

AIR EMISSION PERMIT NO. 13500002- 002

IS ISSUED TO

Marvin Lumber & Cedar Company

MARVIN WINDOWS & DOORS

Highway 11 West
Warroad, Roseau County, MN 56763

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 Application Type	Application Date
Total Facility Operating Permit	04/21/1995 (Final updated prior to notice date)
Major Amendment	12/26/2006

This permit supersedes Air Permit No. 13500002-001, and authorizes the Permittee to operate and modify the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Pt 70/Major for NSR

Issue Date: August 22, 2007

Authorization to Construct and Operate (40 CFR § 52.21) Issuance Date: July 27, 2007

Authorization to Construct and Operate (40 CFR § 52.21) Effective Date: July 27, 2007

Final Permit Issuance Date: August 22, 2007

Expiration: March 05, 2012
All Title I Conditions do not expire.

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

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Appendices:

- I. Wood Treatment Calculations**
- II. Insignificant Activities**
- III. Stack Parameters**

NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

FACILITY DESCRIPTION:

Marvin Lumber and Cedar Company (the Permittee) owns and operates Marvin Windows and Doors (the Facility). The Facility manufactures wood windows and doors for residential and commercial application.

The manufacturing process consists mainly of wood milling, wood treatment, assembly, coating, and shipping. The Facility also has several boilers and emergency generators as well as several processes that qualify as insignificant activities. The main emissions are Volatile Organic Compounds (VOC), Particulate Matter and Particulate Matter less than 10 microns (PM/PM₁₀) and various other pollutants from the combustion of wood, diesel fuel, natural gas, and propane. The permit contains requirements that limit emissions of Nitrogen Oxides (NO_x), VOCs, HAPs, and PM/PM₁₀.

This major amendment authorizes the addition of a wood treatment pilot plant. The purpose of this pilot plant is to study the performance and enhance the accelerated removal of solvent from Light Organic Solvent Preservation (LOSP).

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

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
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply and, upon written request, demonstrate compliance with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, supbs. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0100-7009.0080
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the written or electronic records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
This permit shall not alter or affect the liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance.	Minn. R. 7007.1800, subp. (C)(2)
The facility currently uses ozone-depleting substances as defined in 40 CFR Section 82. Sections 601-618 of the 1990 Clean Air Act Amendments and 40 CFR Section 82 may apply to your facility. Read Sections 601-618 and 40 CFR Section 82 to determine all the requirements that apply to your facility.	40 CFR Section 82
Personnel repairing or servicing MVACs or MVAC-like appliances must use equipment approved pursuant to 40 CFR Section 82.36 and be properly trained and certified by a technician certification program approved by the Administrator pursuant to 40 CFR Section 82.40.	40 CFR Section 82, subp. B; 40 CFR Section 82.34
Refrigerant recycling equipment must be certified by the Administrator or an independent standards testing organization approved by the Administrator under 40 CFR Section 82.38 to meet the standards in subp. B, Appendices A-F.	40 CFR Section 82.36

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Any person who owns approved refrigerant recycling equipment certified under 40 CFR Section 82.36(a)(2) must maintain records of the name and address of any facility to which refrigerant is sent.	40 CFR Section 82.42(b)
Any person who owns approved refrigerant recycling equipment must retain records demonstrating that all persons authorized to operate the equipment are currently certified under 40 CFR Section 82.40.	
Maintain records on-site for a minimum of three years.	
Technicians must be certified by an approved program.	40 CFR Section 82.161
Certify that approved refrigerant recycling equipment is being used.	40 CFR Section 82.162
(k) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added. The owner/operator must keep records of refrigerant purchased and added to such appliances in cases where owners add their own refrigerant.	40 CFR Section 82.166(k), (l) and (m)
(l) Maintain a copy of technician certifications.	
(m) Records must be kept for a minimum of three years.	
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2030, subp. 1-4, Minn. R. 7017.2018, Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Performance Test: due 1096 days after permit issuance, the Permittee shall conduct industrial hygiene (IH) indoor air quality testing once prior to the expiration of the permit in lieu of individual hood certification testing. The IH testing will be used to demonstrate that non-captured emissions from GP001, GP002, GP003, GP004, GP005, P006, GP009, GP011 and GP021 remain negligible. MPCA stack testing staff must review and approve test plan prior to testing. Test results shall be submitted to the MPCA within 45 days after completion of the testing.	40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0070, subp. 2; Minn. R. 7017.2035
MODELING REQUIREMENTS	hdr
Submit modeling data as specified in MPCA guidance for Modeling Information Requests for NOx within 1,096 days of permit issuance. This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the CAA.	Minn. R. 7007.0800, subp. 2

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the modeling for Air Emission Permit No. 1001A-93-OT-1 are listed in the Appendix of this permit. The Permittee must submit to the Commissioner for approval any revisions of these parameters and must wait for a written approval before making such changes. The information submitted must include, at a minimum, the locations, heights and diameters of the stacks, locations and dimensions of nearby buildings, the velocity and temperatures of the gases (continued)	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
(continued) emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled in the most recent Air Quality Impacts Analysis. The Permittee shall demonstrate this equivalency 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.	(continued) Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
For changes that do not involve an increase in an emission rate and that do not require a permit amendment, this proposal must be submitted as soon as practicable, but no less than 60 days before beginning actual construction of the stack or associated emission unit. 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 beginning actual construction of the stack or associated emission unit. For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted with the permit application.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.3000
RECORDKEEPING	hdr
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NEW SOURCE REVIEW	hdr
These requirements apply where there is a reasonable possibility that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test and found to not be part of a major modification, may result in a significant emissions increase. If the ATPA test is not used for a particular project, or if there is not a reasonable possibility that the proposed project could result in a significant emissions increase, then these requirements do not apply to that project. Even though a particular modification is not subject to New Source Review, a permit amendment, recordkeeping, or notification may still be required under Minn. R. 7007.1150 - 7007.1500.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000
Preconstruction Documentation - Before beginning actual construction on a project, the Permittee shall document the following information: 1. A description of the project 2. Identification of the emission unit(s) whose emissions of an NSR pollutant could be affected. 3. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the potential emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the unit(s) could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. The Permittee shall maintain records of this documentation.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
The Permittee must submit a report to the Agency if the annual summed (actual plus potential, if applicable) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain: a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The annual emissions (actual plus potential, if any part of the project was analyzed using potential emissions) for each pollutant for which the preconstruction projection and significant emissions increase are exceeded. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 001 Wood Milling Equipment 1**Associated Items:** CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 029 Centrifugal Collector - Medium Efficiency

CE 030 Centrifugal Collector - Medium Efficiency

CE 031 Centrifugal Collector - Medium Efficiency

EU 057 Grinder

EU 058 Multi-Rip

EU 059 Band Re-Saw

EU 060 Saw Cutoff

EU 062 Saw Cutoff

EU 063 Saw Cutoff

EU 064 Saw Cutoff

EU 068 Saw Cutoff

EU 069 Saw Cutoff

EU 070 Cutback Saw

EU 071 Hog-Mini

EU 072 Saw Cutoff

EU 073 Moulder

EU 076 Saw Cutoff

EU 077 Saw Scan

EU 078 Rerip Saw

EU 079 Chop Saw Chop

EU 114 Saw Table

EU 347 Saw Rip

EU 348 Saw Thin Cut

EU 358 Cleaner

EU 372 Saw Cutoff

EU 378 Saw Cutoff

EU 383 Saw Radial Arm

SV 001 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 002 Wood Milling Equipment 2**Associated Items:** CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 032 Centrifugal Collector - Medium Efficiency

CE 033 Centrifugal Collector - Medium Efficiency

CE 034 Centrifugal Collector - Medium Efficiency

CE 035 Centrifugal Collector - Medium Efficiency

CE 036 Centrifugal Collector - Medium Efficiency

CE 037 Centrifugal Collector - Medium Efficiency

CE 038 Centrifugal Collector - Medium Efficiency

CE 039 Centrifugal Collector - Medium Efficiency

EU 081 Moulder

EU 082 Moulder

EU 083 Moulder

EU 084 Moulder

EU 085 Moulder

EU 087 Moulder

EU 088 Moulder

EU 089 Moulder

EU 090 Moulder

EU 092 D/E Tenoner

EU 093 Sander Belt

EU 094 Band Re-Saw

EU 095 Moulder

EU 131 D/E Tenoner

SV 002 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 003 Wood Milling Equipment 3**Associated Items:** CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 040 Centrifugal Collector - Medium Efficiency

CE 041 Centrifugal Collector - Medium Efficiency

CE 042 Centrifugal Collector - Medium Efficiency

EU 080 Chop Saw

EU 091 D/E Tenoner

EU 098 Saw Cutoff

EU 099 D/E Tenoner

EU 100 D/E Tenoner

EU 101 D/E Tenoner

EU 103 D/E Tenoner

EU 104 Drilling Machine

EU 105 Drilling Machine

EU 106 Shaper

EU 107 Linear Cutoff Saw

EU 108 Saw Radial Arm

EU 109 Saw Radial Arm

EU 110 Linear Cutoff Saw

EU 111 Saw Radial Arm

EU 113 Saw Radial Arm

EU 115 D/E Tenoner

EU 116 D/E Tenoner

EU 117 D/E Tenoner

EU 119 Band Saw

EU 120 D/E Tenoner

EU 370 Saw Cutoff

EU 377 Chop Saw

SV 003 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 004 Wood Milling Equipment 4**Associated Items:** CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 023 Centrifugal Collector - Low Efficiency

CE 024 Centrifugal Collector - Medium Efficiency

CE 025 Centrifugal Collector - Medium Efficiency

EU 121 Saw Cutoff

EU 122 Saw Cutoff

EU 123 Saw Cutoff

EU 124 Finger Jointer

EU 125 Finger Jointer

EU 126 Finger Jointer

SV 004 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-11**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 005 Wood Milling Equipment 5**Associated Items:** CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 026 Centrifugal Collector - Medium Efficiency

CE 027 Centrifugal Collector - Medium Efficiency

CE 028 Centrifugal Collector - Medium Efficiency

EU 127 Moulder

EU 128 Moulder

EU 129 Moulder

EU 130 D/E Tenoner

EU 132 D/E Tenoner

EU 319 D/E Tenoner

SV 005 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 006 Wood Milling Equipment 6**Associated Items:** CE 019 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 096 Saw

EU 112 Saw Cutoff

EU 133 Single End

EU 134 Single End

EU 135 Saw Radial Arm

EU 136 Saw Radial Arm

EU 137 Saw Radial Arm

EU 138 Saw Cutoff

EU 139 Linear Cutoff Saw

EU 140 Saw

EU 141 Saw

EU 142 Single End

EU 143 CNC Router

EU 144 Saw

EU 145 Saw

EU 146 Router

EU 147 Single End

EU 148 Chop Saw

EU 149 Chop Saw

EU 150 Chop Saw

EU 319 D/E Tenoner

EU 329 Saw Chop

EU 332 Saw Radial Arm

EU 333 Saw Rerip

EU 351 Router

EU 376 Table Down Draft

SV 006 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 009 Wood Milling Equipment 9**Associated Items:** CE 020 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 151 Single End

EU 152 Single End

EU 153 Shaper

EU 154 Shaper

EU 155 Single End

EU 156 Planer

EU 157 Sander Belt

EU 158 Chop Saw

EU 159 Single End

EU 160 Chop Saw

EU 161 Moulder

EU 162 Moulder

EU 163 D/E Tenoner

EU 164 Router (CNC)

EU 165 Single End

EU 166 Single End

EU 168 Shaper

EU 169 Shaper

EU 170 Single End

EU 171 Shaper

EU 172 Saw Rip

EU 173 Saw

EU 174 Sander Belt

EU 175 Saw

EU 176 Router

EU 177 Saw

EU 178 Lockrouter/Single Dr

EU 179 Saw Radial Arm

EU 180 Saw Radial Arm

EU 182 Saw Radial Arm

EU 183 Saw Radial Arm

EU 184 Saw Radial Arm

EU 185 Saw Radial Arm

EU 186 Saw Radial Arm

EU 187 Saw Radial Arm

EU 188 Saw Radial Arm

EU 189 Saw Radial Arm

EU 190 Band Saw

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 191 Band Saw
- EU 192 Band Saw
- EU 193 Band Saw
- EU 194 Band Saw
- EU 195 Band Saw
- EU 196 Saw Table
- EU 197 Saw Table
- EU 198 Saw Table
- EU 200 Saw Table
- EU 201 Saw Table
- EU 202 Saw Table
- EU 203 Saw Table
- EU 204 Saw Table
- EU 205 Saw Table
- EU 206 Single End
- EU 208 Saw
- EU 209 Shaper
- EU 210 Shaper
- EU 211 Shaper
- EU 212 Shaper
- EU 213 Shaper
- EU 214 Shaper
- EU 215 Shaper
- EU 216 Shaper
- EU 217 Shaper
- EU 218 Shaper
- EU 219 Shaper
- EU 220 Shaper
- EU 221 Shaper
- EU 222 Shaper
- EU 223 Shaper
- EU 224 Shaper
- EU 225 Shaper
- EU 226 Shaper
- EU 227 Shaper
- EU 228 Shaper
- EU 229 Shaper
- EU 230 Shaper
- EU 231 Shaper
- EU 232 Shaper

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 233 Shaper
- EU 234 Shaper
- EU 235 Router
- EU 236 Shaper
- EU 237 Shaper
- EU 238 Planer
- EU 239 Planer
- EU 241 Sander Belt
- EU 242 Sander Belt
- EU 243 Sander Belt
- EU 244 Sander Belt
- EU 245 Sander Belt
- EU 246 Sander Disc
- EU 247 Sander Disc
- EU 248 Sander Disc
- EU 249 Sander Disc
- EU 250 Sander Disc
- EU 251 Sander Disc
- EU 252 Sander Disc
- EU 253 Sander Disc
- EU 254 Sander Disc
- EU 255 Sander Disc
- EU 256 Sander Disc
- EU 257 Chop Saw
- EU 258 Shaper
- EU 259 Router Table
- EU 260 Router Table
- EU 261 Router
- EU 262 Router
- EU 263 Saw Radial Arm
- EU 264 Shaper
- EU 265 Saw Shaper
- EU 267 Saw Woodbead
- EU 268 Saw Radial Arm
- EU 269 Coper
- EU 270 Band Saw
- EU 271 Planer
- EU 272 Sander Vertical
- EU 273 Saw Radial Arm
- EU 274 Single End

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 275 Single End
- EU 276 Saw Table
- EU 277 Band Saw
- EU 278 Sander Belt
- EU 279 Mortiser
- EU 280 Sander Disc
- EU 281 Chop Saw
- EU 282 Chop Saw
- EU 283 Chop Saw
- EU 284 Chop Saw
- EU 285 Chop Saw
- EU 286 Chop Saw
- EU 287 Saw Radial Arm
- EU 288 Chop Saw
- EU 289 Router
- EU 290 Router
- EU 291 Chop Saw
- EU 292 Chop Saw
- EU 293 Shaper
- EU 294 Chop Saw
- EU 295 Chop Saw
- EU 296 Chop Saw
- EU 297 Router
- EU 298 Chop Saw
- EU 299 Router
- EU 300 Router
- EU 301 Router
- EU 302 Router
- EU 303 Router
- EU 304 Router
- EU 305 Router
- EU 306 Chop Saw
- EU 307 Chop Saw
- EU 308 Chop Saw
- EU 309 Chop Saw
- EU 310 Router Table
- EU 311 Chop Saw
- EU 312 Chop Saw
- EU 313 Sander Drum
- EU 324 Slotter

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 325 Sander Disc
- EU 326 Saw Band
- EU 327 Router
- EU 328 Shaper
- EU 331 Router
- EU 334 Sander Disc
- EU 335 Router Table
- EU 336 Shaper
- EU 337 Router
- EU 338 Saw Radial Arm
- EU 339 Planer
- EU 340 Saw Band
- EU 341 Slotter
- EU 342 Router
- EU 343 Shaper
- EU 344 Table Work
- EU 345 Shaper
- EU 346 Saw Chop
- EU 349 Router
- EU 352 Saw Miter
- EU 353 Saw Chop
- EU 354 Sander Belt
- EU 355 Saw Shop
- EU 356 Saw Radial Arm
- EU 357 Router
- EU 359 Router
- EU 360 Sander
- EU 361 Router
- EU 362 Planer
- EU 363 Saw Miter
- EU 364 Saw Miter
- EU 365 Saw Miter
- EU 366 Saw Miter
- EU 367 Saw Miter
- EU 368 Saw Miter
- EU 369 Sander Belt
- EU 373 Sander
- EU 379 Table Saw
- EU 380 Single End
- EU 381 Sander

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items: EU 384 Single End

SV 009 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-20**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 011 Wood Milling Equipment 11**Associated Items:** CE 021 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 314 Tub Grinder 1

EU 315 Tub Grinder 2

EU 316 Vortex Grinder

SV 011 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-21

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 012 Boilers 5 & 6**Associated Items:** CE 017 Electrostatic Precipitator - High Efficiency

CE 043 Centrifugal Collector - Medium Efficiency

CE 044 Centrifugal Collector - Medium Efficiency

EU 014 Boiler 5 Wood Fired

EU 015 Boiler 6 Wood Fired

SV 027 Boiler 5 & 6 Exhaust

SV 028 Boiler 5 & 6 Exhaust Bypass

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.1 lbs/million Btu heat input using 3-hour Average (emissions).	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000 [most stringent, meets the limits set by Minn. R. 7011.0515, subp. 1]
Particulate Matter < 10 micron: less than or equal to 0.1 lbs/million Btu heat input using 3-hour Average (emissions).	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
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. 7011.0515, subp. 2
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: Total Particulate Matter: greater than or equal to 76 percent control efficiency	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter<10 micron: Particulate Matter < 10 micron: greater than or equal to 73.5 percent control efficiency	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, Minn. R. 7007.0800, subp. 2 and 14
Visible Emissions: The Permittee shall check the stacks for any visible emissions once each day of operation during daylight hours.	Minn. R. 7007.0800, subp. 2
Number of Fields Online: greater than or equal to 2 fields online for CE017, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Minn. R. 7007.0800, subp. 2 and 14
OPERATIONAL REQUIREMENTS	hdr
Allowed Fuels: The Permittee shall burn only wood, as defined in Minn. R. 7011.1201, subp. 48, in GP012.	Minn. R. 7007.0800, subp. 2
The Permittee shall operate and maintain CE017, CE043 and CE044 in accordance with the Operation and Maintenance (O&M) Plan. The Permittee shall keep copies of the O&M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
The Permittee shall operate and maintain the centrifugal collectors and electrostatic precipitator at all times that any emission unit controlled by the equipment is in operation.	Minn. R. 7007.0800, subp. 2 and 14
MONITORING REQUIREMENTS	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording the number of field online as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored electrostatic precipitator is in operation.	Minn. R. 7007.0800, subp. 4
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
PERFORMANCE TESTING	hdr
Performance Test: due before 60 months following permit issuance to measure PM and PM10 emissions from GP012.	Title I Condition: Performance testing for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
RECORDKEEPING	hdr
By the 15th of each month, the Permittee shall record and maintain the quantity of fuel used at GP012 for the previous month calculated from boiler water use. Permittee shall only burn wood and woodwaste.	Minn. R. 7007.0800, subp. 4 and 5

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Recordkeeping of Visible Emissions. The Permittee shall record the time and date of each visible emission inspection and whether or not any visible emissions were observed.	Minn. R. 7007.0800, subp. 2 and 14
Recordkeeping of Number of Fields Online: The Permittee shall record the time and date of each number of fields online reading and whether or not the recorded number was equal to or greater than the minimum value specified in this permit.	Minn. R. 7007.0800, subp. 4 and 5
Corrective Actions: If the electrostatic precipitator or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for the electrostatic precipitator.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: If the centrifugal collectors or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for each centrifugal collector.	Minn. R. 7007.0800, subp. 4, 5 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-23**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 013 Primer Ovens**Associated Items:** EU 042 Wood Bead Primer#1/Munt Primers Oven

EU 046 P2 Prime Line 2 Oven

EU 048 3 Stage Fan Coater Oven

EU 322 P2 Prime Line 3 Oven

SV 019 Paint Emissions

SV 021 Paint Emissions

SV 022 Paint Emissions

SV 044 Paint Emissions

What to do	Why to do it
LIMITS	hdr
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-24**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 014 Diesel Engines I

Associated Items: EU 016 Diesel Generator - South Bldg
 EU 017 Diesel Generator - South Bldg
 EU 018 Diesel Generator - Bldg 3A
 EU 019 Diesel Generator - Bldg 6
 EU 020 Diesel Generator - Boiler House
 EU 021 Diesel Generator - Boiler House
 EU 022 Diesel Generator - Boiler House
 EU 023 Diesel Generator - COB Bldg
 SV 029 Diesel Generator Exhaust
 SV 030 Diesel Generator Exhaust
 SV 031 Diesel Generator Exhaust
 SV 032 Diesel Generator Exhaust
 SV 033 Diesel Generator Exhaust
 SV 034 Diesel Generator Exhaust
 SV 035 Diesel Generator Exhaust
 SV 036 Diesel Generator Exhaust
 SV 037 Diesel Generator Exhaust

What to do	Why to do it
The following requirements of this group apply to each item listed under the group.	Minn. R. 7007.0800, subp. 2
LIMITS	hdr
Fuel Type: Diesel fuel only by design.	Minn. R. 7005.0100, subp. 35a
Operating Hours: less than or equal to 600 hours/year using 12-month Rolling Sum to be calculated monthly by the 15th day of the month for the previous 12 months.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (the potential to emit calculations are based on 0.2 lbs/million BTU heat input)	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
MONITORING	hdr
Hours of Operating Monitoring: The Permittee shall maintain and operate an hours meter on the generator and shall record the hours of operation on the first day of each calendar month for the previous calendar month.	Minn. R. 7007.0800, subp. 4 and 5
RECORDKEEPING	hdr
Monthly Hours of Operation Calculation: By the 15th day of the month, the Permittee shall calculate and record the 12-month Rolling Sum hours of operation for the previous 12-month period by summing the monthly hours data for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 015 Diesel Engines II**Associated Items:** EU 024 Diesel Generator - North Bldg

EU 025 Diesel Generator - North Bldg

SV 038 Diesel Generator Exhaust

SV 039 Diesel Generator Exhaust

What to do	Why to do it
The following requirements of this group apply to each item listed under the group.	Minn. R. 7007.0800, subp. 2
LIMITS	hdr
Fuel Type: Diesel fuel only by design.	Minn. R. 7005.0100, subp. 35a
Operating Hours: less than or equal to 600 hours/year using 12-month Rolling Sum to be calculated monthly by the 15th day of the month for the previous 12 months.	Title I Condition: to avoid classification as a major modification under 40 CFR Section 52.21
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (the potential to emit calculations are based on 0.2 lbs/million BTU heat input)	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
MONITORING	hdr
Hours of Operating Monitoring: The Permittee shall maintain and operate an hours meter on the generator and shall record the hours of operation on the first day of each calendar month for the previous calendar month.	Minn. R. 7007.0800, subp. 4 and 5
RECORDKEEPING	hdr
Monthly Hours of Operation Calculation: By the 15th day of the month, the Permittee shall calculate and record the 12-month Rolling Sum hours of operation for the previous 12-month period by summing the monthly hours data for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-26**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 016 Diesel Engines III**Associated Items:** EU 026 Diesel Generator - Bldg 2

EU 027 Diesel Generator - Bldg 7

EU 031 Fire Pump Engine

SV 040 Diesel Generator Exhaust

SV 041 Diesel Generator Exhaust

SV 042 Fire Pump Engine Exhaust

What to do	Why to do it
The following requirements of this group apply to each item listed under the group.	Minn. R. 7007.0800, subp. 2
LIMITS	hdr
Fuel Type: Diesel fuel only by design.	Minn. R. 7005.0100, subp. 35a
Operating Hours: less than or equal to 600 hours/year using 12-month Rolling Sum to be calculated monthly by the 15th day of the month for the previous 12 months.	Minn. R. 7007.0800, subp. 2
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (the potential to emit calculations are based on 0.2 lbs/million BTU heat input)	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
MONITORING	hdr
Hours of Operating Monitoring: The Permittee shall maintain and operate an hours meter on the generator and shall record the hours of operation on the first day of each calendar month for the previous calendar month.	Minn. R. 7007.0800, subp. 4 and 5
RECORDKEEPING	hdr
Monthly Hours of Operation Calculation: By the 15th day of the month, the Permittee shall calculate and record the 12-month Rolling Sum hours of operation for the previous 12-month period by summing the monthly hours data for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 017 Wood Treatment Usage Limits 1**Associated Items:** EU 035 KD Dip System

EU 037 Departmental Dip Containers

SV 007 Wood Treat System(s) Emissions

SV 008 Wood Treat System(s) Emissions

SV 015 Bypass for KD Dip System

SV 045 General Ventilator assigned to Dept Dip, Hand Priming & Misc VOC, since these don't have specific stacks

What to do	Why to do it
LIMITS	hdr
Usage of wood preservative mixture for EU035 and EU037 shall be less than or equal to 182 tons VOC/year using 365-day Rolling Sum following the calculation procedures specified in Appendix I.	Title I Condition: Limit to avoid major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING	hdr
Daily Calculations - Wood Preservative Usage. By the end of each calendar day, the Permittee shall calculate and record the wood preservative usage 365-day Rolling Sum by summing the daily wood preservative usage data for the previous 365 days. The 365-day rolling sum shall be expressed in tons of VOC.	Title I Condition: Monitoring for limit to avoid major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
CONTROL EQUIPMENT - see also CE 011	hdr
The activated carbon adsorption (CE 011) shall be operated at all times when EU 035 is in operation (this requirement does not apply to EU 037). See CE 011 for activated carbon adsorption requirements.	Title I Condition: Limit to avoid major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-28**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 018 Wood Treatment Usage Limits 2**Associated Items:** EU 036 Dip Dry System

EU 039 Round Tops Dip System

SV 007 Wood Treat System(s) Emissions

SV 008 Wood Treat System(s) Emissions

SV 012 Bypass for Dip Dry System

SV 013 Round Tops Bypass

SV 014 Round Tops Bypass

What to do	Why to do it
LIMITS	hdr
Usage of wood preservative mixture for EU036 and EU039 shall be less than or equal to 687 tons VOC/year using 365-day Rolling Sum following the calculation procedures specified in Appendix I.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING	hdr
Daily Calculations - Wood Preservative Usage. By the end of each calendar day, the Permittee shall calculate and record the wood preservative usage 365-day Rolling Sum by summing the daily wood preservative usage data for the previous 365 days. The 365-day rolling sum shall be expressed in tons of VOC.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
CONTROL EQUIPMENT - see also CE 011	hdr
The activated carbon adsorption (CE 011) shall be operated at all times when the emission unit is in operation. See CE 011 for activated carbon adsorption requirements.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 019 Wood Treatment VOC Limits

Associated Items: CE 011 Activated Carbon Adsorption
EU 036 Dip Dry System
EU 039 Round Tops Dip System
SV 007 Wood Treat System(s) Emissions
SV 008 Wood Treat System(s) Emissions
SV 012 Bypass for Dip Dry System
SV 013 Round Tops Bypass
SV 014 Round Tops Bypass

What to do	Why to do it
LIMITS	dr
Volatile Organic Compounds: less than 19.6 lbs/hour using 3-hour Average This limit applies to captured and controlled emissions from EU036 and EU039.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
CONTROL EQUIPMENT - see also CE 011	hdr
The activated carbon adsorption (CE 011) shall be operated at all times when the emission unit is in operation. See CE 011 for activated carbon adsorption requirements.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 020 Performance Testing Requirements for Baghouse Emission Points**Associated Items:** SV 001 Wood Milling Emissions

SV 002 Wood Milling Emissions

SV 003 Wood Milling Emissions

SV 004 Wood Milling Emissions

SV 005 Wood Milling Emissions

SV 006 Wood Milling Emissions

SV 009 Wood Milling Emissions

SV 011 Wood Milling Emissions

SV 046 Wood Milling Emissions

What to do	Why to do it
PERFORMANCE TESTING	hdr
The permittee is to annually test a control device from this group for one of the baghouse stack vent (SV) emission points listed as an associated item under this group (GP 020). MPCA stack test staff will review and assess which emission point is to be tested for each round of testing. See Group 022 and the associated CE for additional requirements.	Minn. R. 7007.0800, subp. 2
Initial Performance Test: due 270 days after permit issuance , to measure emissions of the control device being tested compared to the associated PM emission limit and to measure the Air Flow Rate (acfm - Exhaust Flow Capacity) at the baghouse outlet to be compared to the permitted Air Flow Rate (acfm - Exhaust Flow Capacity) of the baghouse.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test, to measure emissions of the control device being tested compared to the associated PM emission limit and to measure the Air Flow Rate (acfm - Exhaust Flow Capacity) at the baghouse outlet to be compared to the permitted Air Flow Rate (acfm - Exhaust Flow Capacity) of the baghouse.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 270 days after permit issuance , to measure emissions of the control device being tested compared to the associated PM-10 emission limit and to measure the Air Flow Rate (acfm - Exhaust Flow Capacity) at the baghouse outlet to be compared to the permitted Air Flow Rate (acfm - Exhaust Flow Capacity) of the baghouse.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test, to measure emissions of the control device being tested compared to the associated PM-10 emission limit and to measure the Air Flow Rate (acfm - Exhaust Flow Capacity) at the baghouse outlet to be compared to the permitted Air Flow Rate (acfm - Exhaust Flow Capacity) of the baghouse.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 021 Wood Milling Equipment 12**Associated Items:** CE 059 Centrifugal Collector - Medium Efficiency

CE 060 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 374 D/E Tenoner

EU 375 Moulder

SV 046 Wood Milling Emissions

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see also GP 022	hdr
The Permittee shall vent emissions from all units listed under this Group to control equipment meeting the requirements of GP 022 as specified in this permit. Equipment included in this Group are the Associated Items listed above as well as the equipment identified through the Recordkeeping of Equipment Changes requirement (see GP 022, Recordkeeping of Equipment Changes: ...).	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure the Air Flow Rate (acfm) at the baghouse to be compared to the permitted Air Flow Rate (acfm) of the baghouse. The facility may use in-house methods to complete this requirement.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: GP 022 Control Equipment: Fabric Filters**Associated Items:** CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 019 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 020 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 021 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 060 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The following requirements of this group apply to each item listed under the group.	Minn. R. 7007.0800, subp. 2
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.002 grains/dry standard cubic foot using 3-hour Average .	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, and limit to avoid classification as a major modification under 40 CFR Section 52.21 [most stringent meets the limits set by Minn. R. 7011.0715, subp. 1(A)]
Particulate Matter < 10 micron: less than or equal to 0.002 grains/dry standard cubic foot using 3-hour Average .	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, and limit to avoid classification as a major modification under 40 CFR Section 52.21
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)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency greater for Particulate Matter < 10 micron: greater than or equal to 99 percent	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Pressure Drop: greater than or equal to 0.05 inches of water column and less than or equal to 10 inches of water column when operating emission units controlled by CE001. The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
OPERATIONAL REQUIREMENTS	hdr
Operation of the control equipment is federally enforceable for replaced, new and/or modified wood milling equipment and may be considered when determining permitting applicability for such changes.	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Permittee shall maintain written or electronic records of blower capacity.	Minn. R. 7007.0800, subp. 5
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
MONITORING	hdr
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
RECORDKEEPING	hdr

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

<p>Recordkeeping of Equipment Changes: The Permittee shall keep and maintain a list of equipment vented to each baghouse and the airflows for each piece of equipment and the air flow capacity of each blower. The record shall show that the total airflow capacity of the blowers connected to a baghouse system are less than the limits given in Table A of this permit, listed at CE 001, CE 003, CE 005, CE007, CE 009, CE 019, CE 020, CE 021 and CE 060.</p> <p>This list shall be updated each time a change is made. The record shall include the date the change was made, a brief description of the equipment, the airflow for each piece of equipment, the CE (control equipment) number of the baghouse where the unit will be vented, the airflow capacity of each blower, the total air flow capacity of the blowers connected to each baghouse and any other information required on MPCA form GI-05B.</p>	<p>Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000</p>
<p>Permittee shall maintain written or electronic records of baghouse maintenance and any corrective actions taken as a result of maintenance.</p>	<p>Minn. R. 7007.0800, subp. 5</p>
<p>Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.</p>	<p>Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none">- the recorded pressure drop is outside the required operating range; or- the fabric filter or any of its components are found during the inspections to need repair. <p>Corrective actions shall return the pressure drop to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for each filter.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: SV 018 Paint Emissions

Associated Items: EU 010 Magna Spray Booth

What to do	Why to do it
PERFORMANCE TESTING (See EU 010 for emission limits)	hdr
Initial Performance Test: due 270 days after permit issuance , to measure PM emissions.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 270 days after permit issuance , to measure PM-10 emissions.	Minn. R. 7017.2020, subp. 1

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 010 Magna Spray Booth**Associated Items:** CE 012 Other

CE 050 Other

SV 018 Paint Emissions

What to do	Why to do it
LIMITS	hdr
Volatile Organic Compounds: less than or equal to 30 tons/year using 365-day Rolling Sum (usage).	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Volatile Organic Compounds: less than or equal to 35.4 lbs/hour using 3-hour Average (usage).	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Total Particulate Matter: less than or equal to 0.18 lbs/hour using 3-hour Average (emissions)	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.18 lbs/hour using 3-hour Average (emissions)	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
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)
B. MONITORING	hdr
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written or electronic record of filter inspections.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000, Minn. R. 7007.0800, subp. 5
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 97.75 percent	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 97.75 percent	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is in operation.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000 and Minn. R. 7007.0800, subp. 14
BACT Work Practice Requirements: The following work practices and standards shall be implemented and/or maintained by the Permittee in order to minimize VOC emissions to the atmosphere: 1. A high-solids coating shall be utilized (less than or equal to 7.4 lb VOC/lb solids, as applied) 2. Standardized spray tips, application patterns, and fluid and air pressures will be maintained for proper spraying operations. 3. Ongoing training of and feedback from employees will be maintained regarding paint usage rate to ensure proper mil thickness and transfer efficiencies. 4. Ongoing efforts will be made to implement VOC reducing product substitutions.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
RECORDKEEPING	hdr
Daily Recordkeeping and Calculations: On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of all VOC used at EU010. This shall be based on usage logs.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Coating Content Records: The Permittee shall record and maintain the following for each coating applied at EU 010: 1). The VOC content, as lb VOC/gal of coating and lb VOC/lb solids, as applied. 2). The solids content, as lb solids/gal of coating, as applied.	Minn. R. 7007.0800, subp. 4 and 5

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Material Content: VOC, HAPs, and Solids (PM and PM<10 microns) contents in materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns. Other alternative methods approved by the MPCA may be used to determine the VOC, HAPs, and solids contents. The Commissioner reserves the right to require the Permittee to determine the VOC, HAP, and solids contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.	Minn. R. 7007.0800, subp. 4 and 5
Daily VOC Calculations: By the end of each calendar day, the Permittee shall calculate and record the following: 1. The total usage of VOC containing materials for EU010, in tons, for the previous calendar day using the daily usage records. This record shall also include the VOC and solids contents of each material as determined by the Material Content requirement of this permit. 2. The 365-day Rolling Sum VOC usage, in tons, for the previous 365-day period by summing the daily VOC usage data for the previous 365 days.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5 and 14
PERFORMANCE TESTING (See SV 018)	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-37**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 012 Boiler 3**Associated Items:** CE 014 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

SV 025 Boiler 3 Exhaust

What to do	Why to do it
LIMITS	hdr
Allowed Fuels: The Permittee shall burn only wood, as defined in Minn. R. 7011.1201, subp. 48, in this boiler.	Minn. R. 7007.0800, subp. 2
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input .	Minn. R. 7011.0515, 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. 7011.0515, subp. 2
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 4.1 percent control efficiency	Minn. R. 7007.0800, subp. 2 and 14
Visible Emissions: The Permittee shall check the stacks for any visible emissions once each day of operation during daylight hours.	Minn. R. 7007.0800, subp. 2
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall operate and maintain CE014 in accordance with the Operation and Maintenance (O&M) Plan. The Permittee shall keep copies of the O&M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
The Permittee shall vent emissions from EU 012 to CE 014 any time that EU 012 is in operation.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
PERFORMANCE TESTING	hdr
Performance Test: due before 36 months following permit issuance to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
MONITORING AND RECORDKEEPING	hdr
Recordkeeping of Visible Emissions. The Permittee shall record the time and date of each visible emission inspection and whether or not any visible emissions were observed.	Minn. R. 7007.0800, subp. 2 and 14
By the 15th of each month, the Permittee shall record and maintain the quantity of fuel used at EU012 for the previous month calculated from boiler water use. Permittee shall only burn wood and woodwaste.	Minn. R. 7007.0800, subp. 4 and 5
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the cyclone or any of its components are found during the inspections to need repair. Corrective actions shall return the operation to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the cyclone. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5 and 14
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of the control equipment and associated connections with respect to any condition that may affect the control equipments performance. The Permittee shall maintain a daily written or electronic record of inspections.	Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: At least once per calendar year, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: If any of the control equipment components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5 and 14

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 013 Boiler 4**Associated Items:** CE 015 Flue Gas Recirculation

SV 026 Boiler 4 Exhaust

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input (potential to emit calculations are based on 0.00724 lbs/million BTU heat input).	Minn. R. 7011.0515, 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. 7011.0515, subp. 2
OPERATIONAL LIMITS	hdr
Fuel Type: natural gas or propane only, by design.	Minn. R. 7007.0800, subp. 2
RECORDKEEPING	hdr
By the 15th day of each month, the Permittee shall record the quantity of fuel used at EU013 for the previous calendar month.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: EU 014 Boiler 5 Wood Fired

Associated Items: CE 017 Electrostatic Precipitator - High Efficiency
CE 043 Centrifugal Collector - Medium Efficiency
GP 012 Boilers 5 & 6
SV 027 Boiler 5 & 6 Exhaust
SV 028 Boiler 5 & 6 Exhaust Bypass

What to do	Why to do it
OPERATIONAL LIMITS	hdr
The Permittee shall vent emissions from EU014 to CE043 and CE017, operated in series, any time that EU014 is in operation.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: EU 015 Boiler 6 Wood Fired

Associated Items: CE 017 Electrostatic Precipitator - High Efficiency
CE 044 Centrifugal Collector - Medium Efficiency
GP 012 Boilers 5 & 6
SV 027 Boiler 5 & 6 Exhaust
SV 028 Boiler 5 & 6 Exhaust Bypass

What to do	Why to do it
OPERATIONAL LIMITS	hdr
The Permittee shall vent emissions from EU015 to CE044 and CE017, operated in series, any time that EU015 is in operation.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-41**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 035 KD Dip System

Associated Items: CE 011 Activated Carbon Adsorption
GP 017 Wood Treatment Usage Limits 1
SV 007 Wood Treat System(s) Emissions
SV 008 Wood Treat System(s) Emissions
SV 015 Bypass for KD Dip System

What to do	Why to do it
OPERATIONAL LIMITS	hdr
Work Practice Requirements: The following work practices and standards shall be implemented and/or maintained by the Permittee at EU035 in order to minimize VOC emissions to the atmosphere: 1. The carbon adsorption system will be maintained and utilized at all times while the emission units are operating.	Title I Condition: Limit to avoid major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
CONTROL EQUIPMENT - see also CE 011	hdr
The Permittee shall vent the emissions from EU035 to CE011 (activated carbon adsorption) at all times when the emission unit is in operation. See CE 011 for activated carbon adsorption requirements.	Title I Condition: Limit to avoid major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14

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

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 036 Dip Dry System

Associated Items: CE 011 Activated Carbon Adsorption
GP 018 Wood Treatment Usage Limits 2
GP 019 Wood Treatment VOC Limits
SV 007 Wood Treat System(s) Emissions
SV 008 Wood Treat System(s) Emissions
SV 012 Bypass for Dip Dry System

What to do	Why to do it
OPERATIONAL LIMITS	hdr
Work Practice Requirements: The following work practices and standards shall be implemented and/or maintained by the Permittee at EU036 in order to minimize VOC emissions to the atmosphere: 1. Wood to be dipped will be stacked with spacers to facilitate drainage and improve drying to the extent that product damage does not occur. 2. Dipped loads will be tilted for drainage after being dipped. 3. Recirculating fans in the drying ovens will be used to enhance evaporation. 4. The carbon adsorption system will be maintained and utilized at all times while the emission units are operating.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
CONTROL EQUIPMENT - see also CE 011	hdr
The Permittee shall vent the emissions from EU036 to CE011 (activated carbon adsorption) at all times when the emission unit is in operation. See CE 011 for activated carbon adsorption requirements.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-43**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 039 Round Tops Dip System

Associated Items: CE 011 Activated Carbon Adsorption
GP 018 Wood Treatment Usage Limits 2
GP 019 Wood Treatment VOC Limits
SV 007 Wood Treat System(s) Emissions
SV 008 Wood Treat System(s) Emissions
SV 013 Round Tops Bypass
SV 014 Round Tops Bypass

What to do	Why to do it
OPERATIONAL LIMITS	hdr
Work Practice Requirements: The following work practices and standards shall be implemented and/or maintained by the Permittee at EU039 in order to minimize VOC emissions to the atmosphere: 1. Air knives will be used on the system to remove excess surface solvent from the individual components. 2. The carbon adsorption system will be maintained and utilized at all times while the emission units are operating.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
CONTROL EQUIPMENT - see also CE 011	hdr
The Permittee shall vent the emissions from EU039 to CE011 (activated carbon adsorption) at all times when the emission unit is in operation. See CE 011 for activated carbon adsorption requirements.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-44**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 040 Wood Bead Primer#1**Associated Items:** SV 019 Paint Emissions

What to do	Why to do it
LIMITS	hdr
Volatile Organic Compounds: less than or equal to 38 tons/year using 365-day Rolling Sum (usage).	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
BACT Work Practice Requirements: The Permittee shall use water-based coatings to minimize VOC emissions rates. Water-based coating is defined as those coatings having Volatile Organic Compounds: less than or equal to 0.746 lbs/gallon	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING	hdr
Daily Recordkeeping and Calculations. On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of all VOC used at EU040. This shall be based on usage logs.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21, and Minn. R. 7007.3000
RECORDKEEPING	hdr
Daily VOC Usage Calculations: By the end of each calendar day, the Permittee shall calculate and record the following: 1.) The total usage of VOC containing materials for EU040, in tons, for the previous calendar day using the daily usage records. This record shall also include the VOC and solids contents of each material as determined by the Material Content requirement of this permit. 2.) The 365-day rolling sum VOC usage, in tons, for the previous 365-day period by summing the daily VOC usage data for the previous 365-days.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Coating Content Records: The Permittee shall record and maintain the following for each coating applied at EU040: 1.) The VOC content, as lb VOC/gal of coating and lb VOC/lb solids, as applied. 2.) The solids content, as lb solids/gal of coating, as applied.	Minn. R. 7007.0800, subp. 4 and 5
Material Content: VOC, HAPs, and Solids (PM and PM10) contents in materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM10. Other alternative methods approved by the MPCA may be used to determine the VOC, HAPs, and solids contents. The Commissioner reserves the right to require the Permittee to determine the VOC, HAP, and solids contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-45**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 045 P2 Prime Line 2**Associated Items:** CE 047 Other

CE 055 Other

SV 020 Paint Emissions

What to do	Why to do it
LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 1.91 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. Solids contents for each material shall be determined as described under the Material Content requirement. The calculation of solids used may take into account recovered/recycled solids as described under the Waste Credit requirement.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
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)
OPERATIONAL REQUIREMENTS	hdr
Permittee shall maintain total enclosure and operate and maintain the control equipment so that it achieves an overall control efficiency Particulate Matter < 10 micron: greater than or equal to 95 percent control efficiency	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 95 percent control efficiency	Minn. R. 7007.0800, subp. 2 and 14
Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is in operation.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, Minn. R. 7007.0800, subp. 14
MONITORING	hdr
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written or electronic record of filter inspections.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, sub 4, 5 and 14
RECORDKEEPING	hdr
Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other solids containing materials used at this emissions unit. This shall be based on written or electronic usage logs, flowmeters and/or delivery records.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Monthly Recordkeeping - PM10 Emissions. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids containing material for the previous calendar month using the daily usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. 2) The PM10 emissions for the previous month using the formulas specified in this permit. 3) The 12 month rolling sum PM10 emissions for the previous 12 month period by summing the monthly PM10 emissions data for the previous 12 months.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Monthly Calculation -- PM10 Emissions. The Permittee shall calculate PM10 emissions from the spray booths using the following equations: PM10 (tons/month) = S(1-CE)(1-TE) - W S = (A1 x B1) + (A2 x B2) + (A3 x B3) + W = (C1 x D1) + (C2 x D2) + (C3 x D3) +	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-46**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

<p>Monthly PM10 Emissions Calculation Continued:</p> <p>Where: S = total solids used in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.95 for all spray booths; TE = transfer efficiency, as a fraction. This shall be 0.90, unless otherwise approved by the MPCA in writing. A# = amount of each solids containing material sprayed, in tons/month; B# = weight percent solids in A#, as a fraction; W = the amount of solids shipped in waste, in tons/month; C# = amount, in tons/month, of each solids containing waste material shipped. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero; and D# = weight percent of solids in C#, as a fraction.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Material Content: Solids (PM and PM<10 microns) contents shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns. Other alternative methods approved by the MPCA may be used to determine the solids contents. The Commissioner reserves the right to require the Permittee to determine the solids contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Waste Credit: If the Permittee elects to obtain credit for solids shipped in waste materials, the Permittee shall either use item 1 or 2 to determine the solids content for each credited shipment.</p> <ol style="list-style-type: none"> 1) The Permittee shall analyze a composite sample of each waste shipment to determine the weight content of solids, excluding water. 2) The Permittee may use supplier data for raw materials to determine the solids contents of each waste shipment, using the same content data used to determine the content of raw materials. If the waste contains several materials, the content of mixed waste shall be assumed to be the lowest solids content of any of the materials. 	Minn. R. 7007.0800, subp. 4 and 5
<p>Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for each filter.</p>	Minn. R. 7007.0800, sub 4, 5 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-47**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 047 3 Stage Fan Coater**Associated Items:** SV 022 Paint Emissions

What to do	Why to do it
LIMITS	hdr
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)
RECORDKEEPING	hdr
Coating Content Records: The Permittee shall record and maintain the following for each coating applied at EU047: 1. The VOC content, as lb VOC/gal of coating and lb VOC/lb solids, as applied. 2. The solids content, as lb solids/gal of coating, as applied.	Minn. R. 7007.0800, subp. 4 and 5
Material Content: VOC, HAPs, and Solids (PM and PM < 10 microns) contents in materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns. Other alternative methods approved by the MPCA may be used to determine the VOC, HAPs, and solids contents. The Commissioner reserves the right to require the Permittee to determine the VOC, HAP, and solids contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-48**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 049 Overhead Hand Spray Line**Associated Items:** CE 048 Other

CE 056 Other

SV 023 Paint Emissions

What to do	Why to do it
LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 2.72 tons/year using 12-month Rolling Sum	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
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)
OPERATIONAL REQUIREMENTS	hdr
Permittee shall maintain total enclosure and operate and maintain the control equipment so that it achieves an overall control efficiency Particulate Matter < 10 micron: greater than or equal to 95 percent control efficiency	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 95 percent control efficiency	Minn. R. 7007.0800, subp. 2 and 14
Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is in operation.	Title I Condition: 40 CFR Section 52.21 and Minn. R. 7007.3000
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, Minn. R. 7007.0800, subp. 14
MONITORING	hdr
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written or electronic record of filter inspections.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, sub 4, 5 and 14
RECORDKEEPING	hdr
Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other solids containing materials used at this emissions unit. This shall be based on written or electronic usage logs, flowmeters and/or delivery records.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Monthly Recordkeeping - PM10 Emissions. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids containing material for the previous calendar month using the daily usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. 2) The PM10 emissions for the previous month using the formulas specified in this permit. 3) The 12 month rolling sum PM10 emissions for the previous 12 month period by summing the monthly PM10 emissions data for the previous 12 months.	Title I Condition: Monitoring for limit under 40 CFR Section 52.21 and Minn. R. 7007.3000
Monthly Calculation -- PM10 Emissions. The Permittee shall calculate PM10 emissions from the spray booths using the following equations: PM10 (tons/month) = S(1-CE)(1-TE) - W S = (A1 x B1) + (A2 x B2) + (A3 x B3) + W = (C1 x D1) + (C2 x D2) + (C3 x D3) +	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-49**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

<p>Monthly PM10 Emissions Calculation Continued:</p> <p>Where: S = total solids used in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.95 for all spray booths; TE = transfer efficiency, as a fraction. This shall be 0.15, unless otherwise approved by the MPCA in writing. A# = amount of each solids containing material sprayed, in tons/month; B# = weight percent solids in A#, as a fraction; W = the amount of solids shipped in waste, in tons/month; C# = amount, in tons/month, of each solids containing waste material shipped. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero; and D# = weight percent of solids in C#, as a fraction.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Material Content: Solids (PM and PM<10 microns) contents shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns. Other alternative methods approved by the MPCA may be used to determine the solids contents. The Commissioner reserves the right to require the Permittee to determine the solids contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Waste Credit: If the Permittee elects to obtain credit for solids shipped in waste materials, the Permittee shall either use item 1 or 2 to determine the solids content for each credited shipment.</p> <p>1) The Permittee shall analyze a composite sample of each waste shipment to determine the weight content of solids, excluding water.</p> <p>2) The Permittee may use supplier data for raw materials to determine the solids contents of each waste shipment, using the same content data used to determine the content of raw materials. If the waste contains several materials, the content of mixed waste shall be assumed to be the lowest solids content of any of the materials.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for each filter.</p>	Minn. R. 7007.0800, sub 4, 5 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-50**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 321 P2 Prime Line 3**Associated Items:** CE 057 Other

CE 058 Other

SV 043 Paint Emissions

What to do	Why to do it
LIMITS	hdr
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)
OPERATIONAL REQUIREMENTS	hdr
Permittee shall vent emissions from EU321 to CE057 and CE058, operated in series, anytime EU321 is in operation.	Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7011.0715, subp. 1(A)
Permittee shall maintain total enclosure and operate and maintain the control equipment so that it achieves an overall control efficiency Total Particulate Matter: greater than or equal to 92 percent control efficiency	Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7011.0715, subp. 1(A)
Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is in operation.	Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7011.0715, subp. 1(A)
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
MONITORING	hdr
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written or electronic record of filter inspections.	Minn. R. 7007.0800 subp. 4 and 5
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written or electronic record of these inspections.	Minn. R. 7007.0800, sub 4, 5 and 14
RECORDKEEPING	hdr
Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, sub 4, 5 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-51

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 382 Internally Vented & Controlled Systems**Associated Items:** CE 063 Other

SV 048 Internally Vented & Controlled Systems

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
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)
CONTROL EQUIPMENT - see CE 063	hdr
The Permittee shall vent wood milling emissions to control equipment meeting the requirements of CE 063 as specified in this permit.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-52**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: EU 385 Wood Treatment Pilot Plant Prototype**Associated Items:** SV 049 Wood Treatment Test Unit/Pilot Plant Prototype

What to do	Why to do it
LIMITS	hdr
Volatile Organic Compounds: less than or equal to 36.0 tons/year using 365-day Rolling Sum (usage).	Title I Condition: To avoid classification as a modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
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)
MONITORING	hdr
Daily Recordkeeping and Calculations. On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of all VOC used at EU385. This shall be based on usage logs.	Title I Condition: To avoid classification as a modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
RECORDKEEPING	hdr
Daily VOC Usage Calculations: By the end of each calendar day, the Permittee shall calculate and record the following: 1.) The total usage of VOC containing materials for EU385, in tons, for the previous calendar day using the daily usage records. This record shall also include the VOC contents of each material as determined by the Material Content requirement of this permit. 2.) The 365-day rolling sum VOC usage, in tons, for the previous 365-day period by summing the daily VOC usage data for the previous 365-days.	Minn. R. 7007.0800, subp. 4 and 5
Material Content: VOC contents in materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. Other alternative methods approved by the MPCA may be used to determine the VOC solids contents. The Commissioner reserves the right to require the Permittee to determine the VOC contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the MSDS.	Minn. R. 7007.0800, subp. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-53

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 081 Moulder

EU 082 Moulder

EU 083 Moulder

EU 084 Moulder

EU 085 Moulder

EU 087 Moulder

EU 088 Moulder

EU 089 Moulder

EU 090 Moulder

EU 092 D/E Tenoner

EU 093 Sander Belt

EU 094 Band Re-Saw

EU 095 Moulder

EU 131 D/E Tenoner

GP 002 Wood Milling Equipment 2

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 91,800 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-54**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 080 Chop Saw

EU 091 D/E Tenoner

EU 098 Saw Cutoff

EU 099 D/E Tenoner

EU 100 D/E Tenoner

EU 101 D/E Tenoner

EU 103 D/E Tenoner

EU 104 Drilling Machine

EU 105 Drilling Machine

EU 106 Shaper

EU 107 Linear Cutoff Saw

EU 108 Saw Radial Arm

EU 109 Saw Radial Arm

EU 110 Linear Cutoff Saw

EU 111 Saw Radial Arm

EU 113 Saw Radial Arm

EU 115 D/E Tenoner

EU 116 D/E Tenoner

EU 117 D/E Tenoner

EU 119 Band Saw

EU 120 D/E Tenoner

EU 370 Saw Cutoff

EU 377 Chop Saw

GP 003 Wood Milling Equipment 3

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 76,500 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-55

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 121 Saw Cutoff

EU 122 Saw Cutoff

EU 123 Saw Cutoff

EU 124 Finger Jointer

EU 125 Finger Jointer

EU 126 Finger Jointer

GP 004 Wood Milling Equipment 4

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 46,000 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-56

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 057 Grinder

EU 058 Multi-Rip

EU 059 Band Re-Saw

EU 060 Saw Cutoff

EU 062 Saw Cutoff

EU 063 Saw Cutoff

EU 064 Saw Cutoff

EU 068 Saw Cutoff

EU 069 Saw Cutoff

EU 070 Cutback Saw

EU 071 Hog-Mini

EU 072 Saw Cutoff

EU 073 Moulder

EU 076 Saw Cutoff

EU 077 Saw Scan

EU 078 Rerip Saw

EU 079 Chop Saw Chop

EU 114 Saw Table

EU 347 Saw Rip

EU 348 Saw Thin Cut

EU 358 Cleaner

EU 372 Saw Cutoff

EU 378 Saw Cutoff

EU 383 Saw Radial Arm

GP 001 Wood Milling Equipment 1

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 61,200 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-57**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 127 Moulder

EU 128 Moulder

EU 129 Moulder

EU 130 D/E Tenoner

EU 132 D/E Tenoner

EU 319 D/E Tenoner

GP 005 Wood Milling Equipment 5

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 115,300 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21(k); Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-58**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 011 Activated Carbon Adsorption**Associated Items:** EU 035 KD Dip System

EU 036 Dip Dry System

EU 039 Round Tops Dip System

GP 019 Wood Treatment VOC Limits

What to do	Why to do it
LIMITS	hdr
The Permittee shall operate and maintain CE011 such that it achieves an overall control efficiency for Volatile Organic Compounds: greater than or equal to 95 percent	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14
Temperature: less than or equal to 180 degrees F inlet temperature to carbon vessel A during the adsorption cycle. The permittee shall record the temperature once every 24 hours when in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Temperature: less than or equal to 180 degrees F inlet temperature to carbon vessel B during the adsorption cycle. The permittee shall record the temperature once every 24 hours when in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Temperature: less than or equal to 180 degrees F inlet temperature to carbon vessel C during the adsorption cycle. The permittee shall record the temperature once every 24 hours when in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Temperature: less than or equal to 180 degrees F inlet temperature to carbon vessel D during the adsorption cycle. The permittee shall record the temperature once every 24 hours when in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
MONITORING AND OPERATING SCENARIO	hdr
CE011 shall be operated within the optimal operating conditions specified by the manufacturer or through the most recent performance test. These conditions include, but are not limited to, the parameters established through the most recent performance test.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.3000; and Minn. R. 7007.0800, subp. 2 and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording inlet temperature as required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is in operation.	Minn. R. 7007.0800, subp. 4
Daily Monitoring: The Permittee shall physically verify the operation of the monitoring equipment at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written or electronic record of the daily verifications.	Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping of Inlet Temperature. The Permittee shall record the time and date of each temperature reading and whether or not the recorded temperature was within the range specified in this permit.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
Annual Inspections: At least annually, the Permittee shall inspect the control equipment internal system components. The Permittee shall maintain a written or electronic record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 4, 5 and 14
Annual Calibration: The Permittee shall calibrate the monitoring equipment at least annually and shall maintain a written or electronic record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: If the control device is operated outside the optimal operating conditions or if the control device or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the control device to the optimal operating conditions and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the control device. The Permittee shall keep a written or electronic record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5 and 14
PERFORMANCE TESTING	hdr
Initial Performance Test: due 270 days after permit issuance, to measure emissions compared to the VOC emission limit (see GP 019).	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-59**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 019 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 096 Saw

EU 112 Saw Cutoff

EU 133 Single End

EU 134 Single End

EU 135 Saw Radial Arm

EU 136 Saw Radial Arm

EU 137 Saw Radial Arm

EU 138 Saw Cutoff

EU 139 Linear Cutoff Saw

EU 140 Saw

EU 141 Saw

EU 142 Single End

EU 143 CNC Router

EU 144 Saw

EU 145 Saw

EU 146 Router

EU 147 Single End

EU 148 Chop Saw

EU 149 Chop Saw

EU 150 Chop Saw

EU 319 D/E Tenoner

EU 329 Saw Chop

EU 332 Saw Radial Arm

EU 333 Saw Rerip

EU 351 Router

EU 376 Table Down Draft

GP 006 Wood Milling Equipment 6

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 57,600 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: Limit to avoid a classification s a major modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-60**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 020 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 151 Single End
EU 152 Single End
EU 153 Shaper
EU 154 Shaper
EU 155 Single End
EU 156 Planer
EU 157 Sander Belt
EU 158 Chop Saw
EU 159 Single End
EU 160 Chop Saw
EU 161 Moulder
EU 162 Moulder
EU 163 D/E Tenoner
EU 164 Router (CNC)
EU 165 Single End
EU 166 Single End
EU 168 Shaper
EU 169 Shaper
EU 170 Single End
EU 171 Shaper
EU 172 Saw Rip
EU 173 Saw
EU 174 Sander Belt
EU 175 Saw
EU 176 Router
EU 177 Saw
EU 178 Lockrouter/Single Dr
EU 179 Saw Radial Arm
EU 180 Saw Radial Arm
EU 182 Saw Radial Arm
EU 183 Saw Radial Arm
EU 184 Saw Radial Arm
EU 185 Saw Radial Arm
EU 186 Saw Radial Arm
EU 187 Saw Radial Arm
EU 188 Saw Radial Arm
EU 189 Saw Radial Arm
EU 190 Band Saw
EU 191 Band Saw

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-61**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 192 Band Saw
- EU 193 Band Saw
- EU 194 Band Saw
- EU 195 Band Saw
- EU 196 Saw Table
- EU 197 Saw Table
- EU 198 Saw Table
- EU 200 Saw Table
- EU 201 Saw Table
- EU 202 Saw Table
- EU 203 Saw Table
- EU 204 Saw Table
- EU 205 Saw Table
- EU 206 Single End
- EU 208 Saw
- EU 209 Shaper
- EU 210 Shaper
- EU 211 Shaper
- EU 212 Shaper
- EU 213 Shaper
- EU 214 Shaper
- EU 215 Shaper
- EU 216 Shaper
- EU 217 Shaper
- EU 218 Shaper
- EU 219 Shaper
- EU 220 Shaper
- EU 221 Shaper
- EU 222 Shaper
- EU 223 Shaper
- EU 224 Shaper
- EU 225 Shaper
- EU 226 Shaper
- EU 227 Shaper
- EU 228 Shaper
- EU 229 Shaper
- EU 230 Shaper
- EU 231 Shaper
- EU 232 Shaper
- EU 233 Shaper

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-62**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 234 Shaper
- EU 235 Router
- EU 236 Shaper
- EU 237 Shaper
- EU 238 Planer
- EU 239 Planer
- EU 241 Sander Belt
- EU 242 Sander Belt
- EU 243 Sander Belt
- EU 244 Sander Belt
- EU 245 Sander Belt
- EU 246 Sander Disc
- EU 247 Sander Disc
- EU 248 Sander Disc
- EU 249 Sander Disc
- EU 250 Sander Disc
- EU 251 Sander Disc
- EU 252 Sander Disc
- EU 253 Sander Disc
- EU 254 Sander Disc
- EU 255 Sander Disc
- EU 256 Sander Disc
- EU 257 Chop Saw
- EU 258 Shaper
- EU 259 Router Table
- EU 260 Router Table
- EU 261 Router
- EU 262 Router
- EU 263 Saw Radial Arm
- EU 264 Shaper
- EU 265 Saw Shaper
- EU 267 Saw Woodbead
- EU 268 Saw Radial Arm
- EU 269 Coper
- EU 270 Band Saw
- EU 271 Planer
- EU 272 Sander Vertical
- EU 273 Saw Radial Arm
- EU 274 Single End
- EU 275 Single End

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-63**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 276 Saw Table
- EU 277 Band Saw
- EU 278 Sander Belt
- EU 279 Mortiser
- EU 280 Sander Disc
- EU 281 Chop Saw
- EU 282 Chop Saw
- EU 283 Chop Saw
- EU 284 Chop Saw
- EU 285 Chop Saw
- EU 286 Chop Saw
- EU 287 Saw Radial Arm
- EU 288 Chop Saw
- EU 289 Router
- EU 290 Router
- EU 291 Chop Saw
- EU 292 Chop Saw
- EU 293 Shaper
- EU 294 Chop Saw
- EU 295 Chop Saw
- EU 296 Chop Saw
- EU 297 Router
- EU 298 Chop Saw
- EU 299 Router
- EU 300 Router
- EU 301 Router
- EU 302 Router
- EU 303 Router
- EU 304 Router
- EU 305 Router
- EU 306 Chop Saw
- EU 307 Chop Saw
- EU 308 Chop Saw
- EU 309 Chop Saw
- EU 310 Router Table
- EU 311 Chop Saw
- EU 312 Chop Saw
- EU 313 Sander Drum
- EU 324 Slotter
- EU 325 Sander Disc

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-64**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items:

- EU 326 Saw Band
- EU 327 Router
- EU 328 Shaper
- EU 331 Router
- EU 334 Sander Disc
- EU 335 Router Table
- EU 336 Shaper
- EU 337 Router
- EU 338 Saw Radial Arm
- EU 339 Planer
- EU 340 Saw Band
- EU 341 Slotter
- EU 342 Router
- EU 343 Shaper
- EU 344 Table Work
- EU 345 Shaper
- EU 346 Saw Chop
- EU 349 Router
- EU 352 Saw Miter
- EU 353 Saw Chop
- EU 354 Sander Belt
- EU 355 Saw Shop
- EU 356 Saw Radial Arm
- EU 357 Router
- EU 359 Router
- EU 360 Sander
- EU 361 Router
- EU 362 Planer
- EU 363 Saw Miter
- EU 364 Saw Miter
- EU 365 Saw Miter
- EU 366 Saw Miter
- EU 367 Saw Miter
- EU 368 Saw Miter
- EU 369 Sander Belt
- EU 373 Sander
- EU 379 Table Saw
- EU 380 Single End
- EU 381 Sander
- EU 384 Single End

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-65**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Associated Items: GP 009 Wood Milling Equipment 9

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 140,849 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Conditon: Limit to avoid classification as a major modification Under 40 CFR Section 52.21; and Minn R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-66**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 021 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 314 Tub Grinder 1

EU 315 Tub Grinder 2

EU 316 Vortex Grinder

GP 011 Wood Milling Equipment 11

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 140,849 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: Limit to avoid a classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-67**

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 060 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 374 D/E Tenoner

EU 375 Moulder

GP 021 Wood Milling Equipment 12

GP 022 Control Equipment: Fabric Filters

What to do	Why to do it
LIMITS	hdr
Air Flow Rate: less than or equal to 72,440 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
PERFORMANCE TESTING	hdr
See GP 020 for performance testing requirements.	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-68

08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

Subject Item: CE 063 Other

Associated Items: EU 382 Internally Vented & Controlled Systems

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Air Flow Rate: less than or equal to 250,000 actual cubic feet/minute (Exhaust Flow Capacity). This fabric filter system (includes fabric and cartridge filters) exhaust flow capacity limit applies to all emission units controlled by this control device. The permittee shall keep the fabric filter system design specifications showing the calculated maximum airflow on-site.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Total Particulate Matter: less than or equal to 0.002 grains/dry standard cubic foot using 3-hour Average .	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, and limit to avoid classification as a major modification under 40 CFR Section 52.21 [most stringent meets the limits set by Minn. R. 7011.0715, subp. 1(A)]
Particulate Matter < 10 micron: less than or equal to 0.002 grains/dry standard cubic foot using 3-hour Average .	Title I Condition: 40 CFR Section 52.21, Minn. R. 7007.3000, and limit to avoid classification as a major modification under 40 CFR Section 52.21
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)
The Permittee shall operate and maintain the fabric filter system (includes fabric and cartridge filters) such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 92 percent	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the fabric filter system (includes fabric and cartridge filters) such that it achieves an overall control efficiency greater for Particulate Matter < 10 micron: greater than or equal to 92 percent	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
OPERATIONAL REQUIREMENTS	hdr
Operation of the fabric filter system (includes fabric and cartridge filters) is federally enforceable for replaced, new and/or modified wood milling equipment and may be considered when determining permitting applicability for such changes.	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain each fabric filter system (includes fabric and cartridge filters) any time the associated process equipment is in operation.	Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the fabric filter system (includes fabric and cartridge filters) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
The Permittee shall operate and maintain the fabric filter system (includes fabric and cartridge filters) at all times that any emission unit controlled by the fabric filter is in operation.	Title I Condition: 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
MONITORING	hdr
Fabric Filter System (includes fabric and cartridge filters) Department Procedure: The Permittee shall retain at the Facility and shall implement a Department Procedure (DP) for all air pollution control equipment described. At a minimum, the DP shall require the use of such controls at all times that internally vented wood milling equipment is in operation, shall include a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for the DP, and the written or electronic records kept to demonstrate DP implementation. The DP may be incorporated into the Facility's O&M Plan.	Minn. R. 7007.0800, subp. 2 and 14
Corrective actions may include the repair or replacement of the control device with a similar device.	
RECORDKEEPING	hdr
Recordkeeping of Equipment Changes: The Permittee shall keep and maintain a list of the fabric filter system (includes fabric and cartridge filters) and the airflows for each piece of the fabric filter system. The record shall show that the total fabric filter system airflow is less than the limit.	Title I Condition: Limit to avoid classification as a modification under 40 CFR Section 52.21; Minn. R. 7007.3000
This list shall be updated each time a change is made. The record shall include the date the change was made, the change to EU 382, a brief description of the equipment, and the airflow for each piece of equipment.	

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: TK 001 Preservative Concentrate

What to do	Why to do it
The Permittee shall equip storage vessel TK001 with a permanent submerged fill pipe.	Minn. R. 7011.1505, subp. 3

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: TK 002 Mineral Spirits

What to do	Why to do it
The Permittee shall equip storage vessel TK002 with a permanent submerged fill pipe.	Minn. R. 7011.1505, subp. 3
Except as specified in 40 CFR Section 60.116b(a) & (b), the vessel is exempt from the General Provisions (pt. 60, subp. A) and from the provisions of subp. Kb.	40 CFR Section 60.110b(b); Minn. R. 7011.1520(c)
Recordkeeping: Maintain written or electronic records showing the dimensions of the tank and an analysis showing the tank capacity. These records shall be maintained for the life of the facility.	40 CFR Section 60.110b(b); Minn. R. 7011.1520(c)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: TK 007 Preservative Concentrate/Mineral Spirits

What to do	Why to do it
The Permittee shall equip storage vessel TK001 with a permanent submerged fill pipe.	Minn. R. 7011.1505, subp. 3

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: FS 001 Wood Fuel Storage Pile - Field

What to do	Why to do it
No person shall allow avoidable amounts of particulate matter from becoming airborne.	Minn. R. 7011.0150

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: FS 005 Wood Fuel Storage Pile - Boiler Complex

What to do	Why to do it
No person shall allow avoidable amounts of particulate matter from becoming airborne.	Minn. R. 7011.0150

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

Subject Item: FS 006 Truck Traffic - Unpaved Roads

Associated Items: CE 022 Dust Suppression

What to do	Why to do it
No person shall allow avoidable amounts of particulate matter from becoming airborne.	Minn. R. 7011.0150
Maintain a written or electronic record of dust suppression applications.	Minn. R. 7007.0800, subp. 5

TABLE B: SUBMITTALS

B-1 08/22/07

Facility Name: Marvin Windows & Doors
Permit Number: 13500002 - 002

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

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

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

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

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 submittals that are required by the Acid Rain Program to:

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

Send any application for a permit or permit amendment to:

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

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.

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test for PM emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	SV018
Testing Frequency Plan	due 60 days after Initial Performance Test for PM-10 emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	SV018
Testing Frequency Plan	due 60 days after Initial Performance Test for VOC emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	CE011

TABLE B: RECURRENT SUBMITTALS**B-3** 08/22/07

Facility Name: Marvin Windows & Doors

Permit Number: 13500002 - 002

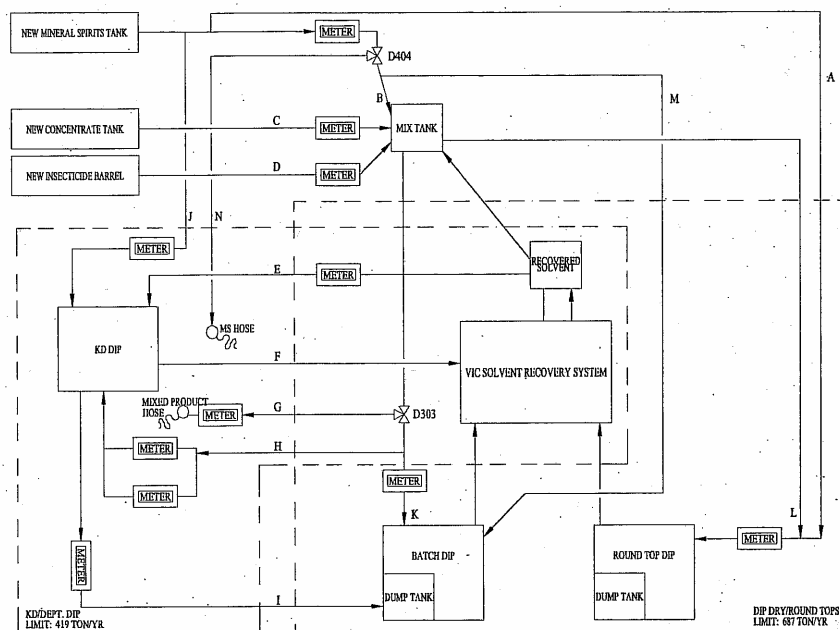
What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following permit issuance . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of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

Permit Number: 13500002-001

NOTE Correction: KD/Department Dip Dry VOC Usage Limit = 182 tons/year
Dip Dry/Round Tops VOC Usage Limit = 687 tons/year

Wood Treatment VOC Usage Calculation Proposal

The following diagram shows the possible paths that product may flow throughout the systems. Letters A through E and G through N represent gallons of liquid. Letter F represents vapor flow from KD Dip system to the solvent recovery system. The dashed boxes distinguish the two "VOC usage systems".



If we consider the recovered solvent to be in both boxes, the usage for each system would be calculated by multiplying the ratio of gallons of mixed product used in each system to the total mixed product used in both systems by the total new product to the mix tank. Additional new product would also be added (J, A, M, and N) as indicated in the following VOC usage formulas:

$$\text{USAGE} = ((G+H-I)/(G+H+K+L) * (B+C+D)) + J + N$$
$$\text{USAGE} = ((K+L+I)/(G+H+K+L) * (B+C+D)) + A + M$$

This option calculates the usage of mixed product for a system based on a ratio of gallons used in that system to total gallons used in both systems. The recovered mineral spirits are not included in the usage calculations; rather the mineral spirits VOC's are only counted when new mineral spirits are added to the system.

APPENDIX I

Facility Name: Marvin Windows & Doors

Permit Number: 13500002-001

APPENDIX II
Facility Name: Marvin Windows & Doors
Permit Number: 13500002-001

Appendix II

Insignificant Activities and General Applicable Requirements

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

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. <i>Marvin Windows has space heaters.</i>	Minn. R. 7011.0610 (PM and Opacity)
3(B)	Infrared electric ovens. <i>Marvin Windows has an IR cure oven.</i>	Minn. R. 7011.0110 (Opacity)
3(G)	Emissions from laboratory operations. <i>Marvin Windows has an "incoming quality control lab".</i>	Minn. R. 7011.0715 (PM and Opacity)
3(H)(3)	Brazing, soldering or welding equipment. <i>Marvin Windows has welding operations that satisfy this description.</i>	Minn. R. 7011.0715
3(H)(4)	Blueprint copiers and photographic processes. <i>Marvin Windows has photocopy equipment.</i>	Min.. R. 7011.0110 (Opacity)
3(I)	Individual Emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/yr of carbon monoxide; and 2. 2,000 lbs/yr each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than 10 microns, volatile organic compounds (including hazardous air pollutant containing VOC) , and ozone. <i>Marvin Windows has the following units that qualify under this part: flax shive building, sawdust storage bin, carbon regen cooling tower, printing, remediation bioreactor, bulk mineral spirits storage, RT dump tank, mix tank, drip dry dump tank, and recovered mineral spirits.</i>	Minn. R. 7011.0715 (PM and Opacity)
3(J)	Fugitive Dust Emissions from Unpaved Parking Lots. <i>Marvin Windows has unpaved parking lots.</i>	Minn. R. 7011.0150 (PM)

APPENDIX II
Facility Name: Marvin Windows & Doors
Permit Number: 13500002-001

3(K)	Infrequent Use of Spray Paint Equipment. <i>Marvin Windows uses spray paint for general maintenance and upkeep purposes.</i>	Minn. R. 7011.0715 (PM and Opacity)
4	<p>Individual Emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than:</p> <p>A. 5.7 lbs/hr of carbon monoxide; and B. 2.28 lbs/hr each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than 10 microns, volatile organic compounds (including hazardous air pollutant containing VOC) , and ozone.</p> <p><i>Marvin Windows has the following units that qualify under this part: printing operations and bulk preservative concentrate storage.</i></p>	Minn. R. 7011.0715 (PM and Opacity)

APPENDIX III
Facility Name: Marvin Windows & Doors
Permit Number: 13500002-001

Appendix III

Available Modeled Parameters

(Note: Initial modeling contained additional units that no longer exist)

Current Stack/Vent Identification	Marvin Source Designation	Particulate Emission Rate (lb./hr)	Stack Height (ft)	Gas Exit Temp. (°F)	Flow Rate (acfm)	Stack Diameter (ft)
SV002	SH-002	1.57540	31.0	70.3	91,800	6.53
SV003	SH-004	1.31271	29.5	70.3	76,440	5.64
SV004	SH-006	0.78929	31.0	70.3	46,020	5.51
SV001	SH-050	1.05000	33.0	70.3	61,200	5.51
SV005	SH-009	1.97858	60.0	70.3	115,620	7.15
SV006	SH-010	0.98834	40.0	70.3	57,780	5.87
SV009	SH-049	1.97858	40.0	70.3	115,620	7.15
SV011	SH-052	1.97858	30.0	70.3	115,620	7.15
SV018	SB-010	0.09008	35.0	80.3	14,280	3.51
	SB-012	0.09008	35.0	80.3	14,280	3.51
SV025	BS-003	6.30560	45.0	300.3	9,120	2.17
SV026	BS-004	0.16016	45.0	500.3	14,040	2.76
SV027/028	BS-005	8.70800	60.0	300.3	25,980	4.50
SV029	GN-003	0.27024	31.0	915.3	2,640	0.98
SV030	GN-004	0.27024	31.0	915.3	2,640	0.98
SV031	GN-005	0.27024	35.0	915.3	2,640	0.98
SV032	GN-006	0.13008	40.0	915.3	1,320	0.49
SV033	GN-007	0.13008	40.0	915.3	1,320	0.49
SV034	GN-008	0.74048	40.0	885.3	1,680	0.59
SV035	GN-009	0.74048	40.0	885.3	1,680	0.59
SV036	GN-010	0.74048	40.0	885.3	1,680	0.59
SV037	GN-011	0.44040	34.0	895.3	1,020	0.49
Insignificant	VN-319	0.10111	43.5	70.3	0	2.60

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13500002-002

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

1.1. Applicant and Stationary Source Location

Owner Address	Operator Address	Stationary Source Address (SIC Code: 2431)
Marvin Lumber & Cedar Co. P.O. Box 100 Highway 11 West Warroad, MN 56763	Marvin Windows & Doors P.O. Box 100 Highway 11 West Warroad, MN 56763	Marvin Windows and Doors Highway 11 West Warroad, MN 56763 Roseau County
	Contact: Bradley J. Baumann Environmental Manager Phone: (218) 386-1430, x1803 Fax: (218) 386-4046	Same

1.2. Description of Permit Action

Marvin Lumber and Cedar Company (the Permittee) owns and operates Marvin Windows and Doors (the Facility). The Facility manufactures wood windows and doors for residential and commercial application. This major amendment to the existing Part 70 Operating Permit authorizes the addition of a wood treatment pilot plant (EU 385, TK 007 and 008). The purpose of this pilot plant is to study the performance and enhance the accelerated removal of solvent from Light Organic Solvent Preservation (LOSP).

The permit application for this major amendment was received by the Minnesota Pollution Control Agency (MPCA) on December 26, 2006. The permittee has continued to update these applications throughout the completion of this permitting action.

1.3 Description of the Activities Allowed by this Permit Action

This major amendment authorizes the addition of a wood treatment pilot plant. The purpose of this pilot plant is to study the performance and enhance the accelerated removal of solvent from Light Organic Solvent Preservation (LOSP). VOC emissions from this addition are limited to 36.0 tons per year.

1.4. Facility Emissions:

Table 1. Title I Emissions Increase Summary

Pollutant	Emissions Increase from the Modification (tpy)	Limited Emissions Increase from the Modification (tpy)	Net Emissions Increase (tpy)	PSD/112(g) Significant Thresholds for major sources	NSR/112(g) Review Required? (Yes or No)
PM				25	
PM ₁₀				15	
NO _x				40	
SO ₂				40	
CO				100	
Ozone (VOC)	36.0	36.0	36.0	40	No
Lead				0.6	
Individual HAP	0.12	0.12	0.12	10	No
Total HAPs	0.12	0.12	20.5 (existing total + individual increase)	25	No

Table 2. Total Facility Potential to Emit Summary

A summary of the Potential to Emit (PTE) in tons per year is as follows:

Pollutant	PM	PM ₁₀	SO ₂	NO _x	VOCs	CO	Lead	Total HAPs	Single HAP
Total Facility PTE	155.2	150.0	14.5	253.5	1087.0	212.2	0.00	20.5	6.1
PTE from new emission units	0.0	0.0	0.0	0.0	36.0	0.0	0.00	0.12	6.1

PM = Particulate Matter

SO₂ = Sulfur Dioxide

VOCs = Volatile Organic Compounds

PM₁₀ = PM smaller than 10 microns

NO_x = Nitrogen Oxides

CO = Carbon Monoxide

Table 3. Facility Classification

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

2. Regulatory and/or Statutory Basis

New Source Review

The Facility is an existing major stationary source under New Source Review regulations. This major amendment authorizes the addition of a wood treatment pilot plant.

Part 70 Permit Program

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

New Source Performance Standards (NSPS)

The bulk mineral spirits storage tank (TK002) is subject to 40 CFR § 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

No other Facility emission units are subject to NSPS requirements. All facility boilers were installed prior to the effective date of 06/09/89 for 40 CFR § 60, Subpart Dc, Small Industrial-Commercial-Institutional Steam Generators >10 MMBtu but <100 MMBtu. Boiler No. 4 was converted from a wood-fired boiler to a natural gas-fired boiler, however, the conversion resulted in no emission increase, thus was not considered a modification as defined in 40 CFR §60.2.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Facility is an area source of HAP emissions with less than 25 tpy for the aggregate of all HAPs and less than 10 tpy for each individual HAP, therefore, the NESHAPs do not apply.

Minnesota State Rules

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

- Minn. R. 7001.0150, Subp. 2, Terms and Conditions of Permits, Special Conditions
- Minn. R. 7007.0100, Subp. 25, Title I Condition
- Minn. R. 7007.0800, Subp. 2, Emission Limitations and Standards
- Minn. R. 7011.0070, Listed Control Equipment and Control Equipment Efficiencies

- Minn. R. 7011.0515, Standards of Performance for New Indirect Heating Equipment
- Minn. R. 7011.0550, Table II, Indirect Heating Equipment
- Minn. R. 7011.0715, Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.0735, Source Gas Volume Concentration
- Minn. R. 7011.1505, Standards of Performance for Storage Vessels
- Minn. R. 7011.2300, Standards of Performance for Stationary Internal Combustion Engines

Table 4 provides a summary of the significant sources of emissions and the applicable regulations and standards.

Table 4. Regulatory Overview of Units Affected by the Modification/Permit Amendment

EU, GP, or SV	Applicable Regulations	Comments:
EU385	Title I Condition: Limit to avoid major modification under 40 CFR § 52.21	Limit on annual usage of wood preservative mixture to limit VOC emissions.
	Minn. R. 7011.0715	Standards of performance for particulate and opacity.
TK007	Minn. R. 7011.1505, subp. 3	Tank design requirements.

3. Technical Information

The proposed Wood treatment pilot plant has a 365 day rolling sum VOC usage limit of 36.0 tons per year to avoid classification as a major modification under 40 CFR § 52.21 and Minn. R. 7007.3000. Compliance with this limit will be determined through daily usage logs and will inherently include emissions from tank losses.

3.1 Calculations of Potential to Emit and Emissions Increase Analysis

Attachment to this TSD are detailed calculations and supporting information, which summarizes the PTE of the Facility. Various specifics of the technology being implemented through this permitting action are unknown, including hourly and maximum potential to emit VOC rates. As a result, the facility is limited by a VOC synthetic minor limit of 36.0 tons per year based on a 365-day rolling sum and the hourly and maximum potential to emit VOC rates are estimated. The maximum hourly emission rate estimate is based on the synthetic minor limit of 36.0 TPY and the estimate of 4000 hours of operation per year. The maximum hourly emission rate (lbs/hr) and maximum uncontrolled emissions (tons/yr) values are simply estimates for the purposes of populating Delta and are not intended to accurately reflect the facilities operating conditions.

3.2 Periodic Monitoring

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

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

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

Table 6 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 5. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
EU 385	VOC \leq 36.0 tons per year (limit to avoid 40 CFR § 52.21)	Recordkeeping: 365-day rolling sum.	Annual usage limit will be monitored based on daily 365-day rolling sum calculations. This limit will inherently include emissions from tank losses.
TK007	Permanent Fill Pipe (Minn. R. 7011.1505)	NA	By design

3.3 Insignificant Activities

The permit is required to include periodic monitoring for all emissions units, including insignificant activities if necessary, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Table 6 documents the justification why no additional periodic monitoring is necessary for the current insignificant activities, and likely future ones, that might be located at this site.

Table 6. Insignificant Activities.

Insignificant Activity	Currently on site? (Y/N)	General Applicable Emission limit	Discussion
Space heaters fueled by kerosene, natural gas or propane	Y	PM, variable depending on airflow Opacity \leq 20% with exceptions (Minn. R. 7011.0610)	For these units based on the fuels used and published emissions factors, it is highly unlikely that they could violate the applicable requirement. These units are vented inside a building, so testing is not feasible.
Fuel use in furnaces or boilers with a capacity of less than 500,000 Btu/hr.	Y	PM \leq 0.4 lb/MMBtu Opacity \leq 20 % (Minn. R. 7011.0610)	For these units based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
Infrared electric ovens	Y	Opacity \leq 20% (Minn. R. 7011.0110)	While no emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions. In addition, these units would be operated and vented directly into the building, so monitoring or testing is not feasible.
Emissions from laboratory operations, as defined in Minn. R. 7007.1300, subp. 3(G)	Y	PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0715)	These are very small, intermittent, bench-top operations that typically do not even have any emissions. It is highly unlikely that they could violate the applicable requirement.
Brazing, soldering or welding equipment	Y	PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
Blueprint copiers and photographic processes	Y	Opacity \leq 20% (Minn. R. 7011.0110)	While no emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate

Insignificant Activity	Currently on site? (Y/N)	General Applicable Emission limit	Discussion
			visible emissions. In addition, these units would be operated and vented directly into the building, so monitoring or testing is not feasible.
Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities	Y	PM, variable depending on airflow or process weight rate Opacity \leq 20% (Minn. R. 7011.0715)	While spray equipment will have the potential to emit particulate matter, these particular activities are those not associated with production, so they would be infrequent and usually occur outdoors. Testing or monitoring is not feasible.
Above ground fuel oil storage tanks with a combined total tank capacity less than 100,000 gallons;	Y	NA	These units consist of diesel-fired electrical generator fuel tanks. The tank capacity and annual throughput is small enough to result in negligible VOC emissions.
Fugitive dust emissions from unpaved entrance roads and parking lots, except from a stationary source applying for an Option D registration permit under part 7007.1130.	Y	Prevent Particulate Matter from Becoming Airborne (Minn. R. 7011.0150)	The operating permit requires the application of dust suppressant. Based on calculations provided by the Permittee, the generation of avoidable amounts of particulate matter will not occur.
Individual units that have potential emissions of less than 2,000 lb/yr of various criteria pollutants.	Y	PM \leq 0.4 lb/MMBtu Opacity \leq 20 % (Minn. R. 7011.0515) or PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0715)	These units consist of: shavings loading auger backup system, flax shive building, sawdust storage bin, carbon regen cooling tower, remediation bioreactor, bulk mineral spirits storage, RT dump tank, mix tank, dip dry dump tank, and recovered mineral spirits. Based on calculations provided by the Permittee (see Attachment 4), it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.

Individual units that have potential emissions of less than 2.28 lb/hr of various criteria pollutants and less than certain thresholds of HAPs.	Y	$PM \leq 0.4 \text{ lb/MMBtu}$ $Opacity \leq 20 \%$ (Minn. R. 7011.0515) or PM, variable depending on airflow $Opacity \leq 20\%$ (Minn. R. 7011.0715)	These units consist of printing operations, bulk preservative concentrate storage, and un-captured wood milling equipment emissions. Based on calculations provided by the Permittee (see Attachment 4), it is highly unlikely that they could violate the applicable requirement. In addition, these units are operated and vented inside a building, so testing for PM or opacity is not feasible.
---	---	--	---

The following paragraphs provide a more detailed discussion of internally vented particulate matter sources. The facility has a variety of internally vented wood milling equipment attached to barrel vac's, Torits and cartridge filter systems.

Combined (identified as EU 382), these systems have a total airflow rate of approximately 250,000 cfm and consist of small groups of wood milling equipment (three to five units) each hooked up to an air cleaning system (identified as CE 063). The internally vented control equipment is typically operated for 4,500 hours per year. Utilization of the wood milling equipment is approximately 20 percent due to the fact that the machines are used very intermittently and sit idle for long periods. Many are designed to make special cuts, or simply cut a milled piece of wood to length for a special order. Table 12 provides a summary of estimated emissions from the internally vented wood milling equipment.

Table 12. Internally Vented Equipment.

Equipment	Estimated Actual PM Emissions (TPY)		Estimated Potential PM Emissions (TPY)	
	Minimum	Maximum	Minimum	Maximum
Individual Milling Equipment	0.004	0.02	0.04	0.21
Each Torit/Barrel Vac	0.01	0.03	0.10	0.33
Each Cartridge Filter	0.09	0.10	0.83	1.00

In order to ensure that internally vented equipment does not adversely impact work place air quality, the Facility employs redundant administrative controls to ensure internally vented dust control systems remain effective. Employees are required to confirm internal emission control systems remain effective and to remove dust from the work area at the end of each shift. In addition, audits are performed to confirm that internal dust control systems remain effective.

3.4 Permit Organization

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

3.5 Comments Received

No comments were received during the comment period.

Public Notice Period: June 21, 2007 – July 20, 2007

EPA 45-day Review Period: June 21, 2007 – August 04, 2007

4. Conclusion

Based on the information provided by Marvin Windows and Doors, the MPCA has reasonable assurance that the proposed operation of the emission Facility, as described in the Air Emission Permit No. 13500002-002 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules. This permit is being issued under issuance goals.

Staff Members on Permit Team:

Permit writer/Engineer:	Steve Gorg, M.S., P.E.
Enforcement Staff:	Cary Hernandez
Peer Reviewer:	Margaret Bartz
Support Staff:	Laurie O'Brien
Data Entry:	Beckie Olson

AQ File No. 1001A; DQ 1334

Attachments: 1. Emission Calculations
 2. CD-01 Forms