

**AIR EMISSION PERMIT NO. 07100002- 005**

**IS ISSUED TO**

Boise Cascade Corporation

**BOISE CASCADE CORPORATION - INTERNATIONAL FALLS**

400 2nd Street

International Falls, Koochiching County, MN 56649

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

Permit Type	Date of Permit Issuance
Total Facility Operating Permit	September 9, 1999
Major Amendment	October 2, 2000
Minor Amendment	August 8, 2001
Major Amendment	(Applications submitted May 2001, January 2002)

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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal; PSD/NSR

**Issue Date:** November 7, 2002

**Expiration:** September 10, 2004  
All Title I Conditions do not expire.

---

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

for Karen A. Studders  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Table C: Compliance Schedule (not included in this permit)**

**Appendices:**

**Appendix A – not used in this permit**

**Appendix B – not used in this permit**

**Appendix C – list of insignificant activities**

**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. Certain requirements which have been determined not to apply are listed in Table A of this permit.

**FACILITY DESCRIPTION:**

Boise Cascade Corporation operates an integrated Kraft pulp and paper mill in International Falls. The mill manufactures a variety of coated and uncoated fine paper products. The facility consists of a woodyard, chip processing center, pulp mill, bleach plant, chemical recovery system, power plant, wastewater treatment facility, industrial landfill, paper mill, finishing and sheeting, warehouse, and shipping facilities. In 1989 and 1990, Boise underwent an expansion that included the installation of a new paper machine, a new bleach plant, a new lime kiln, modification of the chemical recovery furnace, and other upgrades.

A Part 70 permit was issued to Boise Cascade on September 10, 1999. The permit included a Prevention of Significant Deterioration (PSD) modification for the Boiler No. 2, which was for an overfire air project. This project was a waste reduction measure which would allow Boise to burn more sludge and bark in the boiler rather than landfilling the sludge and bark, and which would reduce the carbon content of the ash from 45 percent to 10 percent. The overfire air project was essentially a Nitrogen Oxide (NO<sub>x</sub>) control method, which would reduce the amount of NO<sub>x</sub> generated for a given amount of sludge or wood burned, thus allowing Boise to burn more sludge and wood on an hourly basis, while still remaining within their NO<sub>x</sub> emission limit.

A major amendment was issued in October 2000, for Boise's Efficiency Improvement Project. The amendment was a major PSD permit amendment, and allowed Boise to increase pulp production and generation of black liquor solids so that the facility is less dependent on market pulp. To achieve the higher pulp production and black liquor processing rates, Boise proposed to make several physical modifications.

A minor permit amendment was issued in August 2001; the amendment was primarily for installation of a sludge dryer. Various administrative changes were also made to the permit.

This permit amendment is for two separate amendments. Boise intends to add a rotary debarker to the woodyard. Although the debarker qualifies as an insignificant activity, additional modeling was required to show continued compliance with ambient standards. The second amendment was to increase the SO<sub>2</sub> emission limit for the brownstock washer. The limit was a limit set as the result of a Best Available Control Technology (BACT) review. Therefore the BACT review was updated and a major amendment application was submitted.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls  
 Permit Number: 07100002 - 005

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

Subject Item:	Total Facility
What to do	Why to do it
FACILITY LIMITS	hdr
Black Liquor Solids (bone dried) Production: less than or equal to 41000 tons/month using 12-month Rolling Average	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Recordkeeping: Monthly record and monthly calculation of 12-month rolling average of the black liquor solids production, by the 15th of the following month.	Title I Condition: Recordkeeping for Title I Condition; Minn. R. 7007.0800, subp. 5
Reporting: Annually by January 30th, a report of the previous 12 monthly 12-month rolling average calculations of the black liquor solids production.	Minn. R. 7007.0800, subp. 6
FACILITY REQUIREMENTS	hdr
Parameters Used in Modeling: If the Permittee intends to change any of the stack parameters used in the most recently MPCA-approved modeling, 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, the velocity and temperatures of the gases emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must equal or exceed the dispersion characteristics modeled for this permit, and the Permittee shall demonstrate this in the proposal. 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.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000; Minn. R. 7009.0020 (criteria pollutants); Minn. R. 7007.0800, subp. 2 (non-criteria pollutants)
Parameters Used in Modeling (continued): If the Permittee proposes to emit any pollutant in addition to those listed in the Boise Cascade Air Toxics Review, dated January 1999, or proposes to increase the emission rate of any pollutant, the Permittee shall first use the ATR as a template for re-evaluating the risk due to the change in emissions. If the proposed change may adversely affect the calculated risk, e.g. the change is an increase in one of the pollutants determined to be a risk driver, (i.e. a pollutant contributing to 95% of the acute, subchronic, or chronic hazard index or 95% of the excess cancer risk), then the Permittee shall submit a report to the MPCA of the proposed change and demonstrate that the recalculated risk for all pollutants emitted from the facility does not exceed the acceptable risk criteria used in the ATR. The Permittee must receive written approval from the MPCA before making any changes.	Minn. R. 7007.0800, subp. 2 (non-criteria pollutants)
Parameters Used in Modeling (continued): For changes that do not involve an increase in an emission rate or that do not seem likely to increase the calculated risk, the Permittee shall keep records of such changes. A report shall be submitted with the annual certification which describes these changes. This report shall include an explanation of why it was determined that notification to the agency was not necessary.  This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2 (non-criteria pollutants)
Parameters Used in Modeling (continued): 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.  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.  This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2 (non-criteria pollutants)
Plans and Specifications: This is the Ambient TRS Plan. The Ambient TRS Plan has been submitted. This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

<p>Ambient TRS Plan: The Ambient TRS Plan shall describe the steps to be taken to ensure that the ambient air TRS target is not exceeded. The Ambient TRS Plan has been submitted. The Plan shall include a description of the location of the TRS monitor and the quality assurance requirements for the monitor and its data. Also to be included are steps that the Permittee will follow if the ambient air TRS target, if the exceedance is attributable to Boise Cascade. This will include the investigative steps and the timelines for reporting the corrective actions that the Permittee will take to meet the ambient air TRS target. Upon approval by the Commissioner, the Plan shall be an enforceable part of the permit. This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Cease Operation: The Permittee may cease operation of the ambient TRS monitor as described in the Ambient TRS Plan. Prior to ceasing operation, the MPCA shall issue a public notice to inform the public that the ambient monitoring will cease. The Permittee shall not cease operation until after the public notice period. The Permittee shall continue to abide by the Ambient TRS Plan, except for those provisions related to operation and maintenance of the TRS monitor, after the monitor has been shut off. This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Operation and Maintenance Plan: The O&amp;M Plan has been submitted.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Operation and Maintenance Plan: The O&amp;M Plan shall include information for the following control equipment: CE220, CE240, CE320, CE322, CE323, CE340, CE341, CE430, CE431 and the flare at Moonlight Rock Landfill (EU 901). The Plan has been submitted; a description of what the Plan should include is given below. The Commissioner may require reasonable additions or changes to the O&amp;M Plan prior to granting approval. The Plan may be amended with the Commissioner's written approval. Upon approval, the Plan shall be an enforceable part of the permit and the Permittee shall comply with all parts of the Plan.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Operation and Maintenance Plan: The O&amp;M Plan shall include, for each pollution control equipment: the parameters to be monitored and the parameter ranges to be used, as identified in the permit; corrective action procedures to be followed to return the control equipment to within specified range(s); corrective action procedures to be followed in the event of a malfunction, breakdown or exceedance of operating ranges; a description of inspection procedures to be followed; and records kept to demonstrate plan implementation.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>NCG Venting: The Permittee shall control NCGs through thermal oxidation in either the Lime Kiln (primary device), Power Boiler #2 (secondary device) or Power Boiler #1 (tertiary device). When none of these control devices is available, the Permittee may vent NCGs directly to atmosphere. Upon venting NCGs in an uncontrolled manner, the Permittee shall initiate investigation of the cause and take necessary action to re-establish control. If control cannot be re-established within 30 minutes, the Permittee shall initiate shutdown of the NCG-emitting sources in a controlled manner. The NCG-emitting sources, except for the evaporators, shall be shut down within 10 minutes and the remaining sources (the evaporators) shall be shutdown within one hour. The Permittee shall not re-start any of the NCG emitting sources until one of the control systems is operational.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Fugitive Emissions Control Plan: The Permittee has submitted a fugitive emissions control plan for review and approval by the Commissioner. A revision to the plan, dated 2/14/02, was also submitted and approved. The Plan is considered an enforceable part of the permit. The plan shall identify all fugitive emission sources, including paved and unpaved roads, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.</p>	<p>Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<p>Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.</p>	<p>Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<p>List of Insignificant Activities Required to be Listed: Appendix C includes activities and sources at the facility that have been determined to be insignificant activities under Minn. R. 7007.1300. This list does not include every insignificant activity and is subject to change.</p> <p>The Permittee shall maintain proper maintenance of the sources listed in Appendix C, as well as all silos, baghouses, and cyclones, so as to prevent excessive amounts of particulate matter from being emitted from the associated stacks/vents.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.1300</p>
<p>MACT REQUIREMENTS - SUBPART S</p>	<p>hdr</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

<p>MACT Requirements: This facility is subject to all pertinent requirements of the MACT, 40 CFR pt. 63, subp. S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry). This permit contains many of the applicable requirements from 40 CFR part 63, Subparts A and S. Some of the requirements may be paraphrased in this permit. If there is a conflict between a permit term and the regulation, the regulation shall take precedence.</p>	<p>40 CFR pt. 63, subp. S</p>
<p>The Brownstock Washer and Condensate MACT Schedule has been submitted. This Schedule shall describe the Permittee's proposed schedule for controlling, collecting and/or treating emissions from the pulping system emission units (other than the LVHC system, which is already addressed in this permit as GP 340) and the kraft pulping process condensate emission units. The schedule shall include the schedule for implementing the monitoring, recordkeeping and reporting requirements which are to be followed as well as a schedule for obtaining a permit amendment to incorporate the proposed changes.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Initial Compliance Status Report: This report has been submitted prior to April 15, 1999, which was the due date. This report will serve as the initial notification report specified under 40 CFR Section 63.9(b)(2). A non-binding control strategy report was submitted with the initial notification report.</p>	<p>40 CFR Section 63.455(a)</p>
<p>Compliance Dates for Enclosures and Closed-Vent Systems: Compliance for the requirements in 40 CFR 63.450 and described below (i.e. the standards for enclosures and closed-vent systems) shall be achieved by the date for the applicable system. The compliance date for the NCG system, pulping condensates and bleach plant is April 16, 2001; the compliance date for the brownstock washer system is April 17, 2006.</p>	<p>40 CFR Section 63.440</p>
<p>Standards for Enclosures and Closed-vent Systems:                  Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by procedures specified in 40 CFR Section 63.457(e). Each enclosure or hood opening closed during the initial performance test specified in 40 CFR Section 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.                   Each component of the closed-vent system used to comply with 40 CFR Section 63.443(c) and 63.445(b) that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 ppm by volume above background, as measured by the procedures in 40 CFR Section 63.457(d).</p>	<p>40 CFR Section 63.450(b)</p>
<p>Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in 40 CFR Section 63.443 or 63.445 shall comply with either of the following requirements:                  1) On each bypass line, the owner or operator shall install, calibrate, maintain and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or                  2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.</p>	<p>40 CFR Section 63.450(b)                  CONTINUED</p>
<p>Monitoring Requirements for Enclosure and Closed-vent Systems:                  1) For each enclosure opening, a visual inspection of the closure mechanism specified in 40 CFR Section 63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.                  2) Each closed-vent system required by 40 CFR Section 63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures and connections to covers for visible evidence of defects.                  3) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in 40 CFR Section 63.450(c) measured initially and annually by the procedures in 40 CFR Section 63.457(d).                  4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR Section 63.457(e).</p>	<p>40 CFR Section 63.453(k)</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

<p>5) The valve or closure mechanism specified in 40 CFR Section 63.450(d)(2) shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.</p> <p>6) If an inspection required by paragraphs 1 through 5 of this section identified visible defects in ductwork, piping or enclosure or connections to covers required by 40 CFR Section 63.450, or if an instrument reading of 500 ppm by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable:</p> <p>(i) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.</p> <p>(ii) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.</p>	<p>40 CFR Section 63.453(k) CONTINUED</p>
<p>Site-Specific Inspection Plan: The Permittee shall prepare and maintain a site-specific inspection plan for each applicable enclosure opening, closed-vent system, and closed collection system. The Plan shall include a drawing or schematic of the components of applicable affected equipment. The Permittee shall record the information described in 40 CFR Section 63.454(b) for each inspection.</p>	<p>40 CFR Section 63.454(b)</p>
<p>MACT REQUIREMENTS - GENERAL PROVISIONS</p>	<p>hdr</p>
<p>At all times the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.</p>	<p>40 CFR Section 63.6(e)(1)(i)</p>
<p>Malfunctions: Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.</p>	<p>40 CFR Section 63.6(e)(1)(ii)</p>
<p>The Permittee shall prepare and implement a Startup, Shutdown, and Malfunction Plan (SSMP) for each of the emission units subject to Maximum Control Technology Standards by April 16, 2001. The SSMP is a federally enforceable part of the permit and shall be prepared in accordance with 40 CFR Section 63.6(e)(3) and shall include requirements specified in 40 CFR Section 63(e)(3). The SSMP must be located at the plant site and must be kept updated. When the SSMP is updated, the Permittee must keep all previous versions of the SSMP for a period of 5 years. The Permittee must submit the SSMP when required.</p>	<p>40 CFR Section 63.6(e)(3)(i); 40 CFR Section 63.6(e)(3)(v)</p>
<p>During periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain the source (including associated air pollution control equipment) in accordance with the procedures specified in the Startup, Shutdown, and Malfunction Plan.</p>	<p>40 CFR Section 63.6(e)(3)(ii); 40 CFR Section 63.6(e)(3)(iii)</p>
<p>The Permittee shall maintain files of all information required by this part recorded in a form suitable and readily available for expeditious inspection and review. The information maintained in the files shall, at a minimum, contain the information described in 40 CFR Section 63.10(b)(2). The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Of data required to be retained for five years, only the most recent two years of information must be kept on site.</p>	<p>40 CFR Section 63.10(b)(1)</p>
<p>Startup, shutdown, and malfunction reports shall be submitted only if there is an occurrence of startup, shutdown, and malfunction during the reporting period and shall be delivered or postmarked by the 30th day following the end of each calendar half year after April 16, 2001.</p>	<p>40 CFR Section 63.10(d)(5)(i)</p>
<p>If the Permittee deviates from the startup, shutdown, and malfunction plan (SSMP) during a startup, shutdown, or malfunction, the Permittee shall record the actions taken for that event and report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event. The report must contain name, title, and signature of a responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the SSMP, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred. This requirement applies after April 16, 2001.</p>	<p>40 CFR Section 63.6(e)(3)(iv); 40 CFR Section 63.10(d)(5)(ii)</p>
<p>Prior to construction or reconstruction of an "affected source" under the promulgated MACT standards, the Permittee must apply for and obtain an air emission permit.</p>	<p>40 CFR Section 63.5(b)(3)</p>
<p>GENERAL TOTAL FACILITY REQUIREMENTS</p>	<p>hdr</p>
<p>Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

<p>Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.</p>	<p>Minn. R. 7019.1000, subp. 3</p>
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>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.</p>	<p>Minn. R. 7011.0020</p>
<p>Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.</p>	<p>Minn. R. ch. 7017</p>
<p>General Performance Test (PT) Requirements:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>PT Notifications (written): due 30 days before each Performance Test          PT Plan: due 30 days before each Performance Test          PT Pre-test Meeting: due 7 days before each Performance Test          PT Report: due 45 days after each Performance Test          PT Report - Microfiche: due 105 days after each Performance Test</p>	<p>Minn. R. 7017.2030, subp. 1-4; Minn. R. 7017.2035, subp. 1-2</p>
<p>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. Operating rate limits will be based on a 12 hour block average basis provided that all emission results were less than or equal to 80% of the applicable limits. Otherwise, an averaging period of 6 hours applies.</p>	<p>Minn. R. 7017.2025</p>
<p>Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	<p>Minn. R. 7019.1000, subp. 1</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

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
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
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
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
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises, to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Record keeping: 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)
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 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. 7007.0800, subp. 5(C)
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)
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. 7030.0010 - 7030.0080
COMS and CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, zero and span adjustments, and periods when the monitored source is not in operation, all COMS and CEMS shall be in continuous operation.	Minn. R. 7007.0800, subp. 4; Minn. R. 7007.0800, subp. 2
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Risk Management Plan: The Permittee was required to submit a Risk Management Plan (RMP) under the federal rule, 40 CFR Part 68 which was promulgated on June 20, 1996. The Permittee submitted its RMP on May 28, 1999. The rule requires each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, to design and implement an accidental release prevention program. The RMPs must be submitted to a centralized location as specified by US EPA. 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 Section 68

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: GP 340 NCG Incineration and Venting**

- Associated Items:** CE 342 Other
- EU 110 Turpentine Decanter #1
  - EU 115 Turpentine Decanter #2
  - EU 120 Turpentine Condenser dig. 1-4
  - EU 125 Turpentine Condenser dig. 5-7
  - EU 130 Pre-evaporator Hotwell
  - EU 135 Stripper Feed Tank
  - EU 140 Blow Heat Secondary Condenser
  - EU 303 55% Black Liquor Solids Tank
  - EU 305 62% Black Liquor Solids Tank
  - EU 307 72% Black Liquor Solids Tank
  - EU 309 Evaporator Hotwell

What to do	Why to do it
MACT REQUIREMENTS	hdr
Compliance Date for MACT Requirements: Compliance with the requirements from the MACT standard for the LVHC system shall be achieved by April 16, 2001.	40 CFR 63.440(d)
HAP Control: Gases from the LVHC system shall be combusted in the lime kiln, or boiler #2 or #1 as backup.	40 CFR Section 63.443(a)(1)(i); 40 CFR Section 63.443(d)(4)
Enclosures and Venting: All equipment listed in this group shall be enclosed and vented into a closed-vent system meeting the requirements specified in 40 CFR Section 63.450 and as described in the total facility section.	40 CFR Section 63.443(c)
OTHER REQUIREMENTS	hdr
TRS Control: Gases from the NCG sources (batch digester system (blow heat recovery), relief condensers and decant system, foul condensate stripper feed tank, heavy solids black liquor tanks, and the multiple-effect evaporator) shall be combusted in the lime kiln which shall be equipped with a scrubber. The TRS limit from the lime kiln shall be 8 ppmvd corrected to 10% oxygen.	40 CFR Section 60.283(a)(1)(i); Minn. R. 7011.2450
TRS Control - Backup and Emergency: During shutdowns and malfunctions of the lime kiln, non-condensable gases from the NCG sources (batch digester system, relief condensers and decant system, foul condensate stripper feed tank, heavy solids black liquor tanks, and the multiple-effect evaporator system) shall be routed to Boiler #2 (EU430) for oxidation. During emergency situations when neither the lime kiln or Boiler #2 are available, the NCG shall be oxidized in Boiler #1 (EU420). NCG oxidation in Boilers #1 and #2, in aggregate, shall be limited to no more than 612 hours per year on a 12-month rolling sum basis.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
NCG Venting: NCG venting (venting directly to the atmosphere, rather than being oxidized in the lime kiln or Boilers #1 or #2) shall be limited to not more than 30 hours per year on a 12-month rolling sum basis. NCG venting shall also follow procedure described under the Total Facility subject item.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Recordkeeping: Monthly record of hours during which NCG's are oxidized in Boiler #1 or #2 and of venting hours and monthly calculation of 12-month rolling sums, by the 15th of the following month.	Title I Condition: Recordkeeping associated with Title I Condition; Minn. R. 7007.0800, subp. 5
Reporting: Annually by January 30th, a report of the previous 12 monthly 12-month rolling sum calculations of NCG oxidized in Boiler #1 and #2 and of NCG venting.	Minn. R. 7007.0800, subp. 6

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: GP 420 Boilers & Recovery furnace - NOx cap**

- Associated Items:** EU 320 Recovery Furnace  
 EU 322 Smelt Dissolving Tank  
 EU 340 Lime Kiln  
 EU 420 Boiler #1  
 EU 430 Boiler #2  
 EU 440 Boiler #3  
 EU 450 Boiler #8  
 EU 460 Boiler #9

What to do	Why to do it
Nitrogen Oxides: less than or equal to 3.67 tons/day from combustion sources (Boilers #1, #2, #3, #8, #9 and Recovery Furnace).	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Calculate: Calculate NOx emissions daily from combustion sources. The NOx emissions from EU320, EU420, EU430, EU440, EU450, and EU460 (recovery furnace, boilers #1, #2, #3, #8, and #9) shall be summed together and compared to the NOx limit for the combustion sources (3.67 tons/day). The NOx emissions from each emission unit are to be determined from the CEMS for that emission unit. Any exceedances shall be reported with the CEMS EERs.	Title I Condition: Calculations associated with Title I Condition; Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 4.18 tons/day , calculated on a semi-annual basis. This limit is the total NOx cap for the facility, and includes the combustion sources (boilers #1, #2, #3, #8, #9, and the recovery furnace) as well as the lime kiln and smelt dissolving tank.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Calculate: NOx emissions from the smelt dissolving tank (EU 322) and the lime kiln (EU 340) shall be calculated by multiplying the emission factor determined from performance tests and the applicable production rate. The NOx emissions shall be added to the emissions determined from the CEMS and shall then be compared to the total NOx emission limit for GP 420. The total NOx emissions shall be calculated on a semi-annual basis. Any exceedances shall be reported with the CEMS EERs.	Title I Condition: Calculations associated with Title I Condition; Minn. R. 7007.3000

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: GP 421 Kraft Pulping Process Condensates**

**Associated Items:** EU 145 Foul Condensate Stripper

EU 179 14% Black Liquor Tank

EU 301 18% Liquor Tank

What to do	Why to do it
Compliance Date for MACT Requirements: Compliance with the requirements from the MACT standard for the pulping process condensates, as listed in 40 CFR 63.446(b), shall be achieved by April 16, 2002.	40 CFR 63.440(d)
Condensate Treatment: The Permittee is to submit a schedule as described under the subject item Total Facility. The schedule shall include the schedule for determining the treatment option for condensates as described in 40 CFR Section 63.446.	40 CFR Section 63.446
Condensate Closed Collection System: The condensates to be treated shall be conveyed in a closed collection system that is designed and operated to meet the requirements in paragraphs (d)(1) and (d)(2) of 40 CFR Section 63.446.	40 CFR Section 63.446(d)
Condensate Monitoring Requirements: The Permittee shall install, calibrate, certify, operate, and maintain according to manufacturer's specifications, a continuous monitoring system (CMS) according to 40 CFR Section 63.453 and as described in the Brownstock Washer and Condensate MACT Report.	40 CFR Section 63.453

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** GP 422 Paper Machines**Associated Items:** EU 505 No. 2 Paper Machine

EU 520 No. 3 Paper Machine

EU 540 No. 1 Paper Machine

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Periodic Monitoring: the Permittee shall perform proper maintenance of the paper 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**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** SV 173 Brown Stock Washer

**Associated Items:** EU 173 Brown Stock Washing

EU 174 Brown Stock Decker

What to do	Why to do it
EMISSION LIMITS	hdr
Sulfur Dioxide: less than or equal to 0.02 lbs/ton air dried tons unbleached pulp.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.20 lbs/ton air dried tons unbleached pulp, measured as carbon excluding methane.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Sulfur - Total Reduced: less than or equal to 0.12 lbs/ton air dried tons unbleached pulp, measured as H2S.	Title I Condition: 40 CFR Section 52.21(j); (BACT limit); Minn. R. 7007.3000
OPERATIONAL LIMITS	hdr
TRS Control: The brown stock washing system is exempt from the TRS requirements in 40 CFR pt.60, subp. BB since it was demonstrated that incinerating the exhaust gases from the brown stock washing system is economically infeasible. This was done in the permitting for the 1989 New Source Review permit.	40 CFR Section 60.283(a)(1)(iv); Minn. R. 7011.2450
Compliance Date for MACT Requirements: Compliance with the requirements from the MACT standard for the brown stock washer system shall be achieved by April 17, 2006.	40 CFR 63.440(d)
Pulping System Emissions Control: The emissions from the pulping system, as described in 40 CFR Section 63.443(a)(1)(ii) through (iv) shall be treated as described in the Brownstock Washer and Condensate MACT Report.	40 CFR Section 63.446
Monitoring Requirements: The Permittee shall install, calibrate, certify, operate, and maintain according to manufacturer's specifications, a continuous monitoring system (CMS) according to 40 CFR Section 63.453 and as described in the Brownstock Washer and Condensate MACT Report.	40 CFR Section 63.453
Enclosures and Venting: All equipment listed in this group shall be enclosed and vented into a closed-vent system meeting the requirements specified in 40 CFR Section 63.450 and as described in the total facility section.	40 CFR Section 63.443(c)
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 09/09/1999 to measure Volatile Organic Compound and Total Reduced Sulfur emissions. The tests shall be conducted at an interval not to exceed 36 months between test dates.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1
Performance Test: due before 07/01/2007 to measure Sulfur Dioxide emissions. This test is not required if the Brownstock Washer system has been incorporated into the closed collection system as required by the MACT standards.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: SV 220 ClO2 Generator**

- Associated Items:** EU 220 ClO2 Generator  
 EU 221 Dump Tank  
 EU 222 ClO2 Storage Tank A  
 EU 223 ClO2 Storage Tank B  
 EU 224 Sewer Vent (L8)  
 EU 225 ClO2 Tower Seal Tank  
 EU 226 Saltcake Mix Tank  
 EU 227 Barametric Condenser  
 EU 228 Saltcake Filter  
 EU 229 Saltcake Hydroclone  
 EU 230 Anti-Siphon Vent

What to do	Why to do it
EMISSION LIMITS	hdr
Chlorine: less than or equal to 0.17 lbs/hour . This is a state only limit and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2 (Limit established due to risk assessment performed as part of PSD permitting for 1989 permit)
Chlorine Dioxide: less than or equal to 2.2 lbs/hour . This is a state only limit and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2 (Limit established due to risk assessment performed as part of PSD permitting for 1989 permit)
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Control Equipment Monitoring: Observe and record, once per operating shift, the pressure drop of the gas stream for CE220.	Minn. R. 7007.0800, subp. 14
Control Equipment Monitoring: Observe and record, once per operating shift, the scrubbing liquid supply pressure for CE220.	Minn. R. 7007.0800, subp. 14
Pressure Drop: greater than or equal to 3.2 inches of water column or as determined during the most recent performance test (this is pressure drop of the gas stream).	Minn. R. 7007.0800, subp. 14
Pressure Drop: greater than or equal to 0.5 inches of water column or as determined during the most recent performance test (this is scrubbing liquid supply pressure).	Minn. R. 7007.0800, subp. 14
Corrective Actions: If the monitored parameter is out of the range as described above, the Permittee shall follow the facility O&M Plan and perform the necessary corrective action(s) as soon as possible to get the parameters back into the correct range. The Permittee shall keep a record of the type and date of all corrective actions taken.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 08/08/2000 to measure Chlorine and Chlorine Dioxide emissions. This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act. The next test is due August 8, 2005, then every 60 months thereafter.	Minn. R. 7017.2020, subp. 1



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: SV 240 Bleach plant**

- Associated Items:**
- EU 240 D/C Tower
  - EU 241 D Tower
  - EU 242 D/C Blend Chest
  - EU 243 D-Mixer Sample Pot.
  - EU 244 D/C Filt. Tank
  - EU 245 D Filt. Tank
  - EU 246 Eo Filt. Tank
  - EU 247 Acid Sewer Vent
  - EU 248 Chlorine Blowdown Tank

What to do	Why to do it
EMISSION LIMITS	hdr
Compliance Date for MACT Requirements: Compliance with the requirements from the MACT standard for the bleach plant shall be achieved by April 16, 2001.	40 CFR Section 63.440(d)
HAPs - Total: less than or equal to 10 parts per million or less than or equal to 0.02 lb per ton of oven-dried pulp or reduce the Total Chlorinated HAP mass entering the control device by 99% or more by weight. In this limit, Total HAPs refers to Total Chlorinated HAPs (not including chloroform).	40 CFR Section 63.445(c)
Chlorine: less than or equal to 0.41 lbs/hour . This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2 (Limit established due to risk assessment performed as part of PSD permitting for 1989 permit)
Chlorine Dioxide: less than or equal to 1.2 lbs/hour . This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2 (Limit established due to risk assessment performed as part of PSD permitting for 1989 permit)
Chloroform: less than or equal to 1.33 tons/month using 12-month Rolling Average . This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.	Minn. R. 7007.0800, subp. 2 (Limit established due to risk assessment performed as part of PSD permitting for 1989 permit)
OPERATIONAL LIMITS	hdr
The Permittee shall comply with paragraph (d)(1) or (d)(2) of 40 CFR Section 63.445 (summarized below) to reduce chloroform air emissions to the atmosphere.  (1) Comply with the applicable effluent limitation guidelines and standards specified in 40 CFR part 430;  (2) Use no hypochlorite or chlorine for bleaching in the bleaching system or line.	40 CFR Section 63.445(d)
Enclosures and Venting: Equipment listed at this stack, and which are associated with equipment where bleaching chemicals are added, shall be enclosed and vented into a closed-vent system meeting the requirements specified in 40 CFR Section 63.450 and as described in the total facility section.	40 CFR Section 63.443(c)
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
CMS for Scrubber: The Permittee shall install, calibrate, certify, operate, and maintain a continuous monitory system (CMS) to measure the following parameters for the gas scrubber: (1) The pH or the oxidation/reduction potential of the gas scrubber effluent; (2) The gas scrubber vent gas inlet flow rate; and (3) The gas scrubber liquid influent flow rate.  An option to the CMS requirement above, is to install, calibrate, certify, operate, and maintain a CMS to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in 40 CFR Section 63.445(c)(2).	40 CFR Section 63.453(a), (c), (d)
Scrubber Parameter Values: To establish or reestablish the value for each operating parameter required to be monitored under 40 CFR Section 63.453, the Permittee shall use the procedures described in 40 CFR Section 63.453(n).	40 CFR Section 63.453(n)
Control Equipment Operation: The Permittee shall operate the gas scrubber in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of 40 CFR Section 63.453 and as described in 40 CFR Section 63.453(o). Operation of the control device below minimum operating parameter values or above maximum operating parameter values established under 40 CFR pt. 63, subp. S shall constitute a violation of the applicable emission standard of 40 CFR pt. 63, subp. S and shall be reported as a period of excess emissions.	40 CFR Section 63.453(o)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

Control Equipment Monitoring: Observe and record, once per operating shift, the pressure drop of the gas stream for CE240.	Minn. R. 7007.0800, subp. 14
Control Equipment Monitoring: Observe and record, once per operating shift, the scrubbing liquid supply pressure for CE240.	Minn. R. 7007.0800, subp. 14
Pressure Drop: greater than or equal to 3.6 inches of water column or as determined during the most recent performance test (this is pressure drop of the gas stream).	Minn. R. 7007.0800, subp. 14
Pressure Drop: greater than or equal to 0.5 inches of water column or as determined during the most recent performance test (this is scrubbing liquid supply pressure).	Minn. R. 7007.0800, subp. 14
Corrective Actions: If the monitored parameter is out of the range as described above, the Permittee shall follow the facility O&M Plan and perform the necessary corrective action(s) as soon as possible to get the parameters back into the correct range. The Permittee shall keep a record of the type and date of all corrective actions taken.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 08/08/2000 to measure Chlorine, Chlorine Dioxide and Chloroform emissions. The performance test for chloroform will be used to generate an emission factor which will be used to calculate chloroform emissions on a monthly basis. This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act. The next test is due August 8, 2005, then every 60 months thereafter.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after 04/16/2002 for Total Chlorinated HAPs (chlorine).	40 CFR Section 63.457(a); Minn. R. 7017.2020, subp. 1
RECORDKEEPING	hdr
Recordkeeping: Keep records of the amount and type (hardwood, softwood) of each bleach batch. This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.	Minn. R. 7007.0800, subp. 5
Chloroform calculations: Monthly calculation of 12-month rolling average chloroform emissions, by the 15th of the following month. The calculation of chloroform emissions shall be made by applying the hardwood chloroform emission rate to the total amount of hardwood bleached and applying the softwood chloroform emission rate to the total amount of softwood bleached throughout the month.  Each month, a new monthly and 12-month rolling average emission rate shall be determined.  This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** SV 322 Smelt Dissolving Tank

**Associated Items:** EU 322 Smelt Dissolving Tank

EU 323 Precipitator Salt Cake Mix Tank

EU 324 Hopper Flush Tank

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 5.7 lbs/hour . (This limit is based on an emission rate limit of 0.12 lb/ton BLS (dry) and thus is more stringent than the NSPS limit (40 CFR Section 60.282(a)(2)) of 0.2 lb/ton BLS for a smelt dissolving tank).	Title I Condition: 40 CFR Section 52.21 (modeling and netting); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 5.7 lbs/hour	Title I Condition: 40 CFR Section 52.21 (modeling and netting); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7007.0800, subp. 2
Nitrogen Oxides: less than or equal to 0.033 lbs/ton of black liquor solids produced.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 4.3 lbs/hour (this is equivalent to 0.090 lb/ton BLS).	Title I Condition: 40 CFR Section 52.21 (modeling and netting); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.090 lbs/ton BLS (black liquor solids), measured as C excluding methane. (this is equivalent to 4.3 lb/hr)	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Sulfur - Total Reduced: less than or equal to 0.033 lbs/ton (lb/ton of BLS (black liquor solids)), measured as H2S. The BACT limit is the same as the NSPS limit.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); 40 CFR Section 60.283(a)(4); Minn. R. 7007.3000; Minn. R. 7011.2450
OPERATIONAL LIMITS	hdr
<p>Process Throughput: less than or equal to 1295 tons/day of black liquor solids, calculated on a twelve-hour block average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3, based on the most recent MPCA approved performance test where compliance was demonstrated.</p> <p>The twelve-hour block average shall be calculated by dividing the total weight by the total operating time in each twelve-hour block. Down time of 15 or more minutes is not to be included as operating time.</p>	Minn. R. 7017.2025, subp. 3
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Control Equipment Monitoring: Observe and record once per operating day, the pressure drop for CE322 and CE323.	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.0800, subp. 14
Control Equipment Monitoring: Observe and record once per operating day, the liquid flow rate for CE322 and CE323.	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.0800, subp. 14
Install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of +/- 2 inches water gage pressure. The monitoring device shall be operational upon startup of the control equipment.	40 CFR Section 60.284(b)(2)(i); Minn. R. 7011.2450
Install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within +/- 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The monitoring device shall be operational upon startup of the control equipment.	40 CFR Section 60.284(b)(2)(ii); Minn. R. 7011.2450
Record once per shift, measurements obtained from the monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment and from the monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment.	40 CFR Section 60.284(c)(4); Minn. R. 7011.2450
Pressure Drop: greater than or equal to 6.5 inches of water column or as determined during the most recent performance test.	Minn. R. 7007.0800, subp. 14
Liquid Flow Rate: greater than or equal to 100 gallons/minute or as determined during the most recent performance test.	Minn. R. 7007.0800, subp. 14
Corrective Actions: If the monitored parameter is out of the range as described above, the Permittee shall follow the facility O&M Plan and perform the necessary corrective action(s) as soon as possible to get the parameters back into the correct range. The Permittee shall keep a record of the type and date of all corrective actions taken.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

TESTING REQUIREMENTS	hdr
Initial Performance Test: due 1,095 days after 09/09/1999 (3 years after September 9, 1999) to measure Volatile Organic Compound Emissions.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year starting 01/31/2001 to measure Particulate Matter < 10 micron and Total Reduced Sulfur (TRS) emissions. The next test is due January 31, 2002, then every year (12 months) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 08/08/2000 to measure Total Particulate Matter, Opacity, and Nitrogen Oxides emissions. The Nitrogen Oxides test data will also be used to determine an emission factor which shall be used in calculating the total NOx emissions for comparison to the total NOx cap (GP 420). The next test is due August 8, 2003, then every 36 months (3 years) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months starting 08/08/2000 to measure Sulfur Dioxide emissions. The next test is due August 8, 2005, then every 60 months (5 years) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
RECORD KEEPING	hdr
NOx Emissions Calculation: The NOx emissions shall be calculated on a semi-annual basis. The NOx emission factor, obtained from performance test, shall be multiplied by the production rate of the black liquid solids production. The NOx emissions shall be calculated and converted to a tons/day basis for determining the total NOx emissions from the facility and comparison to the NOx cap (GP 420).	Minn. R. 7007.0800, subp. 6

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** SV 327 Lime Slaker, etc.

- Associated Items:** EU 327 Lime Slaker  
 EU 328 Causticizer #1  
 EU 329 Causticizer #2  
 EU 330 Causticizer #3  
 EU 350 Reburned Lime Bin

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.91 lbs/hour	Title I Condition: 40 CFR Section 52.21 (netting and modeling); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.91 lbs/hour	Title I Condition: 40 CFR Section 52.21 (netting and modeling); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0715, subp. 1(B)
OPERATIONAL LIMITS	hdr
Production: less than or equal to 191 tons/day of lime, calculated on a twelve-hour block average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3, based on the most recent MPCA approved performance test where compliance was demonstrated.  The twelve-hour block average shall be calculated by dividing the total weight by the total operating time in each twelve-hour block. Down time of 15 or more minutes is not to be included as operating time.	Minn. R. 7017.2025, subp. 3
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Control Equipment Monitoring: Observe and record once per operating day, the pressure drop for CE327.	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.0800, subp. 14
Control Equipment Monitoring: Observe and record once per operating day, the supply pressure for CE327.	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.0800, subp. 14
Pressure Drop: greater than or equal to 0 inches of water column or as determined during the most recent performance test. The pressure drop from the most recent performance test was -0.08 inches of water column.	Minn. R. 7007.0800, subp. 14
Water pressure: greater than or equal to 100 psi (gauge) or as determined during the most recent performance test. The pressure measured is the supply pressure.	Minn. R. 7007.0800, subp. 14
Corrective Actions: If the monitored parameter is out of the range as described above, the Permittee shall follow the facility O&M Plan and perform the necessary corrective action(s) as soon as possible to get the parameters back into the correct range. The Permittee shall keep a record of the type and date of all corrective actions taken.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 08/08/2000 to measure Total Particulate Matter and Particulate Matter < 10 micron emissions. The next test is due August 8, 2005, then every 60 months (5 years) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: SV 903 Combined SV220 and SV240 (ClO<sub>2</sub> Generator & Bleach Plant)**

<b>What to do</b>	<b>Why to do it</b>
Additional stack to combine SV 220 (ClO <sub>2</sub> generator) and SV 240 (Bleach plant) was to be installed to match stack parameters as modeled for Air Toxics Review and as listed in Appendix D of this permit. The stack must be maintained. This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 145 Foul Condensate Stripper**

- Associated Items:** CE 340 Centrifugal Collector - Medium Efficiency  
 CE 341 Wet Scrubber-High Efficiency w/o Lime  
 CE 342 Other  
 GP 421 Kraft Pulping Process Condensates  
 SV 145  
 SV 146  
 SV 340  
 SV 346  
 SV 347

What to do	Why to do it
TRS Control: Gases from the foul condensate stripper system shall be combusted in the lime kiln, which shall be equipped with a scrubber.	40 CFR Section 60.283(a)(1); Minn. R. 7011.2450
TRS Control: During periods when the TRS gases from the foul condensate stripper cannot be incinerated in the lime kiln, then the foul condensate stripper shall be shutdown and not operated.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** EU 320 Recovery Furnace

**Associated Items:** CE 320 Electrostatic Precipitator - High Efficiency

GP 420 Boilers & Recovery furnace - NOx cap

MR 320 Recovery Furnace

MR 321 Recovery Furnace

MR 322 Recovery Furnace

MR 323 Recovery Furnace

MR 324 Recovery Furnace

MR 325 Recovery Furnace

SV 320

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 30.7 lbs/hour . This is more stringent than the NSPS subp. BB limit of 0.044 gr/dscf, which also applies.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 22.9 lbs/hour	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7007.0800, subp. 2
Sulfur Dioxide: less than or equal to 200 tons/year using 12-month Rolling Sum , calculated using emission factor derived from performance test and using monthly production throughput.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 106.2 lbs/hour	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 94.5 lbs/hour using 30-day Rolling Average	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 430.9 lbs/hour using 24-hour Rolling Average . This is equivalent to 600 ppm on a dry basis, corrected to 8% oxygen.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 31.3 lbs/hour measured as C, excluding methane. (this is based on emission rate of 0.6 lb/salt cake free, bone dry tons of black liquor solids).	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Sulfur - Total Reduced: less than or equal to 5 parts per million on a dry basis, corrected to 8% oxygen, using a 12-hour average. The BACT limit is the same as the NSPS limit.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); 40 CFR Section 60.283(a)(2); Minn. R. 7007.3000; Minn. R. 7011.2450
OPERATIONAL LIMITS	hdr
Fuel burned: limited to natural gas. Black liquor solids (BLS) are also oxidized in the recovery furnace.	Title I Condition: 40 CFR Section 52.21
Process Throughput: less than or equal to 1275 tons/day of black liquor solids, calculated on a twelve-hour block average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3, based on the most recent MPCA approved performance test where compliance was demonstrated.  The twelve-hour block average shall be calculated by dividing the total weight by the total operating time in each twelve-hour block. Down time of 15 or more minutes is not to be included as operating time.	Minn. R. 7017.2025, subp. 3
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
ESP Monitoring: The COMS for this emission unit shall be used to assess proper operation of this ESP.	Minn. R. 7007.0800, subp. 2
TESTING REQUIREMENTS	hdr
Performance Test: due 180 days after achieving maximum capacity of increased black liquor production but no later than 365 days after permit issuance. Performance test will be done to measure SO2 emissions and to determine emission factor to be used in calculation of SO2 emissions for comparison to 200 tons/year limit.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 08/08/2000 to measure Total Particulate Matter and Particulate Matter < 10 microns emissions. The next test is due August 8, 2003, then every 36 months (3 years) thereafter.	Minn. R. 7017.2020, subp. 1



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

Performance Test: due before end of each 60 months starting 08/08/2000 to measure Volatile Organic Compound emissions. The next test is due August 8, 2005, then every 60 months (5 years) thereafter.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1
COMS REQUIREMENTS	hdr
Emissions Monitoring: The Permittee shall use a COMS to measure Opacity emissions from EU320.	Title I Condition: Monitoring associated with Title I emission limits; Minn. R. 7017.1006
COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily. The COMS must be adjusted whenever the calibration drift (CD) exceeds twice the specification of PS-1 of 40 CFR 60, Appendix B.	Minn. R. 7017.1211, subp. 2; 40 CFR 60.13(d)(2)
COMS Calibration Error Audit: due before end of each calendar half-year starting 09/09/1999 . Conduct audits at least 3 months apart but no greater than 8 months apart. Filter values used shall be compliant with Minn. R. 7017.1210, subp. 3.	Minn. R. 7017.1210, subp. 3
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130
QA Plan Required: Develop and implement a written quality assurance plan which covers each COMS. The plan shall be on site and available for inspection. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1.	Minn. R. 7017.1210
COMS Monitoring Data: The Permittee shall reduce the COMS data to six-minute averages. Opacity averages shall be calculated from all equally spaced consecutive 10-second (or shorter) data points in the six-minute averaging period.	Minn. R. 7017.1200, subp. 1, 2, & 3
COMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all COMS shall be in continuous operation. A COMS must not be bypassed except in emergencies where failure to bypass the COMS would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090, subp. 1
CEMS REQUIREMENTS	hdr
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording, Nitrogen Oxide emissions, Carbon Monoxide emissions, Total Reduced Sulfur emissions, and either Oxygen or Carbon Dioxide.	Title I Condition: Monitoring associated with Title I emission limit; 40 CFR Section 60.45(a); Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7017.1170, subp. 3
CEMS Cylinder Gas Audit (CGA): due before end of each calendar year starting 09/09/1999 for TRS. If a RATA is performed during the calendar year, a CGA is not required.	Minn. R. 7017.1170, subp. 1(A) and (B)
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar 60 months starting 09/09/1999 TRS	Minn. R. 7017.1170, subp. 1(A) and (B)
CEMS Cylinder Gas Audit (CGA): due before end of each calendar half-year starting 09/09/1999 . Conduct cylinder gas audit (CGA) at least 3 months apart but not greater than 8 months apart. If a RATA is performed during the calendar half-year a CGA is not required. Follow the procedures in 40 CFR pt. 60, Appendix F.	Minn. R. 7017.1170, subp. 4
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year starting 09/09/1999 . If the relative accuracy is 15% or less the next CEMS RATA is not due for 24 months from the date of the last test. Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 5
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2
CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090, subp. 1
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** EU 340 Lime Kiln

- Associated Items:** CE 340 Centrifugal Collector - Medium Efficiency  
 CE 341 Wet Scrubber-High Efficiency w/o Lime  
 GP 420 Boilers & Recovery furnace - NOx cap  
 MR 326 Lime Kiln  
 MR 327 Lime Kiln  
 MR 340 Lime Kiln  
 MR 341 Lime Kiln  
 SV 340

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 10.6 lbs/hour . This is more stringent than the NSPS subp. BB of 0.067 gr/dscf, which also applies.	Title I Condition: 40 CFR Section 52.21 (netting and modeling); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 10.6 lbs/hour	Title I Condition: 40 CFR Section 52.21 (netting and modeling); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0610, subp. 1(A)(2)
Sulfur Dioxide: less than or equal to 13.5 lbs/hour	Title I Condition: 40 CFR Section 52.21 (netting and modeling); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 42.5 lbs/hour	Title I Condition: 40 CFR Section 52.21 (BACT limit and modeling); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 23.7 lbs/hour	Title I Condition: 40 CFR Section 52.21 (BACT limit and modeling); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 11.4 lbs/hour , measured as C excluding methane.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Sulfur - Total Reduced: less than or equal to 8 parts per million using 12-hour Average (calculated on a dry basis and corrected to 10% oxygen). The BACT limit is the same as the NSPS limit.	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); 40 CFR Section 60.283(a)(5); Minn. R. 7007.3000; Minn. R. 7011.2450
OPERATIONAL LIMITS	hdr
Fuel Usage: Limited to natural gas. Non-condensable gas (NCG) is also oxidized in the lime kiln.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Production: less than or equal to 191 tons/day of lime, calculated on a twelve-hour block average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3, based on the most recent MPCA approved performance test where compliance was demonstrated.  The twelve-hour block average shall be calculated by dividing the total weight by the total operating time in each twelve-hour block. Down time of 15 or more minutes is not to be included as operating time.	Minn. R. 7017.2025, subp. 3
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Control Equipment Monitoring: Observe and record once per operating day, the liquid flow rate for CE341.	Minn. R. 7007.0800, subp. 14
Install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of +/- 2 inches water gage pressure. The monitoring device shall be operational upon startup of the control equipment.	40 CFR Section 60.284(b)(2)(i); Minn. R. 7011.2450
Install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within +/- 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The monitoring device shall be operational upon startup of the control equipment.	40 CFR Section 60.284(b)(2)(ii); Minn. R. 7011.2450
Record once per shift, measurements obtained from the monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment and from the monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment.	40 CFR Section 60.284(c)(4); Minn. R. 7011.2450

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

Pressure at nozzle: greater than or equal to 280 psi or as determined during the most recent performance test.	Minn. R. 7007.0800, subp. 14
Liquid Flow Rate: greater than or equal to 405 gallons/minute or as determined during the most recent performance test.	Minn. R. 7007.0800, subp. 14
Corrective Actions: If the monitored parameter is out of the range as described above, the Permittee shall follow the facility O&M Plan and perform the necessary corrective action(s) as soon as possible to get the parameters back into the correct range. The Permittee shall keep a record of the type and date of all corrective actions taken.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 5
<b>TESTING REQUIREMENTS</b>	hdr
Performance Test: due before end of each year starting 08/08/2001 to measure Particulate Matter <10 micron emissions. The next test is due August 8, 2002, then every year (12 months) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months starting 08/08/2000 to measure Total Particulate Matter, Nitrogen Oxides, Sulfur Dioxide, Volatile Organic Compounds and Carbon Monoxide emissions. The next test is due August 8, 2003, then every 36 months (3 years) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
<b>CEMS REQUIREMENTS</b>	hdr
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording the Total Reduced Sulfur emissions, and either Oxygen or Carbon Dioxide.	Title I Condition: Monitoring associated with Title I emission limits; 40 CFR Section 60.45(a); Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	40 CFR 60.13(d)(1); Minn. R. 7017.1170, subp. 3
CEMS Cylinder Gas Audit (CGA): due before end of each calendar year starting 09/09/1999 . Follow the procedures in 40 CFR pt. 60, Appendix F. If a RATA is performed during the calendar year, a CGA is not required.	Minn. R. 7017.1170, subp. 1(A) and (B)
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar 60 months starting 09/09/1999 . Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 1(A) and (B)
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2; 40 CFR pt. 60, App. F, section 3
CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	40 CFR 60.13(e); Minn. R. 7017.1090, subp. 1
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130; 40 CFR 60.7(f)
<b>RECORD KEEPING</b>	hdr
Recordkeeping: Monthly record, by the 15th of the following month, the amount of lime produced.	Minn. R. 7007.0800, subp. 6
NOx Emissions Calculation: The NOx emissions shall be calculated on a semi-annual basis. The NOx emission factor, obtained from performance test, shall be multiplied by the production rate of the black liquid solids production. The NOx emissions shall be calculated and converted to a tons/day basis for determining the total NOx emissions from the facility and comparison to the NOx cap (GP 420).	Minn. R. 7007.0800, subp. 6

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** EU 420 Boiler #1

**Associated Items:** CE 420 Other  
 GP 420 Boilers & Recovery furnace - NOx cap  
 MR 420 Boiler 1  
 MR 421 Boiler 1  
 SV 420 Boiler #1

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (modeling and netting); Minn. R. 7011.0510, subp. 1
Particulate Matter < 10 micron: less than or equal to 0.6 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (modeling and netting); 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.	Minn. R. 7011.0510, subp. 2
Nitrogen Oxides: less than or equal to 0.2 lbs/million Btu heat input using 30-day Rolling Average	Title I Condition: 40 CFR Section 52.21(modeling); Minn. R. 7007.3000
OPERATIONAL LIMITS	hdr
Fuel burned: limited to natural gas. Non-condensable gas (NCG) is also oxidized in boiler #1. The amount of NCG burned in boiler #1 is limited under GP 340; the total number of hours that #1 and #2 boilers, combined, can be used for backup is 612 hours/year. The amount of NCG burned in boiler #1 is limited under GP 340.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
CEMS REQUIREMENTS	hdr
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording Nitrogen Oxide emissions.	Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7017.1170, subp. 3
CEMS Cylinder Gas Audit (CGA): due before end of each calendar half-year starting 09/09/1999 . Conduct cylinder gas audit (CGA) at least 3 months apart but not greater than 8 months apart. If a RATA is performed during the calendar half-year a CGA is not required. Follow the procedures in 40 CFR pt. 60, Appendix F.	Minn. R. 7017.1170, subp. 4
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year starting 09/09/1999 . If the relative accuracy is 15% or less the next CEMS RATA is not due for 24 months from the date of the last test. Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 5
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2
CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090, subp. 1
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 430 Boiler #2**

- Associated Items:** CE 430 Centrifugal Collector - Medium Efficiency  
 CE 431 Electrostatic Precipitator - High Efficiency  
 GP 420 Boilers & Recovery furnace - NOx cap  
 MR 430 Boiler 2  
 MR 431 Boiler 2  
 MR 432 Boiler 2  
 MR 433 Boiler 2  
 SV 430  
 SV 431

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 13.0 lbs/hour	Title I Condition: 40 CFR Section 52.21 (BACT limit); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 11.7 lbs/hour	Title I Condition: 40 CFR Section 52.21 (BACT limit); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7007.0800, subp. 2
Sulfur Dioxide: less than or equal to 9.4 lbs/hour . This limit does not apply when NCG is being oxidized in the #2 boiler.	Title I Condition: 40 CFR Section 52.21 (BACT limit); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 100.2 lbs/hour using 30-day Rolling Average	Title I Condition: 40 CFR Section 52.21 (BACT limit); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 122.4 lbs/hour using 3-hour Average	Title I Condition: 40 CFR Section 52.21 (BACT limit); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 40.2 lbs/hour measured as C excluding methane.	Title I Condition: 40 CFR Section 52.21 (BACT limit); Minn. R. 7007.3000
OPERATIONAL LIMITS	hdr
Fuel Burned: Fuels to be burned are limited to bark, wood refuse, wastewater treatment sludge, and natural gas. Non-condensable gas (NCG) is also oxidized in boiler #2. The amount of NCG burned in boiler #1 is limited under GP 340; the total number of hours that #1 and #2 boilers, combined, can be used for backup is 612 hours/year. The amount of NCG burned in boiler #1 is limited under GP 340.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Fuel Usage: less than or equal to 27010 tons/month using 12-month Rolling Average . The fuel usage limit is for combined total of bark, wood refuse, and sludge and shall be expressed in units of green tons per month.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Fuel Usage: less than or equal to 5193 tons/month using 12-month Rolling Average (SLUDGE USAGE LIMIT).	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Fuel Usage: less than or equal to 33.6 tons/hour of total bark/wood refuse/sludge, calculated on a six-hour block average. Sludge combustion shall be less than or equal to 6.1 tons/hour, calculated on a six-hour block average. These limits are in effect unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3, based on the most recent MPCA approved performance test where compliance was demonstrated.  The six-hour block average shall be calculated by dividing the total weight by the total operating time in each six-hour block. Down time of 15 or more minutes is not to be included as operating time.	Minn. R. 7017.2025, subp. 3
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
ESP Monitoring: The COMS for this emission unit shall be used to assess proper operation of this ESP.	Minn. R. 7007.0800, subp. 2
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each year starting 08/08/2001 to measure Carbon Monoxide emissions. The next test is due August 8, 2002, then every year (12 months) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months starting 08/08/2000 to measure Total Particulate Matter, Particulate Matter <10 micron, Sulfur Dioxide, and Volatile Organic Compounds emissions. The next test is due August 8, 2005, then every 60 months (5 years) thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
COMS REQUIREMENTS	hdr
Emissions Monitoring: The Permittee shall use a COMS to measure Opacity emissions from EU430.	Title I Condition: Monitoring associated with Title I emission limits; Minn. R. 7017.1006

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily. The COMS must be adjusted whenever the calibration drift (CD) exceeds twice the specification of PS-1 of 40 CFR 60, Appendix B.	Minn. R. 7017.1211, subp. 2; 40 CFR 60.13(d)(2)
COMS Calibration Error Audit: due before end of each calendar half-year starting 09/09/1999 . Conduct audits at least 3 months apart but no greater than 8 months apart. Filter values used shall be compliant with Minn. R. 7017.1210, subp. 3.	Minn. R. 7017.1210, subp. 3
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130
QA Plan Required: Develop and implement a written quality assurance plan which covers each COMS. The plan shall be on site and available for inspection. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1.	Minn. R. 7017.1210
COMS Monitoring Data: The Permittee shall reduce the COMS data to six-minute averages. Opacity averages shall be calculated from all equally spaced consecutive 10-second (or shorter) data points in the six-minute averaging period.	Minn. R. 7017.1200, subp. 1, 2, & 3
COMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all COMS shall be in continuous operation. A COMS must not be bypassed except in emergencies where failure to bypass the COMS would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090, subp. 1
CEMS REQUIREMENTS	hdr
CO CEMS Equipment Installation: This has been accomplished.	Title I Condition: Monitoring associated with Title I emission limits; Minn. R. 7017.1006
CO CEM Certification Test: due before 06/01/2002	Minn. R. 7017.1050, subp. 1
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording Nitrogen Oxide emissions.	Title I Condition: Monitoring associated with Title I emission limits; Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	Minn. R. 7017.1170, subp. 3
CEMS Cylinder Gas Audit (CGA): due before end of each calendar half-year starting 09/09/1999 . Conduct cylinder gas audit (CGA) at least 3 months apart but not greater than 8 months apart. If a RATA is performed during the calendar half-year a CGA is not required. Follow the procedures in 40 CFR pt. 60, Appendix F.	Minn. R. 7017.1170, subp. 4
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year starting 09/09/1999 . If the relative accuracy is 15% or less the next CEMS RATA is not due for 24 months from the date of the last test. Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 5
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2
CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090, subp. 1
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 440 Boiler #3**

**Associated Items:** CE 440 Other  
 GP 420 Boilers & Recovery furnace - NOx cap  
 MR 440 Boiler 3  
 MR 441 Boiler 3  
 SV 440

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.003 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (netting, modeling); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.003 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (netting, modeling); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0510
Nitrogen Oxides: less than or equal to 0.050 lbs/million Btu heat input using 30-day Rolling Average	Title I Condition: 40 CFR Section 52.21 (BACT limit; modeling); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 0.090 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 33.6 lbs/hour	Title I Condition: 40 CFR Section 52.21(k) (modeling); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.0090 lbs/million Btu heat input , measured as C excluding methane (this is equivalent to 3.4 lb/hr).	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
OPERATIONAL LIMITS	hdr
Fuel Burned: Fuels to be burned are limited to natural gas.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Annual Capacity Factor: Record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor for natural gas each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.	Title I Condition: 40 CFR Section 52.21; 40 CFR Section 60.49b(d); Minn. R. 7007.3000
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each calendar 60 months starting 08/08/2000 to measure Volatile Organic Compounds and Carbon Monoxide emissions. The next test is due August 8, 2005, then every 60 months thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
CEMS REQUIREMENTS	hdr
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording the Nitrogen Oxide emissions, and either Oxygen or Carbon Dioxide.	Title I Condition: Monitoring associated with Title I emission limits; NSPS Subp. Db; 40 CFR Section 60.45(a); Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	40 CFR 60.13(d)(1); Minn. R. 7017.1170, subp. 3; 40 CFR pt. 60, App. F, section 4.1;
CEMS Cylinder Gas Audit (CGA): due before end of each calendar quarter starting 09/09/1999 but in no more than three calendar quarters per calendar year. The RATA shall be conducted during the calendar quarter in which a CGA is not performed.	40 CFR pt. 60, App. F, section 5.1.2; Minn. R. 7017.1170, subp. 4
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year starting 09/09/1999 . Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	40 CFR pt. 60, App. F, section 5.1.1; Minn. R. 7017.1170, subp. 5
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2; 40 CFR pt. 60, App. F, section 3
CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	40 CFR 60.13(e); Minn. R. 7017.1090, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130; 40 CFR 60.7(f)
Records of Startup, Shutdown, or Malfunction: Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR 60.7(b)



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 450 Boiler #8**

**Associated Items:** CE 450 Other  
 GP 420 Boilers & Recovery furnace - NOx cap  
 MR 450 Boiler 8  
 MR 451 Boiler 8  
 SV 450

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.003 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (netting, modeling); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.003 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (netting, modeling); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0510
Nitrogen Oxides: less than or equal to 0.050 lbs/million Btu heat input using 30-day Rolling Average	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 0.090 lbs/million Btu heat input using 3-hour Average	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 33.6 lbs/hour	Title I Condition: 40 CFR Section 52.21(k) (modeling); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.0090 lbs/million Btu heat input measured as C excluding methane (this is equivalent to 3.4 lb/hr).	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
OPERATIONAL LIMITS	hdr
Fuel Burned: Fuels to be burned are limited to natural gas.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
<p>Fuel Usage: less than or equal to 192.0 million Btu's/hour of natural gas heat input, calculated on a twelve-hour block average, unless a new limit is set pursuant to Minn. R. 7017.2025, subp. 3, based on the most recent MPCA approved performance test where compliance was demonstrated.</p> <p>The twelve-hour block average shall be calculated by dividing the total weight by the total operating time in each twelve-hour block. Down time of 15 or more minutes is not to be included as operating time.</p>	Minn. R. 7017.2025, subp. 3
Annual Capacity Factor: Record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor for natural gas each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.	Title I Condition: 40 CFR Section 52.21; 40 CFR Section 60.49b(d); Minn. R. 7007.3000
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each calendar 60 months starting 08/08/2000 to measure Volatile Organic Compounds and Carbon Monoxide emissions. The next test is due August 8, 2005, then every 60 months thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
CEMS REQUIREMENTS	hdr
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording Nitrogen Oxide emissions.	Title I Condition: Monitoring associated with Title I emission limits; 40 CFR Section 60.45(a); Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	40 CFR 60.13(d)(1); Minn. R. 7017.1170, subp. 3
CEMS Cylinder Gas Audit (CGA): due before end of each calendar year starting 09/09/1999. Follow the procedures in 40 CFR pt. 60, Appendix F. If a RATA is performed during the calendar year, a CGA is not required.	Minn. R. 7017.1170, subp. 1(A) and (B)
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar 60 months starting 09/09/1999. Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 1(A) and (B)
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2; 40 CFR pt. 60, App. F, section 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	40 CFR 60.13(e); Minn. R. 7017.1090, subp. 1
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130; 40 CFR 60.7(f)
Records of Startup, Shutdown, or Malfunction: Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR 60.7(b)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 460 Boiler #9**

**Associated Items:** CE 460 Other  
 GP 420 Boilers & Recovery furnace - NOx cap  
 MR 460 Boiler 9  
 MR 461 Boiler 9  
 SV 460

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.003 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (netting, modeling); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.003 lbs/million Btu heat input	Title I Condition: 40 CFR Section 52.21 (netting, modeling); Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0510
Nitrogen Oxides: less than or equal to 0.050 lbs/million Btu heat input using 30-day Rolling Average	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 0.090 lbs/million Btu heat input using 3-hour Average	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Carbon Monoxide: less than or equal to 33.6 lbs/hour	Title I Condition: 40 CFR Section 52.21(k) (modeling); Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 0.0090 lbs/million Btu heat input measured as C excluding methane (this is equivalent to 3.4 lb/hr).	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
OPERATIONAL LIMITS	hdr
Fuel Burned: Fuels to be burned are limited to natural gas.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Annual Capacity Factor: Record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor for natural gas each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.	Title I Condition: 40 CFR Section 52.21; 40 CFR Section 60.49b(d); Minn. R. 7007.3000
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each calendar 60 months starting 08/08/2000 to measure Volatile Organic Compounds and Carbon Monoxide emissions. The next test is due August 8, 2005, then every 60 months thereafter.	Title I Condition: Testing associated with Title I emission limits; Minn. R. 7017.2020, subp. 1
CEMS REQUIREMENTS	hdr
The Permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring and recording Nitrogen Oxide emissions.	Title I Condition: Monitoring associated with Title I emission limits; 40 CFR Section 60.45(a); Minn. R. 7017.1006
CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CEMS.	40 CFR 60.13(d)(1); Minn. R. 7017.1170, subp. 3
CEMS Cylinder Gas Audit (CGA): due before end of each calendar year starting 09/09/1999 . Follow the procedures in 40 CFR pt. 60, Appendix F. If a RATA is performed during the calendar year, a CGA is not required.	Minn. R. 7017.1170, subp. 1(A) and (B)
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar 60 months starting 09/09/1999 . Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 1(A) and (B)
QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection. The plan shall contain all of the information required by 40 CFR 60, App. F, section 3.	Minn. R. 7017.1170, subp. 2; 40 CFR pt. 60, App. F, section 3
CEMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS shall be in continuous operation. A CEMS must not be bypassed except in emergencies where failure to bypass the CEMS would endanger human health, safety, or plant equipment.	40 CFR 60.13(e); Minn. R. 7017.1090, subp. 1
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130; 40 CFR 60.7(f)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

Records of Startup, Shutdown, or Malfunction: Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR 60.7(b)
---	----------------

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 530 No. 4 Paper Machine**

- Associated Items:** SV 511  
 SV 512  
 SV 513  
 SV 514  
 SV 515  
 SV 516  
 SV 517  
 SV 518  
 SV 519  
 SV 524  
 SV 525  
 SV 530  
 SV 531  
 SV 532  
 SV 533  
 SV 534  
 SV 535  
 SV 536  
 SV 537

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)
Fuel Burned: Fuels to be burned are limited to natural gas.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000
Periodic Monitoring: the Permittee shall perform proper maintenance of the paper machine 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**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item: EU 602 Wastewater Treatment Plant Cooling Tower****Associated Items: SV 602**

<b>What to do</b>	<b>Why to do it</b>
Wastewater Process Throughput: less than or equal to 1700E6 gallons/year using 12-month Rolling Sum	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Recordkeeping: Monthly wastewater processed rate and monthly calculation of 12-month rolling sum, by the 15th of the following month.	Title I Condition: Recordkeeping associated with Title I limit; Minn. R. 7007.0800, subp. 5
Reporting: Annually by January 30th, a report of the previous 12 monthly 12-month rolling sum calculations of wastewater throughput.	Minn. R. 7007.0800, subp. 6

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** EU 901 Thermal Oxidizer - Moonlight Rock Landfill (1)

**Associated Items:** CE 901 Direct Flame Afterburner

SV 901

What to do	Why to do it
<p>Odorous Emissions Control: The Permittee shall operate and maintain a gas collection and flare system to control odorous emissions from the Moonlight Rock Landfill. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Temperature: greater than or equal to 1130 degrees F using 3-hour Rolling Average until a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the average temperature recorded during the most recent performance test. A temperature recorder with hard copy shall be operated continuously when the flare is operating. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Retention Time: greater than or equal to 0.6 seconds . This is the minimum residence time in the flame zone. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Monitoring Requirements:                      - The gas flow shall be indicated whenever the flare is in operation and the amount of gas flared shall be calculated.                      - The inlet concentration of methane shall be recorded continuously whenever the flare is in operation.                      - The alarms indicating the flare is out shall be monitored by control room staff (manned 24 hours per day). The flare shall be restarted in a timely manner, such that the landfill gas collection system does not vent unflared gases to the atmosphere.                       This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>
<p>Flare System Requirements:                      - The vacuum system shall be enclosed to minimize noise.                      - A test port shall be provided.                       This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	<p>Minn. R. 7007.0800, subp. 2</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** EU 902 Paint Spray Booth

**Associated Items:** CE 902 Paper Filter (Not Accordian) - Use if paint filter not spec  
SV 902

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity using 6-minute Average	Minn. R. 7011.0715, subp. 1(B)
Operating Hours: less than or equal to 1044 hours/year using 12-month Rolling Sum	Title I Condition: Limit taken to avoid classification as major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Spray Booth Operation: The particulate filter for the emission unit shall be securely in place whenever paint spraying occurs. The filter shall be maintained and replaced according to manufacturer's specifications.	Title I Condition: To limit emissions to avoid classification as major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Recordkeeping: Monthly record of operating hours and monthly calculation of 12-month rolling sum, by the 15th of the following month.	Title I Condition: Recordkeeping for Title I Condition; Minn. R. 7007.0800, subp. 5
Reporting: Annually by January 30th, a report of the previous 12 monthly 12-month rolling sum calculations of spray booth operation.	Minn. R. 7007.0800, subp. 6



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** EU 903 Sludge Dryer

**Associated Items:** CE 904 Other  
 CE 905 Venturi Scrubber  
 CE 906 Spray Tower  
 SV 430  
 SV 431  
 SV 904 Sludge Dryer

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Operation and Maintenance Plan: Within 30 days of initial startup of EU 903 (Sludge Dryer), submit an update to the O&M Plan. The update shall include the parameter ranges for the parameters identified below for CE 905 and CE 906. The plan shall also identify correction action procedures to be followed to return the control equipment to within specified range(s); corrective action procedures to be followed in the event of a malfunction, breakdown or exceedance of operating ranges; a description of inspection procedures to be followed; and records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 2
Control Equipment Monitoring: Observe and record once per operating day, the liquid flow rate and pressure drop for CE 905 and CE 906.	Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

**Subject Item:** FS 904 Intermediate Chip Booster Station (Blower with cyclone)**Associated Items:** CE 903 Single Cyclone

What to do	Why to do it
Total Particulate Matter: less than or equal to 3.0 lbs/hour	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 2.9 lbs/hour	Title I Condition: 40 CFR Section 52.21(j) (BACT limit); Minn. R. 7007.3000
Periodic Monitoring: the Permittee shall perform proper maintenance of the cyclone so as to prevent excessive amounts of particulate matter from being emitted from the associated stack/vents.	Minn. R. 7007.0800, subp. 4

**TABLE B: SUBMITTALS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls  
Permit Number: 07100002 - 005

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

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

Send any application for a permit or permit amendment to:

Permit Technical Advisor  
Permit Section  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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

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

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

Supervisor  
Compliance Determination Unit  
Air Quality Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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

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

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

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

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Relative Accuracy Test Audit (RATA) Notification	due 30 days before CEMS Relative Accuracy Test Audit (RATA) .	EU320, EU340, EU420, EU430, EU440, EU450, EU460
Testing Frequency Plan	due 90 days after Initial Performance Test for Volatile Organic Compound Emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. When developing the plan, data from tests performed prior to permit issuance shall also be considered. 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 per Minn. R. 7017.2020, subp. 1.	SV322
Testing Frequency Plan	due 90 days after Performance Test for determining emission factor for SO2. The plan shall specify a testing frequency using the test data and MPCA guidance. When developing the plan, data from tests performed prior to permit issuance, as well as other relevant information (e.g. variability of TRS emissions using data from CEMS), may also be considered. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	EU320

**TABLE B: RECURRENT SUBMITTALS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

What to send	When to send	Portion of Facility Affected
Ambient Air Monitoring Report	due 45 days after end of each calendar quarter starting 09/09/1999. This is the TRS Ambient Air Monitoring Report. This is a state only requirement and is not federally enforceable or enforceable by citizens under the Act.	Total Facility
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar quarter following Cylinder Gas Audit.	EU440
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 09/09/1999 (Submit Deviations Reporting Form DRF-1 as amended). The EER must contain all of the information requested in 40 CFR 60.7(c). The EER shall indicate all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	EU440
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 09/09/1999 (Submit Deviations Reporting Form DRF-1 as amended). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	EU320, EU420
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 09/09/1999 (Submit Deviations Reporting Form DRF-1 as amended). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions. The first EER for the CO CEMS will be due after the 2nd quarter, 2002. The first quarter in 2002 will be used as a data collection and analysis period as allowed in the June 28, 2001, stipulation agreement	EU430
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 09/09/1999 (Submit Deviations Reporting Form DRF-1 as amended). The TRS CEMS EER shall indicate all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	EU450, EU460
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 09/09/1999 (Submit Deviations Reporting Form DRF-1 as amended). The TRS CEMS EER shall indicate all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	EU340
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 09/09/1999 (Submit Deviations Reporting Form DRF-1). Excess emissions for opacity are defined in 40 CFR Section 60.45(g)(1). The COMS EER shall indicate all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	EU320, EU430
COMS Calibration Error Audit Results Summary	due 30 days after end of each calendar half-year following COMS Calibration Error Audit.	EU320, EU430
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar half-year following Cylinder Gas Audit.	EU320, EU420, EU430

**TABLE B: RECURRENT SUBMITTALS**

11/07/02

Facility Name: Boise Cascade Corp - International Falls

Permit Number: 07100002 - 005

Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 09/09/1999 . 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.	Total Facility
Annual Report	due 30 days after end of each calendar year starting 09/09/1999. A report of the previous 12 monthly 12-month rolling average calculations for the annual capacity factor shall be submitted.	EU440, EU450, EU460
Annual Report	due 30 days after end of each calendar year starting 09/09/1999. The annual Landfill Flare report shall contain the following data: flare downtime or bypassing, methane minimum concentrations, and flare minimum temperatures when the flare is operating.  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	EU901
Compliance Certification	due 31 days after end of each calendar year starting 09/09/1999 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner, and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year. The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604.	Total Facility
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar year following Cylinder Gas Audit.	EU340, EU450, EU460
Emissions Inventory Report	due 91 days after end of each calendar year starting 09/09/1999 (April 1). To be submitted on a form approved by the Commissioner.	Total Facility
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar year following CEMS Relative Accuracy Test Audit (RATA).	EU320
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar year following CEMS Relative Accuracy Test Audit (RATA).	EU420
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar year following CEMS Relative Accuracy Test Audit (RATA).	EU430
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar year following CEMS Relative Accuracy Test Audit (RATA).	EU440
Compliance Status Report	due 30 days after end of each calendar 24 months starting 04/15/1999 (following initial Compliance Status Report). The Compliance Status Report will serve as the non-binding control strategy report and shall be prepared in accordance with the requirements in 40 CFR Section 63.455(b).	Total Facility
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar 60 months following CEMS Relative Accuracy Test Audit (RATA).	EU340
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar 60 months following CEMS Relative Accuracy Test Audit (RATA).	EU450
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar 60 months following CEMS Relative Accuracy Test Audit (RATA).	EU460

## **APPENDIX MATERIAL**

Facility Name: Boise Cascade Corp. - International Falls  
Permit Number: 07100002-005

Appendix A (not used in this permit)

Appendix B (not used in this permit)

Appendix C List of Insignificant Activities

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**DRAFT AIR EMISSION PERMIT NO. 07100002-005**

This Technical Support Document (TSD) is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft 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 (list both if different)	Facility Address (SIC Code: 2621, 2611)
Boise Cascade Corporation 1111 Jefferson Street Boise, Idaho 83702	Boise Cascade Corporation 400 Second Street International Falls, Minnesota 56649 Koochiching County

**1.2. Description of the Facility and Permitting History**

Boise Cascade Corporation operates an integrated Kraft pulp and paper mill in International Falls. The mill manufactures a variety of coated and uncoated fine paper products. The facility consists of a woodyard, chip processing center, pulp mill, bleach plant, chemical recovery system, power plant, wastewater treatment facility, industrial landfill, paper mill, finishing and sheeting, warehouse, and shipping facilities. In 1989/1990, Boise underwent an expansion that included the installation of a new paper machine, a new bleach plant, a new lime kiln, modification of the chemical recovery furnace, and other upgrades.

A Part 70 permit was issued to Boise in September, 1999. Previously, the facility operated under a total facility permit, which was also a PSD permit, issued by the Minnesota Pollution Control Agency (MPCA) on May 12, 1989. The Part 70 operating permit was a consolidation of existing conditions from the 1989 Prevention of Significant Deterioration Program (PSD) permit and subsequent amendments. The Part 70 permit also included a PSD modification for the Boiler No. 2. The modification was for an overfire air project, which is a waste reduction measure that will allow Boise to burn more sludge and bark in the boiler rather than landfilling the sludge and bark. The overfire air project is essentially a Nitrogen Oxide (NO<sub>x</sub>) control method, which reduces the amount of NO<sub>x</sub> generated for a given amount of sludge or wood burned. This allows Boise to burn more sludge and wood on an hourly basis, while still remaining within their NO<sub>x</sub> emission limit.

A permit amendment was issued to Boise in October, 2000, for their Efficiency Improvement Project. The permit allowed Boise to increase pulp production and generation of black liquor solids so that the facility is less dependent on market pulp. To achieve the higher pulp



production and black liquor processing rates, Boise proposed to make several physical modifications. An evaporator effect, two condensers and a blow tank will be added, physical modifications will be made to the evaporating process, and a new economizer will be installed on the recovery furnace. Physical modifications also included changes at the wood processing center to enhance operating flexibility, including the replacement of a bark hog. Other physical changes (equipment replacement) will be made in the course of routine replacement of aging equipment, including the replacement of the brownstock decker.

The Efficiency Improvement Project was evaluated along with the Boiler No. 2 project in an Environmental Assessment Worksheet (EAW) and application for PSD amendment. The project required preparation of a mandatory EAW, because the modification results in an increased generation of greater than 100 tpy for at least a single air pollutant. The application for the PSD amendment was for a major modification; both the Efficiency Improvement Project and the Boiler No. 2 project would be considered major amendments on their own, due to the increase in PTE.

The EAW, which combined both projects, was placed on public notice from February 22, 1999 to April 7, 1999. During the public comment period, many concerns were raised about the proposed increase in wood use and the impacts on timber harvesting and forest management. The proposed modification of Boiler No. 2, which was believed to be environmentally beneficial, received minimal comment. Because the Boiler No. 2 project entailed time-sensitive factors which could jeopardize the project, permitting for that project proceeded along with the Title V permitting.

### **1.3 Description of the Activities Allowed by This Permit Action**

This permit amendment combines two permit amendment applications. The first permit amendment application, dated May 2001, was for an increase in Particulate Matter less than 10 um in size (PM<sub>10</sub>) limit for the smelt dissolving tank and the lime kiln. The PM<sub>10</sub> limit for each unit was increased to match the emission limit of particulate matter and to reflect actual emissions of the emission units. Boise submitted a second permit application (January 2002) to increase the Sulfur Dioxide (SO<sub>2</sub>) limit on the brownstock washer and for installation of the #3 rotary debarker. A Best Available Control Technology (BACT) limit for SO<sub>2</sub> was included in PER 003; a performance test was then required following issuance of the permit. The test results showed that the limit was not attainable, so Boise performed a re-evaluation of the BACT analysis and submitted an amendment to increase the limit. Modeling analysis was required to evaluate the additional PM<sub>10</sub> emissions associated with the debarker and the increased PM<sub>10</sub> limits for the smelt dissolving tank and lime kiln. In May 2002, Boise submitted an updated permit application for the second permit application that contained the final modeling results.

**1.4. Facility Emissions:**

Table 1. PTE Comparison:

	<b>PM tpy</b>	<b>PM<sub>10</sub> tpy</b>	<b>SO<sub>2</sub> tpy</b>	<b>NO<sub>x</sub> tpy</b>	<b>CO tpy</b>	<b>VOC tpy</b>	<b>TRS tpy</b>
<i>Previously Permitted PTEs:</i>							
Smelt Dissolving Tank (SV 322)	nc	24	nc	nc	nc	nc	nc
Lime Kiln (EU 340)	nc	41	nc	nc	nc	nc	nc
Brownstock Washer (SV 173)	nc	nc	2.2	nc	nc	nc	nc
#3 Rotary Debarker (EU 904)	<i>No emissions – emission unit not previously in place</i>						
<i>Proposed PTEs:</i>							
Smelt Dissolving Tank (SV 322)	nc	25	nc	nc	nc	nc	nc
Lime Kiln (EU 340)	nc	46	nc	nc	nc	nc	nc
Brownstock Washer (SV 173)	nc	nc	4.3	nc	nc	nc	nc
#3 Rotary Debarker (EU 904)	4.4	4.4	none	none	none	none	none

nc: no change in allowable PTE

Table 2. Total Facility Potential to Emit Summary:

	<b>PM tpy</b>	<b>PM<sub>10</sub> tpy</b>	<b>SO<sub>2</sub> tpy</b>	<b>NO<sub>x</sub> tpy</b>	<b>CO tpy</b>	<b>VOC tpy</b>	<b>TRS tpy</b>
Total Facility Limited Potential Emissions	451	318	457	1582	3066	711	74

Table 3. Permit Action Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)	PM, PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , VOC, CO, TRS		
NAAR (list pollutant)	NA	NA	NA
Part 70 Permit Program (list pollutant)	PM, PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , VOC, CO		

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

## 2. Regulatory Overview of Units Affected by the Modification and of Existing Facility

Table 4. Regulatory Overview

EU, GRP, or SV #	Applicable Regulations	Comments:
<b>Regulations applicable to permit changes:</b>		
SV 322 (smelt dissolving tank)	40 CFR § 52.21	Prevention of Significant Deterioration. PM <sub>10</sub> limit set originally due to modeling and netting. PM <sub>10</sub> limit increased from 5.5 to 5.7 lb/hr. Modeling indicated continued compliance with ambient standards with revised limit.
EU 340 (lime kiln)	40 CFR § 52.21	Prevention of Significant Deterioration. PM <sub>10</sub> limit set originally due to modeling and netting. PM <sub>10</sub> limit increased from 9.4 to 10.6 lb/hr. Modeling indicated continued compliance with ambient standards with revised limit.
SV 173 (BSW)	40 CFR § 52.21	Prevention of Significant Deterioration. BACT limit for SO <sub>2</sub> revised from 0.01 to 0.02 lbs/air dried tons unbleached pulp.
Total Facility	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2	Fugitive Emissions Control Plan. Revision to the plan has been submitted and approved. Additional control measures have been added to Plan, primarily for paved and unpaved roads.
<b>Existing conditions (added PER 003):</b>		
Total Facility	40 CFR § 52.21	Prevention of Significant Deterioration. Limit set for black liquor production, since emissions used in modeling were based on this level of production. Requirement added to evaluate need for additional modeling and to conduct additional modeling if stack parameters (included in appendix to permit) are significantly changed from what was used in modeling.
SV 173 (BSW); EU 320 (recovery furnace); FS 904 (chip cyclone)	40 CFR § 52.21	Prevention of Significant Deterioration. BACT limits set. Pollutants considered in BACT analysis included PM/PM <sub>10</sub> , VOC, CO, SO <sub>2</sub> , NO <sub>x</sub> , TRS.
Total Facility	Minn. R. 7007.0800, subp.2	Requirement added to evaluate need to perform additional modeling if stack parameters (included in appendix to permit) are significantly changed from what was used in modeling.
SV 903 (Combined stack for ClO <sub>2</sub> gener., bleach plant)	Minn. R. 7007.0800, subp.2	The stacks for the bleach plant and chlorine dioxide generator are to be combined to match the parameters used in the modeling for the Air Toxics and improve dispersion.

<b>Existing conditions (PER 001):</b>		
EU 440; EU 450; EU 460	40 CFR pt. 60, subp. Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
GP 340; SV 322; EU 145; EU 320; EU 340	40 CFR pt. 60, subp. BB	Standards of Performance for Kraft Pulp Mills
numerous	40 CFR § 52.21	Prevention of Significant Deterioration. BACT limits set for NO <sub>x</sub> , VOCs, TRS. Limits set for PM, PM <sub>10</sub> , SO <sub>2</sub> due to modeling and netting.
EU 902	40 CFR § 52.21	Prevention of Significant Deterioration. Limit taken to avoid classification as major modification
EU 420; EU 430	Minn. R. 7011.0510	Standards of Performance for New Indirect Heating Equipment
SV 327; EU 902	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
GP 420	40 CFR § 52.21	Cap limit for NO <sub>x</sub> for combustion units (i.e. boilers and recovery furnace). Total NO <sub>x</sub> cap includes combustion units as well as the lime kiln and smelt dissolving tank. Limit was set due to visibility concerns for Class I area.
SV 220, SV 240		Limits for toxics (chlorine, chlorine dioxide, chloroform) set due to risk assessment performed for EAW for 1989 permit
GP 340; GP 421; SV 173; SV 220; SV 240	40 CFR pt. 63, subp. S	National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

### 3. Technical Information

#### 3.1 Amendment to change PM<sub>10</sub> limits for Smelt Dissolving Tank and Lime Kiln

Boise proposed to amend the PM<sub>10</sub> emission limits for the smelt dissolving tank (SV 322) and the lime kiln (EU 340) in their permit amendment application dated May 2001. The PM<sub>10</sub> limits were initially set due to modeling and netting. Boise has conducted PM<sub>10</sub> performance tests for these emission units and has determined that the existing PM<sub>10</sub> emission limits could not be attained. The PM<sub>10</sub> emissions were initially assumed to be a certain fraction of total particulate matter and were based on the filterable particulate matter measure in U.S. Environmental Protection Agency's (EPA) Method 5. Testing using EPA Method 202 has shown that the PM<sub>10</sub> emissions are higher than initially estimated. BACT analysis is not required for these changes; Boise is not proposing any physical or operational changes to these emission units, nor were the limits set due to previous BACT analyses. Changing the limits would not change the previous netting analysis, and additional modeling was performed to ensure that compliance with the ambient air quality standards continue to be met. (See dispersion modeling results in following section.)

**3.2 Amendment to change Brownstock Washer SO<sub>2</sub> limit and to add Rotary Debarker**

Boise submitted an amendment application, dated January 2002, to increase the SO<sub>2</sub> emissions limit on the Brownstock Washer (BSW) and to add a rotary debarker. Although the BSW was an existing emission unit, a BACT limit was applied to the BSW as part of the PSD permit amendment PER 002. The BACT analysis for the BSW primarily focused on Total Reduced Sulfur (TRS) but included consideration of control for SO<sub>2</sub>. The BSW does have some emissions of SO<sub>2</sub>; however, most controls considered for SO<sub>2</sub> were to control SO<sub>2</sub> produced by incineration of TRS, which would cause an increase in SO<sub>2</sub>. As part of this amendment to increase the SO<sub>2</sub> limit, Boise was required to update the previous BACT analysis. The updated BACT analysis is attached to this document. The conclusion was that all controls considered were not cost effective. Therefore, no control remains as BACT, with the emission limit increased to 0.02 lbs/air dried tons unbleached pulp. It should also be noted that the Maximum Achievable Control Technology (MACT) standard (40 CFR pt. 63, subp. S) promulgated in April 1998 will require that brownstock washers be controlled; the compliance date for the BSW is in 2006. Due to the relatively low amount of SO<sub>2</sub> emissions from the BSW, and due to the fact that the MACT requires that the BSW will be controlled by 2006, it was felt that additional SO<sub>2</sub> testing is not necessary. However, as a precaution that something might happen such that the BSW is not controlled, the requirement to test for SO<sub>2</sub> every three years was changed to test in five years from now, unless the BSW emissions are being controlled as required by the MACT.

Boise proposed to add a rotary debarker to their facility, in their permit amendment application dated January 2002. The debarker qualifies as an insignificant activity. However, the debarker has poor dispersion characteristics and will be located in the logyard, which is an area that previous dispersion modeling has indicated as having receptors with the highest ambient concentrations of PM<sub>10</sub>. Therefore, Boise performed modeling for PM<sub>10</sub> to ensure that there will be continued compliance with the ambient standards after the addition of the debarker.

The results of the PM<sub>10</sub> dispersion modeling are shown below.

Pollutant	Ave. Period	Maximum Predicted Impacts (µg/m <sup>3</sup> )	National Ambient Air Quality Standard		Minnesota Ambient Air Quality Standard	
			Primary Standard (µg/m <sup>3</sup> )	Secondary Standard (µg/m <sup>3</sup> )	Primary Standard (µg/m <sup>3</sup> )	Secondary Standard (µg/m <sup>3</sup> )
PM <sub>10</sub>	Annual	32	50 <sup>a</sup>	50	50	50
	24-Hour	121	150 <sup>b</sup>	150	150	150

<sup>a</sup> Not to be exceeded; therefore, the maximum result is shown.

<sup>b</sup> Not to be exceeded more than once per year; therefore, the maximum second-highest result is shown. Primary standards are set to protect human health; secondary standards are set to protect crops, visibility, soils and other structures.

A summary of the increment consumption results for PM<sub>10</sub> is given below:

<b>Pollutant</b>	<b>Ave. Period</b>	<b>Maximum Modeled Impact (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PSD Class II Increment (<math>\mu\text{g}/\text{m}^3</math>)</b>
PM <sub>10</sub>	Annual	0.02	17 <sup>a</sup>
	24-hour	2.0	30 <sup>b</sup>

<sup>a</sup> Not to be exceeded; therefore, the maximum result is shown.

<sup>b</sup> Not to be exceeded more than once per year; therefore, the maximum second-highest result is shown.

The modeling that was performed included updated emission calculations for paved and unpaved roads using the most current AP-42 information. Boise assumed 80 percent control of unpaved roads during the summer months. Control of the unpaved roads will be accomplished by monthly application of calcium chloride during the summer months. The Fugitive Emissions Control Plan was updated by Boise. The Plan, revised on February 18, 2002, was approved by MPCA and is an enforceable part of the permit. The Plan is attached to this document.

The modeling performed by Boise used the most current AP-42 factors for calculations of emissions from paved and unpaved roads. However, Boise used previous modeling files for increment consumption modeling. Boise will be required to recreate complete PSD increment files in any future modeling involving increment consumption. The files will include baseline data (emissions rates and stack and building data) on a source-by-source basis to ensure that this information is well documented for any future modeling efforts. Besides the baseline data, data must be provided to show changes made since the baseline date. Separate increment files for 24-hour averages and annual averages must be prepared. Negative emission rates for the baseline and positive emission rates for subsequent changes shall be used as required in the EPA New Source Review Workshop Manual.

#### **4. Conclusion**

Based on the information provided by Boise Cascade Corporation, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 07100002-005, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Paula Connell, Robert Beresford

Peer Review: Craig Thorstenson

Attachment: CD-01 Forms

Fugitive Emissions Control Plan

Updated BACT Analysis for Brownstock Washer SO<sub>2</sub> Emissions