

AIR EMISSION PERMIT NO. 10900006-007**IS ISSUED TO****International Business Machines Corporation**

IBM - Rochester

3605 Highway 52 North

Rochester, Olmsted County, MN 55901 – 7829

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

Permit Type:

Total Facility Operating Permit

Moderate Amendment

Major Amendment

Moderate Amendment

Major Amendment

Minor Amendment

Administrative Amendment

Major Amendment

Application Date:

June 15, 1995; February 19, 1996; April 11, 1997

September 8, 1998

November 11, 1998

December 23, 1999

November 9, 2000

February 12, 2001

March 22, 2001

March 20, 2003

While description of the emission units, control equipment, and emission stacks in the above-listed applications remains in effect (as updated in Attachment A), this permit supersedes the permit and amendments listed above. This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted. The Permittee must comply with all the conditions of the permit and with all conditions in rules incorporated by reference, except where a variance is noted as being applicable. 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: State; Limits to Avoid Part 70**Issue Date:** May 19, 2003**Expiration:** This permit does not expire
All Title I conditions do not expire.

Ann M. Foss, Manager
Major Facilities Section Manager
Majors and Remediation Division

For Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

A. INTRODUCTION

This Minnesota Air Emissions Permit is an experimental permit under the Joint U.S. Environmental Protection Agency/State Agreement to Pursue Regulatory Innovation. This permit replaces the Permittee's current synthetic minor permit, and authorizes the Permittee (IBM) to construct, modify and operate the computer equipment manufacturing and related facilities located at the above address (the Facility).

The Permittee shall comply with all conditions of this permit and any new rules which apply to the stationary source. The stationary source may be modified or changed, but the stationary source as modified or changed shall comply with all conditions of this permit and any new rules which apply to or are triggered by the change. Terms used in this permit are as defined in Minnesota Pollution Control Agency (MPCA) statutes and rules unless otherwise defined in this permit.

Because the Facility is located in a Sulfur Dioxide (SO₂) maintenance area, this permit contains specific State Implementation Plan (SIP) requirements for SO₂. In addition, this permit contains various requirements that limit the emissions of all regulated air pollutants including particulate matter (PM), particulate matter under 10 microns (PM₁₀), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), lead (Pb), SO₂, and Hazardous Air Pollutants (HAPs). These limits enable the Facility to avoid classification as a major stationary source for New Source Review (40 CFR § 52.21) and Title V (40 CFR § pt.70) for these operations and pollutants. This permit also requires the Permittee to maintain an Environmental Management System (EMS) and Third-party Audits of that EMS in order to be eligible for a variance from minor and moderate amendment requirements, and for the reduced recordkeeping and modified inspection procedure provided in this permit.

FACILITY DATA

The Facility manufactures electronic digital computers and produces computer software. The primary sources of emissions at the Facility are four boilers, that have a combined heat input of 325 MMBtu/hr. This makes the Facility subject to the 100 ton-per-year major source definition under 40 CFR § 52.21 (fossil-fuel boilers totaling more than 250 MMBtu/hr heat input). The facility has accepted federally enforceable emission limits to maintain its NO_x and SO₂ emissions under 100 tons-per-year.

B. 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. The permit shield does not apply to future physical changes or changes in method of operation authorized by this permit and not reviewed by MPCA in the course of a major amendment.

C. SO₂ SIP REQUIREMENTS

Any physical change or change in the method of operation at the Facility which affects a permit condition labeled "Title I Condition: State Implementation Plan for SO₂" will require a permit amendment as described in Minn. R. 7007.1150 through 7007.1650.

Emission Unit Requirements**SIP SO₂ Conditions: Total Facility**

Citation	Requirement
	RECORDKEEPING REQUIREMENTS
Title I Condition: State Implementation Plan for SO ₂	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 SO ₂ " requirement.
	REPORTING REQUIREMENTS
Title I Condition: State Implementation Plan for SO ₂	Deviations from requirements cited as "Title I Condition: State Implementation Plan for SO ₂ " shall be reported semiannually with the Semiannual Deviations Report required by this permit. If deviations from any requirement cited as "Title I Condition: State Implementation Plan for SO ₂ " did not occur during the reporting period, the Permittee shall indicate such in the Semiannual Deviations Report.
Title I Condition: State Implementation Plan for SO ₂	Amendments to Title I Conditions: If any permit requirement cited as "Title I Condition: State Implementation Plan for SO ₂ " is amended, the amendment must first comply with procedures of parts 7007.0850 (Permit Application Notice and Comment) and 7007.0950 (EPA Review and Objection) applicable to major amendments to Part 70 permits.

Conditions: GP 001 Boilers, Generators and Fire Pumps

See also listing in Attachment A.

EU 001 Boiler 1

EU 002 Boiler 2

EU 003 Boiler 3

EU 004 - EU 014, EU 016 - EU 025, EU 027 - EU29 Emergency Electric Generators

EU 030 - EU 034 Auxiliary Emergency Electric Generators 1 - 5

EU 035 Fire Pump 1

EU 049 Boiler 4

EU 050 Boiler 5

EU 051- EU 052 Emergency Electric Generators

EU 058 East Diesel Fire Pump

EU 059 Bldg 104 Diesel Generator

SV 001- SV 025, SV027- SV035, SV 037, SV 049 - SV 052, SV 058, SV 059

Citation	Requirement
	RECORDKEEPING REQUIREMENTS
Title I Condition: State Implementation Plan for SO ₂	<p>The Permittee shall either: 1) obtain and maintain a fuel supplier receipt from the fuel supplier for each shipment of residual oil, distillate oil and diesel fuel certifying that the shipment complies with the American Society of Testing and Materials (ASTM) specifications for residual oil, distillate oil and diesel fuel and that the sulfur content is less than or equal to 1.50% by weight for residual oil, 0.50% by weight for distillate oil, and 0.05% by weight for diesel fuel;</p> <p>OR</p> <p>2) sample the fuel oil from the tank(s) after each delivery. Sampling shall be conducted within 48 hours after each delivery, or within 48 hours after the last of multiple deliveries in a calendar week if oil is combusted at the time of delivery. If oil is not combusted at the time of delivery, sampling shall be conducted within 30 days after each delivery or within 30 days after the last of multiple deliveries in a calendar week but prior to combustion of any oil. Samples shall be collected from a location representative of the contents of the tank. Record the date and the time of delivery, time of fuel sampling, initials of person recording the information, and the results of the fuel analysis. The fuel samples shall be analyzed to determine the sulfur content of the fuel in percent by weight, in accordance with the current ASTM method for that fuel.</p>

Conditions: GP 002 Boilers

See also listing in Attachment A.

EU 001 - EU 003, EU 049, EU 050 Boilers 1 - 5

Citation	Requirement
	EMISSION LIMITS
Minn. R. 7011.0510, subp. 1	Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input (applies individually and only to EU 001, EU 002 and EU 003 in GP 002).
Minn. R. 7011.0510, subp. 2	Opacity: less than or equal to 20% opacity except for one six-minute period per hour of not more than 60% opacity (applies individually and only to EU 001, EU 002 and EU 003 in GP 002).
Title I condition: State Implementation Plan for SO ₂	Sulfur Dioxide: less than or equal to 143.8 lbs/hour using 24-hour Block Average (midnight to midnight) for any calendar day when residual oil is burned, and two or more boilers burn oil.
	OPERATING REQUIREMENTS
Title I Condition: State Implementation Plan for SO ₂	Fuel usage: Boiler #1 is limited to natural gas, LP gas and distillate oil; Boilers #2 & #3 are limited to natural gas, residual oil, LP gas, and distillate oil; and, Boilers #4 & #5 are limited to natural gas and distillate oil.
Title I Condition: State Implementation Plan for SO ₂	Sulfur Content of Fuel: less than or equal to 0.5% by weight for distillate oil.
Title I Condition: State Implementation Plan for SO ₂	Sulfur Content of Fuel: less than or equal to 1.5% by weight for residual oil.
Title I Condition: State Implementation Plan for SO ₂	No more than 4 boilers may be in operation at the same time.
	RECORDKEEPING REQUIREMENTS
Title I Condition: State Implementation Plan for SO ₂	SO ₂ Emission Limit Recordkeeping: once each day, record the calculated 24-hr Block Average (midnight to midnight) SO ₂ emission limit for the previous calendar day if residual oil was burned in two boilers during the previous day.

Title I Condition: State Implementation Plan for SO ₂	<p>SO₂ Emission Calculations and Recordkeeping: once each day, calculate and record the 24-hour block average SO₂ emission rate for the previous calendar day, using the following formula:</p> $\text{Emission Rate (lb SO}_2\text{/hr)} = [(Ar * 0.159 * Sr) + (Ad * 0.144 * Sd) + (Alp * 0.0001 * SIp)]$ <p>Ar = 24-hr block average residual oil usage (gal/hr) Ad = 24-hr block average distillate oil usage (gal/hr) Alp = 24-hr block average LP gas usage (gal/hr) Sr = the weight percent sulfur for residual oil (determined according to the requirements in GP 001) Sd = the weight percent sulfur for distillate oil (determined according to the requirements in GP 001) Slp = the sulfur content expressed in gr/100 cf of gas vapor.</p>
Title I Condition: State Implementation Plan for SO ₂	Recordkeeping: for each calendar day (midnight to midnight) when residual oil is used in two boilers, calculate and record the individual 24-hour block average usages for residual oil, distillate oil, and LP gas (in gallons per hour) by the end of the following calendar day. The 24-hour block average usage is determined by dividing the usage rate for the calendar day (in gallons per day) by 24 hours/day.
Title I Condition: State Implementation Plan for SO ₂	Recordkeeping: record the type of fuel combusted in each boiler, for each hour of boiler operation.
Title I Condition: State Implementation Plan for SO ₂	Recordkeeping: record number of boilers in operation, at any time.
	ADDITIONAL REQUIREMENTS
Title I Condition: State Implementation Plan for SO ₂ ; Minn. R. 7007.0800, subp.6	Equipment Removal and/or Dismantlement: due 30 days after Startup of Boiler #5. Within 30 days after startup of Boiler #5, Boiler #1 shall be removed.
Title I Condition: State Implementation Plan for SO ₂ ; Minn. R. 7007.0800, subp.6	Notification of the date of Equipment Removal/Dismantlement: due 45 days after Startup of Boiler #5.
Title I Condition: 40 CFR 52.21(k) [to not cause or contribute to a violation of the ambient air increments for SO ₂ established in 40 CFR 52.21(c)]	Boiler No. 5 Construction: Prior to construction of Boiler No. 5 (EU 050), the Permittee must conduct air dispersion modeling to demonstrate that emissions from the IBM facility do not cause or contribute to an exceedance of the ambient air increments for SO ₂ established in 40 CFR 52.21 (c). The air dispersion modeling must be approved by the MPCA prior to construction of Boiler No. 5. If any additional permit restriction(s) are necessary to demonstrate compliance with the ambient air increments for SO ₂ established in 40 CFR 52.21(c), the Permittee

	shall submit the necessary permit application and obtain the necessary permit amendment prior to construction of Boiler No. 5.
--	--

Conditions: GP 003 Generators and Fire Pumps

See also listing in Attachment A.

EU 004 - EU 014, EU 016 - EU 025

EU 027 - EU29 Emergency Electric Generators

EU 030 - EU 034 Auxiliary Emergency Electric Generators 1 - 5

EU 035 Fire Pump 1

EU 051- EU 052 Emergency Electric Generators

EU 058 East Diesel Fire Pump

EU 059 Bldg 104 Diesel Generator

SV 004- SV 025, SV027- SV035, SV 037, SV 051, SV 052, SV 058, SV 059

Citation	Requirement
Title I Condition: State Implementation Plan for SO ₂	Fuel Usage is limited to diesel fuel and natural gas.
Title I Condition: State Implementation Plan for SO ₂ meets requirements of Minn. R. 7011.2300, subp. 2	Sulfur Content of Fuel: less than or equal to 0.05% by weight for diesel fuel.
Minn. R. 7011.2300, subp. 1	Opacity: less than or equal to 20% opacity once operating temperature has been attained (applies individually to each emission unit in GP 003).

NON-SIP REQUIREMENTS

For operations not limited by the SIP conditions in Section C of this permit, the Permittee has obtained a variance and is authorized to make any physical change or change in the method of operation that would otherwise require a minor or moderate permit amendment without making application as provided in Minn. R. 7007.1450. If a change or modification made results in the stationary source being subject to a New Source Performance Standard, National Emissions Standard for Hazardous Air Pollutant, or Minnesota Standard for Stationary Sources, the Permittee shall:

- maintain a copy of any applicable standard with applicable portions highlighted, including applicable general requirements; and
- perform all notification, monitoring, and recordkeeping requirements of the applicable standard.

1. TOTAL FACILITY LIMITS

Citation	Pollutant	Emissions Limits
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	Any single HAP	The Permittee shall not cause to be discharged into the atmosphere from the Facility any single hazardous air pollutant emissions in an amount that exceeds 9 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	Total HAP	The Permittee shall not cause to be discharged into the atmosphere from the Facility total hazardous air pollutant emissions in an amount that exceeds 22.5 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	PM	The Permittee shall not cause to be discharged into the atmosphere from the Facility particulate matter emissions in an amount that exceeds 90 tons/year based on a 12-month rolling sum.

Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	PM ₁₀	The Permittee shall not cause to be discharged into the atmosphere from the Facility particulate matter under 10 microns emissions in an amount that exceeds 90 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	VOC	The Permittee shall not cause to be discharged into the atmosphere from the Facility volatile organic compound emissions in an amount that exceeds 90 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	SO ₂	The Permittee shall not cause to be discharged into the atmosphere from the Facility sulfur dioxide emissions in an amount that exceeds 90 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	NO _x	The Permittee shall not cause to be discharged into the atmosphere from the Facility nitrogen oxides emissions in an amount that exceeds 90 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 70.2, and Minn. R. 7007.3000	CO	The Permittee shall not cause to be discharged into the atmosphere from the Facility carbon monoxide emissions in an amount that exceeds 90 tons/year based on a 12-month rolling sum.
Title 1 Condition: To avoid classification as a major source under 40 CFR § 52.21, 40 CFR § 0.2, and Minn. R. 7007.3000	Pb	The Permittee shall not cause to be discharged into the atmosphere from the Facility lead emissions in an amount that exceeds 0.45 tons/year based on a 12-month rolling sum.

2. CONDITIONS: GP 004 Dc Boilers 4 and 5

See also listing in Attachment A.

EU 049 Boiler 4

EU 050 Boiler 5

Citation	Requirement
	EMISSIONS LIMITS
40 CFR § 60.43c(c)	Opacity: less than or equal to 20% except for one 6-minute period per hour of not more than 27% opacity.
Title I Condition: Limit to avoid major source classification under 40 CFR § 52.21	Boiler #5, individually, shall not exceed 84.0 MMBtu/hr in nameplate heat input capacity and 70,000 lbs/hr in nameplate rated steam capacity.
	OPERATING REQUIREMENTS
Title I Condition: Limit to avoid major source classification under 40 CFR § 52.21	Install and operate a NO _x burner, in each of Boilers #4 & #5, that will not emit more than 0.000100 Lb NO _x /cubic feet of natural gas.
40 CFR 60.42c(d)	Sulfur content of fuel: less than or equal to 0.5% by weight for distillate oil.
	REPORTING AND RECORDKEEPING REQUIREMENTS
40 CFR § 60.48c(d); 40 CFR § 60.48c(e)	Report: due 30 days after end of each calendar half-year following permit issuance. The report shall include a statement certifying that the records of fuel supplier certifications submitted represent all of the fuel combusted during the calendar half-year. Each report shall be postmarked by the 30 th day following the end of the calendar half-year.
40 CFR § 60.7(a)(2); 40 CFR § 60.48c(a)	Notification of the Anticipated Date of Initial Startup: for EU 050, due 30 days before Anticipated Date of Initial Startup, but no more than 60 days before. Submit the name and number of the emission unit and the anticipated date of initial startup (for Boiler #5). This notification shall include: 1) the design heat input capacity of each boiler and identification of boilers fuels to be combusted; and 2) the annual capacity factor at which the Permittee anticipates operating each boiler based on all fuels fired and based on each individual fuel fired.

Citation	Requirement
40 CFR § 60.7(a); 40 CFR § 60.48c(a)	Notification of the Date Construction Began: due 30 days after Start Of Construction for EU 050. Submit the name and number of the emission unit and the anticipated date of initial startup (for Boiler #5). This notification shall include: 1) the design heat input capacity of each boiler and identification of boilers fuels to be combusted; and 2) the annual capacity factor at which the Permittee anticipates operating each boiler based on all fuels fired and based on each individual fuel fired.
40 CFR § 60.7(a)(3); 40 CFR § 60.48c(a)	Notification of the Actual Date of Initial Startup: due 15 days after Initial Startup for EU 050. Submit the name and number of the emission unit and the actual date of initial startup (for Boiler #5). This notification shall include: 1) the design heat input capacity of each boiler and identification of boilers fuels to be combusted; and 2) the annual capacity factor at which the Permittee anticipates operating each boiler based on all fuels fired and based on each individual fuel fired.
Minn. R. 7017.2020, subp. 1	Testing Frequency Plan: due 60 days after Initial Performance Test for EU 050. The plan shall specify the testing frequency to measure opacity and NO _x using the test data and MPCA guidance for EU 050. In addition, the plan shall address a testing schedule for opacity of EU 049. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written MPCA approval per Minn. R. 7017.2020, subp. 1.
40 CFR § 60.48c(f)	Fuel supplier certifications shall include: i) the name of the oil supplier; and, ii) a statement from the oil supplier that the oil sulfur content is less than or equal to 0.50% by weight for distillate oil.
40 CFR § 60.48c(g)	Record and maintain records of the amounts of each fuel combusted during each day for each individual boiler.
	PERFORMANCE TESTS
Title I Condition: Limit to avoid major source classification under 40 CFR § 52.21; Minn. R. 7017.2020, subp. 1, and Minn. R. 7017.2030, subp. 4	Performance Test: due 180 days after Initial Startup to measure NO _x for Boiler #5 (EU 050).
40 CFR § 60.45c(a); Minn. R. 7017.2020, subp. 1, and Minn. R. 7017.2030, subp. 4	Initial Performance Test: due 180 days after Initial Startup, but not to exceed 60 days after achieving the maximum production rate at which the affected facility will be operated to measure opacity for Boiler #5 (EU 050) while combusting distillate oil.

3. CONTROL EQUIPMENT REQUIREMENTS

The Permittee must operate control equipment listed below in accordance with the requirements listed below if the Permittee is relying on the control equipment, in whole or part, to demonstrate compliance with an emissions limitation in this permit.

Fabric Filters CE 001, CE 002, CE 003, CE 004, CE 005

See also listing in Attachment A.

EU 044 - EU 048

Minn. R. 7011.0715, subp. 1(A)	PM: 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 limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.
Minn. R. 7007.0800, subp. 14	Operation of CE 001: the Permittee shall capture all emissions from EU 044 and vent them to CE 001.
Minn. R. 7007.0800, subp. 14	Operation of CE 002: the Permittee shall capture all emissions from EU 045 and vent them to CE 002.
Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20% opacity.
Minn. R. 7011.0715, subp. 3	PM: greater than or equal to 85% collection efficiency to meet the total particulate matter emission limit in Minn. R. 7011.0715, subp. 1(A).
Control equipment requirement to avoid major source classification under 40 CFR 70.2; Minn. R. 7007.0800, subp. 2 and 14.	PM < 10 micron: greater than or equal to 85% collection efficiency.
Minn. R. 7007.0800, subp. 4	Check for visible emissions (during daylight hours) from the control equipment once each time the lime silo is loaded. (CE 001 only)
Minn. R. 7007.0800, subp. 2	Corrective Action: If visible emissions (VE) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VE. (CE 001 only)
Minn. R. 7007.0800, subp. 5	Recordkeeping: record the time and date of each VE inspection, and whether or not any VE were observed. If VE were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken. (CE 001 only)

Monitoring of control equipment to avoid major source classification under 40 CFR § 70.2; Minn. R. 7007.0800, subp. 2 and 14	Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 4.0 inches of water column. (CE 002 only)
Monitoring of control equipment to avoid major source classification under 40 CFR § 70.2; Minn. R. 7007.0800, subp. 2 and 14	Pressure Drop: greater than or equal to 0.2 inches of water column and less than or equal to 6.0 inches of water column. (CE 003, CE 004 and CE 005)
Minn. R. 7007.0800, subp. 2 and 14	Inspect quarterly, or as required by manufacturing specifications, all components that are not subject to wear or plugging including structural components, housings, ducts, and hoods. Maintain a written record of the inspection and any action resulting from the inspection. (CE 002, CE 003, CE 004 and CE 005)
Minn. R. 7007.0800, subp. 2 and 14	Inspect monthly, or as required by manufacturing specifications, all components that are subject to wear or plugging for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. Maintain a written record of the inspection and any action resulting from the inspection. (CE 002, CE 003, CE 004 and CE 005)
Minn. R. 7007.0800, subp. 2 and 14	Calibrate the pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration. (CE 002, CE 003, CE 004 and CE 005)

4. OPERATING, MONITORING AND RECORDKEEPING: In addition to any operating, monitoring or recordkeeping requirements in Section C of this permit, the Permittee, unless specified otherwise, shall:

Minn. R. 7007.0800, subp 14 and Minn. R. 7007.0800 subp. 16(J)	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.
Minn. R. 7011.0020	Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.

Minn. R. 7011.0150	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. 7030.0010 - 7030.0080	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 federally enforceable.
Minn. R. 7007.0800, subp. 16	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.
Minn. R. 7007.0800, subp. 9(A)	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).
Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)	Air Pollution Control Equipment: Operate all pollution control equipment identified in this permit whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Attachment A.
Minn. R. 7007.0800, subp. 4(D)	Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit.)
Minn. R. 7007.0800, subp. 4(D)	Operation of Monitoring Equipment: Unless otherwise specified in this permit, 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. 5(C)	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, 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. 7019.3000 through Minn. R. 7019.3010	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. 7002.0005 through Minn. R. 7002.0095	Emission Fees: due 60 days after receipt of an MPCA bill.
Minn. R. 7019.1000, subp. 1	Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.
Minn. R. 7019.1000, subp. 1	Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: <ol style="list-style-type: none"> 1. The cause of the deviation; 2. The exact dates of the period of the deviation, if the deviation has been corrected; 3. Whether or not the deviation has been corrected; 4. The anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.
Minn. R. 7007.0800, subp. 6(C) Minn. R. 7019.1000, subp. 1	Compliance Certification: Thirty days after the end of each calendar year following permit issuance (for the previous calendar year), Permittee shall submit a certification of compliance with the conditions and requirements of this permit to the Commissioner. If deviations for any permit conditions did not occur during a calendar year, then the Permittee will indicate such in that year's Compliance Certification.
Minn. R. 7007.1150 through Minn. R. 7007.1500	Application for Permit Amendment: If a permit amendment is needed, submit application in accordance with the requirements of Minn. R. 7007.1150 through 7007.1500. The MPCA has granted a variance to the Permittee from 7007.1450 subparts 2 and 3 (minor and moderate permit amendments). The variance is conditional upon the Permittee's compliance with conditions described in section E of this permit. If the variance is terminated, the Permittee must thereafter comply with 7007.1450 subparts 2 and 3.

Minn. R. ch 7017	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in this permit.
Minn. R. 7017.2025	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.
Title 1 Condition: Recordkeeping for limit to avoid classification as a major source under 40 CFR § 52.21; 40 CFR § 70.2 and Minn. R. 7007.3000	Monthly Recordkeeping: By the last day of each month the Permittee shall record the total VOC-containing material used in the previous calendar month, and the VOC content of each material used.
Title 1 Condition: Recordkeeping for limit to avoid classification as a major source under 40 CFR § 52.21; 40 CFR § 70.2 and Minn. R. 7007.3000	Monthly Recordkeeping: By the last day of each month the Permittee shall record the total HAP-containing material used in the previous calendar month, and the HAP content of each material used.
Title 1 Condition: Recordkeeping for limit to avoid classification as a major source under 40 CFR § 52.21; 40 CFR § 70.2 and Minn. R. 7007.3000	Monthly Recordkeeping: By the last day of each month the Permittee shall record the total fuel used in the previous calendar month, and the sulfur content of the fuel used. The sulfur content of each batch of fuel received must be measured by an independent laboratory using ASTM methods or verified by vendor certification.
Title 1 Condition: Recordkeeping for limit to avoid classification as a major source under 40 CFR § 52.21; 40 CFR § 70.2 and Minn. R. 7007.3000	Monthly Recordkeeping: Unless the Permittee is eligible for the reduced recordkeeping requirements in section E.6 of this permit, the Permittee shall record by the last day of each month the total emissions of each pollutant for the previous calendar month, and the sum of emissions for the previous 12 calendar months for each pollutant for which an emissions limitation has been established.
Title 1 Condition: Recordkeeping for limit to avoid classification as a major source under 40 CFR § 52.21; 40 CFR § 70.2 and Minn. R. 7007.3000	Monthly Recordkeeping: If the Permittee is relying on hours of operation to comply with the emissions limitations contained in section D.1 of this permit, then the Permittee shall record by the last day of each month the hours of operation of the previous calendar month.

<p>Title 1 Condition: Recordkeeping for limit to avoid classification as a major source under 40 CFR § 52.21 and Minn. R. 7007.3000</p>	<p>The Permittee shall maintain a list of all physical changes to existing emissions units by the last day of each month. The Permittee shall list any new emissions units added to the Facility.</p>
<p>40 CFR pt. 60 40 CFR pt. 63 Minn. R. 7011</p>	<p>The Permittee shall maintain a copy of any applicable New Source Performance Standard, National Emissions Standard for Hazardous Air Pollutants (NESHAP) and Minnesota Standard for Stationary Sources with the applicable portions of the standards highlighted, including applicable general requirement, or a checklist form provided by the Commissioner. In addition, the Permittee shall perform all notification, monitoring and recordkeeping requirements of any applicable standard.</p>
<p>Minn. R. 7011.0060-7011.0080; Minn. R. 7007.0800; Minn. R. 7017</p>	<ol style="list-style-type: none"> 1. If the Permittee is determining compliance with the emission limitations in this permit in whole or in part by using control efficiencies for listed control equipment determined under Minn. R. 7011.0070, then the Permittee shall comply with the requirements of Minn. R. parts 7011.0060-7011.0080. 2. If the Permittee is determining compliance with the emission limitations in this permit using control equipment efficiencies based on an alternative control efficiency under Minn. R. 7011.0070, subpart 2, then the Permittee shall comply with the operating parameters of the performance test that established the alternative control efficiency. 3. If the Permittee is determining compliance with the emission limitations in this permit using control equipment that is not listed in Minn. R. 7011.0070, and is not identified in Section C of this permit, then the Permittee shall comply with the requirements in Minn. R. 7017 to conduct performance test(s), and with the operating parameters of the performance test(s) that established an alternative emission factor. The Permittee must calculate actual emissions assuming an uncontrolled emission factor for the period of operation prior to the date the performance test is conducted. Upon notification from the MPCA of a compliant performance test, the Permittee may calculate actual emissions from the date of the performance test taking into consideration the effects of the control equipment.
<p>Minn. R. 7707.0800, subp. 4(D)</p>	<p>Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.</p>

Minn. R. 7019.1000, subp. 3	<p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p>
Minn. R. 7019.1000, subp. 2	<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>

5. CALCULATION OF ACTUAL EMISSIONS

The Permittee may use a calculation worksheet provided by the Commissioner for calculating actual emissions under this permit, or may use the calculation methods under items (a) to (d) below. The Permittee must calculate actual emissions for each emissions unit, except that similar emissions units may be aggregated for emission calculation purposes. The Permittee shall use the calculation method in item (b) instead of the calculation method in item (a) if the data described in item (b) are available for the stationary source. The alternative methods described in items (c) and (d) may be used by the Permittee without advance notification to the Commissioner. The Commissioner shall reject data submitted using the methods described in items (b) to (d) if the conditions set forth for the method are not fully met. To prevent double counting of emissions, the owner or operator must select one calculation method under this subpart for each emissions unit at the stationary source. Fugitive dust emissions must be included in the calculations under this subpart, if the stationary source is a category listed in Minn. Rule part 7007.0200, subpart 2, item B, subitems (1) to (27).

(a) All calculations of actual emissions required under this part shall be based on the Facility's operating parameters, and must use the following equation:

$$E = OP \times UEF \times [1 - CE], \text{ where}$$

E = Actual Emissions in tons per year

OP = Operating Parameter as required by the Uncontrolled Emission Factor (hours of operation or units produced)

UEF = Uncontrolled Emission Factor (pounds of pollutant per hour of operation or units produced) as defined in part 7005.0100, subpart 10a, for uncontrolled emissions

CE = Control Efficiency (percent expressed as a decimal fraction of 1.00) determined according to part 7011.0070 for listed control equipment.

(b) Emission factors from performance tests may be used for the calculation of actual emissions, provided that the performance tests met all the requirements of Minn. Rule parts 7017.2001 to 7017.2060, and all other applicable state rules and federal regulations governing performance tests. If IBM uses an emission factor developed from a performance test, then IBM shall use the calculation method under D.5.(a) above.

(c) A material balance method may be used to calculate VOC actual emissions. If the Permittee uses material balance to calculate VOC actual emissions, then the Permittee shall determine total VOC actual emissions (E) using the following equation:

$$E = (a - b - c) \times (1 - d), \text{ where}$$

a = the amount of VOC entering the process. A signed statement from the supplier or the material safety data sheet must be submitted stating the maximum amount of VOC in any material that was used in the process.

b = the amount of VOC incorporated permanently into the product. This includes VOCs chemically transformed in production. It does not include latent VOC remaining in the product that will at some time be released to the atmosphere. An explanation of this calculation must also be submitted.

c = the amount of VOC, if any, leaving the process as waste, or otherwise not incorporated into the product and not emitted to the air.

d = the control efficiency (percent expressed as a decimal fraction of 1.00) determined according to Minn. Rule part 7011.0070.

(d) The Permittee will determine sulfur dioxide actual emissions by measuring the sulfur content of the fuel and the amount of fuel used and calculate emissions using the appropriate emission factors from AP 42 or the FIRE database. All other criteria pollutant actual emissions from combustion sources will be determined by calculations using the appropriate emission factors from AP 42 or the FIRE database.

E. ENVIRONMENTAL MANAGEMENT SYSTEM (EMS), THIRD-PARTY EMS AUDITING, VARIANCES, TERMINATION, AND REPORTING

Provisions in this section do not replace or override conditions set forth in sections A through D. The MPCA has issued the Permittee a variance from Minn. R. 7007.1450 conditioned on compliance with this section of the permit. If that variance expires or is terminated, the Permittee is no longer required to comply with this section but must thereafter comply with Minn. R. 7007.1450.

1. OVERVIEW

(a) The Permittee is required to maintain an Environmental Management System. The Permittee must also conduct Third-party Environmental Management System (EMS) Audits at the Facility in order to:

1. determine whether the Permittee properly implemented its EMS;
2. determine whether the Permittee took action to correct any deficiencies, if any existed, with its EMS or implementation of its EMS;
3. have the auditor sample compliance with the limits and conditions in this Permit; and
4. have the auditor supply a summary of its audit to MPCA.

(b) The auditor's activities and findings will provide MPCA with an indication of the performance and compliance status of the Permittee and assist the MPCA in determining if it is necessary to take some further action to accurately determine the compliance status of the Facility. The Permittee shall allow public review of the auditor's summary of audit findings, and the audit summary and any subsequent responses by the Permittee and MPCA will be available on the MPCA web site (<http://www.pca.state.mn.us/hot/ibm-emspermit.html>) or another agreed-upon web site.

(c) Conditions in this permit that constitute a variance from MPCA rules (see section D.4) are conditioned on the Permittee maintaining a third-party audited Environmental Management System (EMS) as set forth in this section. The MPCA has granted the variance to ascertain whether regulatory oversight can be reduced if the regulated party adopts and maintains an EMS and third-party EMS auditing.

(d) Outreach to stakeholders is an important part of this permit. The Permittee has identified additional local stakeholders who have received notice of the availability of this Permit and Variance for public comment, and will receive any future formal notices. In addition, the project web site will enhance stakeholder access by publicly reporting facility performance, notification of facility changes, and other pertinent facility information.

2. DEFINITIONS

(a) Environmental Management System (EMS) - An EMS is a continual cycle of planning, implementing, reviewing and improving the actions an organization takes to meet its environmental obligations and legal requirements, and to improve environmental performance, as measured by pollutants emitted or discharged, waste generated, or other objective measures. An EMS may be based on the environmental management system standard established by the International Organization for Standardization (ISO 14001) or other auditable EMS standards.

(b) Third-party EMS Audit - A Third-party EMS Audit:

- is a systematic and documented verification process of objectively obtaining and evaluating evidence to determine whether an organization's EMS conforms to the EMS audit criteria set by that organization;
- is conducted by an accredited auditor who is completely outside the organizational, accountability, and ownership (including publicly-held shares) structure of the organization being audited. Third-party EMS Audits may be conducted by those auditors retained for ISO 14001 or other certification purposes;
- may not be performed by a person who provided EMS or other environmental consulting services to the audited organization less than two years prior to the audit;
- for purposes of this permit, must include random sampling of air quality performance data and recordkeeping practices in order to verify performance data.

3. EMS AND EMS AUDIT REQUIREMENTS: The Permittee shall maintain an EMS and shall conduct Third-party EMS Audits as set out in this part.

(a) EMS Content. The Permittee is currently registered to the ISO 14001 Environmental Management Systems international standard. The Permittee shall continue its registration to the ISO 14001 Environmental Management Systems international standard. Should the Permittee wish to discontinue its ISO 14001 registration, the Permittee shall choose a new external or internal standard for its EMS. The Permittee shall, at least 60 days in advance of discontinuing its registration to the ISO 14001 standard, submit its new EMS and Third-party EMS Audit procedure (including how the Permittee will certify qualifications and independence of the Third-party EMS Auditor) to MPCA for review and approval.

The Permittee's EMS shall be a Facility-wide system for environmental performance and regulatory compliance with these elements, at a minimum:

1. the Facility management's environmental policy including commitment to compliance and continuous improvement in environmental management;
2. identification of current and future legal requirements at the Facility;
3. measurable objectives and targets relating to Facility legal requirements and other performance commitments;
4. the roles and responsibilities of Facility personnel for meeting objectives and targets;
5. procedures for implementation and operation at the Facility, including training and documentation;
6. checking and corrective action, including an active compliance and EMS audit program;
7. the Facility management's review and organization-wide reporting of progress against objectives and targets.

In addition, the Permittee's EMS must include the following:

1. reference to this Air Emissions Permit;
2. requirements for submittal of the summary of findings of the enhanced Third-party EMS Audit;
3. the process and responsibility for complying with this Air Emissions Permit;
4. the schedule for Third-party EMS Audits; and
5. goals for continuously improving environmental performance.

(b) Audit Frequency. The Permittee shall conduct a Third-party EMS audit as provided in this part within 12 months and 36 months of the effective date of this permit, and every 24 months thereafter.

(c) Advance Notification Of Third-Party EMS Audits - The Permittee shall provide MPCA with at least 30 days notice of the date when Third-party EMS Audits will commence, so that MPCA can determine in advance what observer roles, if any, MPCA staff may play in audits. The Permittee agrees to facilitate participation by MPCA staff in auditing activities upon request.

(d) Certification of Third-party EMS Auditor independence - At the time which the Permittee notifies MPCA of an impending Third-party EMS Audit (at least 30 days prior), the Permittee shall submit to MPCA a certification of its verification of Third-party EMS Auditor independence. If MPCA documents: 1) conditions other than the independence claimed; 2) conflicts of interest; 3) patterns of inaccurate EMS auditing; or 4) patterns of nonconformance with generally-accepted EMS auditing standards on the part of the Permittee's selected Third-party EMS Auditor, then MPCA may require the Permittee to select a new Third-party EMS Auditor.

(e) Audit Scope supplied. - The Third-party EMS Auditor and the Permittee shall define an EMS audit scope and provide it to MPCA in advance of the Third-party EMS Audit. The Permittee shall supply all information required for the EMS audit to the Third-party EMS Auditor, including all reported noncompliance information.

(f) Content of Third-party EMS Audit. - The air emission permit portion of the Permittee's operations will undergo the Third-party EMS Audit, which at a minimum must include the following items:

1. Review of the EMS

The Third-party EMS Auditor must determine whether the Permittee properly implemented its EMS. The Third-party EMS Auditor must identify instances where the Permittee did not conform with the EMS.

2. The Permittee's Identification of and Response to EMS deficiencies

For any nonconformances documented in the audit summary, the Third-party EMS Auditor shall state whether the Permittee's management was aware of the nonconformance and shall report corrective action(s) that were identified and the status of any corrective action(s).

3. Review of Air Emissions Process and Data

During each audit, the Third-party EMS Auditor shall randomly select at least one element of the Permittee's documented air emission recording, calculation, and reporting process for review. The Third-party EMS Auditor shall determine if the element selected has been performed as documented and that the information in the element has been accurately recorded and reported. Elements of the Permittee's process include obtaining and recording raw data, compiling data for a reporting period, determining appropriate calculations of emissions as required by the permit and referenced in the

Permittee's EMS, calculating reportable emissions, reviewing emissions with the Permittee's management, and reporting emissions to MPCA. The Third-party EMS Auditor's summary will include any deficiencies found in any air emission recording, calculation, and reporting process element. Additionally, the audit summary will include any instances where, although the Permittee was in compliance with emission limits, there is an indication that the Permittee had submitted inaccurate emission calculations.

4. Audit Summary

The Third-party EMS Auditor shall prepare a summary of its audit that describes findings related to the items in Section E.3.(f).1-3 above. The audit summary's format will be modeled on the Permittee's 2002 Third-party EMS Audit summary posted on the project web site at <http://www.pca.state.mn.us/hot/ibm-emspermit.html>. Audit summaries are public documents.

(g) Audit results provided to MPCA. The Permittee shall require the Third-party EMS Auditor to submit the audit summary required by this permit directly to MPCA and the Permittee within 45 days after the conclusion of the audit. At the request of MPCA, the Third-party EMS Auditor shall make available at the Facility any notes or records used to prepare the audit summary. Unless otherwise directed by MPCA, the audit summary shall be submitted to MPCA at the following address:

Minnesota Pollution Control Agency
Policy and Planning Division/Agency Wide Planning Unit
520 Lafayette Road
St Paul, MN 55155-4194

4. CONDITIONAL VARIANCE - The Permittee has received a variance from Minn. R. 7007.1450 subparts 2 and 3 (Minor and moderate permit amendments) that will expire in three years from the date this permit is issued unless the Permittee requests continuation 3 months prior to that date, and the variance is continued by the MPCA as provided in this section. This three-year period corresponds with the trial period and process described in Section F.1. The MPCA's decision to continue the variance shall be based on the record developed under this permit including the following:

- (a) compliance with permit limits and the extent of any violations;
- (b) any identified deficiencies in the Permittee's EMS;
- (c) the timeliness of any corrective actions, whether initiated by the Permittee's EMS audits or the Third-party EMS Audit;
- (d) stakeholder and Permittee input;
- (e) amount of MPCA and Permittee resources utilized;

- (f) MPCA and Permittee administrative costs;
- (g) the effectiveness of web site reporting; and
- (h) the effectiveness of Third party EMS Audits in confirming the accuracy of reported emissions and identifying strengths and weaknesses in the Permittee's EMS which are germane to this permit.

If the MPCA elects to continue the variance, the MPCA will follow the procedures for public notice in Minn. R. 7000.7000, subparts 4-7. If the MPCA elects to allow the variance to expire, the Permittee will be required to comply with Minn. R. 7007.1450 subparts 2 and 3 and other requirements of this permit for all regulated activities, but will not be required to comply with sections E and F of this permit or be eligible for the reduced recordkeeping in Section E.6.

5. **TERMINATION OF VARIANCE.** MPCA or the Permittee may, at any time, opt to terminate this variance for any of the following documented reasons:

- (a) the Permittee abandons the use of EMSs and Third-party EMS Audits;
- (b) repeated violations of permit limits;
- (c) uncorrected patterns of noncompliance with other permit conditions, which may or may not be revealed or substantiated by the Third-party EMS Audit(s); or
- (d) any other reason MPCA and the Permittee agree to.

If the MPCA or the Permittee elect to terminate the variance, the Permittee will be required to comply with Minn. R. 7007.1450 subparts 2 and 3 and other requirements of this permit for all regulated activities, but will not be required to comply with sections E and F of this permit or be eligible for the reduced recordkeeping in Section E.6.

6. RECORDKEEPING FREQUENCY, ELIGIBILITY AND REQUIREMENTS

(a) As long as the Permittee is in compliance with the conditions in sections E.1-5, the Permittee is eligible for the reduced recordkeeping option described in this part.

(b) Use of chemicals, VOCs, and fuels shall be recorded on a monthly basis, or as required by specific conditions of this permit.

Table 6.(b). EMISSIONS ELIGIBILITY LIMITS FOR REDUCED RECORDKEEPING

Pollutant	Eligibility Limit for Reduced Recordkeeping
Any single HAP	2.5 tons/year
Total HAP	6.25 tons/year
PM	25 tons/year
PM ₁₀	25 tons/year
VOC	25 tons/year
CO	25 tons/year
Pb	0.05 tons/year

(c) If the actual emissions for the previous calendar year of each pollutant are less than the Eligibility Limit for Reduced Recordkeeping for each pollutant listed in 6.(b) of this section, then the Permittee may reduce the frequency of calculating and recording actual emissions from monthly (twelve-month rolling sum calculations) to annually (total calendar year calculation). Under these circumstances, the Permittee shall by February 15 of each calendar year calculate and record the sum of actual emissions for the previous calendar year. If all HAP emissions are VOC emissions and the actual VOC emissions are less than 5 tons/year and no single HAP exceeds 2.5 tons/year, then the Permittee is not required to perform this calculation for HAP emissions. This calculation shall be made pursuant to the requirements of section D.5 of this permit. This calculation must include all emissions units at the stationary source, except for insignificant activities under Minn. Rule part 7007.1300, subparts 2 and 3.

(d) If the actual emissions for the previous calendar year exceed the Eligibility Limit for Reduced Recordkeeping for any pollutant listed in this section, then the stationary source is no longer eligible for annual calculations. The source must comply with the requirements of section D.4, calculating emissions each month as a twelve-month rolling sum. If the Permittee must calculate emissions each month, then the Permittee must maintain its actual emissions for each pollutant below the Reporting Threshold in this section for twelve consecutive monthly 12-month rolling sums before eligibility is reinstated for annual emission calculations as set forth in 6.(c) of this section.

(e) The combined usage of VOC-containing substances ("VOC use sum") must be recorded for the eight highest usage VOC chemicals each month. If the VOC use sum is above seven tons per month for each of three consecutive months, then VOC emissions must be calculated and recorded monthly as a twelve month rolling sum. When the monthly VOC use sum remains below seven tons for a subsequent three-month period and actual emissions for all other pollutants in Table 6.(b) have been less than the Eligibility Limit for Reduced Recordkeeping for the last 12-month period, monthly twelve month rolling sum VOC emission calculations are no longer required.

If the monthly rolling sum for NO_x exceeds 85 tons, then the Permittee shall begin monthly twelve-month rolling sum calculations for PM, PM₁₀, and CO. If the NO_x monthly twelve-month rolling sum calculation is less than 85 tons for any three consecutive months and actual emissions for all other pollutants in Table 6.(b) have been less than the Eligibility Limit for Reduced Recordkeeping for the last 12-month period, the monthly 12-month rolling sum PM, PM₁₀, and CO calculations are no longer required.

For Pb calculations, if there are any fuel use or process changes that exceed the Insignificant Modification threshold in Minnesota Rule 7007.1250, Subpart 1.B.(2), then the Permittee shall calculate whether the change will result in the exceedance of the 0.05 ton/year threshold listed in the table under 6.(b). If the change is calculated to exceed the 0.05 ton/year annual calculation threshold, then the Permittee shall begin monthly twelve-month rolling sum calculations of Pb emissions and continue until such time as the monthly twelve-month rolling sum has been below 0.05 ton/year for twelve consecutive months and actual emissions for all other pollutants in Table 6.(b) have been less than the Eligibility Limit for Reduced Recordkeeping for the last 12-month period.

F. PROCEDURES - This section describes how MPCA and the Permittee have agreed to manage this experimental project as long as the variance described in Section D.4 and above continues.

1. TRIAL PERIOD - To support the decision on continuing the variance (see E.4), and to determine whether to use this permit as a model for others or for rulemaking, this permit will be implemented under an initial trial period, in which:

- (a) MPCA will observe at least 2 Third-party EMS Audits to gain further understanding of the structure and content of the Permittee's EMS.
- (b) MPCA and the Permittee will review the Permittee's documented process, referenced in the Permittee's EMS, for compiling, reporting, and reviewing air emissions data. MPCA will document its involvement in this review, and following any necessary corrections, accept the air emissions data process as sound, assuming it is executed as written.
- (c) MPCA and the Permittee will verify the accuracy of the attached list of air emission units and control equipment as representative of the stationary source at the time of permit issuance.
- (d) MPCA and the Permittee will establish baselines for each organization's regulatory compliance resource commitment under the previous permit.

2. MPCA'S INSPECTION AUTHORITY - MPCA retains authority to conduct its own investigation of compliance with the conditions of this permit should the conduct, reporting, or response to an audit raise issues of compliance or performance. MPCA may inspect at any time, however, MPCA will typically conduct inspections under conditions of:

- (a) potential imminent and substantial danger to human health or the environment;
- (b) an emergency spill or accident mitigation circumstances;
- (c) complaint situations not otherwise resolvable; or
- (d) continuing noncompliance with permit emission limits or recordkeeping requirements.

3. MPCA'S REVIEW AND RESPONSE TO THIRD-PARTY EMS AUDIT - The MPCA will use the following and other sources of information as necessary to determine compliance:

- (a) MPCA will review the Third-party EMS Auditor's summary and the Permittee's air emissions data submittals as required by the permit to determine if the Permittee is in compliance with this Permit. MPCA may also request and review notes or records used to prepare the audit summary.
- (b) If the audit summary or related notes or records raise issues that indicate that the Permittee may not be in compliance with this Permit, or MPCA can not determine whether there is Permit compliance, then MPCA may conduct further actions necessary to determine the compliance status of the Permittee, which may include, but are not limited to, an information request or an inspection.

4. MPCA'S RESPONSE TO IDENTIFIED NONCOMPLIANCE OR EMS NONCONFORMANCE

- (a) Investigation of Identified Noncompliance - When the Permittee or the Third-party EMS Auditor identifies any noncompliance with a term or condition of this Permit, MPCA shall investigate and monitor the situation to determine whether the Permittee has responded adequately, and shall summarize the issue and its resolution on the project web site.
- (b) EMS Nonconformance- A determination by MPCA that the Permittee was aware of a deficiency or problem in its EMS (that is not a violation of permit, statute, or rule), but failed to inform MPCA of that deficiency, will not be treated as a Permit violation subject to an enforcement action for a monetary penalty, but will be a factor considered in determining the success and future of the variance.

5. PERMIT INFORMATION ON THE WEB - As a means to improve public accessibility to compliance information and results of the Third-party EMS Audit, the following information will be posted on the project web site, <http://www.pca.state.mn.us/hot/ibm-emspermit.html>, by MPCA within 30 days of MPCA's receipt, unless a different amount of time is provided for below. The posted information shall include:

- (a) Annual results of air emissions calculations, as required by the Permit. The Permittee shall report air emissions as described in D.5. Calculation of Actual Emissions and continue to use the report formats currently in use for annual air emissions. Air emissions data posted on the web will be Facility-wide. Reports may be electronically-formatted, submitted, and certified. Annual air emissions data from previous years shall be archived.
- (b) Third-party EMS Audit summaries, beginning with the summary from the 2000 Third-party EMS Audit.
- (c) As identified in the Third-party EMS Audit, any notable improvements in the EMS and resulting environmental performance.
- (d) Any notifications by the Permittee of deviations or noncompliance with a term or condition of this Permit, including any corrective actions.
- (e) A summary of MPCA's investigation and monitoring of the Permittee's response to any identified deviations, noncompliance, deficiencies, or potential problems with the terms and conditions of this permit. MPCA shall summarize each issue and its resolution on the web site as soon as possible, but normally within 90 days of being informed of the situation, unless a longer investigation is required;
- (f) This permit, including the attachment of baseline process and control equipment; and
- (g) Notification of Facility operation changes significant enough to have caused an amendment to the permit which was in place on the day before this Permit was implemented.

ATTACHMENT A**1. Emissions Units at the Facility at Permit Issuance**

Note: Typical use of emergency generators is during annual shutdowns for maintenance of boilers/piping, electrical, and plumbing.

GP Permit conditions:				FACILITY EMISSION SOURCES (Identifiers, manufacturer, age, use, feedstocks, notes, etc.)	BLDG NO.	STACK VENT	CONTROL EQUIP. & requirement
GP 001	GP 002			EU 001 Boiler 1 Erie City, 1956 (natural gas, LP, distillate)	301	SV 001	
GP 001	GP 002			EU 002 Boiler 2 Erie City, 1957 (NG, LP, distillate, residual)	301	SV 002	
GP 001	GP 002			EU 003 Boiler 3 Murray (NG, LP, distillate, residual)	301	SV 003	
GP 001		GP 003		EU 004 Emergency Electric Generator		SV 004	
GP 001		GP 003		EU 005 Emergency Electric Generator		SV 005	
GP 001		GP 003		EU 006 Emergency Electric Generator		SV 006	
GP 001		GP 003		EU 007 Emergency Electric Generator		SV 007	
GP 001		GP 003		EU 008 Emergency Electric Generator		SV 008	
GP 001		GP 003		EU 009 Emergency Electric Generator		SV 009	
GP 001		GP 003		EU 010 Emergency Electric Generator		SV 010	
GP 001		GP 003		EU 011 Emergency Electric Generator		SV 011	
GP 001		GP 003		EU 012 Emergency Electric Generator		SV 012	
GP 001		GP 003		EU 013 Emergency Electric Generator		SV 013	
GP 001		GP 003		EU 014 Emergency Electric Generator		SV 014	
GP 001		GP 003		EU 016 Emergency Electric Generator		SV 016	
GP 001		GP 003		EU 017 Emergency Electric Generator		SV 017	
GP 001		GP 003		EU 018 Emergency Electric Generator		SV 018	
GP 001		GP 003		EU 019 Emergency Electric Generator		SV 019	

GP 001		GP 003		EU 020 Emergency Electric Generator		SV 020	
GP 001		GP 003		EU 021 Emergency Electric Generator		SV 021	
GP 001		GP 003		EU 022 Emergency Electric Generator		SV 022	
GP 001		GP 003		EU 023 Emergency Electric Generator		SV 023	
GP 001		GP 003		EU 024 Emergency Electric Generator		SV 024	
GP 001		GP 003		EU 025 Emergency Electric Generator		SV 025	
GP 001		GP 003		EU 027 Emergency Electric Generator		SV 027	
GP 001		GP 003		EU 028 Emergency Electric Generator		SV 028	
GP 001		GP 003		EU 029 Emergency Electric Generator		SV 029	
GP 001		GP 003		EU 030 Auxiliary Emergency Electric Generator 1		SV 030	
GP 001		GP 003		EU 031 Auxiliary Emergency Electric Generator 2		SV 031	
GP 001		GP 003		EU 032 Auxiliary Emergency Electric Generator 3		SV 032	
GP 001		GP 003		EU 033 Auxiliary Emergency Electric Generator 4		SV 033	
GP 001		GP 003		EU 034 Auxiliary Emergency Electric Generator 5		SV 034	
GP 001		GP 003		EU 035 Fire Pump 1		SV 035	
				EU 038 Production Unit 1: Facilities, Power House		SV 038	
				EU 039 Production Unit 2: System Build, Test, Ship		SV 039	
				EU 040 Production Unit 3: Flex Circuit Manufacturing		SV 040	
				EU 041 Production Unit 4; System Development, Analytical Lab, Model Shop		SV 041	
				EU 044 Lime Silo Contractor manages baghouse.	Outside 204/115	SV 044	CE 001 Sec. C.2
				EU 045 Metal Chip Collector (for recycling) Hoffman cyclone (prototype shop - occasional use)	103	SV 045	CE 002 Sec. C.2
GP 001	GP 002		GP 004	EU 049 Boiler 4 - Dc - low-NOx Nebraska (tallest stack; on-fly switchover; most used and most efficient - NG, distillate)	301	SV 049	

GP 001		GP 003		EU 051 Emergency Electric Generator		SV 051	
GP 001		GP 003		EU 058 East Diesel Fire Pump		SV 058	
GP 001		GP 003		EU 059 Bldg 104 Diesel Generator		SV 059	
				FS 001 Paved Road PM10		Fugitives	
				TK 001 Distillate Oil Storage Tank		Fugitives	

2. Facility Emissions Units from Previous Permit Inactive at Permit Issuance

GP Permit conditions:				FACILITY EMISSION SOURCES (Identifiers, manufacturer, age, use, feedstocks, notes, etc.)	BLDG. NO.	STACK VENT	CONTROL EQUIP. & requirement
				EU 042 Production Unit 5 - Disk Process (Shutdown and removed)	111	SV 042	
				EU 043 Sludge Dryer (Shutdown and removed)	106	SV 043	None
				EU 046 Router/Dust Collector (Shutdown and removed)	106	SV 046	CE 003 Sect. C.2
				EU 047 Router/Dust Collector (Shutdown and removed)	106	SV 047	CE 004 Sect. C.2
				EU 048 Router/Dust Collector (Shutdown and removed)	106	SV 048	CE 005 Sect. C.2
				EU 053 Production Unit 5 - Pre-Chem Spin Dryers (Shutdown and removed; water scrubber in place if needed)	111	SV 053	CE 006 Sect. C.2
				EU 054 Production Unit 5 - Pre-Chem Alcohol Baths (Shutdown and removed; water scrubber in place if needed)	111	SV 054	CE 007 Sect. C.2
				EU 055 Production Unit 5 - Pre-Chem Spin Dryers Shutdown and removed	111	SV 055	None
				EU 056 Production Unit 5 - Post-Chem Alcohol Baths (Shutdown and removed; water scrubber in place if needed)	111	SV 056	CE 009 Sect. C.2
				EU 057 Production Unit 5 - Slurry Mix	111	SV 057	CE 010

Note: 2 other scrubbers in place but never used.

GP Permit conditions:				FACILITY EMISSION SOURCES (Identifiers, manufacturer, age, use, feedstocks, notes, etc.)	BLDG NO.	STACK VENT	CONTROL EQUIP. & requirement
GP 001	GP 002		GP 004	EU 050 Boiler 5 - Dc - low-NO _x (when installed, would substitute for Boiler 1 which would be removed - NG, distillate)	301	SV 050	
GP 001		GP 003		EU 052 Emergency Electric Generator		SV 052	

Note: This form provided as a template for minimum content; Permittee may choose other formats.

[illegible]

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 10900006-007

This technical support document is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner/Operator Address and Phone Number	Facility Address (SIC Code: 3571)
International Business Machine Corporation Armonk, New York 10504	International Business Machine Corporation 3605 Highway 52 North Rochester, MN 55901 Olmsted County

1.2. Description Of The Facility

The facility manufactures electronic digital computers and produces computer software. Until recently, the facility operated production units that manufactured circuit boards and disks. This permit amends a State Total Facility Operating Permit. The primary sources of emissions at the facility include four (4) boilers that have a combined heat input of 326 MMBtu/hr. This makes the facility subject to the 100 ton-per-year major source definition under 40 CFR § 52.21 (fossil-fuel boilers totaling more than 250 MMBtu/hr heat input). The facility has accepted federally enforceable emission limits to maintain its Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂) emissions under 100 tons per year (tpy). Hence, 40 CFR § 52.21 does not apply. The facility also has thirty (30) emergency electric generators and two (2) fire pumps. Five (5) fabric filter baghouses control small sources of particulate, although only two (2) are now operational.

This permit contains conditions cited as “Title I condition: State Implementation Plan.” Carried over from the previous permit, these conditions are necessary to demonstrate compliance with the national ambient air quality standards for SO₂. This facility is located in an area formerly designated nonattainment for SO₂; this area is now commonly referred to as a maintenance area for SO₂, which has led MPCA and U.S. Environmental Protection Agency (EPA) to continue in force all “Title I condition: State Implementation Plan” permit conditions pertaining to SO₂ emissions.

1.3 Description of the Activities Allowed By This Permit Action

The PSD minor source baseline dates were recently triggered in Olmsted county for PM-10 and SO₂. Since Boiler No. 5 has not been constructed at the IBM facility, the entire emissions from Boiler No. 5 are increment-consuming. Modeling results indicate that emissions from Boiler No.

Permit Action Number:

Date: 12/4/2003

5 have the potential to cause or contribute to a violation of the PSD increments for SO₂. To ensure that the PSD increments for SO₂ are protected, the following condition is being added to the permit under GP 002 – Boilers:

Title I Condition: 40 CFR 52.21(k) [to not cause or contribute to a violation of the ambient air increments for SO ₂ established in 40 CFR 52.21(c)]	Boiler No. 5 Construction: Prior to construction of Boiler No. 5 (EU 050), the Permittee must conduct air dispersion modeling to demonstrate that emissions from the IBM facility do not cause or contribute to an exceedance of the ambient air increments for SO ₂ established in 40 CFR 52.21 (c). The air dispersion modeling must be approved by the MPCA prior to construction of Boiler No. 5. If any additional permit restriction(s) are necessary to demonstrate compliance with the ambient air increments for SO ₂ established in 40 CFR 52.21(c), the Permittee shall submit the necessary permit application and obtain the necessary permit amendment prior to construction of Boiler No. 5.
---	---

1.4. Facility Emissions:

This permit amendment only adds the condition shown in Section 1.3 above. No other changes are proposed at this time. The potential to emit from the facility remains as follows:

Pollutant	PM	PM ₁₀	SO ₂	NO _x	VOCs	CO	Lead	Combined HAPs	Single HAP
Total Facility PTE	90	90	90	90	90	90	0.45	22.5	9

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

Regulatory Overview of Units Affected by the Modification

No new units are being added with this modification and the regulatory status of Boiler No. 5 is not being affected by this permit action.

3. Conclusion

Based on the information provided by IBM, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 10900006-007 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Craig Thorstenson

Attachments: None

Permit Action Number:

Date: 12/4/2003