



AIR EMISSION PERMIT NO. 12300053-006
Total Facility Operating Permit - Reissuance

IS ISSUED TO

Metropolitan Council

Metropolitan Council Environmental Services
MCES - 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 reissuance are as described in the Permit Applications Table.

This permit reissuance supersedes Air Emission Permit No. 12300053-006, and authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

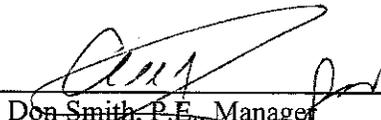
Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such as are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Permit Type: Federal; Pt 70/Major for NSR;

Operating Permit Issue Date: February 25, 2010

Expiration Date: February 25, 2015 – All Title I Conditions do not expire.

* The Permittee may continue to operate this facility after the expiration date of the permit, per the provision under Minn. R. 7007.0450, subp. 3. (Title V Reissuance Application was received on 09/16/2005)



Don Smith, P.E., Manager
Air Quality Permits Section
Industrial Division

for Paul Eger
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

FACILITY DESCRIPTION:

The Metropolitan Council Environmental Services (MCES) -Metropolitan Wastewater Treatment Plant (WWTP) is an advanced secondary waste water treatment facility located at Mississippi River mile 836 in St. Paul, Ramsey County, Minnesota. This plant is the principal sewage treatment facility for the Minneapolis and St. Paul metropolitan area serving more than 80 percent of the area's sewered population, as well as commercial, institutional, and industrial wastewater generators. The facility has a permitted average wet weather design flow of 314 million gallons per day; discharge of treated waste water to the Mississippi River is authorized by NPDES/SDS permit number MN0029815. Primary and secondary sludges from the waste water treatment process, as well as sludges from other MCES treatment facilities, are blended and thickened prior to incineration on-site.

The primary source of emissions at this facility is the incineration of sewage sludge, along with small amounts of spent activated carbon and scum generated on-site in three fluidized bed reactors (FBR). Each identical FBR is equipped with a pollution control train consisting of carbon injection, a high temperature fabric filter baghouse, a venturi scrubber and a high efficiency wet electrostatic precipitator. The FBRs normally fire natural gas as an auxiliary fuel, but are capable of using No. 2 fuel oil. Emissions also result from aeration of the waste water during the treatment process, operation of auxiliary steam boilers for plant heating, operation of emergency generators, ash and materials handling, fuel storage activities, spray painting for maintenance activities, and other routine maintenance activities.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant
 Permit Number: 12300053 - 006

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

Subject Item: Total Facility

What to do	Why to do it
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
A. OPERATIONAL REQUIREMENTS	hdr
A.01. SIP REQUIREMENTS Activities Not Requiring A Modification To The SIP: The Permittee is authorized to make changes to the facility without obtaining a modification to the SIP as long as the change does not increase from any emission point, the PM10 emission rates (either lb/hr or gr/dscf) or overall PM10 emissions, or alter equipment or parameters described in Appendix D, which forms the basis of the PM10 modeling.	hdr Title I Condition: State Implementation Plan for PM10

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant
 Permit Number: 12300053 - 006

<p>Remodeling for Attainment Demonstration: Before making any physical changes, including construction or modification of structures that increase effective structural dimensions, or changes to the method of operation which may affect parameters listed in Appendix D, the Permittee shall demonstrate to the MPCA that the PM10 plume dispersion characteristics following the physical change or change in method of operation will be equivalent to or better than the PM10 dispersion characteristics modeled using the parameters in Appendix D. The information submitted must include stacks, locations and dimensions of nearby buildings, the velocity and temperature of the gasses emitted, and the PM10 emission rates. If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot be readily made about the dispersion, the Permittee must remodel.</p>	<p>Title I Condition: State Implementation Plan for PM10</p>
<p>Activities Requiring A Modification To The SIP: Activities requiring a modification of the SIP prior to the Permittee commencing the activity include, but are not limited to: 1. Any decrease in the design stack gas volumetric flow rate below that indicated in Appendix D; 2. Any decrease in the design stack gas exit temperature below that contained in Appendix D; 3. Any reduction in stack height below that indicated in Appendix D; 4. Any increase in stack exit diameter above that contained in Appendix D; and/or 5. Any changes in operations that increase potential PM10 emissions</p>	<p>Title I Condition: State Implementation Plan for PM10</p>
<p>General Operation and Maintenance Requirements for the SIP: The Permittee shall operate and maintain the process and control equipment described in Appendix D according to the parameters set forth in Appendix D.</p>	<p>Title I Condition: State Implementation Plan for PM10</p>
<p>C. POLLUTION CONTROL EQUIPMENT REQUIREMENTS</p>	<p>hdr</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J) regarding times of operation; Title I Condition: State Implementation Plan for PM10</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 006

<p>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.</p>	<p>Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y</p>
<p>G. REPORTING</p>	<p>hdr</p>
<p>Submittal: due 30 days after end of each calendar half-year following Permit Issuance. 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.</p>	<p>Title I Condition: State Implementation Plan for PM10; 40 CFR 52.1230; 40 CFR pt. 52, subp.Y</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant
 Permit Number: 12300053 - 006

Subject Item: GP 004 Ash Handling Systems

- Associated Items:** CE 024 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 CE 027 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 EU 019 Local Exhaust Control Ash Loadout
 EU 048 Ash Loadout Transporters
 EU 049 Coal Ash or FBR Ash Transporters
 EU 050 Quicklime Transporter
 SV 023 Local Exhaust Control Ash Loadout and Transporters BF08 Stack
 SV 033 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour
 SV 034 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour
 SV 035 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour
 SV 036 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour
 SV 037 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour
 SV 038 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

What to do	Why to do it
A. EMISSION LIMITS	hdr
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant
 Permit Number: 12300053 - 006

Subject Item: GP 006 Fluidized Bed Reactors (EU035, EU036, EU037)

- Associated Items:** CE 028 Fabric Filter - High Temperature, i.e., T>250 Degrees F
 CE 029 Venturi Scrubber 1
 CE 030 Electrostatic Precipitator - High Efficiency
 CE 031 Fabric Filter - High Temperature, i.e., T>250 Degrees F
 CE 032 Venturi Scrubber 2
 CE 033 Electrostatic Precipitator - High Efficiency
 CE 034 Fabric Filter - High Temperature, i.e., T>250 Degrees F
 CE 035 Venturi Scrubber 3
 CE 036 Electrostatic Precipitator - High Efficiency
 CE 048 Enhanced Hg Control Equip. 1
 CE 049 Enhanced Hg Control Equip. 2
 CE 050 Enhanced Hg Control Equip. 3
 EU 035 Fluidized Bed Sewage Sludge Reactor 1
 EU 036 Fluidized Bed Sewage Sludge Reactor 2
 EU 037 Fluidized Bed Sewage Sludge Reactor 3
 SV 039 Fluidized Bed Reactor #1 Stack
 SV 040 Fluidized Bed Reactor #2 Stack
 SV 041 Fluidized Bed Reactor #3 Stack

What to do	Why to do it
A. EMISSION LIMITS	hdr
CONTROL EQUIPMENT	hdr
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; Title I Condition: State Implementation Plan for PM10
A.02. PM-10	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant
 Permit Number: 12300053 - 006

Subject Item: GP 007 Auxiliary Boilers

Associated Items: EU 042 Auxiliary Boiler 3
 EU 043 Auxiliary Boiler 4
 SV 046 Auxiliary Boiler No. 3
 SV 047 Auxiliary Boiler No. 4

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 006

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 Alkaline Stabilization Cells
 - SV 043 Alkaline Stabilization Cells
 - SV 044 Alkaline Stabilization Cells
 - SV 045 Alkaline Stabilization Loading

What to do	Why to do it
A. EMISSION LIMITS	hdr
<p>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.</p>	<p>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</p>
<p>CONTINUED $12\text{-month emissions} = 12\text{-month sum}[(E * C * FO)/2000]$</p> <p>Where: E = particulate matter < 10 micron exhaust concentration from the most recent performance test of the ID fan stack/vent (lbs PM10/dscf)</p> <p>C = ID fan capacity (dscf/hour)</p> <p>FO = total operating hours of the ID fan for the given month (hours)</p> <p>2000 = conversion factor (lbs/ton)</p>	<p>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</p>
<p>CONTINUED $\text{Daily emissions (lbs/day)} = E * C * FO$</p> <p>Where: E = particulate matter < 10 micron exhaust concentration from the most recent performance test of the ID fan stack/vent (lbs PM10/dscf)</p> <p>C = ID fan capacity (dscf/hour)</p> <p>FO = total operating hours of the ID fan for the calendar day (hours/day)</p>	<p>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</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Metropolitan Wastewater Treatment Plant

Permit Number: 12300053 - 006

Subject Item: EU 034 Ash Loadout Housekeeping Vacuum

Associated Items: CE 027 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 033 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

SV 034 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

SV 035 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

SV 036 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

SV 037 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

SV 038 Ash Loadout Housekeeping Vacuum and/or Local Exhaust Control Ash Loadout BF01 Stack - Not a NOx Sour

What to do	Why to do it
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