

AIR EMISSION PERMIT NO. 12300410- 004

IS ISSUED TO

Rock-Tenn Company

Waldorf Corporation d/b/a Rock-Tenn Company
2250 Wabash Avenue
St. Paul, Ramsey County, MN 55114

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	Application Date
Total Facility Operating Permit	01/17/2003
Major Amendment	09/20/2007

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

Permit Type: Federal; Pt 70/Major for NSR

Operating Permit Issue Date: April 17, 2003

Major Amendment Issue Date: December 21, 2007

Expiration: April 17, 2008

All Title I Conditions do not expire.

Jeff J. Smith, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Permit History

Table A: Limits and Other Requirements

Table B: Submittals

Table C: not used in this permit

Appendix A: not used in this permit

Appendix B: Insignificant Activities

Appendix C: Modeled Parameters

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:

Waldorf manufactures 100 percent recycled corrugated medium and boxboard at the St. Paul facility. The paper products are manufactured entirely from pre- and post-consumer corrugated board, white paper, newsprint, and boxboard. The papermaking processes are not a significant source of emissions, except for volatile organic compound (VOC) emissions. The VOC emissions from the papermaking are primarily from material used for cleaning the papermaking machines, as well as from additives added to the paper.

Process steam is provided by four on-site boilers. The boilers are allowed to burn natural gas, #2 or #6 fuel oil. The boilers are sources of particulate matter, nitrogen oxides, sulfur dioxide, carbon monoxide, VOC, and hazardous air pollutant emissions.

PERMIT HISTORY:Permit Action -001

This was the original Part 70 Operating Permit

Permit Action -002

This permit action was not issued. The application was for two new natural gas fired boilers, and was withdrawn by the Permittee.

Permit Action -003

The purpose of this permit action was to revise and delete certain permit provisions reflecting the recent retirement and removal of emission units associated with the folding carton operation; to change the status of the web welder emission unit to conditionally exempt (under Minn. R. ch. 7008); to incorporate standard physical parameters required for compliance with ambient air standards based on air dispersion modeling; and to add recordkeeping requirements now standard in all permits for major sources under New Source Review.

Permit Action -004 (this permit action)

The purpose of this permit action is to provide for alternative operating scenarios whereby the facility may use Boiler #4 to combust only natural gas and exhaust the emissions through SV002, or Boiler #4 may combust #. 2 or 6 fuel oil in addition to natural gas, and the emissions must be exhausted through SV001, which is taller and provides better dispersion. Duct work must be reconfigured for Boiler 4 to exhaust to SV001. Both scenarios result in modeled attainment of National and Minnesota Ambient Air Quality Standards (NAAQS and MAAQS).

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

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
SOURCE-SPECIFIC REQUIREMENTS	hdr
<p>The parameters used in the modeling performed for determining emission and/or operational limits for this facility are listed in Appendix C of this permit. If the Permittee intends to change any of the listed parameters, the Permittee must submit the revised parameters to the Commissioner and receive written approval before making any changes. The revised parameter information submittal must include, but is not limited to: the locations, heights and diameters of the stacks; locations and dimensions of nearby buildings; velocity and temperatures of the gases emitted; and the emission rates. The plume dispersion characteristics due to the parameter revisions must equal or exceed the dispersion characteristics modeled for this permit, and the Permittee shall demonstrate this in the proposal.</p> <p>If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must remodel.</p>	Minn. R. 7009.0020
<p>Parameters Used in Modeling (continued):</p> <p>For changes that do not involve an increase in an emission rate and that do not require a permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.</p> <p>For changes involving increases in emission rates and that require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.</p> <p>For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted prior to or with the permit amendment application.</p> <p>This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.</p>	Minn. R. 7009.0020
DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NEW SOURCE REVIEW	hdr
<p>These requirements apply where there is a reasonable possibility that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test and found to not be part of a major modification, may result in a significant emissions increase. If the ATPA test is not used for a particular project, or if there is not a reasonable possibility that the proposed project could result in a significant emissions increase, then these requirements do not apply to that project.</p> <p>Even though a particular modification is not subject to New Source Review, a permit amendment, recordkeeping, or notification may still be required under Minn. R. 7007.1150 - 7007.1500.</p>	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000
<p>Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following information:</p> <ol style="list-style-type: none"> 1. A description of the project 2. Identification of the emission unit(s) whose emissions of an NSR pollutant could be affected 3. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the potential emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the unit(s) could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. <p>The Permittee shall maintain records of this documentation.</p>	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
<p>Before beginning actual construction of any project which includes any electric utility steam generating unit (EUSGU), the Permittee shall submit a copy of the preconstruction documentation (items 1-3 under Preconstruction Documentation, above) to the Agency.</p>	Title I Condition: 40 CFR Section 52.21(r)(6)(ii) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
For any project which includes any EUSGU, the Permittee must submit an annual report to the Agency, within 60 days after the end of the calendar year. The report shall contain: a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The quantified annual emissions analyzed using the ATPA test, plus the potential emissions associated with the same project and analyzed using potential emissions c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection, if that is the case.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
For any project which does not include any EUSGU, the Permittee must submit a report to the Agency if the annual summed (actual plus potential, if applicable) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain: a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The annual emissions (actual plus potential, if any part of the project was analyzed using potential emissions) for each pollutant for which the preconstruction projection and significant emissions rate is exceeded. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, supbs. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080.
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
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 or group of units.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
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

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
If applicable, the Permittee is required to submit a Risk Management Plan (RMP) under the federal rule, 40 CFR pt. 68. Each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, shall design and implement an accidental release prevention program. A complete RMP must be submitted to the RMP Reporting Center, PO Box 3346, Merrifield, VA 22116. RMP submittal information may be obtained at http://www.epa.gov/swercepp or by calling 1-800-424-9346. These requirements must be complied with no later than the latest of the following dates: (1) June 21, 1999; (2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or (3) The date on which a regulated substance is first present above a threshold quantity in a process.	40 CFR pt. 68

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

Subject Item: GP 001 Boilers**Associated Items:** EU 001 Boiler 1 - normal fired

EU 002 Boiler 2 - normal fired

EU 003 Boiler 3 - normal fired

EU 004 Boiler 4 - tangential fired

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input . This applies separately to each boiler. PTE for the boilers based on worst-case allowable fuels is 0.12 lb/mmBtu.	Minn. R. 7011.0510, subp. 1
Total Particulate Matter: less than or equal to 285 tons/year using 12-month Rolling Sum . Limit is for total PM emissions from boilers, as calculated using formula below.	Minn. R. 7009.0080 (State ambient air quality standards as demonstrated by modeling); Minn. R. 7007.0800, subp. 4 and 5
$PM = [NG * EF_{ng} * HVNG]/2000 + (EF_2 * FO_2)/2000 + (EF_6 * FO_6)/2000$ <p>Where:</p> <p>NG = Total volume of natural gas burned in boilers 1-4 based on 12-month rolling sum, in units of cf</p> <p>EF_{ng} = emission factor for natural gas based on site-specific performance test (or from AP-42 if no site-specific data) in units of lb/mmBtu</p> <p>HVNG = Average heating value of natural gas as provided by supplier, in units of mmBtu/cf</p> <p>2000 = conversion factor, in units of lb/ton</p> <p>EF₂ = emission factor for #2 fuel oil, based on site-specific performance test (or from AP-42 if no site-specific data) in units of lb/1000 gallons</p> <p>EF₆ = emission factor for #6 fuel oil, based on site-specific performance test (or from AP-42 if no site-specific data) in units of lb/1000 gallons</p> <p>FO₆ = Total volume of #6 fuel oil burned based on 12-month rolling sum, in units of 1000 gallons</p> <p>FO₂ = Total volume of #2 fuel oil burned based on 12-month rolling sum, in units of 1000 gallons</p>	Minn. R. 7009.0080 (State ambient air quality standards as demonstrated by modeling); Minn. R. 7007.0800, subp. 4 and 5
Sulfur Dioxide: less than or equal to 1.6 lbs/million Btu heat input . This applies separately to each boiler.	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This applies separately to each boiler.	Minn. R. 7011.0510, subp. 2
Sulfur Content of Fuel: less than or equal to 0.5 percent by weight for #2 fuel oil.	Minn. R. 7007.0800, subp. 2
Sulfur Content of Fuel: less than or equal to 1.5 percent by weight for #6 fuel oil.	Minn. R. 7007.0800, subp. 2
Fuel Type: Natural gas, No. 2 fuel oil, or No. 6 fuel oil only, by design.	Minn. R. 7005.0100, subp. 35a
Notification of Installation of Fuel Oil Storage Capacity: 90 days before installing any fuel oil storage tanks, the Permittee shall notify the Manager of the Air Quality Permits Section of the planned action.	Minn. R. 7007.0800, subp. 6
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Emissions Monitoring: The owner or operator shall use a COMS to measure opacity emissions from the boilers.	Minn. R. 7007.0800, subp. 4
Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain records of the type and total quantity of all fuel used in the boilers.	Minn. R. 7007, subp. 4 and 5

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

<p>Monthly Recordkeeping - Total PM Emissions. By the 15th of the month, the Permittee shall calculate and record the following:</p> <p>1) The total fuel usage of each fuel used in the boilers for the previous calendar month using the fuel usage records.</p> <p>2) The average heating value, for the previous 12-month period, for each fuel type burned using the data provided by the fuel supplier.</p> <p>3) The 12 month rolling sum Total PM Emissions for the previous 12 month period using the formula specified in this permit.</p> <p>The Total PM emissions using the formula only needs to be calculated if fuel oil was combusted during the previous month. PTE for the boiler using natural gas shows that the emission limit is met.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Fuel Records: The Permittee shall obtain and maintain a certification from the fuel supplier for each fuel oil delivery specifying the sulfur content of the fuel oil, in percent by weight, and the heating value of the fuel oil, in mmBtu/gal. The Permittee shall also obtain and maintain a certification from the natural gas supplier specifying the heating value of the natural gas, in mmBtu/cf. This information shall be maintained on site.</p>	Minn. R. 7007.0800, subp. 5
<p>Fuel usage records: the Permittee shall, on a monthly basis, record what boilers were operated during the month and the type of fuel burned and, if fuel oil was burned, the quantity of fuel oil burned, during the month. The Permittee shall also record the volume and type of fuel oils delivered to the facility during the month.</p>	Minn. R. 7007, subp. 4 and 5
TESTING REQUIREMENTS	hdr
<p>Performance Test: due 180 days after Initial Startup of EU001 on fuel oil, to measure PM emissions from EU001. Test should be done while burning No. 6 fuel oil.</p>	Minn. R. 7017.2020, subp. 1
<p>Performance Test: due 180 days after Initial Startup of EU002 on fuel oil, to measure PM emissions from EU002. Test should be done while burning No. 6 fuel oil.</p>	Minn. R. 7017.2020, subp. 1
<p>Performance Test: due 180 days after Initial Startup of EU003 on fuel oil, to measure PM emissions from EU003. Test should be done while burning No. 6 fuel oil.</p>	Minn. R. 7017.2020, subp. 1
<p>Performance Test: due 180 days after Initial Startup of EU004 on fuel oil, to measure PM emissions from EU004. Test should be done while burning No. 6 fuel oil.</p>	Minn. R. 7017.2020, subp. 1
<p>Performance Test Notifications and Submittals;</p> <p>Performance Test Notification (written): due 30 days before each Performance Test</p> <p>Performance Test Plan: due 30 days before each Performance Test</p> <p>Performance Test Pre-Test Meeting: due 7 day before each Performance Test</p> <p>Performance Test Report: due 45 days after each Performance Test</p> <p>Performance Test Report - Microfiche Copy or CD: due 105 day after each Performance Test.</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	Minn. R. 7017.2030, subp. 1-4; Minn. R. 7017.2018 and Minn. R. 7017.2035, subp. 1-2

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

Subject Item: GP 004 Paper Machines, Boxboard Mill**Associated Items:** EU 013 CorMed Paper Machine 4

EU 014 CorMed Paper Machine 5

EU 015 Boxboard Mill 1

EU 016 Boxboard Mill 2

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735. This applies separately to each piece of industrial process equipment.	Minn. R. 7011.0710, subp. 1(A)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This applies separately to each piece of industrial process equipment.	Minn. R. 7011.0710, subp. 1(B)
Periodic Monitoring: the Permittee shall perform proper maintenance of the paper and boxboard machines so as to prevent excessive amounts of particulate matter from being emitted from the associated stack/vents.	Minn. R. 7007.0800, subp. 4

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

Subject Item: EU 004 Boiler 4 - tangential fired**Associated Items:** GP 001 Boilers

SV 001 Boilers 1, 2, 3, and 4 - gas or oil

SV 002 Boiler 4 - gas only

What to do	Why to do it
Capacity: less than or equal to 232 million Btu's/hour . This is derated heat input used in modeling for PM SIP.	Minn. R. 7009.0080
ALTERNATIVE OPERATING SCENARIOS	hdr
Alternative Operating Scenario. This permits contains operating and stack parameter requirements for the boilers to ensure compliance with National and Minnesota Ambient Air Quality Standards. These limits are written as two Alternative Operating Scenarios (AOS). The Permittee must comply with either Scenario 1 or Scenario 2 at all times.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Alternative Operating Scenario Recordkeeping. The Permittee shall keep a log showing which scenario it is operating under at all times. The log shall be updated whenever making a change from one operating scenario to the other. The log shall at a minimum include the actual day the switch was made and the designation of the operating scenario (AOS 1 or AOS 2).	Minn. R. 7007.0800, subp. 11
AOS 1 - Required Use of SV001	hdr
Emissions From SV001 - Boiler 4 (EU004) must exhaust to SV001 whenever fuel oil (No. 2 or No. 6) is being combusted. Boiler 4 may also exhaust emissions to SV001 when natural gas is being combusted.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
AOS 2 - Optional Use of SV002	hdr
Emissions From SV002 - Boiler 4 (EU004) may only exhaust emissions to SV002 when only natural gas is being combusted. At any time when any fuel other than natural gas is being combusted in Boiler 4, emissions from Boiler 4 must be exhausted to SV001.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080

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

12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

Subject Item: EU 018 Clay Coater Dryer**Associated Items:** SV 011 Clay Coater

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0610, subp. 1(A)(1)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
Sulfur Dioxide: less than or equal to 1.6 lbs/million Btu heat input . Potential emissions using allowed fuel is approximately 0.0006 lb/MMBtu.	Minn. R. 7011.0610, subp. 2(A)(1)
Fuel Type: Natural gas only, by equipment design.	Minn. R. 7005.0100, subp. 35a

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Waldorf Corp - A Rock-Tenn Co
Permit Number: 12300410 - 004

Subject Item: FS 001 Paved Roads

What to do	Why to do it
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. Do not cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne. All persons shall take reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. The commissioner may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including, but not limited to, paving or frequent clearing of roads, driveways, and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.	Minn. R. 7011.0150

TABLE B: SUBMITTALS

B-1 12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co
Permit Number: 12300410 - 004

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

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

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

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

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

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

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

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup on No. 6 fuel oil	EU001, EU002, EU003, EU004
Testing Frequency Plan	due 60 days after Performance Test for PM emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU001, EU002, EU003, EU004

TABLE B: RECURRENT SUBMITTALS**B-3** 12/21/07

Facility Name: Waldorf Corp - A Rock-Tenn Co

Permit Number: 12300410 - 004

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 04/17/2003 . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year starting 04/17/2003 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B – Insignificant Activities**Facility Name:** Waldorf Corporation - A Rock-Tenn Company**Permit Number:** 12300410-004**Insignificant Activities Required to be Listed**

Minn. R. 7007.1300, subp.	Rule Description of the Activity	General Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. <ul style="list-style-type: none">• <i>Natural gas-fired space heaters</i>	Minn. R. 7011.0515 (PM and opacity)
3(G)	Emissions from a laboratory. <ul style="list-style-type: none">• <i>Analytical and QA/QC laboratories</i>	Minn. R. 7011.0715 (PM and opacity)
3(H)(4)	Brazing, soldering or welding equipment.	Minn. R. 7011.0715 (PM and opacity)
3(H)(5)	Blueprint copiers and photographic processes.	Minn. R. 7011.0715 (PM and opacity)
4(B)	Emission units with potential emissions of less than 2.28 lb/hr or actual emissions of less than 1.0 ton/yr of PM, PM ₁₀ , NO _x , SO ₂ , and VOCs. <ul style="list-style-type: none">• <i>Fuel oil storage tank (day tank)</i>• <i>Lubricating oil storage tank</i>• <i>Feedstock paper storage piles and handling</i>• <i>Drum and tote storage of VOC-containing materials</i>• <i>Underground storage tank (UST) # 25 – diesel fuel</i>	Minn. R. 7011.0715 (PM and opacity)
Minn. R. 7008.4110 subp.	Rule Description of the Activity	General Applicable Requirement
(2)	Equipment venting PM/PM ₁₀ inside a building, provided that emissions from the equipment are filtered through an air cleaning system and vented inside of the building 100% of the time. <ul style="list-style-type: none">• <i>Finishing operations that are filtered through an air cleaning system, and vented inside the building.</i>• <i>CorMed Web welder (EU017) is reconfigured to be filtered and exhausted inside the building 100% of the time</i>	Minn. R. 7011.0715 (PM and opacity)

APPENDIX C – Modeled Parameters

Facility Name: Waldorf Corporation - A Rock-Tenn Company

Permit Number: 12300410-004

The Scenario 1 values in the following table are those that were used in the modeling in the Air Quality Impact Analysis of the Rock-Tenn Company Facility, March 2006.

Scenario 1 - Boilers 1-4 combusting fuel oil or natural gas, all four boilers emitting through SV001

Stack ID	Stack Height (ft)	Stack Temp (°F)	Design Flow Rate (acfm)	Stack Diameter (ft)	Source ID	NO _x (lb/hr)	CO (lb/hr)	Short-term SO ₂ (lb/hr)	Long-term SO ₂ (lb/hr)	Short-term PM ₁₀ (lb/hr)	Long-term PM ₁₀ (lb/hr)	Annual PM (ton/year)
SV001	197.0	382	414,840	12.7	EU001	42.95	11.0	215.1	906.4 ⁽¹⁾	16.9	65.06 ⁽¹⁾	285.0
					EU002	62.70	16.0	314.0		24.7		
					EU003	62.70	16.0	314.0		24.7		
					EU004	72.74	18.6	364.2		28.6		
SV010 ⁽²⁾					EU017 ⁽²⁾	N/A	N/A	N/A	N/A	0.34	0.34	N/A
SV011	49	80	1400	0.9	EU018	2.581	2.168	N/A	N/A	0.196	0.196	N/A
Fugitive					FS001a ⁽³⁾	N/A	N/A	N/A	N/A	0.347	0.165	N/A
Fugitive					FS001b ⁽³⁾	N/A	N/A	N/A	N/A	0.220	0.105	N/A
Fugitive					FS001c ⁽³⁾	N/A	N/A	N/A	N/A	0.079	0.038	N/A
Fugitive					FS001d ⁽³⁾	N/A	N/A	N/A	N/A	0.133	0.064	N/A
Fugitive					FS001e ⁽³⁾	N/A	N/A	N/A	N/A	0.243	0.116	N/A
Fugitive					FS001f ⁽³⁾	N/A	N/A	N/A	N/A	0.010	0.005	N/A
Fugitive					FS001g ⁽³⁾	N/A	N/A	N/A	N/A	0.551	0.263	N/A
Fugitive					FS001h ⁽³⁾	N/A	N/A	N/A	N/A	0.055	0.025	N/A
Fugitive					FS001i ⁽³⁾	N/A	N/A	N/A	N/A	0.008	0.004	N/A

(1) Limited emission rate for the four boilers combined, based on the limited annual PM (total particulate matter) emissions.

(2) While EU017/SV010 was modeled using the listed parameters, the Permittee has elected to reconfigure the emissions such that they are routed through a particulate filter device and exhausted inside a building 100% of the time. This operation is thus considered a conditionally insignificant activity under Minn. R. 7008.4110.

- (3)
- FS001a = Boxboard shipping paved roads
 - FS001b = Final boxboard shipping paved roads
 - FS001c = CorMed shipping paved roads
 - FS001d = Fuel oil delivery paved roads
 - FS001e = Boxboard scrap yard "M" paved roads
 - FS001f = Boxboard receiving warehouse "W" paved roads
 - FS001g = CorMed yard "S" & "C" paved roads
 - FS001h = Employee parking paved roads
 - FS001i = Bailer "B" paved roads

Scenario 2 - Boilers 1-3 combusting fuel oil or natural gas and exhausting through SV001,
Boiler 4 combusting natural gas and exhausting through SV002

Stack ID	Stack Height (ft)	Stack Temp (°F)	Design Flow Rate (acfm)	Stack Diameter (ft)	Source ID	NO _x (lb/hr)	CO (lb/hr)	Short-term SO ₂ (lb/hr)	Long-term SO ₂ (lb/hr)	Short-term PM ₁₀ (lb/hr)	Long-term PM ₁₀ (lb/hr)	Annual PM (ton/year)
SV001	197.0	382	318736	12.7	EU001	42.9	11.0	215.1	843.1 ⁽¹⁾	16.9	66.3 ⁽¹⁾	285.0
					EU002	62.7	16.0	314.0		24.7		
					EU003	62.7	16.0	314.0		24.7		
SV002	115.0	500	96104	7.0	EU004	61.9 ⁽⁴⁾	19.1 ⁽⁴⁾	0.14 ⁽⁴⁾	0.14 ⁽⁴⁾	1.73 ⁽⁴⁾	1.73 ⁽⁴⁾	
SV010 ⁽²⁾					EU017 ⁽²⁾	N/A	N/A	N/A	N/A	0.34	0.34	N/A
SV011	49	80	1400	0.9	EU018	2.581	2.168	N/A	N/A	0.196	0.196	N/A
Fugitive					FS001a ⁽³⁾	N/A	N/A	N/A	N/A	0.347	0.165	N/A
Fugitive					FS001b ⁽³⁾	N/A	N/A	N/A	N/A	0.220	0.105	N/A
Fugitive					FS001c ⁽³⁾	N/A	N/A	N/A	N/A	0.079	0.038	N/A
Fugitive					FS001d ⁽³⁾	N/A	N/A	N/A	N/A	0.133	0.064	N/A
Fugitive					FS001e ⁽³⁾	N/A	N/A	N/A	N/A	0.243	0.116	N/A
Fugitive					FS001f ⁽³⁾	N/A	N/A	N/A	N/A	0.010	0.005	N/A
Fugitive					FS001g ⁽³⁾	N/A	N/A	N/A	N/A	0.551	0.263	N/A
Fugitive					FS001h ⁽³⁾	N/A	N/A	N/A	N/A	0.055	0.025	N/A
Fugitive					FS001i ⁽³⁾	N/A	N/A	N/A	N/A	0.008	0.004	N/A

(1) Limited emission rate for the three boilers combined. This is a conservative estimate of long term emissions, since it is not based on the limited annual PM (total particulate matter) emissions

(2) While EU017/SV010 was modeled using the listed parameters, the Permittee has elected to reconfigure the emissions such that they are routed through a particulate filter device and exhausted inside a building 100% of the time. This operation is thus considered a conditionally insignificant activity under Minn. R. 7008.4110.

(3) FS001a = Boxboard shipping paved roads
 FS001b = Final boxboard shipping paved roads
 FS001c = CorMed shipping paved roads
 FS001d = Fuel oil delivery paved roads
 FS001e = Boxboard scrap yard "M" paved roads
 FS001f = Boxboard receiving warehouse "W" paved roads
 FS001g = CorMed yard "S" & "C" paved roads
 FS001h = Employee parking paved roads
 FS001i = Bailer "B" paved roads

(4) Applicant modeled emissions that are higher than calculated by MPCA, based on equipment capacity and natural gas combustion. This is a conservative estimate of modeled impacts.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 12300410-004

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

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 2631)
Waldorf Corporation (dba Rock Tenn Company) 2250 Wabash Avenue St. Paul, MN 55114	2250 Wabash Avenue St. Paul Ramsey County
Contact: Steve Haselmann Phone: 651-641-4127	

1.2. Description of the Permit Action

Waldorf manufactures 100 percent recycled corrugated medium and boxboard at the St. Paul facility. The paper products are manufactured entirely from pre- and post-consumer corrugated board, white paper, newsprint, and boxboard. The papermaking processes are not a significant source of emissions, except for VOC emissions. The VOC emissions from the papermaking are primarily from material used for cleaning the papermaking machines, as well as from additives added to the paper.

Process steam is provided by four on-site boilers. The boilers are allowed to burn natural gas, #2 or #6 fuel oil. The boilers are sources of particulate matter, nitrogen oxides, sulfur dioxide, carbon monoxide, VOC, and HAP emissions.

1.3 Description of the Activities Allowed by this Permit Action

The purpose of this permit action is to provide for alternative operating scenarios whereby the facility may use Boiler #4 to combust only natural gas and exhaust the emissions through SV002, or Boiler #4 may combust no. 2 or no. 6 fuel oil in addition to natural gas, and the emissions must be exhausted through SV001, which is taller and provides better dispersion. Both scenarios result in modeled attainment of National and Minnesota Ambient Air Quality Standards (NAAQS and MAAQS).

1.4. Facility Emissions:

No change in emissions is authorized by this permit action.

Table 1. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD	X		
Part 70 Permit Program	X		
Part 63 NESHAP			X

2. Regulatory and/or Statutory Basis

New Source Review

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

Part 70 Permit Program

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

New Source Performance Standards (NSPS)

There are no New Source Performance Standards applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a non-major source of HAPs. Thus, no NESHAPs apply.

Compliance Assurance Monitoring (CAM)

CAM is not an issue in this permit action because the affected units are uncontrolled.

Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0510 Standards of Performance for Existing Indirect Heating Equipment
- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0710 Standards of Performance for Pre-1969 Industrial Process Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

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

EU, GP, or SV	Applicable Regulations	Comments:
Total Facility	Minn. R. 7009.0020	Facility is restricted to those physical parameters and emission rates that allowed them to model compliance with ambient air quality standards. This is a state only requirement.
GP001	Minn. R. 7009.0080	Limit set on combined annual PM emissions from the boilers, to be protective of ambient air quality standards. This is a state only requirement.

EU, GP, or SV	Applicable Regulations	Comments:
GP001 (EU001, EU002, EU003, EU004)	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment. Determination of applicable limit from rule: <ul style="list-style-type: none"> the units were constructed in 1928, 1947, 1949, and 1964; the facility is located in St. Paul; each unit capacity is less than 250 MMBtu/hr; and the facility has greater than 250 MMBtu/hr of indirect heating equipment.
EU004	Minn. R. 7009.0020	Boiler 4 is restricted to combusting only natural gas until the exhaust duct work is reconfigured for the boiler to exhaust to SV001. While burning natural gas, Boiler 4 may exhaust to SV002.

3. Technical Information

3.1 Modeling

Attachment 1 to this TSD contains a summary of the modeling done by the applicant to demonstrate that the ambient air quality standards are not compromised when Boiler 1 exhausts through SV002 when combusting natural gas. Modeling associated with the previous permit amendment demonstrated that when fuel oil is combusted in Boiler 4, ambient air quality standards are not compromised when the emissions are exhausted through SV001. The background concentrations that were not included in the modeling (but were added to the modeled results) were approved prior to the Scenario 1 modeling, and were used again when modeling Scenario 2.

Thus, the permit now allows two operating scenarios regarding emissions and stack parameters and protectiveness of the ambient air quality standards. “Scenario 1” is the scenario to which the facility was previously restricted: all four boilers exhausting to SV001, regardless of the fuels being combusted. This requires reconfiguration of the ductwork, since Boiler 4 is currently exhausted to SV002 and Boilers 1-3 currently exhaust to SV001. Scenario 1 was modeled for the previous permit amendment, 12300410-003. “Scenario 2” allows Boiler 4 to continue to exhaust to SV002, provided only natural gas is combusted. Table 3 summarizes the modeled impacts of each of these scenarios, and compares them to the NAAQS and MAAQS.

Table 3. Modeled Ambient Impacts

Pollutant	Averaging Time	NAAQS/MAAQS ($\mu\text{g}/\text{m}^3$)	Modeled Impacts of Scenario 1 ($\mu\text{g}/\text{m}^3$)	Modeled Impacts of Scenario 2 ($\mu\text{g}/\text{m}^3$)
SO ₂	Annual	60	8	9
	24-hour	365	88	77
	3-hour	1300	193	169
	1-hour	1300	253	223
PM ₁₀	Annual	50	37	37
	24-hour	150	77	77
NO _x	Annual	100	58	63

Pollutant	Averaging Time	NAAQS/MAAQs ($\mu\text{g}/\text{m}^3$)	Modeled Impacts of Scenario 1 ($\mu\text{g}/\text{m}^3$)	Modeled Impacts of Scenario 2 ($\mu\text{g}/\text{m}^3$)
CO	8-hour	10000	4573	4498
	1-hour	40000	7811	7313

The modeling done for this permit action (the modeling resulting in the modeled impacts of Scenario 2) was conservative, for three reasons. First, the long term emissions of SO_2 and PM_{10} and NO_x (the emissions used to model compliance with annual standards) were modeled using the maximum hourly emission rate, rather than an “average” emission rate reflective of the annual PM limit which restricts operation of the boilers to less than full capacity over the course of a 12-month period. Second, the applicant modeled slightly higher SO_2 and PM_{10} emissions from natural gas combustion in Boiler 4, due to assuming that the heat content of natural gas is 1020 British thermal units (Btu) per cubic foot (Btu/ft^3), rather than the 1050 Btu/ft^3 assumed when the emissions were calculated for the previous permit. Third, the applicant modeled higher hourly NO_x and CO emissions from combusting natural gas in Boiler 4 because they based the calculations on published emission factors for a normally fired boiler, rather than a tangentially fired boiler; Boiler 4 is a tangentially fired unit. Table 4 summarizes these differences. The modeled parameters are conservative in all instances.

Table 4. Summary of Conservatively Modeled Parameters for Scenario 2

Modeled Parameter	Modeled Value (lb/hr)	Calculated value (lb/hr)
Hourly SO_2 for Boiler 4/SV002	0.14	0.13
Long term SO_2 for Boilers 1-3/SV001	843.1	828.1
Hourly PM_{10} for Boiler 4/SV002	1.73	1.68
Long term PM_{10} for Boilers 1-3/SV001	66.3	65.1
Hourly NO_x for Boiler 4/SV002	61.9	37.6
Long term NO_x for Boilers 1-3/SV001	168.3	165.3
Hourly CO for Boiler 4/SV002	19.1	5.3

3.2 Periodic Monitoring

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

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

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

Table 5 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 5. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
Boilers: GP001	PM = 285 tons per year (total), on a 12 month rolling basis (limit set to be protective of ambient air standards)	Recordkeeping: Ongoing records of fuel oil deliveries (for sulfur content); Daily records of fuel usage; Monthly calculations of emissions.	Calculation of PM emissions to be done per the equation listed in the permit.
Boilers: EU001, EU002, EU003, and EU004	PM: ≤ 0.4 lb/MMBtu heat input, each boiler SO ₂ : ≤ 1.6 lb/MMBtu heat input, each boiler (Minn. R. 7011.0510, subp. 1) Opacity: $\leq 20\%$, with allowed excursions (Minn. R. 7011.0510, subp. 2)	PM: Performance Testing SO ₂ : None Opacity: COMS	Potential PM emissions when using the worst case allowed fuel are approximately 0.12 lb/MMBtu, or 30% of the allowable emissions; violation of this limit is unlikely. However, several commenters suggested that PM testing be done on the boiler. Since the emission factors used are an average, and the boilers are uncontrolled, MPCA has decided that testing is warranted for combustion of fuel oil. Potential SO ₂ emissions based on a mass balance of the maximum fuel usage and sulfur content are equivalent to the limit. Since you can't get more sulfur out that you put in, as long as the sulfur content limit of the fuel is adhered to, the limit will not be exceeded.

3.3 Insignificant Activities

Waldorf/Rock Tenn has several operations which are classified as insignificant activities. These are listed in Appendix B to the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. See the Technical Support Document for the previous permit action (12300410-003) for the summary of necessary periodic monitoring.

3.4 Permit Organization

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

3.5 Comments Received

Public Notice Period: 11/6/07 – 12/5/07

EPA 45-day Review Period: 11/6/07 – 12/20/07

Comments were not received from the public or EPA during their respective notice periods. No changes to the permit have been made since beginning the public comment period.

4. Conclusion

Based on the information provided by Waldorf Corporation, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 12300410-003, 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: Toni Volkmeier (permit writer/engineer)
 Suzanne Venem (enforcement)
 Paula Connell (peer reviewer)

AQ File No. 87A; DQ 1667, 1628

Attachments: 1. Modeling Information
 2. Boiler Calculations
 3. Facility Description and CD-01 Forms

Attachment 1

Modeling Information



Acrobat Document

Attachment 2

Boiler Calculations

Attachment 3

Facility Description & CD-01 Forms