

AIR EMISSION PERMIT NO. 01900022-005

IS ISSUED TO

ELKAY Manufacturing

MEDALLION CABINETRY INC
180 Industrial Boulevard
Waconia, Carver County, MN 55387

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

Permit Type	Application Date	Issue Date	Action #
Total Facility Operating Permit - Reissuance	March 31, 2004	April 16, 2007	004
Major Amendment	April 20, 2007	See Below	005

This permit supersedes Permit No. 01900022-004 and authorizes the Permittee to operate and construct 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/Limits to Avoid NSR

Authorization to Construct and Operate Issuance Date: November 27, 2007

Final Permit Amendment Issuance Date: December 10, 2007

Expiration: April 16, 2012
Title I Conditions do not expire.

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

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

FACILITY DESCRIPTION:

Medallion Cabinetry Inc. is a manufacturer of finished kitchen cabinets. The facility assembles and finishes kitchen cabinet pieces purchased from outside sources or manufactured at the site based on customer design specifications. The cabinet pieces manufactured on site are refined from stock lumber by sawing, milling, and sanding to fit in the cabinets being assembled. The cabinet components are then loaded on a conveyer system which carries them through different stages of surface coating operations. The coatings applied are stains, lacquers and sealers. The product is then allowed to fan or oven dry followed by assembly, packaging, storage, and shipping.

PERMIT ACTION 005 DESCRIPTION

The permit action is for a major amendment of the facility’s Part 70 permit. The facility will remain a synthetic minor Prevention of Significant Deterioration (PSD) source. In this permit action, all existing surface coating operations will be removed and nineteen new spray booths will be added. The spray booths will be controlled by wall filters. Additional wood working operations will also be constructed. The new wood working operations will be controlled by a fabric filter. The new wood working building will be kept under negative pressure with air curtains at each door. The building qualifies as a total enclosure.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc
 Permit Number: 01900022 - 005

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

Subject Item: Total Facility

What to do	Why to do it
SOURCE-SPECIFIC REQUIREMENTS	hdr
This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee cannot make any change at the source that would make the source a major source under New Source Review until a major permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.3000
Recordkeeping of Equipment Changes: The Permittee shall maintain a written list of all emissions units and control equipment on site. The Permittee shall update the list to include any replaced, modified, or new equipment prior to making the change. The list shall correlate the units to the numbers used in this permit (EU, GP, CE) and shall include the data on forms GI-04, GI-05A, and GI-05B. The date of construction shall be the date the change was made for replaced, modified, or new equipment.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.3000
Production Operating Hours: less than or equal to 6200 hours/year using 12-month Rolling Sum	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
MODELING REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Parameters Used in Modeling: The parameters used in the modeling performed for determining emission and/or operational limits for this facility are listed in Appendix IV of this permit. If the Permittee intends to change any of these parameters, the Permittee must submit the revised parameters to the Commissioner and receive written approval before making any changes. The revised parameter information submittal must include, but is not limited to: the locations, heights and diameters of the stacks; locations and dimensions of nearby buildings; velocity and temperatures of the gases emitted; and the emission rates.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
The plume dispersion characteristics due to the parameter revisions must equal or exceed the dispersion characteristics modeled for this permit, and the Permittee shall demonstrate this in the proposal. 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 re-model. For changes that do not involve an increase in an emission rate and that do not require a permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter. For changes involving increases in emission rates and that require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.	(continued)
For changes involving increases in emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted prior to or with the permit amendment application. This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	(continued)
OPERATIONAL REQUIREMENTS	hdr
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, subps. 2 & 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

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 control practices and shall include a preventative maintenance program for the equipment and practices, 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 proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subs. 14 & 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
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - CD 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. 7017.2018; Minn. R. 7017.2030, subs. 1-4; Minn. R. 7017.2035, subs. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr
Production Operating Hours Monitoring: By the 15th day of the accounting period (defined in GP 002 of this permit), the Permittee shall calculate and record the following: 1. The production operating hours for the previous accounting period using production, payroll, timesheet, and/or work schedule records; and 2. The 12-accounting period rolling sum production operating hours for the previous 12 accounting periods by summing the production operating hours data for the previous 12 periods. A production operating hour is an hour in which any of the equipment covered by this permit was operating.	Minn. Stat. Section 116.07, subs. 4a & 9; Minn. R. 7007.0100, subs. 7A, 7L & 7M; Minn. R. 7007.0800, subs. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Table A, 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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

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: Immediately after discovery of the deviation or immediately after when the deviation reasonable should have been discovered, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 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 - 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 - 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 - 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 001 NESHAP Sources

- Associated Items:**
- EU 099 Booth #1 16' NGR
 - EU 100 Booth #2 16' Stain
 - EU 101 Booth #3 16' Washcoat
 - EU 102 Booth #4 16' Sealer
 - EU 103 Booth #5 16' Glaze
 - EU 104 Booth #6 16' Topcoat
 - EU 105 Booth #7 16' NGR
 - EU 106 Booth #8 16' Stain
 - EU 107 Booth #9 14' Washcoat
 - EU 108 Booth #10 16' Sealer
 - EU 109 Booth #11 16' Glaze
 - EU 110 Booth #12 16' Topcoat
 - EU 111 Booth #13 16' NGR
 - EU 112 Booth #14 20' Stain
 - EU 113 Booth #15 14' Washcoat
 - EU 114 Booth #16 16' Sealer
 - EU 115 Booth #17 16' Glaze
 - EU 116 Booth #18 16' Topcoat
 - EU 117 Booth #19 20' Specialty

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Volatile hazardous air pollutant (VHAP) means any VHAP listed in Table 2 of 40 CFR pt. 63, subp. JJ.	40 CFR Section 63.801; Table 2 of 40 CFR pt. 63, subp. JJ; Minn. R. 7011.7340
Emission Limit for Finishing Materials (compliance based on averaging): The average VHAP content (E) of all finishing materials, which include but are not limited to, stains, basecoats, washcoats, enamels, sealers, and topcoats used, shall not exceed 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied. "E" shall be calculated using the equation given in this permit.	40 CFR Section 63.802(b)(1); Table 3 of 40 CFR pt. 63, subp. JJ; Minn. R. 7011.7340
Emission Limit (contact adhesives): The VHAP content, as applied, shall not exceed than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids). The limit does not apply to aerosol adhesives and contact adhesives applied to nonporous substrates.	40 CFR Section 63.802(b)(2); 40 CFR Section 63.804(e); Minn. R. 7011.7340
Emission Limit (strippable spray booth coatings): The VOC content, as applied, shall not exceed than 0.8 kg VOC/kg solids (0.8 lb VHAP/lb solids).	40 CFR Section 63.802(b)(3); Minn. R. 7011.7340
Work Practice Implementation Plan (WPIP): The Permittee shall maintain and adhere to the WPIP which defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the work practice standards presented in paragraphs (b)-(l) or Section 63.803. These standards are included in Appendix I of this permit. The plan shall be available upon request by the Administrator and shall be revised upon request by the Administrator.	40 CFR Section 63.803(a); Minn. R. 7011.7340
MONITORING AND RECORDKEEPING	hdr
The VHAP content for each finishing material, thinner, contact adhesive, and strippable spray booth coating shall be determined as specified in 40 CFR Section 63.805(a). This information shall be found on the Certified Product Data Sheet (CPDS).	40 CFR Section 63.805(a); Minn. R. 7011.7340

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

<p>Compliance Procedure For Finishing Materials: The Permittee shall calculate the average VHAP content (E) using the following equation:</p> $E = \frac{Mc_1Cc_1 + Mc_2Cc_2 + \dots + Mc_nCc_n + S_1W_1 + S_2W_2 + \dots + S_nW_n}{Mc_1 + Mc_2 + \dots + Mc_n}$ <p>Where: n=1,2,3,...(the 1st finishing material(c), the 2nd finishing material(c), etc); Mc=the mass of solids in a finishing material(c), in kg (lb); Cc=the VHAP content of a finishing material(c), in kg of VHAP per kg of coating solids (lb VHAP/lb solids), as supplied; S=the VHAP content of a solvent, in weight fraction, added to finishing materials; W=amount of solvent, in kg (lb), added to finishing materials during the monthly averaging period.</p>	<p>40 CFR Section 63.804(d)(1); Minn. R. 7011.7340</p>
<p>Recordkeeping: The Permittee shall maintain the following records onsite:</p> <ol style="list-style-type: none"> 1. A CDPS for each finishing material, thinner, contact adhesive, and strippable spray booth coating; 2. Copies of the averaging calculation for each month following the initial startup, as well as the data on the quantity of coatings and thinners used that is necessary to support the above E calculation; 3. The VHAP content, in kg VHAP/kg solids, as applied, of each finishing material and contact adhesive; 4. The VOC content, in kg VOC/kg solids, as applied, of each strippable booth coating; and 5. The WPIP and all records associated with fulfilling the requirements of the WPIP 	<p>40 CFR Sections 63.806(b), (c), & (e); Minn. R. 7011.7340</p>
<p>The minimum WPIP onsite record content shall include:</p> <ol style="list-style-type: none"> 1. Records demonstrating that the operator training program is in place; 2. Records collected in accordance with the inspection and maintenance plan; 3. Records associated with the cleaning solvent accounting system; 4. Records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with this type of spray guns for each semiannual period; and 5. Copies of documentation such as logs developed to demonstrate that the other provisions of the WPIP are followed. 	<p>40 CFR Section 63.806(e); Minn. R. 7011.7340</p>
<p>The Permittee shall maintain records of all reports submitted to the agency including the supporting materials.</p>	<p>40 CFR Sections 63.806(h) & (i); Minn. R. 7011.7340</p>
<p>The Permittee shall maintain all records for a period of 5 years and, at a minimum, the most recent 2 years of data shall be retained on site. The records including all required reports shall be in a form suitable and readily available for expeditious inspection and review.</p>	<p>40 CFR Section 63.806(j); 40 CFR Section 63.10(b)(1); Minn. R. 7011.7340</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 002 VOC and Coating Limits

- Associated Items:**
- EU 099 Booth #1 16' NGR
 - EU 100 Booth #2 16' Stain
 - EU 101 Booth #3 16' Washcoat
 - EU 102 Booth #4 16' Sealer
 - EU 103 Booth #5 16' Glaze
 - EU 104 Booth #6 16' Topcoat
 - EU 105 Booth #7 16' NGR
 - EU 106 Booth #8 16' Stain
 - EU 107 Booth #9 14' Washcoat
 - EU 108 Booth #10 16' Sealer
 - EU 109 Booth #11 16' Glaze
 - EU 110 Booth #12 16' Topcoat
 - EU 111 Booth #13 16' NGR
 - EU 112 Booth #14 20' Stain
 - EU 113 Booth #15 14' Washcoat
 - EU 114 Booth #16 16' Sealer
 - EU 115 Booth #17 16' Glaze
 - EU 116 Booth #18 16' Topcoat
 - EU 117 Booth #19 20' Specialty

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. This limit applies separately to each emissions unit listed in GP 002.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies separately to each emissions unit listed in GP 002.	Minn. R. 7011.0715, subp. 1(B)
<p>Volatile Organic Compounds: less than or equal to 240.0 tons/year based on a 12-accounting period rolling sum as described later in this permit. VOC content shall be determined as described under the Material Content requirements of this permit.</p> <p>All non-combustion VOC-emitting equipment at the facility is subject to this limit and shall be included in the 12-accounting period rolling sum calculation (e.g., coating, cleaning, etc.).</p>	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
<p>VOC PreCap: If the Permittee replaces any existing non-combustion VOC emitting equipment, adds new VOC emitting equipment, or modifies the existing equipment listed in GP 002, such equipment is subject to the above VOC limit as well as all of the requirements of GP 002. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat VOC calculations described in Minn. R. 7007.1200, subp. 2.</p> <p>A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit.</p>	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall vent emissions from all spray booths, including existing, modified, or new spray booths, to control equipment meeting the requirements of GP 003.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Solids Content Limits and Solids Spray Limits: The Permittee shall use coatings that have less than or equal to the solids pounds/gallon or solids applied/hr limits listed in Appendix III for each booth, as specified. The solids content limits are on the coating contents, as applied (versus as purchased).	Minn. Stat. Section 116.07, subs. 4a & 9; Minn. R. 7007.0100, subs. 7A, 7L & 7M; Minn. R. 7007.0800, subs. 1, 2 & 4; Minn. R. 7009.0010-7009.0080

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

<p>Spray Gun Restrictions:</p> <ol style="list-style-type: none"> 1. A maximum of two spray guns shall be operated at a time, per spray booth, for each of GP 002's spray booths. 2. All spray gun capacities shall meet the maximum capacity limits in Appendix III of this permit for the specified booth. 3. All spray guns must have a transfer efficiency equal to or better than airless technology (75% minimum manufacturer specified transfer efficiency). 	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000</p>
<p>All painting at the Facility shall be conducted in a building that meets the following requirements:</p> <ol style="list-style-type: none"> 1. All air vented from the building shall be sent through air pollution control equipment meeting the requirements of GP 003; and 2. All doors and windows leading to the outside air shall be kept closed when the painting equipment is in operation. 	<p>Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>MONITORING AND RECORDKEEPING</p>	<p>hdr</p>
<p>Daily Recordkeeping -- VOC Emissions.</p> <ol style="list-style-type: none"> 1. On each day of operation, the Permittee shall calculate, record, and maintain daily totals of all VOC dispensed at the facility, in gallons, based on purchase records, flow meters, and Material Content data. 2. In addition, for each "Type A" material used, the daily record of usage shall include the shipment/batch/container information in order to determine the materials contents as specified in the Type A Materials requirements of this permit. 	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000</p>
<p>Accounting Period Recordkeeping -- VOC Emissions. By the 15th day of the accounting period, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1. The total usage of VOC containing materials for the previous accounting period by using the daily records for the previous accounting period. 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 total VOC shipped in waste for the previous accounting period, using the records specified in this permit. 3. The VOC emissions for the previous accounting period using the formulas specified in this permit. 4. The 12-accounting period rolling sum VOC emissions for the previous 12 accounting periods by summing the monthly VOC emissions data for the previous 12 periods. 	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Accounting Period Calculation -- VOC Emissions. The Permittee shall calculate VOC emissions using the following equations:</p> <p>VOC (tons/accounting period) = V - W $V = (A1 \times D1 \times B1) + (A2 \times D2 \times B2) + (A3 \times D3 \times B3) + \dots$ $W = (C1 \times F1) + (C2 \times F2) + (C3 \times F3) + \dots$</p> <p>Where: V = total VOC used in tons/accounting period; A# = amount of each VOC containing material used, in gallons/accounting period; D# = the density of A#, in lbs/gallon; B# = weight percent VOC in A#, as a fraction; W = the amount of VOC shipped in waste, in tons/accounting period; C# = amount, in tons/accounting period, of each VOC containing waste material shipped; and F# = weight percent of VOC in C#, as a fraction.</p>	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Recordkeeping for Spray Guns: The Permittee shall maintain on-going records for each spray gun that includes the spray technology and manufacturer specified transfer efficiency (minimum of 75%), the spray capacity in gallons per hour, and the EU (emission unit) number of the spray booth where the gun will be used. This record shall be updated any time a spray gun is added or replaced.</p>	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Daily Recordkeeping -- Solids Content and Spray Gun Capacity. On each day of operation, the Permittee shall record and maintain:</p> <ol style="list-style-type: none"> 1. The solids content of each coating used, as applied, in pounds/gallon, in each booth, based on purchase records, flow meters, and the required Material Content data as specified by this permit. 2. The spray gun capacity for each coating applied. 3. The maximum solids supply rate for each coating applied, for (EU 099, 100, 105, 106, 111, and 112) as a total amount consumed daily for each coating. 	<p>Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080; Minn. R. 7007.0800, subps. 4 & 5</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

<p>Signage and Inspection of Building Openings: The Permittee shall post signs on all non-alarmed doors and windows leading to the outside from the painting building that state that the doors and windows must remain closed while the paint booths are in use. The signs shall be in at least both English and Spanish.</p> <p>The Permittee shall conduct inspections at least once each calendar week, while the paint booths are in use, to determine if the doors and windows are closed as required by this permit. The Permittee shall maintain a written record of the inspections and any corrective action taken.</p>	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Material Content Requirements: The Permittee shall determine the density, VOC, and solids content for each VOC-containing material used during the accounting period by using the specified methods below.</p> <p>- Type A Materials, Analysis Data: For White Primer Reducer, Lilly Pecan Stain, Hazelnut Wipe DBF, Lilly Topcoat, Low Sheen Topcoat, and Low VOC Sealer (#AUS0290), or substitute products used for the same purpose, the Permittee shall obtain a Certificate of Analysis (COA) for each shipment/batch/container of material received that is based on Method 24 (Appendix A to 40 CFR pt. 60) for that shipment/batch/container. The COA shall specify the weight fraction of non-aqueous volatile matter, weight fraction solids, and material density of each shipment/batch/container of material received. This content data shall be used in the accounting period calculations for the associated shipment/batch/container.</p>	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>- Type B Materials, Formulation Data: For all other VOC-containing materials, the density, VOC, and Solids (PM) content of raw materials shall be determined by the Material Safety Data Sheet (MSDS) or CPDS provided by the supplier for each material used. The Permittee shall obtain a certification from the supplier as to the accuracy of the data. If the MSDS/CPDS provides a material content range, the highest number in the range shall be used for all calculations. Other alternative methods approved by the MPCA may be used to determine the VOC or Solids (PM) content. The Commissioner reserves the right to require the Permittee to take the samples of VOC containing materials, and to conduct analysis of VOC or Solids (PM) as per EPA reference methods. If the EPA reference method is used, it shall supersede the MSDS/CPDS.</p>	<p>(continued)</p>
<p>Material Content Records: The Permittee shall keep a current copy of information provided by materials suppliers or manufacturers for each VOC-containing material used. This includes MSDSs, CPDSs, COAs, and test data used to determine the solids and VOC content and density for each VOC-containing material. If the Permittee conducted testing to determine the pollutant content or density, the Permittee must keep a copy of the complete test report. If information was used that was provided by the manufacturer or supplier of the material that was based on testing, the Permittee must keep the COA provided by the manufacturer or supplier. The Permittee is not required to obtain the test report or other supporting documentation from the manufacturer or supplier.</p>	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Material Content of Waste: The Permittee shall determine the VOC content of waste materials as specified in the Waste Sampling requirements of this permit. The content data for each waste stream shall be used in calculations required by this permit for all relevant shipments in the calendar quarter (or half year, if applicable) following the sample analysis. For example, sample results from January shall be used for all waste relevant shipments in February, March, and April, and April results shall be used in May, June, July, etc.</p>	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Waste Sampling: The Permittee or the company receiving the waste shall analyze a sample of each of the three waste streams (solvent, paint, solids) using an EPA or ASTM reference method, a gas chromatograph, or other method approved by the Commissioner, to determine the weight content of VOC according to the following schedule:</p> <ol style="list-style-type: none"> 1. At least once per calendar quarter; or 2. At least once per calendar half year, if after four consecutive quarterly samples have been completed for the given waste stream, and the VOC content from each consecutive sample varies by less than or equal to 3.0%. If any two consecutive samples of the given waste stream vary by greater than 3.0%, then the sampling frequency for the given waste stream reverts back to quarterly. <p>The Permittee shall keep copies of all test reports for each waste stream.</p>	<p>Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Definition of Accounting Period: The VOC limit is based on 12 accounting periods in a calendar year. These periods can vary from three to five weeks each. The Company determines the number of weeks in each accounting period prior to the beginning of the calendar year. The determination of how many weeks are in each accounting period, including starting and ending dates, shall be included in the Annual Report that is due January 30th of each year.</p>	<p>Minn. R. 7007.0800, subp. 2</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 003 Panel Filter Requirements

- Associated Items:** CE 019 Mat or Panel Filter
 CE 020 Mat or Panel Filter
 CE 021 Mat or Panel Filter
 CE 022 Mat or Panel Filter
 CE 023 Mat or Panel Filter
 CE 024 Mat or Panel Filter
 CE 025 Mat or Panel Filter
 CE 026 Mat or Panel Filter
 CE 027 Mat or Panel Filter
 CE 028 Mat or Panel Filter
 CE 029 Mat or Panel Filter
 CE 030 Mat or Panel Filter
 CE 031 Mat or Panel Filter
 CE 032 Mat or Panel Filter
 CE 033 Mat or Panel Filter
 CE 034 Mat or Panel Filter
 CE 035 Mat or Panel Filter
 CE 036 Mat or Panel Filter
 CE 037 Mat or Panel Filter

What to do	Why to do it
The requirements of GP 003 apply separately to each panel filter.	Minn. R. 7007.0800, subp. 2
EMISSION AND OPERATIONAL LIMITS	hdr
The Permittee shall use 2-ply panel filters that have a combined control efficiency as required by this permit. Single ply filters, even with a higher manufacturer specified efficiency, are not allowed for meeting this requirement.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Operate and maintain control equipment such that it achieves a overall control efficiency for Total Particulate Matter: greater than or equal to 97.1 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Operate and maintain control equipment such that it achieves a overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 97.1 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
If the Permittee replaces any existing panel filter, adds new panel filters, or modifies the panel filters listed in GP 003, such equipment is subject to all of the requirements of GP 003. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

<p>The Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is(are) in operation. The Permittee shall document periods of non-operation of the control equipment.</p>	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080</p>
<p>Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the O&M Plan. The Permittee shall keep copies of the O&M Plan available onsite for use by staff and MPCA staff.</p>	<p>Minn. R. 7007.0800, subp. 14</p>
<p>MONITORING AND RECORDKEEPING</p>	<p>hdr</p>
<p>Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of the panel filters, including, but not limited to, alignment, saturation, tears, and holes. The Permittee shall maintain a daily written record of filter inspections.</p>	<p>Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5</p>
<p>Periodic Inspections: The Permittee shall inspect the control equipment components as required by the manufacturing specifications. The Permittee shall maintain a written record of these inspections.</p>	<p>Minn. R. 7007.0800, subp. 14</p>
<p>Corrective Actions: If the filters or any of their components are found to need repair during the inspections, the Permittee shall follow the O&M Plan for the panel filter and take corrective action as soon as possible. The Permittee shall keep a record of the type and date of any corrective action taken for each filter, as soon as possible after completion of any corrective action.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, & 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-11

12/10/07

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 004 Indirect Heating Equipment

Associated Items: EU 012 Air Make Up Unit 50K Old N
 EU 013 Air Make Up Unit 50K Old S
 EU 015 Air Make Up 40K (Any other process units)
 EU 016 Air Make Up Unit 50K SW
 EU 017 Air Make Up Unit 50K W
 EU 018 Air Make Up Unit 50K N
 EU 019 Air Make Up Unit 50K SE
 EU 159 Air Make Up Unit
 EU 160 Air Make Up Unit
 EU 161 Air Make Up Unit

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input . Due to equipment design, PTE of each unit is 0.0072 lb/MMBtu.	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
Fuel Type: natural gas only, by design.	Minn. R. 7005.0100, subp. 35a
The Permittee shall keep records of fuel type and usage on a monthly basis.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-12

12/10/07

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 005 Wood Working Equipment**Associated Items:** CE 012 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 013 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 022 22 Shapers

EU 025 2 Shapers

EU 026 Sanding Table

EU 027 Chop Saw

EU 029 4 Table Saws

EU 032 Table Saw

EU 036 2 Castle Boring Machines

EU 037 Gannomat drill

EU 038 4 Table Saws

EU 039 Table Saw

EU 041 Table Saw

EU 045 2 Toe Notchers

EU 046 Vertical Panel Saw

EU 049 Veneer Sander

EU 050 Sanding Table

EU 051 3 Wide Belt Sanders

EU 052 Dovetail Machine

EU 056 Edge Sander

EU 062 1 CNC

EU 063 4 table saws

EU 064 1 boring machine

EU 065 1 miter chop saw

EU 066 1 chop saw

EU 067 4 widebelt planers

EU 068 3 Orbital planers

EU 069 1 Vacuum Hold-Down

EU 070 1 Radial arm saw

EU 071 1 Drill

EU 072 1 Chop Saw

EU 073 1 CNC

EU 074 1 CNC

EU 075 1 Balestrini Tenon

EU 076 1 Balestrini Cut-Off

EU 077 1 CNC Machine

EU 078 1 Miter Chop Saw

EU 079 1 J & P Machine

EU 080 1 Router

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

- Associated Items:**
- EU 081 Band Saw
 - EU 082 Chop Saw
 - EU 083 Unique
 - EU 084 2 Table Saw
 - EU 085 Wood Grinder/Trailer
 - EU 086 2 Shapers
 - EU 087 2 Table Saws
 - EU 088 2 Shapers
 - EU 089 2 Toe Notch Saws/2 CTD Saws
 - EU 090 2 Table Saws
 - EU 091 2 Straight Line Rip Saws
 - EU 092 3 Port Panel Saw HPL 22
 - EU 093 4 Panel Saws HPL 33
 - EU 094 4 Table Saws
 - EU 095 New Table Saw
 - EU 096 8 Ports - 4 Shapers
 - EU 097 Shaper
 - EU 098 Edgebander

What to do	Why to do it
Unless otherwise noted, the requirements of GP 005 apply separately to each wood working unit.	Minn. R. 7007.0800, subp. 2
EMISSION AND OPERATIONAL LIMITS	hdr
Total Particulate Matter: less than or equal to 0.007 grains/dry standard cubic foot . This limit applies separately to each wood working unit at the Facility and includes both the controlled and uncontrolled portion of the emissions.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Particulate Matter < 10 micron: less than or equal to 0.007 grains/dry standard cubic foot . This limit applies separately to each wood working unit at the Facility and includes both the controlled and uncontrolled portion of the emissions.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
The Permittee shall vent emissions from all wood working units at the Facility, including existing, new, or modified units, to control equipment meeting the requirements of GP 006.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
If the Permittee replaces any existing wood working units, adds new wood working units, or modifies the wood working units listed in GP 005, such equipment is subject to all of the requirements of GP 005 and GP 006. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; 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. This limit applies separately to each piece of wood working equipment listed in GP 005.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies separately to each piece of wood working equipment listed in GP 005.	Minn. R. 7011.0715, subp. 1(B)
Performance Test: due before end of each calendar 36 months starting 04/24/2004 to measure PM10 emissions. The Permittee shall test one of the two wood working filter systems to measure the controlled portion of the emissions. The Permittee shall not test the same filter system consecutively (i.e., must alternate filter systems for each test).	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

BUILDING REQUIREMENTS -- INTERNAL	hdr
The Permittee shall maintain Air Curtains to all entry ways leading to the wood working area from the other portions of the facility (i.e., internal entrances to the wood working area).	Minn. R. 7007.0800, subp. 14
The Air Curtains shall be maintained and operated according to the manufacturers' specifications.	Minn. R. 7007.0800, subp. 14
The Air Curtains shall be operated at all times that the wood working area is in use.	Minn. R. 7007.0800, subp. 14
Air Curtain Signage and Inspections: The Permittee shall post signs at each exit that has an air curtain that states that the air curtain must be operated at all times when any wood milling equipment is in operation. The signs shall be in at least both English and Spanish. The Permittee shall conduct inspections at least once each calendar week, while the wood milling equipment is in use, to determine if the air curtains are in operation as required by this permit. The Permittee shall maintain a written record of the inspections and any corrective action taken.	Minn. R. 7007.0800, subps. 4 & 5
BUILDING REQUIREMENTS -- EXTERNAL	hdr
All wood milling at the Facility shall be conducted in a building that meets the following requirements: 1. All air vented from the wood milling building shall be sent through air pollution control equipment meeting the requirements of GP 006; and 2. Each door and window in the wood milling building leading to the outside air shall either: a) be kept closed when any wood milling equipment is in operation (Option A); or b) have an air curtain that meets all the requirements listed in this Table A under BUILDING REQUIRMENTS -- INTERNAL (Option B).	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0060, subp. 5
Option A - Signage and Inspection of External Building Openings: The Permittee shall post signs on all non-alarmed doors and windows leading to the outside from the wood milling building that state that the doors and windows must remain closed while any wood milling equipment is in use. The signs shall be in at least both English and Spanish. The Permittee shall conduct inspections at least once each calendar week, while the wood milling equipment is in use, to determine if the doors and windows are closed as required by this permit. The Permittee shall maintain a written record of the inspections and any corrective action taken. The applicable signage for doors and windows using Option B (air curtains) are listed under BUILDING REQUIRMENTS -- INTERNAL.	Minn. R. 7007.0800, subps. 4 & 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 006 Fabric Filter Requirements

Associated Items: CE 012 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 013 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 038 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The requirements of GP 006 apply separately to each fabric filter.	Minn. R. 7007.0800, subp. 2
EMISSION AND OPERATIONAL LIMITS	hdr
Operate and maintain control equipment such that it achieves a control efficiency (= 100% capture efficiency x removal efficiency of the fabric filter) for Particulate Matter < 10 micron: greater than or equal to 99.0 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0065, subps. 1(A) & (B)
Operate and maintain control equipment such that it achieves a control efficiency (= 100% capture efficiency x removal efficiency of the fabric filter) for Total Particulate Matter: greater than or equal to 99.0 percent control efficiency	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0065, subps. 1(A) & (B)
Pressure Drop: greater than or equal to 2.0 inches of water column and less than or equal to 4.0 inches of water column , unless a new range is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If a new range is required to be set, it will be based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0080
If the Permittee replaces any existing fabric filter, adds new fabric filters, or modifies the fabric filters listed in GP 006, such equipment is subject to all of the requirements of GP 006. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
The control equipment is considered listed control equipment under Minn. R. 7011.0060 - 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0075, subp. 1
Maintenance of Control Equipment. The Permittee shall maintain the control equipment as specified in Minn. R. 7011.0075, subps. 2(A) - (G) and maintain records of maintenance activities and corrective actions as specified in Minn. R. 7011.0075, subps. 2(H) & (I).	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7011.0075, subp. 2
MONITORING AND RECORDKEEPING	hdr
Pressure Drop Monitoring: Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities, the Permittee shall continuously monitor the pressure drop across each fabric filter when any of the units controlled by the fabric filter are in operation. Monitoring data shall be used in assessing the control device operation as required by 40 CFR Section 64.7(c).	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR Section 64.7(c); Minn. R. 7017.0200; Minn. R. 7011.0075, subp. 5(b)
Daily Inspections. The Permittee shall read and record the pressure drop across each fabric filter at least once every 24 hours. If the pressure drop is outside the specified pressure drop range limit, this shall be considered a deviation that must be reported in the Semiannual Deviations Report listed in Table B of this permit.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7017.0200; Minn. R. 7011.0075, subp. 5(b)
Weekly Inspections: At least once each calendar week, the Permittee shall inspect each fabric filter stack for any visible emissions during daylight hours.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7017.0200
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit. Recorded values outside the pressure drop range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

<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"> - Visible emissions are observed; - 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, eliminate visible emissions, 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 record of the type and date of any corrective action taken for each filter.</p>	<p>40 CFR Section 64.7(d); Minn. R. 7017.0200</p>
<p>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, including maintaining necessary parts for routine repairs of the monitoring equipment, when the monitored fabric filter is in operation.</p>	<p>40 CFR Section 64.7(b); Minn. R. 7017.0200</p>
<p>The Permittee shall calibrate each pressure gauge at least once every calendar year and shall maintain a written record of any action resulting from the calibration.</p>	<p>40 CFR Section 64.3; Minn. R. 7017.0200</p>
<p>Documentation of Need for Improved Monitoring. If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an exceedance (as defined in 40 CFR Section 64.1) while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.</p>	<p>40 CFR Section 64.7(e); Minn. R. 7017.0200</p>
<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <ol style="list-style-type: none"> 1. Summary information on the number, duration and cause of exceedances (as defined in 40 CFR Section 64.1), as applicable, and the corrective actions taken; and 2. Summary information on the number, duration and cause for monitor downtime incidents. 	<p>40 CFR Section 64.9(a)(2); Minn. R. 7017.0200</p>
<p>The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.</p>	<p>40 CFR Section 64.9(b); Minn. R. 7017.0200</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-17

12/10/07

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Subject Item: GP 007 Wood Working Equipment**Associated Items:** CE 038 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 118 Saw 1

EU 119 Saw 2

EU 120 Saw 3

EU 121 Shapper

EU 122 Vertical Saw

EU 123 Pistorius

EU 124 Time Saver

EU 125 Weekes CNC

EU 126 Saw 4

EU 127 Saw 5

EU 128 Pocket Cutter

EU 129 Chop Saw

EU 130 Mitter Saw

EU 131 Edge Sander

EU 132 Shapper

EU 133 Saw 6 (BTW Acc&DB)

EU 134 Saw 7

EU 135 Saw 8 (rep/dep)

EU 136 Router Table 1 (hoods)

EU 137 Router Table 2 (hoods)

EU 138 Router Table 3 (hoods)

EU 139 Dewalt Mitter (hoods)

EU 140 Holzma Panel Saw

EU 141 Edge Bander

EU 142 CNC (new)

EU 143 Panel Sander

EU 144 Time Saver

EU 145 Slip Con

EU 146 Automatic Boring

EU 147 Boring

EU 148 Boring

EU 149 Drill

EU 150 Saw

EU 151 Chop Saw w/ Tiger

EU 152 Band Saw

EU 153 Chop Saw

EU 154 Table Saw

EU 155 Blum 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

- Associated Items:** EU 156 Blum 2
 EU 157 Blum 3
 EU 158 Blum 4

What to do	Why to do it
Unless otherwise noted, the requirements of GP 007 apply separately to each wood working unit.	Minn. R. 7007.0800, subp. 2
EMISSION AND OPERATIONAL LIMITS	hdr
Total Particulate Matter: less than or equal to 0.02 grains/dry standard cubic foot . This limit applies separately to each wood working unit at the Facility and includes both the controlled and uncontrolled portion of the emissions.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.02 grains/dry standard cubic foot . This limit applies separately to each wood working unit at the Facility and includes both the controlled and uncontrolled portion of the emissions.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall vent emissions from all wood working units at the Facility, including existing, new, or modified units, to control equipment meeting the requirements of GP 006.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
If the Permittee replaces any existing wood working units, adds new wood working units, or modifies the wood working units listed in GP 007, such equipment is subject to all of the requirements of GP 007 and GP 006. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; 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. This limit applies separately to each piece of wood working equipment listed in GP 007.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies separately to each piece of wood working equipment listed in GP 007.	Minn. R. 7011.0715, subp. 1(B)
Initial Performance Test: due 180 days after Initial Startup to measure PM10 emissions.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7017.2020, subp. 1
BUILDING REQUIREMENTS -- INTERNAL	hdr
The Permittee shall maintain Air Curtains to all entry ways leading to the wood working area from the other portions of the facility (i.e., internal entrances to the wood working area).	Minn. R. 7007.0800, subp. 14
The Air Curtains shall be maintained and operated according to the manufacturers' specifications.	Minn. R. 7007.0800, subp. 14
The Air Curtains shall be operated at all times that the wood working area is in use.	Minn. R. 7007.0800, subp. 14
Air Curtain Signage and Inspections: The Permittee shall post signs at each exit that has an air curtain that states that the air curtain must be operated at all times when any wood milling equipment is in operation. The signs shall be in at least both English and Spanish. The Permittee shall conduct inspections at least once each calendar week, while the wood milling equipment is in use, to determine if the air curtains are in operation as required by this permit. The Permittee shall maintain a written record of the inspections and any corrective action taken.	Minn. R. 7007.0800, subps. 4 & 5
BUILDING REQUIREMENTS -- EXTERNAL	hdr
All wood milling at the Facility shall be conducted in a building that meets the following requirements: 1. All air vented from the wood milling building shall be sent through air pollution control equipment meeting the requirements of GP 006; and 2. Each door and window in the wood milling building leading to the outside air shall either: a) be kept closed when any wood milling equipment is in operation (Option A); or b) have an air curtain that meets all the requirements listed in this Table A under BUILDING REQUIRMENTS - INTERNAL (Option B).	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0060, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

Option A - Signage and Inspection of External Building Openings: The Permittee shall post signs on all non-alarmed doors and windows leading to the outside from the wood milling building that state that the doors and windows must remain closed while any wood milling equipment is in use. The signs shall be in at least both English and Spanish.

The Permittee shall conduct inspections at least once each calendar week, while the wood milling equipment is in use, to determine if the doors and windows are closed as required by this permit. The Permittee shall maintain a written record of the inspections and any corrective action taken.

The applicable signage for doors and windows using Option B (air curtains) are listed under BUILDING REQUIREMENTS -- INTERNAL.

Minn. R. 7007.0800, subps. 4 & 5

TABLE B: SUBMITTALS

B-1 12/10/07

Facility Name: Medallion Cabinetry Inc
Permit Number: 01900022 - 005

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 12/10/07

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test for PM10 emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on 12 month, 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP007

TABLE B: RECURRENT SUBMITTALS

B-3 12/10/07

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022 - 005

What to send	When to send	Portion of Facility Affected
Compliance Status Report	<p>due 30 days after end of each calendar half-year starting 09/28/1999. The Permittee shall submit a semiannual Continuous Compliance Report. At a minimum, the report shall include:</p> <ol style="list-style-type: none"> 1. Results of averaging calculation of VHAP from finishing operation for each month within that semiannual period using above equation "E"; 2. A compliance certification stating the "E" value was always less than 0.8, compliant contact adhesives have been used on each operating day, compliant strippable spray booth coatings have been used each day, and the WPIP being followed. <p>The certification must be signed by a responsible official of the facility. If the Permittee is out of compliance with any of the requirements in the NESHAP, the Permittee shall state the measures taken to bring them back into compliance.</p>	GP001
Semiannual Deviations Report	<p>due 30 days after end of each calendar half-year starting 04/16/2007. 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.</p>	Total Facility
Annual Report	<p>due 30 days after end of each calendar year starting 04/16/2007. The Permittee shall submit an annual report by January 30 each year that describes the changes made at the facility during the previous calendar year using the latest MPCA application forms (GI-04 and GI-05 series). The report shall document any equipment that was modified, added, replaced, or removed. It shall also include the defined accounting periods for the next calendar year. The report shall be submitted with the annual Compliance Certification listed in Table B.</p>	Total Facility
Compliance Certification	<p>due 31 days after end of each calendar year starting 04/16/2007 (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.</p>	Total Facility

APPENDIX I
Facility Name: Medallion Cabinetry Inc
Permit Number: 01900022-005

Work Practice Implementation Plan

At a minimum, a work practice implementation plan (WPIP) shall contain the following:

A. Operator training course - the Permittee shall train all personnel involved in finishing, gluing, cleaning, and washoff operations, use of manufacturing equipment, or implementation of the requirements of the MACT standard. Those personnel hired before the compliance date shall be trained within six months of the compliance date and new personnel shall be trained prior to performing their job duties. At a minimum all personnel shall receive annual refresher training. The Permittee shall maintain a copy of the program with the WPIP, each with minimum of following information:

- 1) a list of all current personnel by name and job description;
- 2) outline of all training materials;
- 3) lesson plans which shall include, but not limited to appropriate application techniques, cleaning and washoff procedures, equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and
- 4) documentation of successful completion of training.

B. Inspection and maintenance plan - A written leak inspection and maintenance plan shall be followed. At a minimum this plan shall specify the following:

- 1) a visual inspection frequency of at least once per month for all equipment used to transfer or apply coating, adhesives, or organic solvents;
- 2) an inspection schedule;
- 3) methods for documenting the date and results of each inspection and any repairs that were made; and
- 4) the timeframe between identifying the leak and making the repair. A first attempt at repair and final repairs shall be made within 5 and 15 calendar days after the leak is detected respectively. If new equipment must be purchased, the leak must be repaired within three months of discovery.

C. Cleaning and washoff solvent accounting system - An accounting system shall be maintained to record the following:

- 1) the quantities and types of organic solvent used/month for cleaning and washoff operations;
- 2) the number of pieces washed off and the reason for the washoff; and
- 3) the quantity of spent solvent from each washoff and cleaning operation and whether it is recycled onsite or disposed offsite.

D. Chemical composition of cleaning and washoff solvents - The facility is prohibited from using cleaning or washoff solvents containing the chemicals listed in Table 4 of 40 CFR pt. 63, subp. JJ, in concentrations subject to MSDS reporting as required by OSHA.

E. Spray booth cleaning - VOC content of cleaning spray booth components shall not exceed 8 percent by weight. This limit does not apply to cleaning conveyors, continuous coaters and total enclosures, or metal filters. If the Permittee is replacing the spray booth coating or other protective material used to cover the booth, no more than 1 gallon of organic solvent per booth to prepare the surface of the booth prior to applying the booth coating.

F. Storage requirements - use normally closed containers for storing finishing, gluing, cleaning, and washoff materials.

APPENDIX I

Facility Name: Medallion Cabinetry Inc

Permit Number: 01900022-005

- G. Application equipment requirements - A WPIP shall specify when conventional air spray guns are allowed to be used in application of finishing materials as outlined in 40 CFR Section 63.803(h).
- H. Line Cleaning - pump or drain all organic solvent used for line cleaning into a normally closed containers.
- I. Gun cleaning - collect all organic solvent used to clean spray guns into a normally closed container.
- J. Washoff operations - use normally closed tanks for washoff and minimizing dripping by tilting or rotating the part to drain as much solvent as possible.
- K. Formulation assessment plan (FAP) for finishing operations - prepare and maintain with the WPIP a formulation assessment plan only if the following chemicals are being used in finishing operations: dimethyl formamide, formaldehyde, methylene chloride, 2-nitropropane, isophorone, styrene monomer, phenol, diethanolamine, 2-methoxyethanol, 2-ethoxyethyl acetate. A FAP shall be done in accordance with 40 CFR Section 63.803(l).

APPENDIX II
Facility Name: Medallion Cabinetry Inc
Permit Number: 01900022-005

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.	Rule Description of the Activity	General Applicable Requirement
7007.1300, subp. 3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. <i>Medallion's current total capacity is 1.37 MMBtu/hr.</i>	Minn. R. 7011.0515

APPENDIX III
Facility Name: Medallion Cabinetry Inc
Permit Number: 01900022-005

Spray Gun Capacities and Solids Content Limits

Any and all individual spray guns used in a spray booth are limited to the capacity given in the table below for the specified booth. Each emission unit listed below has two spray guns. Each spray booth is also limited to coatings meeting the maximum solids content given in the table below. For each coating used in EU 099, EU 100, EU 105, EU 106, EU 111, and EU 112, the Permittee must keep records demonstrating the supply for these booths meets the solids application limits listed below.

Emission Unit (EU)	Individual Gun Capacity Limit (gallons/hour)	Maximum Solids Content, as applied (pounds/gallon)
099	≤ 1.60 lb solids applied/hr	
100	≤ 11.02 lb solids applied/hr	
101	2.19	2.92
102	2.51	6.31
103	0.16	4.56
104	5.56	6.80
105	≤ 1.60 lb solids applied/hr	
106	≤ 11.02 lb solids applied/hr	
107	2.19	2.92
108	2.51	6.31
109	0.16	4.56
110	5.56	6.78
111	≤ 1.60 lb solids applied/hr	
112	≤ 11.02 lb solids applied/hr	
113	2.19	2.92
114	2.51	6.31
115	0.16	4.56
116	5.56	6.80
117	5.56	6.78

APPENDIX IV
Facility Name: Medallion Cabinetry Inc
Permit Number: 01900022-005

PM₁₀ Stack Parameters

Stack ID	DELTA ID	Description	Elevation (m)	UTM Coordinates		PM ₁₀ Emission Rate (g/s)		Stack Height (m)	Exit Temp. (K)	Exit Velocity (m/s)	Exit Diameter (m)
				X (m)	Y (m)	Short-Term	Long-Term				
SV018	EU022-37	Carter Day Baghouse	295.0	437532.5	4965351.0	3.63E-01	2.57E-01	11.58	294.3	21.61	1.16
SV019	EU020, 38-56	Pneumafil Baghouse	295.0	437546.2	4965361.0	4.31E-01	3.05E-01	11.58	294.3	18.96	1.34
SV030	EU099	Booth 1 NGR	295.0	437425.1	4965338.5	1.26E-03	8.92E-04	9.75	294.26	13.87	0.86
SV031	EU100	Booth 2 Stain	295.0	437435.1	4965338.0	1.01E-02	7.13E-03	9.75	294.26	13.87	0.86
SV032	EU101	Booth 3 Washcoat	295.0	437458.7	4965337.5	1.13E-02	8.03E-03	9.75	294.26	13.87	0.86
SV033	EU102	Booth 4 Sealer	295.0	437443.4	4965337.5	2.90E-02	2.05E-02	9.75	294.26	13.87	0.86
SV034	EU013	Booth 5 Glaze	295.0	437443.4	4965345.0	1.26E-03	8.92E-04	9.75	294.26	13.87	0.86
SV035	EU104	Booth 6 To coat	295.0	437452.1	4965354.0	6.93E-02	4.90E-02	9.75	294.26	13.87	0.86
SV036	EU105	Booth 7 NGR	295.0	437421.8	4965319.0	1.26E-03	8.92E-04	9.75	294.26	13.87	0.86
SV037	EU106	Booth 8 Stain	295.0	437430	4965319.0	1.01E-02	7.13E-03	9.75	294.26	13.87	0.86
SV038	EU107	Booth 9 Washcoat	295.0	437461.7	4965318.0	1.13E-02	8.03E-03	9.75	294.26	12.89	0.86
SV039	EU108	Booth 10 Sealer	295.0	437461.4	4965321.0	2.90E-02	2.05E-02	9.75	294.26	13.87	0.86
SV040	EU109	Booth 11 Glaze	295.0	437425.1	4965329.0	1.26E-03	8.92E-04	9.75	294.26	13.87	0.86
SV041	EU110	Booth 12 Topcoat	295.0	437448.9	4965328.5	6.93E-02	4.90E-02	9.75	294.26	13.87	0.86
SV042	EU111	Booth 13 NGR	295.0	437423.4	4965312.5	1.26E-03	8.92E-04	9.75	294.26	13.87	0.86
SV043	EU112	Booth 14 Stain	295.0	437432.7	4965312.0	1.01E-02	7.13E-03	9.75	294.26	16.90	0.86
SV044	EU113	Booth 15 Washcoat	295.0	437446.7	4965303.5	1.13E-02	8.03E-03	9.75	294.26	12.89	0.86
SV045	EU114	Booth 16 Sealer	295.0	437425.4	4965304.0	2.90E+00	2.05E-02	9.75	294.26	13.87	0.86
SV046	EU115	Booth 17 Glaze	295.0	437425.4	4965297.5	1.26E-03	8.92E-04	9.75	294.26	13.87	0.86
SV047	EU116	Booth 18 Topcoat	295.0	437425.4	4965291.0	6.93E-02	4.90E-02	9.75	294.26	13.87	0.86
SV048	EU117	Booth 19 Specialty	295.0	437484	4965353.5	6.93E-02	4.90E-02	9.75	294.26	16.9	0.86
SV049	EU118-158	Baghouse	295.0	437378.3	4965344.0	4.74E-01	3.35E-01	6.71	294.26	11.10	1.09

PM₁₀ Fugitive Parameters

Source ID	Description	NAD83 UTM Easting (meters)	NAD83 UTM Northing (meters)	Base Elevation (m)	PM ₁₀ Emission Rate (g/s)	Release Height (m)	Side Length (m)	Side Length (m)
MCWRP001	Paved Road	437373.7	4965315.5	294.5	2.50E-03	1.0	17.2	0.64
MCWRP002	Paved Road	437582.1	4965432.5	295.1	3.70E-03	1.0	17.2	0.64
MCWRP003	Paved Road	437602.0	4965280.5	293.5	9.00E-04	1.0	9.58	0.64
MCWRP004	Paved Road	437644.6	4965330.0	294.0	1.08E-02	3.0	9.58	1.40

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 01900022-005

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

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 2434)
180 Industrial Blvd. Waconia, MN 55387	180 Industrial Blvd Waconia, Carver County
Contact: Craig Fast	Phone: (952) 442-6920

1.2 Description of the Permit Action

Medallion Cabinetry is a manufacturer of finished kitchen cabinets. The main processes that generate emissions are wood working, surface coating, and combustion of natural gas. The coating operations emit Volatile Organic Compounds (VOC), several Hazardous Air Pollutants (HAP), and particulate matter and Particulate Matter less than 10 microns (PM/PM₁₀). They have wall filters that control PM/PM₁₀. The wood working operations emit PM/PM₁₀ and are controlled with fabric filter systems.

1.3 Description of the Activities Allowed by this Permit Action

The proposed modification is a major amendment under Minnesota Rules since existing Title I permit conditions will be amended. The facility will remain a synthetic minor Prevention of Significant Deterioration (PSD) source. In this permit action, all existing surface coating operations will be removed and nineteen new spray booths will be added. The spray booths will be controlled by wall filters. Additional wood working operations will also be constructed. The new wood working operations will be controlled by a fabric filter. The new wood working building will be kept under negative pressure with air curtains at each door. The building qualifies as a total enclosure. Three new air make-up units are also proposed. The air make-up units will combust natural gas.

1.4 Facility Emissions

Table 1. Title I Emissions Increase Summary (tpy)

Pollutant	Uncontrolled Emissions Increase from the Modification	Limited Emissions Increase from the Modification	PSD/112(g) Significant Thresholds for minor sources	NSR/112(g) Review Required?
PM	1,708.9	-9.1	250	No
PM ₁₀	1,708.9	-9.1	250	No
NO _x	7.1	6.9	250	No
SO ₂	0.04	0.04	250	No
CO	6.0	5.8	250	No
Ozone (VOC)*	2,397.3	0.4	250	No
Lead	0	0	250	No
Total HAPs	620.5	0.1	10/25**	No

* VOCs from surface coating operations will remain limited at 240 ton/yr. All existing surface coating equipment will be removed and 19 new booths will be added.

** Surface coating operations are regulated under 40 CFR § 63, subp. JJ. Therefore 112(g) review is not applicable.

Table 2. Total Facility Potential to Emit Summary (tpy)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	Single HAP	All HAPs
Total Facility Limited Potential Emissions	43.7	43.7	0.1	23.3	19.5	241.3	240.4	240.4
Total Facility Actual Emissions (2005)	15.4	15.4	.01	1.9	1.6	233.7	HAPs not reported in emission inventory	

Table 3. Facility Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		VOC, PM/PM10	
Part 70 Permit Program	VOC/HAP		
Part 63 NESHAP	X		

2. Regulatory and/or Statutory Basis

New Source Review

The facility is a synthetic minor source under New Source Review. The facility has a surface coating VOC limit of 240 ton/yr. The equipment listed under the VOC limit is updated in this permit amendment.

Part 70 Permit Program

The facility will remain a major source under the Part 70 Permit Program.

New Source Performance Standards (NSPS)

There are no NSPS applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major source of HAPs. The facility's coating operations are subject to 40 CFR pt. 63, subp. JJ. All existing surface coating will be replaced with nineteen coating booths. No changes to the existing NESHAP permit terms are proposed except to update the equipment covered by the NESHAP requirements.

The existing coating operations were considered "new" emission units under the NESHAP. Therefore, the applicable limits do not change after removing all existing surface coating equipment and installing new surface coating equipment.

Compliance Assurance Monitoring (CAM)

The new woodworking operations have uncontrolled particulate emissions greater than 100 ton/yr. The woodworking equipment is subject to the state Industrial Process Equipment Rule and has particulate control equipment. Therefore, the woodworking operations are subject to CAM (40 CFR pt. 64). The new woodworking operations have post-control emissions less than 100 ton/yr, and therefore are considered "other" rather than "large" emission units under CAM. The surface coating booths uncontrolled PM emissions are less than 100 ton/yr. The existing woodworking operation fabric filters are also subject to CAM. The CAM analysis completed for the facility's Title V renewal (Permit No. 01900022-004) was relied upon for the new woodworking operation CAM requirements. These CAM requirements are included as Attachment 1.

Minnesota State Rules

The new woodworking and surface coating equipment are subject to the following Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment.

The three new make-up air units are subject to Minn. R. 7011.0515 Standards of Performance for New Indirect Heating Equipment.

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

EU/GP/S V	Applicable Regulations	Comments:
TF	40 CFR pt 50; Minn. Stat. 116.07, subps. 4a & 9; Minn. R. 7007.0800, subps 1,2, & 4; Minn. R. 7009.0010-7009.0080	Modeling for NAAQS for Title V. The permit includes the 6200 hour/year operation limit that was used in the modeling, (updated from a limit of 8000 hour/year based on the most recent modeling.) The permit includes the standard requirements for facilities that have modeled compliance with the NAAQS/MAAQS. The most recently modeled parameters are included as an appendix to the permit and the Permittee must receive written approval prior to making changes to the parameters.
GP 001	40 CFR pt. 63, subp. JJ	National Emission Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations. No changes to the existing permit terms were required in this permit amendment. The existing operations were considered “new”. The applicable emission units within GP 001 were updated.
GP 002	40 CFR § 52.21	Prevention of Significant Deterioration. Existing synthetic minor permit limit of 240 ton VOC/yr was not unchanged. The equipment covered by GP 002 was updated. Existing requirements to maintain a total enclosure by keeping doors and windows closed were unchanged. The equipment covered by GP 002 was updated.
GP 003	40 CFR § 52.21; Minn. Stat. 116.07 subps. 4a & 9; Minn. R. 7007.0100 subps. 7A, 7L & 7M; Minn. R. 7007.0800 subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	PSD and NAAQS. Requirement to use 2-ply filters for new surface coating operations. The overall control efficiency specified in this permit reflects the use of 2-ply filters. Based on dispersion modeling, this efficiency must be met in order to meet the NAAQS. The control efficiency was updated from 97.0% to 97.1% based on the modeled emission rates assumptions. The applicable control equipment within GP 003 was updated.
GP 004	Minn. R. 7011.0515	Standards of Performance for Indirect Heating Equipment. Fuel limited to natural gas only. The direct heating equipment rule might seem to apply to the air make up units, since the combustion gases are vented directly into the building. However, none of these units are used for “processing a material”; the other criteria necessary to be direct heating equipment (e.g., process oven or dryer). Since the intent of the indirect heating rule is to limit emissions from combustion, this rule applies. The permit contains limits for units constructed after 1977 and that are located inside Minneapolis/St. Paul area; the new units and the site have ≤ 250 MMBtu/hr capacity.
GP 007	40 CFR § 52.21; Minn. Stat. 116.07 subps. 4a & 9; Minn. R. 7007.0100 subps. 7A, 7L & 7M; Minn. R. 7007.0800 subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	PSD and NAAQS: Emissions limits are included for the new wood working units that reflect the operation of the control equipment, and limit the PM/PM10 PTE to avoid major source classification under PSD. The limits also meet the NAAQS. The operation of air curtains is required to maintain the total enclosures of both the new wood working area of the facility.

3. Technical Information

The following additional information is attached to the TSD:

- Compliance Assurance Monitoring Plan – CAM Plan for SV 049/CE 038 is included in Attachment 1.

3.1 Emissions Increase Analysis

A summary of the PTE of the Facility as well as detailed spreadsheets and supporting information prepared by the Permittee for the new equipment is saved in Delta. The calculations for the new surface coating emission units are based on mass balance and the woodworking emission calculations are based on manufacturer performance guarantees. The maximum gun capacity was varied by the coating used in the surface coating calculations. For six of the booths, coating specific gun capacities multiplied by the coating solids content were lower than the worst case gun capacity multiplied by the worst case solids content. Potential controlled hourly emissions were based on the Permittee's calculations for the new equipment. However, total facility emissions were calculated by MPCA after including the 6200 hour per year operating restriction proposed by the Permittee in the air quality analysis.

3.2 Spray Booth and Woodworking Capture Efficiency

The permit continues to require that doors and windows remain closed during painting operations. Air curtains are also required at the doors leading to the existing and new woodworking areas to ensure total enclosure.

3.3 Dispersion Modeling

Air dispersion modeling was updated for the new equipment. The 6200 hour/yr operating restriction assumed in the modeling was included as an operating limit in the Total Facility permit terms. This modeling was analyzed and verified by Chris Nelson.

3.4 Periodic Monitoring

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

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

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

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

Table 5. Periodic Monitoring

EU/GP	Requirement	Additional Monitoring	Discussion
Total Facility	Production Operating Hours ≤ 6200 , 12 accounting period sum (NAAQS)	Accounting period records and calculation of hours operated	The Permittee can use existing records – production schedules, payroll, time sheets, work schedules, etc. – to determine the hours operated in the accounting period. Actual hours of operation have historically been 2 shifts. If any piece of equipment is operating, that hour is considered an operating hour.
Spray Booths: GP 002	VOC ≤ 240 tons per year, on a 12 month rolling basis (limit to avoid NSR)	Recordkeeping: Daily records of coating usage; On-going MSDS records of coating contents; Monthly calculations of emissions.	Records can be generated on a daily basis since all the coating materials are dispensed from the central paint stores. This area will be using a combination of daily manual logs and purchase records (for smaller quantity items). <u>VOC Content</u> The Permittee requested a limit of 245 tpy. The MPCA denied this request given the type of records that are being used to calculate actual emissions. The VOC limit will remain at 240 tpy. <u>Waste Credit</u> Credit can be taken for waste materials collected and shipped off-site (dispensed - waste = emissions). Since this is done at most monthly, calculating emissions more frequently than monthly would result in large spikes (while waste is accumulating) and dips (when waste is shipped) – resulting in possible paperwork violations and days with negative emissions. For these reasons, 12 month rolling limits are reasonable for this Facility. <u>Accounting Periods</u> The Permittee currently uses an accounting period tracking system which is based on weeks rather than calendar months. There are always 12 accounting periods per year, but the number of weeks in each period is not always the same each year. This is determined prior to the start of the year and is used throughout the year for all business functions. Since this varies from year to year, the permit requires the Permittee to include the defined accounting periods for the following year in each annual report.
	Solids Content and Solids Applied \leq limits specified in Appendix III of permit (NAAQS)	Daily records of solids content of coatings and maximum gun capacity for each coating, as applied	These are the same records that can be used for the VOC cap calculations.
	PM: $\leq X$ gr/dscf, variable, for each booth Opacity: $\leq 20\%$	None	Other PM limits at GP003 and GP002 (and monitoring) ensure that this applicable requirement is being met. These other operational limits give these booths PTEs of roughly 1% of the allowable by rule.
Panel Filters (non-CAM): GP 003	PM/PM ₁₀ $\geq 97.1\%$ overall control (to avoid NSR & NAAQS)	Recordkeeping, O&M, inspections	Monitoring based on the Minnesota Performance Standard for Control Equipment is adequate to have a reasonable assurance of compliance (daily and periodic inspections, corrective actions, and O&M).
Indirect Heating Units: GP 004	PM ≤ 0.4 lb/MMBtu Opacity $\leq 20\%$ with exceptions (Minn. R. 7011.0515)	Recordkeeping: Monthly Fuel records	All units use natural gas; therefore, the likelihood of violating either of the emission limits is very small. The Permittee can demonstrate that these units will continue to operate such that emissions are well below the emission limits by only burning natural gas. Design based PTE for each unit, using AP-42, is 0.0072 compared to the rule limit of 0.4 lb/MMBtu.

EU/GP	Requirement	Additional Monitoring	Discussion
Fabric Filter: CE 038 under GP 006	PM/PM ₁₀ ≥ 99.0% overall control (to avoid NSR + 7011.0065)	Pressure drop monitoring, weekly VE checks, recordkeeping, O&M, inspections (CAM)	Most of the monitoring is required by the Minnesota Performance Standard for Control Equipment and yields a reasonable assurance of compliance. In addition, the Permittee has proposed to do weekly VE checks. CAM requirements have been added in terms of monitoring equipment, recordkeeping, and reporting. The pressure drop range is a limit from an applicable requirement (control equipment rule), so operating outside that range is a deviation.
Wood working equipment: GP 007	PM/PM ₁₀ ≤ 0.02 gr/dscf (to avoid NSR and NAAQS)	See GP 006 for control equipment monitoring; performance testing	Initial performance testing is required with a stack test frequency plan required to propose the frequency for additional testing. The initial test is required 6 months after the startup of the affected emission units.
	PM/PM ₁₀ : All units required to be controlled by fabric filters in GP 006 (limits to avoid NSR)	See GP 006 for monitoring	
	PM: ≤ X gr/dscf, variable, for each unit Opacity: ≤ 20 % (Minn. R. 7011.0715)	None	Other PM limits at GP006 and GP007 ensure that this applicable requirement is being met (title I limit is lower than the IPER limit). These other operational limits give PTEs less than 30% of the allowable by rule.

3.5 Insignificant Activities

Medallion Cabinetry has operations which are classified as insignificant activities. These are listed in Appendix II to the permit. There are no new insignificant activities added with this permit action.

3.6 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.

The permit also lists requirements at groups that actually apply to each member of the group individually. This was done in order to shorten the permit.

3.7 Comments Received

Public Notice Period: October 26, 2007 – November 26, 2007

EPA 45-day Review Period: October 26, 2007 – December 9, 2007

No comments were received during the review periods.

4. Conclusion

Based on the information provided by Medallion Cabinetry, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 01900022-005, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Trevor Shearen (permit writer/engineer)
Stephanie Kuphal (MPCA contractor/permit writer)
Chris Nelson (modeling)
Christian Norman (enforcement)
Shanda Fisher (stack testing)
Peggy Bartz (peer reviewer)

AQ File No. 908A; DQ 1491

Attachments: 1. CAM Plan for SV 049/CE 038
2. PTE Summary and Emissions Increase Calculation Spreadsheets (in Delta)
3. Facility Description and CD-01 forms (in Delta)

Attachment 1

CAM Plan for SV049/CE038New Wood Working Operations CAM Plan

The following text was copied directly from Medallion Cabinetry’s Title V Renewal Application CAM Plan, as prepared by Medallion Cabinetry. The following information was submitted for the existing wood working emission units and here is applied to the new wood working emission units.

Table TSD 3-1

Emission Units Subject to CAM Requirements

Emission Unit ID	Stack/Vent ID	Emission Unit	Control Equipment	Applicable Pollutant	Pre-Control Emissions
EU 118- EU 158	SV 049	New wood working emission units	CE 038 Baghouse	PM	377.14 tpy

The Waconia cabinet manufacturing facility uses baghouses, or fabric filter technology, to collect particulate matter generated from wood working area operations. Dust laden air is drawn through the fabric filters to capture particles entrained in the air. The fabric filter provides filtrations as well as acting as a support for the formation and accumulation of a filter cake that provides for very high efficiency filtration.

As the particulate matter accumulates on the filter media and the filter cake is formed, the pressure drop across the fabric filter increases. Although the filter cake increases collection efficiency, it also restricts the airflow and increases energy requirements. For proper continuous operation of the fabric filter, the filter media must be periodically cleaned or replaced. Because these emission units operate at or near ambient temperatures, monitoring airflow temperature is not necessary.

Table TSD 3-2

Monitoring Approach

I. Indicators	Indicator No. 1 Differential Pressure	Indicator No. 2 Inspection/Maintenance
A. Measurement Approach	CE038 will use a magna helix pressure drop gauge to continuously monitor operations.	Equipment performance will be monitored by observing opacity and differential pressure.
II. Indicator Range	Visible Emissions	Routine Inspections are performed by qualified personnel
III Performance Criteria	If the differential pressure is out of the specified operating range, corrective action will be taken according to the manufacturer’s specifications and the equipment Operation and Maintenance Manual.	If inspections reveal repair work is needed, maintenance activities are initiated.
A. Representativeness	Differential pressure gauges were installed at representative locations.	NA
B. Monitoring Frequency	Differential pressure is observed once per day.	Routine observations and maintenance.
C. QA/QC Practices	Annual calibration of differential pressure gauges.	Qualified personnel perform inspections/maintenance.
D. Data Collection	Differential pressure readings will be recorded daily by an automatic recorder for 15 minutes daily in units of inches of water column.	Maintain records of all maintenance activities performed.
E. Averaging Period	NA	NA

The first indicator used to monitor baghouse operation is Differential Pressure (DP). A DP gauge is used for measurement at each baghouse. Routine weekly observations of DP are performed and recorded by plant personnel to monitor bag performance. As particulate matter accumulates on the filter media and the filter cake is formed, DP across the fabric filter increases. An increase in DP that exceeds the specified indicator range may signal plugging. Maintenance activities may also cause brief excursions from the DP indicator range. Excursions from the DP range will be documented and reported, and corrective action will be initiated if necessary.

The second indicator used to monitor baghouse operation is a visible emissions check. Weekly visible emission checks will be performed by plant personnel. Additional visible emission checks will be performed in the event of an excursion from the DP indicator range. If visible emissions are present, this indicates an excursion and corrective action will be initiated. All excursions will be documented and reported.

Compliance testing is not required to establish the pressure drop range required to avoid potential emission exceedances. DP monitoring as specified by the manufacturer is adequate to have a reasonable assurance of compliance and to ensure that the baghouse continues to operate properly and achieve the desired control efficiency.