**
**A-21**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Sulfur Content of Fuel: less than or equal to 0.5 percent as certified by the vendor.	40 CFR 60.42c(d)																										
Production: less than or equal to the steam production rate in lbs/hr using 8-hour block average, set pursuant to Minn. R. 7017.2025, subp. 3 and subp. 3a, based on the values recorded during the most recent MPCA approved performance test while burning distillate fuel oil. Limit applies to each unit individually. Limit applies only while burning distillate fuel oil.	Minn. R. 7017.2025, subp. 3; Minn. R. 7017.2025, subp. 3a																										
Production: less than or equal to the steam production rate in lbs/hr using 8-hour block average, set pursuant to Minn. R. 7017.2025, subp. 3 and subp. 3a, based on the values recorded during the most recent MPCA approved performance test while burning natural gas. Limit applies to each unit individually. Limit applies only while burning natural gas.	Minn. R. 7017.2025, subp. 3; Minn. R. 7017.2025, subp. 3a																										
<p>Fuel Usage: less than or equal to 2484507 gallons/year using 12-month Rolling Sum of distillate fuel oil for both units combined, provided that all distillate fuel oil shipments contain not more than 0.05 percent sulfur by weight as certified by vendor, or</p> <p>If any distillate fuel oil shipment contain greater than 0.05 weight percent sulfur, then the volume of distillate fuel oil burned in EU042 and EU043 expressed as a 12-month rolling sum, shall not exceed the volume determined by the following equation:</p> <p>Distillate fuel oil limit (gallons) = 12-month sum <math>[(8.82 * 2000) / (0.142 * \%S)]</math></p> <p>where:              8.82 = total limited boiler EU042 and EU043 annual SO<sub>2</sub> emissions (tons)              2000 = conversion factor (lbs/ton)              0.142 = emission factor from AP-42, Section 1.3, "Fuel Oil Combustion" (lb/gal)              %S = monthly percent sulfur by weight</p>	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21																										
<p>Production: less than or equal to 438E6 lbs/year using 12-month Rolling Sum of total steam produced from both units combined.</p> <p>During the first 12 months of operation after start-up of either EU042 or EU043, the total heat input to both units shall not exceed the following cumulative totals:</p> <table> <tr> <th>Month</th><th>Steam Production</th></tr> <tr><td>1</td><td>72.0 million lbs.</td></tr> <tr><td>2</td><td>144.0 million lbs.</td></tr> <tr><td>3</td><td>173.4 million lbs.</td></tr> <tr><td>4</td><td>202.8 million lbs.</td></tr> <tr><td>5</td><td>232.2 million lbs.</td></tr> <tr><td>6</td><td>261.6 million lbs.</td></tr> <tr><td>7</td><td>291.0 million lbs.</td></tr> <tr><td>8</td><td>320.4 million lbs.</td></tr> <tr><td>9</td><td>349.8 million lbs.</td></tr> <tr><td>10</td><td>379.2 million lbs.</td></tr> <tr><td>11</td><td>408.6 million lbs.</td></tr> <tr><td>12</td><td>438.0 million lbs.</td></tr> </table>	Month	Steam Production	1	72.0 million lbs.	2	144.0 million lbs.	3	173.4 million lbs.	4	202.8 million lbs.	5	232.2 million lbs.	6	261.6 million lbs.	7	291.0 million lbs.	8	320.4 million lbs.	9	349.8 million lbs.	10	379.2 million lbs.	11	408.6 million lbs.	12	438.0 million lbs.	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21
Month	Steam Production																										
1	72.0 million lbs.																										
2	144.0 million lbs.																										
3	173.4 million lbs.																										
4	202.8 million lbs.																										
5	232.2 million lbs.																										
6	261.6 million lbs.																										
7	291.0 million lbs.																										
8	320.4 million lbs.																										
9	349.8 million lbs.																										
10	379.2 million lbs.																										
11	408.6 million lbs.																										
12	438.0 million lbs.																										
At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, in accordance with 40 CFR 60.11(d).	40 CFR 60.11(d)																										
C. TESTING REQUIREMENTS	hdr																										
C.1. Opacity Testing	hdr																										
Performance Test: due 180 days after Initial Startup or within 60 days of achieving maximum capacity for opacity using Method 9. Opacity observations shall be conducted and reported, pursuant to the conditions described in 40 CFR 60.11(e)(1)-(3). This requirement applies to each unit individually	40 CFR 60.8(a); 40 CFR 60.45c(a); 40 CFR 60.11(b) regarding the method; 40 CFR 60.11(e)(1)-(3)																										
The minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test.	40 CFR 60.11(b) regarding minimum time																										
Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.	40 CFR 60.8(c) regarding nonrepresentative testing conditions																										
If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, notify the commissioner as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the commissioner by mutual agreement.	40 CFR 60.8(d) regarding changes after the 30-day notice																										



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-22**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

C.2. PM-10 Testing	hdr
Performance Test: due 180 days after Initial Startup or within 60 days of achieving maximum capacity for Particulate Matter < 10 micron. This requirement applies to each unit individually. Separate tests shall be conducted for distillate fuel oil and natural gas.	Title I Condition: State Implementation Plan for PM10; 40 CFR section 52.1230; 40 CFR pt. 52, subp.Y
C.3. NOx Testing	hdr
Performance Test: due 180 days after Initial Startup or within 60 days of achieving maximum capacity for Nitrogen Oxides. This is a one-time stack test to validate the appropriateness of the AP-42 emission factor of 0.12 lb per MMBtu heat input, using distillate fuel oil, for calculating potential to emit. This requirement applies to each unit individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21
D. MONITORING REQUIREMENTS	hdr
SO2 Monitoring: Obtain fuel supplier certification to demonstrate compliance with SO2 limit in lieu of performance testing. Certification from the fuel supplier includes the name of the oil supplier and a statement from the oil supplier stating that the oil complies with the definition of distillate oil.	40 CFR 60.44c(h); 40 CFR 60.48c(f)
E. RECORDKEEPING	hdr
Steam production monitoring: Record the amount of steam produced by EU042 and EU043 during each calendar month.	Minn. R. 7007.0800, subp. 4
Recordkeeping: Record the amount of each fuel combusted each month. These records could be in the form of fuel bills or meter readings.	40 CFR 60.48c(g)
Recordkeeping: Record monthly the 12-month Rolling Sum of total operating hours from both units combined.	Minn. R. 7007.0800, subp. 4
Recordkeeping: If the PM-10 pounds-per-day emission limit is implemented, record daily the total PM-10 emitted for that day from both boilers combined.	Minn. R. 7007.0800, subp. 4
Recordkeeping: Maintain all records for at least five years	40 CFR 60.48c(l); Minn. R. 7007.0800, subp. 5
Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR 60.7(b)
F. REPORTING	hdr
F.1. Performance Test Reporting	hdr
Performance Test Report: Due 45 days after Performance Test	40 CFR 60.48c(b)
F.2. Periodic reports	hdr
Reporting: Submit reports on sulfur limits as part of the Semiannual Deviations Report. The reports must include: (a) calendar dates covered in the reporting period; (b) records of fuel supplier certification and a certified statement that the records represent all fuel combusted (Fuel supplier certification must include the name of the oil supplier and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil); (c) 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken (d) Each 30-day average percent of potential SO2 emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.	40 CFR 60.48c(d); 40 CFR 60.48c(e) regarding all applicable reporting requirements; 40 CFR 60.48c(f)
Reporting: Report reasons for instances of distillate fuel oil use, along with a justification of its use in lieu of natural gas. Include this information as part of the Semiannual Deviations Report. (NFE)	Minn. R. 7007.0800, subp. 2
F.3. Initial Notifications	hdr
Submit the following notifications. These notifications must include the design heat input capacity of the affected unit and identification of fuels to be combusted.	40 CFR 60.48c(a)
F.3.a. Notification of the Date Construction	hdr
F.3.b. Notification of the Actual Date of Initial Startup	hdr
F.4. Other Notifications	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant  
Permit Number: 12300053 - 005

Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. (The commissioner may request additional relevant information subsequent to this notice.	40 CFR 60.7(a)(4)
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# TABLE A: LIMITS AND OTHER REQUIREMENTS

A-24

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 008 Alkaline Stabilization Cell Ventilation

**Associated Items:** EU 038 Alkaline Stabilization Cell

EU 039 Alkaline Stabilization Cell

EU 040 Alkaline Stabilization Cell

EU 041 Alkaline Stabilization Loading Area

SV 042

SV 043

SV 044

SV 045

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.005 grains/dry standard cubic foot . Applies to each stack/vent individually. OR THE PERMITTEE MAY CHOOSE THE ALTERNATIVE BELOW Alternative Limit - Total Particulate Matter: less than or equal to 2.3 tons as a 12-month Rolling Sum. This requirement applies to each stack/vent individually, and shall be calculated as follows.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Minn. R. 7011.0715, subp. 1(A); Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2
CONTINUED 12-month emissions (tons/year) = 12-month sum[(E * C * FO)/2000]  Where: E = total particulate matter exhaust concentration from the most recent performance test of the ID fan stack/vent (lbs PM/dscf)  C = ID fan capacity (dscf/hour)  FO = total operating hours of the ID fan for the given month (hours)  2000 = conversion factor (lbs/ton)	CONTINUED Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Minn. R. 7011.0715, subp. 1(A); Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2
Particulate Matter < 10 micron: less than or equal to 0.005 grains/dry standard cubic foot . Applies to each stack/vent individually. OR THE PERMITTEE MAY CHOOSE THE ALTERNATIVE BELOW Alternative Limit - Particulate Matter < 10 micron: less than or equal to 2.30 tons as a 12-month Rolling Sum AND less than or equal to 25.2 lbs/calendar day. This requirement applies to each stack/vent individually, and shall be calculated as follows.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y; Minn. R. 7007.0800, subp. 2
CONTINUED 12-month emissions = 12-month sum[(E * C * FO)/2000]  Where: E = particulate matter < 10 micron exhaust concentration from the most recent performance test of the ID fan stack/vent (lbs PM10/dscf)  C = ID fan capacity (dscf/hour)  FO = total operating hours of the ID fan for the given month (hours)  2000 = conversion factor (lbs/ton)	CONTINUED Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y; Minn. R. 7007.0800, subp. 2
CONTINUED Daily emissions (lbs/day) = E * C * FO  Where: E = particulate matter < 10 micron exhaust concentration from the most recent performance test of the ID fan stack/vent (lbs PM10/dscf)  C = ID fan capacity (dscf/hour)  FO = total operating hours of the ID fan for the calendar day (hours/day)	CONTINUED Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y; Minn. R. 7007.0800, subp. 2
Opacity: less than or equal to 20 percent opacity using 6-minute Average . Applies to each stack/vent individually.	Minn. R. 7011.0715, subp. 1(B); Minn. R. 7017.2060, subp. 5(D)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-25**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Hydrogen Sulfide: less than or equal to 0.18 lbs/hour from all stack/vents combined	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21																										
OPERATIONAL REQUIREMENTS	hdr																										
<p>Operating Hours: less than or equal to 17520 hours/year using 12-month Rolling Sum for the ID fans associated with SV042, SV043, SV044, SV045. During the first 12 months of operation after start-up of the alkaline stabilization system the total ID fan operating hours shall not exceed the following cumulative totals:</p> <table> <tr> <th>Month</th><th>Operating Hours</th></tr> <tr><td>1</td><td>2,976</td></tr> <tr><td>2</td><td>5,952</td></tr> <tr><td>3</td><td>8,832</td></tr> <tr><td>4</td><td>9,797</td></tr> <tr><td>5</td><td>10,763</td></tr> <tr><td>6</td><td>11,728</td></tr> <tr><td>7</td><td>12,693</td></tr> <tr><td>8</td><td>13,659</td></tr> <tr><td>9</td><td>14,624</td></tr> <tr><td>10</td><td>15,589</td></tr> <tr><td>11</td><td>16,555</td></tr> <tr><td>12</td><td>17,520</td></tr> </table>	Month	Operating Hours	1	2,976	2	5,952	3	8,832	4	9,797	5	10,763	6	11,728	7	12,693	8	13,659	9	14,624	10	15,589	11	16,555	12	17,520	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S;
Month	Operating Hours																										
1	2,976																										
2	5,952																										
3	8,832																										
4	9,797																										
5	10,763																										
6	11,728																										
7	12,693																										
8	13,659																										
9	14,624																										
10	15,589																										
11	16,555																										
12	17,520																										
CONTINUED ("Why to do it" continued from above)	CONTINUED Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2																										
TESTING REQUIREMENTS	hdr																										
Performance Test: due 60 days after achieving maximum capacity but not later than 180 days after initial startup to measure Total Particulate Matter, PM-10, and hydrogen sulfide emissions. Applies to each stack/vent individually.	Minn. R. 7017.2020, subp. 1																										
RECORDKEEPING	hdr																										
Recordkeeping: If the 12-month Rolling Sum Total Particulate Matter limit is implemented, calculate and record monthly the Total Particulate Matter 12-month Rolling Sum for each stack/vent.	Minn. R. 7007.0800, subp. 4																										
Recordkeeping: If the 12-month Rolling Sum PM-10 limit is implemented, calculate and record monthly the PM-10 12-month Rolling Sum for each stack/vent.	Minn. R. 7007.0800, subp. 4																										
Recordkeeping: Record the total operating hours of the individual ID fans for each day of operation.	Minn. R. 7007.0800, subp. 4																										

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-26

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 009 FBI Fabric Filter Baghouse**Associated Items:** CE 028 Fabric Filter - High Temperature, i.e., T>250 Degrees F

CE 031 Fabric Filter - High Temperature, i.e., T&gt;250 Degrees F

CE 034 Fabric Filter - High Temperature, i.e., T&gt;250 Degrees F

What to do	Why to do it
The requirements of GP 009 apply separately to each item listed under GP009.	Minn. R. 7007.0800, subp.2
A. OPERATIONAL REQUIREMENTS	hdr
A.1. Operational limits	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 10.0 inches of water column using 1-Hour Average , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; to avoid classification as a major modification under 40 CFR, pt 51, Appendix S; Minn. R. 7007.0800, subp. 4 and 5;
CONTINUED ("Why to do it" continued from above)	CONTINUED to avoid classification as a major source under 40 CFR 63.2; State Implementation Plan for PM10; 40 CFR 52.1230 & Subp. Y; Minn. R. 7007.0800, subp. 16(J) regarding Baghouse O&M
Alternative Pressure Drop Range: If the Permittee wishes to propose an alternative pressure drop range to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative range. Upon written approval by MPCA, the alternative range shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
A.2. Operating procedures	hdr
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - 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. Corrective actions shall return the pressure drop to within the permitted range 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.	Minn. R. 7007.0800, subp. 4, 5, and 14
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.	Minn. R. 7007.0800, subp. 14
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7007.0800, subp. 16(J) regarding Baghouse O&M
The requirement to operate the control equipment within the prescribed ranges may be waived temporarily for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling mercury emissions upon written approval from the commissioner. A plan must be submitted to the commissioner 30 days prior to undertaking any of the activities identified in this item, with the following information: (1) a description of the proposed project; (2) the outcome the project is designed to evaluate; and (3) the length of time the project will take to complete, not to exceed 14 days. The emission limits associated with the process equipment remain intact, and any emissions data indicative of an emission limit exceedance may be used as credible evidence.	Minn. Stat. 116.07, subd. 4a

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-27**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

B. MONITORING REQUIREMENTS	hdr
B.1. Requirement to have a monitor	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and 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.	Minn. R. 7007.0800, subp. 4 regarding Baghouse monitoring; Minn. R. 7007.0800, subp. 5 regarding Baghouse recordkeeping
The pressure drop monitor shall be designed to complete a minimum of one cycle of sampling, analyzing, and data recording in each 15-minute period.	Minn. R. 7007.0800, subp. 4 regarding Baghouse monitoring
B.2. Monitor operation	hdr
All monitors required by this subject item shall be installed and operational prior to Initial Startup of the FBL.	Minn. R. 7007.0800, subp. 4(D) regarding Baghouse monitoring
B.3. Data reduction	hdr
Monitoring Data: For all monitors required by this subject item, reduce all data to 1-hour averages. 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Record all 1-hour averages.	Minn. R. 7007.0800, subp. 4 regarding Baghouse monitoring; Minn. R. 7007.0800, subp. 5 regarding ESP recordkeeping
C. RECORDKEEPING	hdr
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.	Title I Condition: Monitoring for Limit taken to avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4, 5 and 16(J)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-28

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 010 FBI Venturi Scrubbers**Associated Items:** CE 029 Venturi Scrubber

CE 032 Venturi Scrubber

CE 035 Venturi Scrubber

What to do	Why to do it
(See also the Fluidized Bed Incinerator portion of this permit for additional control equipment requirements.)	hdr
A. OPERATIONAL REQUIREMENTS	hdr
A.1. Operational limits	hdr
Pressure Drop: greater than or equal to 10.0 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S;
("Why to do it" continued from above)	CONTINUED Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2; Title 1 Condition: State Implementation Plan for PM10; 40 CFR 52.1230 & Subp. Y; Minn. R. 7007.0800, subp. 16(J) regarding Venturi O&M
Alternative Wet Scrubber Operational Limits: If the Permittee wishes to propose an alternative Wet Scrubber Operational Limit to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative limits. Upon written approval by MPCA, the alternative limit shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
A.2. Operating procedures	hdr
The Permittee shall operate and maintain the Wet Scrubber at all times that any process equipment controlled by the Wet Scrubber is operating.	Minn. R. 7007.0800, subp. 16(J) regarding Venturi O&M
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the Wet Scrubber or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range 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 Wet Scrubber. The Permittee shall keep a record of the type and date of any corrective action taken for each Wet Scrubber.	Minn. R. 7007.0800, subp. 16(J) regarding Venturi O&M
The requirement to operate the control equipment within the prescribed ranges may be waived temporarily for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling mercury emissions upon written approval from the commissioner. A plan must be submitted to the commissioner 30 days prior to undertaking any of the activities identified in this item, with the following information: (1) a description of the proposed project; (2) the outcome the project is designed to evaluate; and (3) the length of time the project will take to complete, not to exceed 14 days. The emission limits associated with the process equipment remain intact, and any emissions data indicative of an emission limit exceedance may be used as credible evidence.	Minn. R. 7007.0800, subp. 16(J) regarding Venturi O&M
B. MONITORING REQUIREMENTS	hdr
B.1. Requirement to have a monitor	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop upstream and downstream of the Wet Scrubber's venturi throat. The monitoring equipment must be installed, in use, and properly maintained when the monitored Wet Scrubber is in operation.	Minn. R. 7007.0800, subp. 4(D) regarding Venturi monitoring
B.2. Monitor operation	hdr
All monitors required by this subject item, as well as all required Wet Scrubber monitors as described in the FBI subject item, shall be installed and operational prior to Initial Startup of the FBI.	Minn. R. 7007.0800, subp. 4(D) regarding Venturi monitoring

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-29**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

B.3. Data reduction	hdr
Monitoring Data: For all monitors required by this subject item, reduce all data to 1-hour Block Averages. 1-hour averages shall be computed from all data points collected at one-minute intervals over each 1-hour period. Record all 1-hour Block Averages.	Minn. R. 7007.0800, subp. 4 regarding Venturi monitoring; Minn. R. 7007.0800, subp. 5 regarding Venturi recordkeeping
B.4. QA/QC	hdr
Once a month, compare the the pressure monitor with a U-tube manometer.	Minn. R. 7007.0800, subp. 16(J) regarding Venturi O&M



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-30**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 011 FBI Wet Electrostatic Precipitators**Associated Items:** CE 030 Electrostatic Precipitator - High Efficiency

CE 033 Electrostatic Precipitator - High Efficiency

CE 036 Electrostatic Precipitator - High Efficiency

What to do	Why to do it
A. OPERATIONAL REQUIREMENTS	hdr
A.1. Operational limits	hdr
WESP Secondary Voltage: greater than or equal to 10.0 kilovolts, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S;
CONTINUED ("Why to do it" continued from above)	CONTINUED Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2; Title 1 Condition: State Implementation Plan for PM10; 40 CFR 52.1230 & Subp. Y; Minn. R. 7007.0800, subp. 16(J) regarding WESP O&M
WESP Inlet Temperature Trigger Level: less than 500 degrees F, measured to two significant digits. If a trigger level is exceeded, the permittee shall immediately initiate an investigation to determine and correct the cause of the abnormal conditions.	Minn. R. 7007.0800, subp. 16(J) regarding WESP O&M
WESP Outlet Temperature Trigger Level: less than 300 degrees F, measured to two significant digits. If a trigger level is exceeded, the permittee shall immediately initiate an investigation to determine and correct the cause of the abnormal conditions.	Minn. R. 7007.0800, subp. 16(J) regarding WESP O&M
Alternative WESP Secondary Voltage Limit: If the Permittee wishes to propose an alternative WESP Secondary Voltage Limit to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative limit. Upon written approval by MPCA, the alternative limit shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
Alternative WESP Trigger Level: If the Permittee wishes to propose an alternative WESP Trigger Level to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative level. Upon written approval by MPCA, the alternative level shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
A.2. Operating procedures	hdr
The Permittee shall operate and maintain the WESP at all times that any process equipment controlled by the WESP is operating.	Minn. R. 7007.0800, subp. 16(J) regarding WESP O&M
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - an operating parameters is outside the required operating range; or - the WESP or any of its components are found during the inspections to need repair.  Corrective actions shall return the operating parameter to within the permitted range 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 WESP. The Permittee shall keep a record of the type and date of any corrective action taken for each WESP.	Minn. R. 7007.0800, subp. 14
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as presented in Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7007.0800, subp. 16(J) regarding WESP O&M

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-31**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

The requirement to operate the control equipment within the prescribed ranges may be waived temporarily for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling mercury emissions upon written approval from the commissioner. A plan must submitted to the commissioner 30 days prior to undertaking any of the activities identified in this item, with the following information: (1) a description of the proposed project; (2) the outcome the project is designed to evaluate; and (3) the length of time the project will take to complete, not to exceed 14 days. The emission limits associated with the process equipment remain intact, and any emissions data indicative of an emission limit exceedance may be used as credible evidence.	Minn. Stat. 116.07, subd. 4a
<b>B. MONITORING REQUIREMENTS</b>	hdr
<b>B.1. Requirement to have a monitor</b>	hdr
Install, calibrate, maintain, and operate a measuring device to monitor primary and secondary voltage for each transformer/rectifier of each WESP. The minimum accuracy of the monitor is plus-or-minus 0.5 kV. The measuring device shall be operated continuously.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
Install, calibrate, maintain, and operate a measuring device to monitor primary and secondary current for each transformer/rectifier of each WESP. The measuring device shall be operated continuously.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
Install, calibrate, maintain, and operate a measuring device to monitor sparking rate of each WESP. The measuring device shall be operated continuously.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
Install, calibrate, maintain, and operate a measuring device to monitor the number of fields in operation for each WESP. The monitoring device shall be operated continuously.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
Install, calibrate, maintain, and operate a measuring device to monitor the inlet temperature of each WESP. The minimum accuracy of the monitor is plus-or-minus 4 degrees F or 1.4 percent of the measured temperature, whichever is greater. The measuring device shall be operated continuously.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
Install, calibrate, maintain, and operate a measuring device to monitor the outlet temperature of each WESP. The minimum accuracy of the monitor is plus-or-minus 4 degrees F or 1.4 percent of the measured temperature, whichever is greater. The measuring device shall be operated continuously.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
<b>B.2. Monitor operation</b>	hdr
All monitors required by this subject item shall be installed and operational prior to Initial Startup of the FBI.	Minn. R. 7007.0800, subp. 4(D) regarding WESP monitoring
<b>B.3. Data reduction</b>	hdr
Monitoring Data: For all monitors required by this subject item, reduce all data to 1-hour Block Averages. 1-hour averages shall be computed from all data points collected at one-minute intervals over each 1-hour period. Record all 1-hour Block Averages.	Minn. R. 7007.0800, subp. 4 regarding WESP monitoring; Minn. R. 7007.0800, subp. 5 regarding WESP recordkeeping
<b>B.4. QA/QC</b>	hdr
Monitoring Equipment Calibration: Annually calibrate all temperature monitors required by this subject item by comparing them against an instrument of known accuracy. The acceptance criteria is plus-or-minus 4 degrees F.	Minn. R. 7007.0800, subp. 16(J) regarding thermocouple maintenance
Voltmeter zero check: Perform a zero check on the secondary voltage monitor at least once every three weeks. Record the results.	Minn. R. 7007.0800, subp. 16(J) regarding voltmeter maintenance

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-32**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item: GP 013 Alkaline Stabilization and Ash Baghouses****Associated Items:** CE 024 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 037 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 038 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 039 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 040 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 041 Chemical Neutralization

CE 042 Chemical Neutralization

CE 043 Chemical Neutralization

CE 044 Chemical Neutralization

What to do	Why to do it
A. OPERATIONAL REQUIREMENTS	hdr
A.1. Operational limits	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column and less than or equal to 10.0 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. Applies to each control device individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR, pt 51, Appendix S;
CONTINUED ("Why to do it" continued from above)	CONTINUED Title I Condition: Limit taken to avoid classification as a major source under 40 CFR 63.2; Title 1 Condition: State Implementation Plan for PM10; 40 CFR 52.1230 & Subp. Y; Minn. R. 7007.0800, subp. 16(J) regarding baghouse O&M
Alternative Pressure Drop Range: If the Permittee wishes to propose an alternative pressure drop range to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative range. Upon written approval by MPCA, the alternative range shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
A.2. Operating procedures	hdr
The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating. Applies to each control device individually.	Minn. R. 7007.0800, subp. 16(J) regarding fabric filter O&M
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - 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. Corrective actions shall return the pressure drop to within the permitted range 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.	Minn. R. 7007.0800, subp. 14
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.	Minn. R. 7007.0800, subp. 14
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as presented in Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7007.0800, subp. 16(J) regarding fabric filter O&M
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4 regarding fabric filter inspections; Minn. R. 7007.0800, subp. 5 regarding records of inspections.
B. MONITORING REQUIREMENTS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-33**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

B.1. Requirement to have a monitor	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and 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. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4(D) regarding fabric filter monitoring
The pressure drop monitor shall be designed to complete a minimum of one cycle of sampling, analyzing, and data recording in each 15-minute period.	Minn. R. 7007.0800, subp. 4 regarding fabric filter monitoring
B.2. Monitor operation	hdr
All monitors required by this subject item shall be installed and operational prior to initial startup of the emission unit.	Minn. R. 7007.0800, subp. 4 regarding fabric filter monitoring
B.3. Data reduction	hdr
Monitoring Data: For all monitors required by this subject item, reduce all data to 1-hour averages. 1-hour averages shall be computed from four or more data points, one from each 15-minute period. Record all 1-hour averages.	Minn. R. 7007.0800, subp. 4 regarding fabric filter monitoring; Minn. R. 7007.0800, subp. 5 regarding fabric filter recordkeeping
C. RECORDKEEPING	hdr
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.	Minn. R. 7007.0800, subp. 16(J)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-34**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item: GP 014 Three-stage Odor Scrubbers****Associated Items:** CE 041 Chemical Neutralization

CE 042 Chemical Neutralization

CE 043 Chemical Neutralization

CE 044 Chemical Neutralization

What to do	Why to do it
A. OPERATIONAL REQUIREMENTS	hdr
A.1. Operational limits	hdr
Maintain liquid flow in the recirculation loop. Applies to each control device individually.	Title I Condition: Limit taken to avoid classification as a major modification under 40 CFR 52.21; Minn. R. 7007.0800, subp. 16(J) regarding Three-stage Odor Scrubber O&M
pH: greater than or equal to 2.0 and less than or equal to 7.0 in any one of the three stages of the Three-Stage Odor Scrubber concurrently with greater than or equal to 8.0 and less than or equal to 12.5 in the other two stages, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. Applies to each control device individually.	Minn. R. 7007.0800, subp. 16(J) regarding Three-stage Odor Scrubber O&M
Alternative Three-stage Odor Scrubber Operational Limits: If the Permittee wishes to propose an alternative Scrubber Operational Limit to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative limits. Upon written approval by MPCA, the alternative limit shall become an enforceable part of this permit.	Minn. R. 7007.0800, subp. 2
A.2. Operating procedures	hdr
The Permittee shall operate and maintain the Three-stage Odor Scrubber at all times that any process equipment controlled by the Three-stage Odor Scrubber is operating.	Minn. R. 7007.0800, subp. 16(J) regarding Three-stage Odor Scrubber O&M
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pH is outside the required operating range; or - water flow in the recirculation loop is not occurring; or - the Three-stage Odor Scrubber or any of its components are found during the inspections to need repair.  Corrective actions shall return the operating parameters to within the permitted range 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 Three-stage Odor Scrubber. The Permittee shall keep a record of the type and date of any corrective action taken for each Three-stage Odor Scrubber.	Minn. R. 7007.0800, subp. 16(J) regarding Three-stage Odor Scrubber O&M
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as presented in Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7007.0800, subp. 16(J) regarding Three-stage Odor Scrubber O&M
B. MONITORING REQUIREMENTS	hdr
B.1. Requirement to have a monitor	hdr
The Permittee shall install and operate a flow switch to indicate liquid flow within the recirculation loops. The monitoring equipment must be installed, in use, and properly maintained at all times that any process equipment controlled by the Three-stage Odor Scrubber is operating. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4(D) regarding Three-stage Odor Scrubber monitoring
The Permittee shall install, calibrate, maintain, and operate a monitor the necessary monitoring equipment for measuring and recording Stage 1 pH. The measuring device shall be operated continuously at all times that any process equipment controlled by the Three-stage Odor Scrubber is operating. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4(D) regarding Three-stage Odor Scrubber monitoring
The Permittee shall install, calibrate, maintain, and operate the necessary monitoring equipment for measuring and recording Stage 2 pH. The measuring device shall be operated continuously at all times that any process equipment controlled by the Three-stage Odor Scrubber is operating. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4(D) regarding Three-stage Odor Scrubber monitoring

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-35**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

The Permittee shall install, calibrate, maintain, and operate a monitor the necessary monitoring equipment for measuring and recording Stage 3 pH. The measuring device shall be operated continuously at all times that any process equipment controlled by the Three-stage Odor Scrubber is operating. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4(D) regarding Three-stage Odor Scrubber monitoring
The Permittee shall install, maintain, and operate an alarm indication loss of liquid flow in the recirculation loop. The alarm shall be operated continuously at all times that any process equipment controlled by the Three-stage Odor Scrubber is operating. Applies to each control device individually.	Minn. R. 7007.0800, subp. 4(D) regarding Three-stage Odor Scrubber monitoring
B.2. Monitor operation	hdr
All monitors required by this subject item shall be installed and operational prior to initial startup of the Three-stage Odor Scrubber.	Minn. R. 7007.0800, subp. 4(D) regarding Three-stage Odor Scrubber monitoring
B.3. Data reduction	hdr
Monitoring Data: For all monitors required by this subject item (except for the flow switch), reduce all data to 1-hour averages. 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Record all 1-hour averages.	Minn. R. 7007.0800, subp. 4 regarding Three-stage Odor Scrubber monitoring; Minn. R. 7007.0800, subp. 5 regarding Three-stage Odor Scrubber recordkeeping
B.4. QA/QC	hdr
During planned outages, confirm and record that the flow switch delivers a no-flow signal when flow is not occurring in the recirculation loop. Applies to each control device individually.	Minn. R. 7007.0800, subp. 16(J) regarding flow switch maintenance

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-36**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** GP 015 Feed Tanks, Vents, and Cake Bins for Centrifuges**Associated Items:** EU 051 Centrifuge Feed Tanks

EU 052 Centrifuge Vents

EU 053 Cake Bins

What to do	Why to do it
When the process equipment controlled by the Fluidized Bed Incinerator is operating, the Permittee shall record all times when the process equipment emissions are not vented through an operating Fluidized Bed Incinerator (bypass). The Permittee shall record the date of the bypass, the length of time of the bypass, and the reason for the bypass. The Permittee shall report the above information in the Semiannual Deviations Report.	Minn. Stat. 116.07, subd. 4a

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-37

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** EU 026 Paint Booth**Associated Items:** CE 025 Mat or Panel Filter

SV 031

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.0974 grains/dry standard cubic foot of exhaust gas.	Minn. R. 7011.0715, subp. 1A
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0715, subp. 1 B
HAPs - Total: less than or equal to 1.0 tons/year using 12-month Rolling Sum	Title I Condition: Limit to avoid classification as a major source under 40 CFR 63.2
B. RECORDKEEPING	hdr
Recordkeeping: Check and record filter operation and maintenance items daily when paint booth is in operation	Minn. R 7007.0800, subp. 4(B)
Recordkeeping: Maintain a record of type and quantity of paint and thinner/cleanup solvent used, HAP content and density of subject materials, control/destruction efficiency (if applicable), and a monthly calculation of actual HAP emissions expressed as a 12-month rolling sum	Minn. R 7007.0800, subp. 4(B) and 5(C)
C. POLLUTION PREVENTION PLAN	hdr
Failure to meet the goals of the Pollution Prevention Plan will not result in enforcement action. At such time as the permittee no longer uses toxic chemicals in the paint booth facility, the Pollution Prevention reporting requirement of this Permit becomes null and void. Utilization of toxic chemicals at some future time will result in re-imposition of the requirement for Pollution Prevention Planning and Progress Reporting. (NFE)	Minn. R. 7007.0800, subp. 2
C.1. Submittal requirements	hdr
Submittal: due May 15, 2003, and with each subsequent permit application, as long as permittee is utilizing toxic chemicals in painting processes, the Permittee shall submit a pollution prevention plan for each toxic chemical used in the paint booth. The toxic pollution prevention plan must establish a program identifying the specific technically and economically practicable steps that could be taken during the life of the permit, to eliminate or reduce the generation or release of toxic pollutants reported by the facility. (NFE)	Minn. R. 7007.0800, subp. 2
Submittal: due on November 15 of each year following Permit Issuance. The Permittee shall submit an annual progress report to the commissioner. Progress reports are due annually on the anniversary of permit issuance. (NFE)	Minn. R. 7007.0800, subp. 2
C.2. Plan content. At a minimum, the plan must include:	hdr
(1) a policy statement articulating upper management support for eliminating or reducing the release of toxic pollutants at the paint booth (NFE);	Minn. R. 7007.0800, subp. 2
(2) a description of the specific processes releasing toxic pollutants that specifically describes the types, sources, and quantities of toxic pollutants currently being released by the facility (NFE);	Minn. R. 7007.0800, subp. 2
(3) a description of the current and past practices used to eliminate or reduce the release of toxic pollutants at the facility and an evaluation of the effectiveness of these practices (NFE);	Minn. R. 7007.0800, subp. 2
(4) an assessment of technically and economically practicable options available to eliminate or reduce the release of toxic pollutants at the facility, including options such as changing the raw materials, operating techniques, equipment and technology, personnel training, and other practices used at the facility. The assessment may include a cost benefit analysis of the available options (NFE);	Minn. R. 7007.0800, subp. 2
(5) a statement of objectives based on the assessment in clause (4) and a schedule for achieving those objectives. Wherever technically and economically practicable, the objectives for eliminating or reducing the generation of each toxic pollutant at the facility must be expressed in numeric terms based on a specified base year that is the date of Pollution prevention plan inception. (NFE)	Minn. R. 7007.0800, subp. 2
(6) an explanation of the rationale for each objective established for the facility; (NFE)	Minn. R. 7007.0800, subp. 2
(7) a listing of options that were considered not to be economically and technically practicable (NFE); and	Minn. R. 7007.0800, subp. 2
(8) a certification, signed and dated by the facility manager and an officer of the MCES attesting to the accuracy of the information in the plan. (NFE)	Minn. R. 7007.0800, subp. 2
C.3. Progress report content. At a minimum, each progress report must include:	hdr



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-38**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

(1) a summary of each reduction objective established in the plan, including the base year and amount released, and the schedule for meeting each objective (NFE);	Minn. R. 7007.0800, subp. 2
(2) a summary of progress made during the past year, if any, toward meeting each objective established in the plan including the quantity of each toxic pollutant eliminated or reduced (NFE);	Minn. R. 7007.0800, subp. 2
(3) a statement of the methods through which elimination or reduction has been achieved (NFE);	Minn. R. 7007.0800, subp. 2
(4) if necessary, an explanation of the reasons objectives were not achieved during the previous year, including identification of any technological, economic, or other impediments the facility faced in its efforts to achieve its objectives (NFE); and	Minn. R. 7007.0800, subp. 2
(5) a certification, signed and dated by the facility manager and an officer of the MCES, to the accuracy of the information in the progress report. (NFE)	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-39**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** EU 034 Ash Loadout Housekeeping Vacuum**Associated Items:** CE 027 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 033

SV 034

SV 035

SV 036

SV 037

SV 038

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0715, subp. 1A
Particulate Matter < 10 micron: less than or equal to 0.05 grains/dry standard cubic foot	Title I Condition: State Implementation Plan for PM10; 40 CFR section 52.1230; 40 CFR pt. 52, subp.Y
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0715, subp. 1B
Recordkeeping: the Permittee shall maintain a record of shutdown or breakdown including hours of and reason for the the shutdown or breakdown	Minn. R. 7007.0800, subp. 5(C)
Read and record the pressure drop on the baghouse daily	Recordkeeping for limit to avoid classification as a major source under 40 CFR 63.2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-40**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** CE 048 Other**Associated Items:** EU 035 Fluidized Bed Sewage Sludge Incinerator 1

GP 006 Fluidized Bed Incinerators (EU035, EU036, EU037)

What to do	Why to do it
MERCURY CONTROL EQUIPMENT FOR FLUIDIZED BED INCINERATOR	hdr
INSTALL AND OPERATE	hdr
The Permittee shall operate and maintain the mercury control equipment at all times when sludge is being burned. The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. (NFE)	Minn. Stat. 116.07, subd. 4a
The requirement to operate the mercury control equipment may be waived temporarily for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling mercury emissions upon written approval from the commissioner. A plan must be submitted to the commissioner 30 days prior to undertaking any of the activities identified in this item, with the following information: (1) a description of the proposed project; (2) the outcome the project is designed to evaluate; and (3) the length of time the project will take to complete, not to exceed 14 days. (NFE)	Minn. Stat. 116.07, subd. 4a
Install, maintain, and operate at all times a system for monitoring and recording the mercury additive's mass feed rate. (NFE)	Minn. Stat. 116.07, subd. 4a
Install, calibrate, maintain and operate a temperature measuring and recording devices at the location where mercury additive is introduced in the flue gas stream. (NFE)	Minn. Stat. 116.07, subd. 4a
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall describe the proper operation and maintenance of the mercury control equipment in the Operation and Maintenance Plan. (NFE)	Minn. R. 7007.0800, subp. 14 regarding mercury control
Low mercury additive feedrate: Immediately upon discovery of loss of mercury additive flow, initiate measures to restore mercury additive flow as soon as possible. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding inadequate mercury additive feedrate
RECORDKEEPING	hdr
Record the time periods, reasons, and corrective actions regarding the loss of mercury additive flow. (NFE)	Minn. Stat. 116.07, subd. 4a
REPORTING	hdr
Report as a Breakdown any incident of more than one hour duration of mercury control equipment breakdown while sludge is being burned. Comply with the requirements in Minn. R. 7019.1000. (NFE)	Minn. R. 7019.1000, subp. 2 regarding mercury additive feedrate reporting
DEFINITIONS	hdr
MERCURY ADDITIVE: The material added to the flue gas stream for the purposes of controlling mercury emissions, such as activated carbon.	Minn. Stat. 116.07, subd. 4a
8-HOUR BLOCK AVERAGE: The average of all one-hour averages when the emissions unit is operating and combusting sludge measured over three discrete eight-hour periods beginning at midnight (i.e., Midnight to 0800, 0800 to 1600, and 1600 to midnight).	Minn. Stat. 116.07, subd. 4a

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-41

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** CE 049 Other**Associated Items:** EU 036 Fluidized Bed Sewage Sludge Incinerator 2

GP 006 Fluidized Bed Incinerators (EU035, EU036, EU037)

What to do	Why to do it
MERCURY CONTROL EQUIPMENT FOR FLUIDIZED BED INCINERATOR	hdr
INSTALL AND OPERATE	hdr
The Permittee shall operate and maintain the mercury control equipment at all times when sludge is being burned. The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. (NFE)	Minn. Stat. 116.07, subd. 4a
The requirement to operate the mercury control equipment may be waived temporarily for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling mercury emissions upon written approval from the commissioner. A plan must be submitted to the commissioner 30 days prior to undertaking any of the activities identified in this item, with the following information: (1) a description of the proposed project; (2) the outcome the project is designed to evaluate; and (3) the length of time the project will take to complete, not to exceed 14 days. (NFE)	Minn. Stat. 116.07, subd. 4a
Install, maintain, and operate at all times a system for monitoring and recording the mercury additive's mass feed rate. (NFE)	Minn. Stat. 116.07, subd. 4a
Install, calibrate, maintain and operate a temperature measuring and recording devices at the location where mercury additive is introduced in the flue gas stream. (NFE)	Minn. Stat. 116.07, subd. 4a
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall describe the proper operation and maintenance of the mercury control equipment in the Operation and Maintenance Plan. (NFE)	Minn. R. 7007.0800, subp. 14 regarding mercury control
Low mercury additive feedrate: Immediately upon discovery of loss of mercury additive flow, initiate measures to restore mercury additive flow as soon as possible. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding inadequate mercury additive feedrate
RECORDKEEPING	hdr
Record the time periods, reasons, and corrective actions regarding the loss of mercury additive flow. (NFE)	Minn. Stat. 116.07, subd. 4a
REPORTING	hdr
Report as a Breakdown any incident of more than one hour duration of mercury control equipment breakdown while sludge is being burned. Comply with the requirements in Minn. R. 7019.1000. (NFE)	Minn. R. 7019.1000, subp. 2 regarding mercury additive feedrate reporting
DEFINITIONS	hdr
MERCURY ADDITIVE: The material added to the flue gas stream for the purposes of controlling mercury emissions, such as activated carbon.	Minn. Stat. 116.07, subd. 4a
8-HOUR BLOCK AVERAGE: The average of all one-hour averages when the emissions unit is operating and combusting sludge measured over three discrete eight-hour periods beginning at midnight (i.e., Midnight to 0800, 0800 to 1600, and 1600 to midnight).	Minn. Stat. 116.07, subd. 4a

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-42**

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

**Subject Item:** CE 050 Other**Associated Items:** EU 037 Fluidized Bed Sewage Sludge Incinerator 3

GP 006 Fluidized Bed Incinerators (EU035, EU036, EU037)

What to do	Why to do it
MERCURY CONTROL EQUIPMENT FOR FLUIDIZED BED INCINERATOR	hdr
INSTALL AND OPERATE	hdr
The Permittee shall operate and maintain the mercury control equipment at all times when sludge is being burned. The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. (NFE)	Minn. Stat. 116.07, subd. 4a
The requirement to operate the mercury control equipment may be waived temporarily for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling mercury emissions upon written approval from the commissioner. A plan must be submitted to the commissioner 30 days prior to undertaking any of the activities identified in this item, with the following information: (1) a description of the proposed project; (2) the outcome the project is designed to evaluate; and (3) the length of time the project will take to complete, not to exceed 14 days. (NFE)	Minn. Stat. 116.07, subd. 4a
Install, maintain, and operate at all times a system for monitoring and recording the mercury additive's mass feed rate. (NFE)	Minn. Stat. 116.07, subd. 4a
Install, calibrate, maintain and operate a temperature measuring and recording devices at the location where mercury additive is introduced in the flue gas stream. (NFE)	Minn. Stat. 116.07, subd. 4a
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall describe the proper operation and maintenance of the mercury control equipment in the Operation and Maintenance Plan. (NFE)	Minn. R. 7007.0800, subp. 14 regarding mercury control
Low mercury additive feedrate: Immediately upon discovery of loss of mercury additive flow, initiate measures to restore mercury additive flow as soon as possible. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding inadequate mercury additive feedrate
RECORDKEEPING	hdr
Record the time periods, reasons, and corrective actions regarding the loss of mercury additive flow. (NFE)	Minn. Stat. 116.07, subd. 4a
REPORTING	hdr
Report as a Breakdown any incident of more than one hour duration of mercury control equipment breakdown while sludge is being burned. Comply with the requirements in Minn. R. 7019.1000. (NFE)	Minn. R. 7019.1000, subp. 2 regarding mercury additive feedrate reporting
DEFINITIONS	hdr
MERCURY ADDITIVE: The material added to the flue gas stream for the purposes of controlling mercury emissions, such as activated carbon.	Minn. Stat. 116.07, subd. 4a
8-HOUR BLOCK AVERAGE: The average of all one-hour averages when the emissions unit is operating and combusting sludge measured over three discrete eight-hour periods beginning at midnight (i.e., Midnight to 0800, 0800 to 1600, and 1600 to midnight).	Minn. Stat. 116.07, subd. 4a

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-43

02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

Subject Item: CE 051 Other

Associated Items: EU 002 Bar Screens-East

EU 004 Grit Chambers-East

What to do	Why to do it
BIOFILTER	hdr
A. OPERATIONAL REQUIREMENTS	hdr
A.1. Operational limits	hdr
Pressure Drop: greater than or equal to 4.0 inches of water column and less than or equal to 18.0 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. Measure the pressure in the odorous air plenum downstream of the odorous air fans but prior to the point where the duct exits the building. Applies to each control device individually. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding Biofilter O&M
Alternative Biofilter Operational Limits: If the Permittee wishes to propose alternative Biofilter Operational Limits to the one specified in this permit without conducting a performance test, the Permittee shall submit the proposal to MPCA for review. The proposal shall contain control equipment vendor data, actual operating data, or other information as necessary, in order to justify an alternative limits. Upon written approval by MPCA, the alternative limit shall become an enforceable part of this permit. (NFE)	Minn. R. 7007.0800, subp. 2
Control efficiency: greater than or equal to 90 percent control of H2S. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding Biofilter O&M
A.2. Operating procedures	hdr
The Biofilter shall be installed and operating no later than 11/01/2002. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding Biofilter startup
The Permittee shall operate and maintain the Biofilter at all times that any process equipment controlled by the Biofilter is operating. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding Biofilter O&M
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the Biofilter or any of its components are found during the inspections to need repair.  Corrective actions shall return the pressure drop to within the permitted range 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 Biofilter. The Permittee shall keep a record of the type and date of any corrective action taken for each Biofilter. (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding Biofilter O&M
The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as presented in Minn. R. 7011.0075, subp. 2(A) to 2(I). (NFE)	Minn. R. 7007.0800, subp. 16(J) regarding Biofilter O&M
B. MONITORING REQUIREMENTS	hdr
B.1. Requirement to have a monitor	hdr
Monitoring Equipment: The Permittee shall install, calibrate, maintain, and operate the necessary monitoring equipment for measuring and recording pressure drop across the biofilter. The monitoring equipment must be installed, in use, and properly maintained at all times that any process equipment controlled by the Biofilter is operating. Applies to each control device individually. (NFE)	Minn. R. 7007.0800, subp. 4(D) regarding Biofilter monitoring
B.2. Monitor operation	hdr
All monitors required by this subject item shall be installed and operational prior to initial startup of the Biofilter. (NFE)	Minn. R. 7007.0800, subp. 4(D) regarding Biofilter monitoring
B.3. Data reduction	hdr
Monitoring Data: For all monitors required by this subject item, reduce all data to 1-hour averages. 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Record all 1-hour averages. (NFE)	Minn. R. 7007.0800, subp. 4 regarding Biofilter monitoring; Minn. R. 7007.0800, subp. 5 regarding Biofilter recordkeeping

## TABLE B: SUBMITTALS

B-1 02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant  
Permit Number: 12300053 - 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:

AQ Permit Technical Advisor  
Industrial 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:

AQ Compliance Tracking Coordinator  
Industrial 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****B-2** 02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit. Include any required pollution prevention plans. Include an updated Fugitive Control Plan that reflects all operations current at the time of the application submittal due date.	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. This requirement applies to each unit EU035 to EU037 individually.	GP006
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. This requirement applies to each unit individually.	GP007
Notification of the Anticipated Date of Initial Startup	due 30 days before Anticipated Date of Initial Startup. This requirement applies to each unit EU035 to EU037 individually.	GP006
Notification of the Date Construction Began	due 30 days after Start Of Construction (or reconstruction). Submit the name and number of each unit and the date construction of each unit began. This requirement applies to each unit individually.	GP007
Notification of the Date Construction Began	due 30 days after Start Of Construction (or reconstruction). Submit the name and number of each unit and the date construction of each unit began.	GP006
Notification of the date of Equipment Removal/Dismantlement	due 15 days after Equipment Removal and/or Dismantlement. Submit the name and number of each unit and the date the unit was permanently removed from service.	Total Facility
Notification	due 1 days after Discovery of Deviation (Oral Notification of Deviations Endangering Human Health or the Environment): Within 24 hours of discovery, orally notify the Commissioner of any deviation from permit conditions which could endanger human health or the environment.	Total Facility
Notification	due 2 days after Discovery of Deviation (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.	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test for Total Particulate Matter and PM-10 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.	GP004
Testing Frequency Plan	due 60 days after Initial Performance Test for Total Particulate Matter, PM-10, and hydrogen sulfide 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.	GP008



**TABLE B: RECURRENT SUBMITTALS****B-3** 02/05/07

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 005

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 CEM Certification Test or COMS Certification Test, whichever occurs first. (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.	Total Facility
Report	due 30 days after end of each calendar quarter following Initial Startup all 8-Hour Block Average mercury additive feedrates and 8-Hour Block Average temperatures. (NFE)	CE048
Report	due 30 days after end of each calendar quarter following Initial Startup all 8-Hour Block Average mercury additive feedrates and 8-Hour Block Average temperatures. (NFE)	CE049
Report	due 30 days after end of each calendar quarter following Initial Startup all 8-Hour Block Average mercury additive feedrates and 8-Hour Block Average temperatures. (NFE)	CE050
Report	due 30 days after end of each calendar half-year starting 11/15/2002 of any FBI. (The report shall contain the monthly mercury sample analysis of the mixed sludge charged to the FBIs, the quarterly plant influent sample analysis, and the estimated mercury emissions to the air.). (NFE)	GP006
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 11/15/2002. 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. The report shall also contain all instances of Trigger Level exceedances and corrective actions taken.	Total Facility
Submittal	due 30 days after end of each calendar half-year starting 11/15/2002. The Deviations from Requirements Cited as "Title I Condition: State Implementation Plan for PM10" shall be reported with the Semiannual Deviations Report required by this permit. If there were no deviations from any requirements cited as "Title I Condition: State Implementation Plan for PM10", the Permittee shall indicate such in the Semiannual Deviations Report.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 06/28/2004 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner, and to the U.S. EPA Regional Office in Chicago. The report covers all deviations experienced during the calendar year.	Total Facility

**APPENDIX A****Insignificant Activities and General Applicable Requirements**

Facility Name: Metropolitan Wastewater Treatment Plant  
Permit Number: 12300053

The table below lists the insignificant activities that are currently at the Facility and their associated general applicable requirements.

<b>Minn. R. 7007.1300, subp.</b>	<b>Rule Description of the Activity</b>	<b>General Applicable Requirement</b>
3(D)	Processing operations: 1. Open tumblers with a batch capacity of 1,000 pounds or less; and 2. Equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM-10) inside a building, provided that emissions from the equipment are: a). filtered through an air cleaning system; and b). vented inside of the building 100% of the time.	Minn. R. 7011.0710 Minn. R. 7011.0715 (PM and opacity)

**APPENDIX B****40 CFR 60, subp. III Requirements**

Facility Name: Metropolitan Wastewater Treatment Plant  
Permit Number: 12300053

The following tables list the requirements for emergency generator engines subject to subp. III.

**Table 1 – Applies to pre-2007 model year generator engines manufactured after April 1, 2006**

<b>Emission Limits</b>	
Exhaust Opacity: Less than or equal to: 1. 20 percent during the acceleration mode 2. 15 percent during the lugging mode; and 3. 50 percent during the peaks in either the acceleration or lugging modes.	40 CFR 60.4202(a)(2); 40 CFR 89.113 (a)
Carbon Monoxide: Exhaust emissions of carbon monoxide shall not exceed 11.4 grams per kilowatt-hour.	40 CFR 60.4205(a)
Hydrocarbons: Exhaust emissions of hydrocarbons shall not exceed 1.3 grams per kilowatt-hour.	40 CFR 60.4205(a)
Nitrogen Oxides: Exhaust emissions of nitrogen oxides shall not exceed 9.2 grams per kilowatt-hour.	40 CFR 60.4205(a)
Particulate Matter: Exhaust emissions of particulate matter shall not exceed 0.54 grams per kilowatt-hour	40 CFR 60.4205(a)
<b>Operating Conditions</b>	
Fuel Type: Diesel fuel must meet the requirements of 40 CFR 80.510(a), which requires that diesel fuel have a maximum sulfur content of 500 parts per million and either a minimum cetaine index of 40 or a maximum aromatic content of 35 volume percent. This rule is applicable beginning October 1, 2007.  The Permittee may petition the Administrator for approval to use existing non-compliant diesel fuel inventories for up to six months or until exhausted, whichever comes first. If additional time is needed, the Permittee must submit a new application to the Administrator. This rule is applicable if the generator was manufactured before 2011.	40 CFR 60.4207(a); 40 CFR 60.4207(c); 40 CFR 80.510(a)
Fuel Type: Diesel fuel must meet the requirements of 40 CFR 80.510(b), which requires that diesel fuel have a maximum sulfur content of 15 parts per million and either a minimum cetaine index of 40 or a maximum aromatic content of 35 volume percent. This rule is applicable beginning October 1, 2010.  The Permittee may petition the Administrator for approval to use existing non-compliant diesel fuel inventories for up to six months or until exhausted, whichever comes first. If additional time is needed, the Permittee must submit a new application to the Administrator. This rule is applicable if the generator was manufactured before 2011.	40 CFR 60.4207(b); 40 CFR 60.4207(c); 40 CFR 80.510(b)
Emission Standards: The Permittee shall operate and maintain the unit in accordance with the standards as required by 40 CFR 60.4205, according to the manufacturer's written instructions, or according to procedures developed by the owner or operator that are approved by the engine manufacturer, for the entire life of the engine. Settings for the unit may not be changed unless permitted by the manufacturer.	40 CFR 60.4206; 40 CFR 60.4211(a)
Operating Limitations: The Permittee may operate the emergency engine for the purpose of maintenance checks and readiness testing provided that the tests are recommended by Federal, State, or local government; the manufacturer; the vendor; or the insurance company associated with the engine. Maintenance checks and readiness testing for the emergency engines is limited to 100 hours per year. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that the Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year.  There is no time limit on the use of emergency stationary ICE in emergency situations. Any operation other than emergency operation, maintenance, and testing, as permitted, is prohibited.	40 CFR 60.4211(e)
Performance Testing (Optional): If the Permittee conducts performance tests, the tests must be completed in accordance with 40 CFR 60.4212(a) through 40 CFR 60.4212(d).	40 CFR 60.4212
Operating Limitations: After December 31, 2008, the Permittee may not install stationary CI ICE that do not meet applicable requirements for 2007 model year engines.	40 CFR 60.4208(a)
<b>Monitoring Requirements</b>	
Monitoring – Hours of Operation: The engine shall contain a non-resettable hour meter prior to startup of the engine.	40 CFR 60.4209(a)
<b>Compliance Requirements</b>	
Compliance Demonstration: The Permittee may use one of the following methods to demonstrate compliance. 1. Purchase an engine certified to conform with the emission standards listed in 40 CFR pt. 89, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. 2. Keep records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in 40 CFR 60.4212 and must have been followed correctly. 3. Keep records of engine manufacturer data indicating compliance with the standards. 4. Keep records of control device vendor data indicating compliance with the standards. 5. Conduct an initial performance test to demonstrate compliance with the emissions standards according to the requirements specified in 40 CFR 60.4212, as applicable.	40 CFR 60.4211(b); 40 CFR pt. 89

**Table 2 – Applies to 2007 model year, or later, emergency generator engines**

<b>Emission Limits</b>	
Exhaust Opacity: Less than or equal to: 1. 20 percent during the acceleration mode 2. 15 percent during the lugging mode; and 3. 50 percent during the peaks in either the acceleration or lugging modes.	40 CFR 60.4202(a)(2); 40 CFR 89.113(a)
Carbon Monoxide: Exhaust emissions of carbon monoxide shall not exceed 3.5 grams per kilowatt-hour.	40 CFR 60.4202(a)(2); 40 CFR 89.112(a)
Non-Methane Hydrocarbons plus Nitrogen Oxides: Total combined exhaust emissions of non-methane hydrocarbons plus nitrogen oxides shall not exceed 6.4 grams per kilowatt-hour.	40 CFR 60.4202(a)(2); 40 CFR 89.112(a)
Particulate Matter: Exhaust emissions of particulate matter shall not exceed 0.20 grams per kilowatt-hour.	40 CFR 60.4202(a)(2); 40 CFR 89.112(a)
<b>Operating Conditions</b>	
Fuel Type: Diesel fuel must meet the requirements of 40 CFR 80.510(a), which requires that diesel fuel have a maximum sulfur content of 500 parts per million and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. This rule is applicable beginning October 1, 2007.  If the generator was manufactured before 2011, the Permittee may petition the Administrator for approval to use existing non-compliant diesel fuel inventories for up to six months or until exhausted, whichever comes first. If additional time is needed, the Permittee must submit a new application to the Administrator.	40 CFR 60.4207(a); 40 CFR 60.4207(c); 40 CFR 80.510(a)
Fuel Type: Diesel fuel must meet the requirements of 40 CFR 80.510(b), which requires that diesel fuel have a maximum sulfur content of 15 parts per million and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. This rule is applicable beginning October 1, 2010.  If the generator was manufactured before 2011, the Permittee may petition the Administrator for approval to use existing non-compliant diesel fuel inventories for up to six months or until exhausted, whichever comes first. If additional time is needed, the Permittee must submit a new application to the Administrator.	40 CFR 60.4207(a); 40 CFR 60.4207(c); 40 CFR 80.510(b)
Emission Standards: The Permittee shall operate and maintain the unit in accordance with the standards as required by 40 CFR 60.4205, according to the manufacturer's written instructions, or according to procedures developed by the owner or operator that are approved by the engine manufacturer, for the entire life of the engine. Settings for the unit may not be changed unless permitted by the manufacturer.	40 CFR 60.4206; 40 CFR 60.4211(a)
Operating Limitations: The Permittee may operate the emergency engine for the purpose of maintenance checks and readiness testing provided that the tests are recommended by Federal, State, or local government; the manufacturer; the vendor; or the insurance company associated with the engine. Maintenance checks and readiness testing for the emergency engines is limited to 100 hours per year. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that the Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year.  There is no time limit on the use of emergency stationary ICE in emergency situations. Any operation other than emergency operation, maintenance, and testing, as permitted, is prohibited.	40 CFR 60.4211(e)
Performance Testing (Optional): If the Permittee conducts performance tests, the tests must be completed in accordance with 40 CFR 60.4212(a) – (d).	40 CFR 60.4212
Operating Limitations: After December 31, 2008, the Permittee may not install stationary CI ICE that do not meet applicable requirements for 2007 model year engines.	40 CFR 60.4208(a)
<b>Monitoring Requirements</b>	
Monitoring – Hours of Operation: The engine shall contain a non-resettable hour meter prior to startup of engine.	40 CFR 60.4209(a)
<b>Compliance Requirements</b>	
Compliance Demonstration: The Permittee must demonstrate compliance by purchasing an engine certified to conform with the emission standards listed in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engine must be installed and configured according to manufacturer's specifications.	40 CFR 60.4211(c)
<b>Recordkeeping Requirements</b>	
The Permittee shall maintain records of the operation of the engine in emergency service that are recorded through the non-resettable hour meter. The record must include the time of operation and the reason the generator was in operation during that time. This requirement is applicable when using a generator whose model year is 2011 or later.	40 CFR 60.4214(b)

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 12300053-005**

This Technical Support Document (TSD) 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**

Stationary Source/Address (SIC Code: <b>4952</b> )	Owner/Operator Address
2400 Childs Road St. Paul, MN 55106 Ramsey County	Metropolitan Council Environmental Services 390 Robert Street North St. Paul, MN 55101-1805
Contact: Rebecca Flood	Phone: 651-602-1073

**1.2 Description of the Facility**

The Metropolitan Wastewater Treatment Plant is an advanced secondary wastewater treatment facility with a nominal design capacity of 250 million gallons per day. The plant is located on the east bank of the Mississippi River at mile 836, just east of downtown St. Paul. It is the principal sewage treatment facility for the Minneapolis and St. Paul metropolitan area serving more than 80 percent of the area's sewer population, as well as commercial, institutional, and industrial wastewater generators. Solids removed in the wastewater treatment process are managed through incineration, which is the primary source of air emissions from the facility. In addition, small amounts of scum from the treatment process and activated carbon from odor control systems are also incinerated. Emissions also result from operation of heating boilers, emergency generators, ash and materials handling, spray painting for maintenance, and aeration of the wastewater in the treatment process.

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

This is a moderate amendment to authorize the use of two 2,000 kW diesel temporary generators, which will provide emergency power for the effluent pump station at the MWWTP. Each year, the diesel generators will be rented and used, if needed, during the flooding season. Each year, the diesel generators will be returned to the rental company when they are no longer needed. Each diesel generator will vent to its own stack, and will provide only emergency back-up service and will not be operated in prime power or peak-shaving service.

During the flood season, the river level can be high enough that the treated effluent from the treatment plant has to be pumped into the river, rather than being discharged into the river by gravity. The generators will provide standby power for the effluent pumps in the event of a power outage, thereby minimizing the possibility of flooding of the plant or the discharge of untreated sewage.

## 1.4 Permit History

Permit Number and Issuance Date	Action Authorized
12300053-004 (6/28/04)	Authorizes operation for Fabric Filters to be used instead of ESPs.
12300053-003 (Not Issued)	None
12300053-002 (11/15/02)	Authorizes construction and operation of Solids Processing Facility
12300053-001 (3/13/01)	Part 70 Total Facility Permit issuance

## 1.5 Facility Emissions

**Table 1. Non-Title I Emissions Increase Summary**

Pollutant	Total Facility PTE		Net Change		Minor Mod Thresholds	Moderate Mod Thresholds	PSD Mod Thresholds	Type of Amendment
	Proposed (tpy)	Current (tpy)	(tpy)	(lb/hr)	(lb/hr $\geq$ )	(lb/hr $\geq$ )	(tpy $\geq$ )	
PM	102.1	101.1	1.0	4.0	--	--	--	N/A
PM <sub>10</sub>	63.0	62.0	1.0	4.0	0.855	3.42	15	Moderate
NO <sub>x</sub>	318.0	283.4	34.6	138.4	2.28	9.13	40	Moderate
SO <sub>2</sub>	58.1	52.3	5.8	23.2	2.28	9.13	40	Moderate
CO	163.5	155.6	7.9	31.6	5.70	22.80	100	Moderate
VOC	2798.0	2797.0	1.0	4.0	2.28	9.13	40	Minor
Lead	0.59	0.59	0.0	0.0	0.025	0.11	0.6	Insignificant
Single HAP	5.76	5.75	0.01	0.03	--	--	--	N/A
Total HAP	17.47	17.45	0.02	0.06	--	--	--	N/A

**Table 2. Facility Classification**

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD	NO <sub>x</sub> , VOC	PM, PM <sub>10</sub> , SO <sub>2</sub> , CO	Pb
Part 70 Permit Program	PM, NO <sub>x</sub> , CO, VOC	PM <sub>10</sub> , SO <sub>2</sub> , HAP	Pb
Part 63 NESHAP		HAP	
Non-Attainment Area Review (NAAR)	PM <sub>10</sub> *		

\* Although the facility as modified is not a Non-Attainment Area Review major source, it has been a major source in the past and is therefore regulated as one under New Source Review.

## 2. Regulatory and/or Statutory Basis

### New Source Review

The facility is an existing major source under New Source Review regulations. No changes are authorized by this permit.

### Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

### New Source Performance Standards (NSPS)

There is a New Source Performance Standard, 40 CFR pt. 60, Subp. IIII, for Stationary Compressions Ignition Internal Combustion Engines which may be applicable to the emergency generators at this facility based on their manufacture date.

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility has accepted limits on HAP usage such that it is a non-major source under 40 CFR pt. 63. Thus, no NESHAPs apply.

### Minnesota State Rules

Affected portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

**Table 3. Regulatory Overview of Units Affected by the Modification/Permit Amendment**

Unit	Applicable Regulations	Comments
GP 003	40 CFR pt. 60, subp. IIII Minn. R. 7011.2300 Minn. R. 7007.0800, subp. 2	Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines applies to all generators brought on site manufactured after April 1, 2006.

### 3. Technical Information

#### 3.1 Emissions Increase Analysis

Attachment 1 to this TSD contains a table which summarizes the calculations used to determine the Non-Title I emissions increases in Table 1, using information supplied by the Permittee and formatted by MPCA staff. PTE of the Facility was retrieved from the TSD to permit 12300053-002.

#### 3.2 Insignificant Activities

MWWTP has several operations which are classified as insignificant activities. These are listed in Appendix A to the permit.

#### 3.3 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 on similar units elsewhere.

Table 4 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

**Table 4. Periodic Monitoring**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
GP 003	< 500 hours per year of operation for each emergency generator	Engines subject to 40 CFR pt. 60, subp. IIII shall contain a non-resettable hour meter prior to startup of engine.	Limit based on U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators", dated September 6, 1995.



### **3.4 Permit Organization**

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

Deviation from normal format: GP003 for emergency generators references requirements that are listed in Appendix B. This approach was used because 40 CFR 63 Subp. IIII contains different requirements for units based on their manufacture date. Since some of the generators are brought onsite temporarily, it cannot be determined which requirements they are subject to prior to their arrival at the facility.

### **3.5 Comments Received**

EPA 45-day Review Period: December 22, 2006 – February 4, 2007

No comments were received during the review period.

## **4. Conclusion**

Based on the information provided by MWWTP, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 12300053-005, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:	Trevor Shearen (permit writer/engineer)
	Scott Parr (enforcement)
	Curt Stock (stack testing)
	Dan Sullivan (peer reviewer)

Attachments: 1. Emissions Increase Calculation Summary

## Attachment 1 – Emissions Increase Calculation Summary

The following table summarizes the calculations used to determine the emissions increases used in Table 1 to determine the type of amendment required. The emissions calculated below represent the sum of the two units.

Stack ID	Emission Unit		Mechanical Output (hp)	Fuel Consumption (gal/hr)	Pollutant	Emission Factor <sup>1</sup> (lbs/hp-hr)	Emission Rate <sup>2</sup> (lbs/hr)	Maximum Emissions <sup>3</sup> (tpy)	Limited Emissions <sup>4</sup> (tpy)
	ID	Description							
SV 052	EU 054	Emergency Generator 9	2884.9	139.7	PM	7.0E-04	4.04	17.69	1.01
SV 053	EU 055	Emergency Generator 10	2884.9	139.7	PM <sub>10</sub>	7.0E-04	4.04	17.69	1.01
		Total:	<b>5769.8</b>	<b>279.4</b>	SO <sub>x</sub>	4.0E-03	23.08	101.09	5.77
					NO <sub>x</sub>	2.4E-02	138.48	606.52	34.62
					VOC	7.0E-04	4.04	17.69	1.01
					CO	5.5E-03	31.73	138.99	7.93
Total HAPs						(lb/MM Btu) 1.76E-03	0.07	0.30	0.02

[1] Emission Factors for HAPs from AP-42 Tables 3.4-3, 3.4-4, and 1.3-10  
Emission Factors for other Pollutants from AP-42 Table 3.4-1

[2] Emission Rate (lbs/hr) = Emission Factor (lbs/hp-hr) x Total Mechanical Output (hp)  
or

Emission Rate (lbs/hr) = Emission Factor (lb/MMBtu) x Fuel Consumption (gal/hr) x 0.137 (MMBtu/gal)

[3] Maximum Emissions (tpy) = Emission Rate (lbs/hr) x 8760 (hr/yr) / 2000 (lbs/ton)

[4] Limited Emissions (tpy) = Emission Rate (lbs/hr) x 500 (hr/yr) / 2000 (lbs/ton)