



NRO-017-15

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193-1453
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

David K. Paylor
Director

Thomas A. Faha
Regional Director

January 23, 2015

Mr. Nathan Martineau
Director of Manufacturing
Masco Cabinetry, LLC.
P.O. Box 1387
Culpeper, Virginia 22701

Location: Culpeper County
Registration No: 40728
County-Plant No: 047-00032

Dear Mr. Martineau:

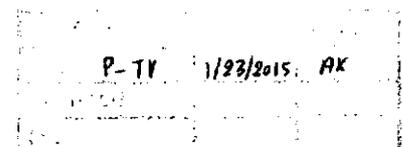
Attached is a renewal to your permit to operate a wood furniture manufacturing facility in accordance with 9 VAC 5 Chapter 80, Article 1, of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution (Regulations). This permit incorporates provisions from the minor new source review permit document, as last amended on May 28, 2014 (referred to as 5/28/14 Permit).

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil charge. Please read all permit conditions carefully.

In evaluating the application and arriving at a final decision for approval, the Department deemed the application complete on November 25, 2014, and solicited written public comments by placing a newspaper advertisement in the Culpeper Star Exponent on December 5, 2014. The thirty-day comment period (provided for in 9 VAC 5-80-270) expired on January 6, 2015. No comments were received in this office from the public or the U.S. EPA.

This approval to operate shall not relieve Masco Cabinetry, LLC. of the responsibility to comply with all other local, state and federal permit regulations.

Issuance of this permit is a case decision. The Regulations, at 9 VAC 5-170-200, provide that you may request a formal hearing from this case decision by filing a petition with the Board



Mr. Nathan Martinueau
January 23, 2015
Page 2

within 30 days after this permit is mailed or delivered to you. Please consult that and other relevant provisions for additional requirements for such requests.

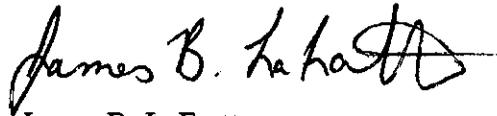
Additionally, as provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Mr. David K. Paylor, Director
Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please call Mr. Ali Khalilzadeh at (703) 583-3839.

Sincerely,



James B. LaFratta
Regional Air Permit Manager

TAF/JBL/AK/15017t5

Attachment: Permit

cc: Chief, Air Enforcement Branch (3AP10), U.S. EPA Region III
Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)
Regional Air Compliance Manager (electronic file submission)
File



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Federal Operating Permit Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name: Masco Cabinetry, LLC.
Facility Name: Masco Cabinetry – Merillat Culpeper Plant
Facility Location: 641 Maddox Drive
Culpeper, Virginia 22701

Registration Number: 40728
Permit Number: NRO40728

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 3 through 35)

January 23, 2015
Effective Date

January 22, 2020
Expiration Date

Thomas A. Faha
Thomas A. Faha, Regional Director

January 23, 2015
Signature Date

Table of Contents, 1 page
Permit Conditions, 33 pages
Fabric Filter CAM Plan, 1 page

Table of Contents

Facility Information..... 1
Emission Units..... 2
Process Equipment Requirements - Woodworking Operations (emission unit ID# W1)..... 3
Process Equipment Requirements - Finishing Operations (emission unit ID# F1)..... 8
Facility Wide Conditions for Hazardous Air Pollutant Emissions 11
Insignificant Emission Units 24
Permit Shield & Inapplicable Requirements 25
General Conditions 26
Fabric Filter (Baghouse) (Unit: BH1) - CAM Plan Attachment 1

Facility Information

Permittee

Masco Cabinetry, LLC. – Merillat Culpeper Plant
P.O. Box 1387
Culpeper, Virginia 22701

Responsible Official

Mr. Nathan Martineau
Director of Manufacturing

Facility

Masco Cabinetry, LLC. – Merillat Culpeper Plant
641 Maddox Drive
Culpeper, Virginia 22701

Contact Person

Ms. Bonnie Wharton
Health & Safety- Environmental Quality Advisor
540-727-7845

County-Plant Identification Number: 51-047-00032

Facility Description: NAICS Code 337110/SIC Code 2434 - Wood kitchen and bath cabinet manufacturing

Masco Cabinetry, LLC. - Merillat Culpeper Plant manufactures kitchen and bath wood cabinets and frame components by woodworking, coating/finishing and assembly operations.

The woodworking equipment includes saws, borers, routers, sanders, and shaping machines used on previously milled wood. Sanding machines are used for final preparation of the assembled components prior to the finishing operations. Dust from the woodworking operation is collected by a dust collection system with ductwork connected to a common fabric filter baghouse.

The finishing system consists of application spray booths, flash areas, brush and wipe sanding stations, and curing ovens. Dust from the brush and wipe sanding areas is collected by small dust collection systems with the air returned to the building. High-volume low pressure (HVLP) or equivalent spray guns are used to apply toners, stains, sealers, and topcoats. Currently, there are 11 booths with 71 spray guns. Low temperature ovens operated in the range of 150 °F dry the stain. The finishing operations are subject to National Emission Standards For Hazardous Air Pollutants (NESHAP) for wood furniture manufacturing operations, 40 CFR 63, Subpart JJ. After the finishing process, the wood cabinets are assembled, packaged, and stored for shipment.

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Woodworking Operations							
W1	BHS1	Miscellaneous Woodworking Equipment (saws, borers, routers, sanders, shaping and carving machines, etc) and wood dust collection systems with baghouse. Constructed in 2005.	2,200 Cabinets Per day	Waltz Hoist Dostar baghouse Model 12-816-12612	BH1	PM PM-10	3/7/05, amended 5/28/14
Finishing Operations							
F1	FS1-x (multiple stacks)	Up to fourteen coating booths with conveyor systems; Two off-line coating booths; One paint spray booth; one wood brushing system; one sanding system, natural gas fired curing ovens total combined rated capacity of 5 MMbtu/hr; flash-off and cooling tunnels. Constructed in 1999. Commenced Operation in 2005.	193 Cabinets Per hour	Spray booths: fiberglass filters or equivalent and High Volume Low Pressure (HVLP) or equivalent spray guns	N/A	PM VOC HAPS	3/7/05, as amended 5/28/14

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Process Equipment Requirements – Woodworking Operations (emission unit ID# W1)

1. **Limitations** - Particulate emissions from the particle saw board operation shall be controlled by exhausting the saw to the inside of the manufacturing facility.
(9 VAC 5-80-110 and Condition 2 of 5/28/14 Permit)
2. **Limitations** - Particulate emissions from the woodworking and machining operation shall be controlled by baghouses. The baghouses shall be provided with adequate access for inspection and shall be in operation when woodworking and machining processes are operating.
(9 VAC 5-80-110 and Condition 4 of 5/28/14 Permit)
3. **Limitations** - Fugitive particulate emissions from the collection, transfer and handling of wood waste shall be controlled by covering of all conveyors or complete enclosure.
(9 VAC 5-80-110, Condition 3 and Condition 9 of 5/28/14 Permit)
4. **Limitations** - Particulate emissions from combined operation of all woodworking and machining baghouse dust collection systems shall not exceed the limits specified below:

PM-10	0.01 gr/dscf	2.0 tons/yr
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Compliance with these emission limits may be determined as stated in Condition 17.
(9 VAC 5-80-110, and Condition 7 of 5/28/14 Permit)

5. **Limitations** - Visible emissions from the exhaust of each woodworking and machining baghouse dust collection system shall not exceed five percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-110 and Condition 8 of 5/28/14 Permit)
6. **Limitations** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
 - a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
 - b. Maintain an inventory of spare parts.
 - c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-80-110 and Condition 36 of 5/28/14 Permit)

7. **Monitoring** - Each baghouse shall be equipped with a device to continuously measure the pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the respective baghouse is operating.
(9 VAC 5-80-110 and Condition 5 of 5/28/14 Permit)
8. **Monitoring** - The control monitoring device used to continuously measure pressure drop across the fabric filter (BH1) shall be observed by the permittee with a frequency of not less than once per day of operation. The permittee shall keep a log of the observations from the control monitoring device that includes, at a minimum, the name of the observer, the date and time of the observation, and the pressure drop reading.
(9 VAC 5-80-110 and Condition 6 of 5/28/14 Permit)
9. **Compliance Assurance Monitoring (CAM)** - The permittee shall monitor, operate and maintain the fabric filter baghouse (BH1) controlling the woodworking equipment (W1) as specified in the permit Attachment (Fabric Filter Compliance Assurance Monitoring Plan).
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))
10. **Compliance Assurance Monitoring (CAM)** - The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))
11. **Compliance Assurance Monitoring (CAM)** - At all times, the permittee shall maintain the pressure drop monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
(9 VAC 5-80-110 E and 40 CFR 64.7 (b))
12. **Compliance Assurance Monitoring (CAM)** - Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the woodworking equipment (W1) is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality

assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.

(9 VAC 5-80-110 E and 40 CFR 64.7 (c))

13. **Compliance Assurance Monitoring (CAM)** - Upon detecting an excursion or exceedance, the permittee shall restore operation of the woodworking equipment (W1) (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable.

(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))

14. **Compliance Assurance Monitoring (CAM)** - Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(9 VAC 5-80-110 E and 40 CFR 64.7(d)(2))

15. **Compliance Assurance Monitoring (CAM)** - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Regional Air Compliance Manager of the DEQ's NRO and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(9 VAC 5-80-110 E and 40 CFR 64.7(e))

16. **Compliance Assurance Monitoring (CAM)** - If more than three exceedances or excursions from the indicator range specified in Compliance Assurance Plan for the fabric filter baghouse (BH1) [Attachment] occur within a two week period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:
- a. Improved preventative maintenance practices;
 - b. Process operation changes;
 - c. Appropriate improvements to control methods;
 - d. Other steps appropriate to correct control performance; and
 - e. More frequent or improved monitoring.

(9 VAC 5-80-110 E and 40 CFR 64.8(a) and (b))

17. **Recordkeeping** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO. These records shall include, but are not limited to:
- a. Annual number of cabinets produced through woodworking and machining operations, calculated monthly as the sum of each consecutive twelve month period.
 - b. Annual emissions calculations of PM-10 from the woodworking and machining operation, calculated monthly as the sum of each consecutive twelve month period.
 - c. Operation and control device monitoring records for the baghouses.
 - d. Scheduled and unscheduled maintenance, and operator training.
 - e. Baghouse design efficiency specifications from the equipment manufacturer.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 10 of 5/28/14 Permit)

18. **Compliance Assurance Monitoring (CAM) Recordkeeping** - The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken,

any written quality improvement plan (QIP) required pursuant to §64.8 and any activities undertaken to implement a quality improvement plan (QIP), and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
(9 VAC 5-80-110 E and 40 CFR 64.9(b))

19. **Testing** - The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110 and Condition 18 of 5/28/14 Permit)
20. **Testing** – Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the exhaust stacks to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO.
(9 VAC 5-80-110 and Condition 19 of 5/28/14 Permit)
21. **Testing** - If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)
22. **Compliance Assurance Monitoring (CAM) Reporting** - The permittee shall submit CAM reports as part of the Title V semi-annual monitoring reports required by General Condition 54 of this permit to the Regional Air Compliance Manager of the DEQ's NRO. Such reports shall include at a minimum:
 - a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - b. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
 - c. A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

(9 VAC 5-80-110 F and 40 CFR 64.9(a))

Process Equipment Requirements - Finishing Operations (emission unit ID# F1)

23. **Limitations** - Particulate emissions from the spray booths shall be controlled by fiberglass filters or equivalent. The spray booths shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 11 of 5/28/14 Permit)

24. **Limitations** - Volatile Organic Compound emissions from the spray booths shall be minimized by the use of high volume low pressure (HVLV) or equivalent spray guns.
(9 VAC 5-80-110 and Condition 13 of 5/28/14 Permit)

25. **Limitations** - Total Volatile Organic Compound emissions from the facility shall not exceed the limits specified below:

Volatile Organic Compounds	282.0 lbs/hr	247.0 tons/yr
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(9 VAC 5-80-110 and Condition 14 of 5/28/14 Permit)

26. **Limitations** - Visible emissions from each furniture finishing spray booth exhaust and each curing oven exhaust shall not exceed five percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-80-110 and Condition 15 of 5/28/14 Permit)

27. **Limitations** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-80-110 and Condition 36 of 5/28/14 Permit)

28. **Monitoring** - Visible Emissions Observation (VEO) – At least once per week, during operation, an observation of visible emissions from the exhaust stack of the spray booths and curing ovens, shall be made. Each VEO shall be performed for a sufficient period of time to identify the presence of visible emissions.
- a. If no visible emissions are observed, no action shall be required.
 - b. If visible emissions are observed:
 - (1) the permittee shall take corrective action such that the spray booths and/or curing ovens resumes operation with no visible emissions; or,
 - (2) the permittee shall perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the spray booths and/or curing ovens do not exceed five percent opacity. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed five percent, the VEE shall be conducted for a total of sixty minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the spray booths and/or curing ovens resumes operation with visible emissions of five percent or less.
- (9 VAC 5-80-110E)
29. **Monitoring** - The permittee shall maintain an observation log to demonstrate compliance. The log shall include the date and time of the observations, whether or not there were visible emissions, any VEE recordings, and any necessary corrective action.
(9 VAC 5-80-110E)
30. **Recordkeeping** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO. These records shall include, but are not limited to:
- a. Annual consumption of each VOC containing coating, thinner, and cleaning solvent, calculated monthly as the sum of each consecutive twelve-month period.
 - b. Material Safety Data Sheets or other vendor information showing VOC content, water content, and solids content for each coating, thinner, and cleaning solvent used.

- c. Annual emissions of VOC's to verify compliance with emission limits listed in Condition 25. Annual emissions shall be calculated monthly as the sum of each consecutive twelve-month period.
- d. Annual consumption of natural gas for the facility, calculated monthly as the sum of each consecutive twelve-month period.
- e. Observation logs as required by the monitoring condition 28.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 17 of 5/28/14 Permit)

- 31. **Testing** - The spray booths shall be constructed to allow for testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.
(9 VAC 5-80-110 and Condition 12 and 18 of 5/28/14 Permit)
- 32. **Testing** - If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Facility Wide Conditions for Hazardous Air Pollutant Emissions

33. **Limitations** - Except where this permit is more restrictive than the applicable requirement, the Finishing Operations (F1) shall be operated in compliance with the requirements of 40 CFR 63, Subpart JJ.
(9 VAC 5-80-110, 40 CFR 63, Subpart JJ and Condition 21 of 5/28/14 Permit)
34. **Limitations** - Volatile Hazardous Air Pollutant (VHAP) emissions from the facility shall not exceed the following limits:
- a. For finishing operations use any of the following methods:
 - i. Achieve a weighted average VHAP content across all coatings of 0.8 lb VHAP/lb solids, as applied.
 - ii. Use compliant finishing materials that meet the following specifications:
 - 1) Each sealer and topcoat has a VHAP content of no more than 0.8 lb VHAP/lb solids, as applied;
 - 2) Each stain has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied;
 - 3) Each thinner contains no more than 10.0 percent HAP by weight except where excluded by part (v) of this sub-section. For purposes of calculating thinner content of this section, VHAP equals HAP;
 - 4) Each washcoat, basecoat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 0.8 lb VHAP/lb solids, as applied;
 - 5) Each washcoat, basecoat, and enamel that is formulated onsite must be formulated using a finishing material containing no more than 0.8 lb VHAP/lb solids and a thinner containing no more than 3.0 percent HAP by weight; or
 - iii. Use any combination of averaging and compliant coatings such that no greater than 0.8 lb of VHAP is being emitted per lb of solids used.
 - b. For cleaning operations, strippable spray booth coatings shall contain no more than 0.8 lb VOC/lb solids, as applied.
 - c. Compliant contact adhesives shall be used with VHAP content no greater than 0.2 lb VHAP/lb solids, as applied; except for nonporous substrates and aerosol adhesives;

- d. Formaldehyde emissions from the facility shall be limited by complying with one of the following options:
- i. Limit total formaldehyde (F_{total}) used in all coatings and contact adhesives to no more than 400 pounds per rolling 12-month period; or
 - ii. Use coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives in any wood furniture manufacturing operations. Low-formaldehyde means a product concentration of less than or equal to 1.0 percent formaldehyde by weight, as described in a certified product data sheet for the material.

(9 VAC 5-80-110, 40 CFR 63.802 (b), and Condition 22 of 5/28/14 Permit)

35. **Limitations** - The permittee shall meet the following operation and maintenance requirements:

- a. At all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.
- b. Malfunctions shall be corrected as soon as practicable after their occurrence.
- c. Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.
- d. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(9 VAC 5-80-110, 40 CFR 63, Subpart JJ and Condition 26 of 5/28/14 Permit)

36. **Limitations** - The permittee shall develop and implement the following work practice standards:

- a. Work Practice Implementation Plan - The permittee shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for the wood furniture manufacturing operation and addresses each of the work practice standards presented below (in this condition). The plan shall be developed no more than sixty days after startup. The written work practice

implementation plan shall be available for inspection by the Administrator upon request. If the Administrator determines that the work practice implementation plan does not adequately address each of the topics specified in Subpart JJ or that the plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the Administrator may require the permittee to modify the plan. Revisions or modifications to the plan do not require a revision of the source's Title V permit.

- b. Operator Training Course - The permittee shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and wash-off operations, use of manufacturing equipment, or implementation of the requirements of this subpart. All new personnel shall be trained upon hiring. All existing personnel shall be trained within six months of startup. All personnel shall be given refresher training annually. The permittee shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:
- i. A list of all current personnel by name and job description that are required to be trained;
 - ii. An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;
 - iii. Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and wash-off procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and
 - iv. A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.
- c. Inspection and Maintenance Plan - The permittee shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:
- i. A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic solvents;
 - ii. An inspection schedule;
 - iii. Methods for documenting the date and results of each inspection and any repairs that were made;

- iv. The timeframe between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:
 - 1) A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and
 - 2) Final repairs shall be made within fifteen calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.
- d. Cleaning and Wash-Off Solvent Accounting System - The permittee shall develop an organic solvent accounting form to record:
 - i. The quantity and type of organic solvent used each month for wash-off and cleaning, as defined in 40 CFR 63.801 of Subpart JJ;
 - ii. The number of pieces washed off, and the reason for the wash-off; and
 - iii. The quantity of spent solvent generated from each wash-off and cleaning operation each month, and whether it is recycled onsite or disposed offsite.
- e. Chemical Composition of Cleaning and Wash-Off Solvents - The permittee shall not use cleaning or wash-off solvents that contain any of the pollutants listed in Table 4 of Subpart JJ, in concentrations subject to MSDS reporting as required by OSHA.
- f. Spray Booth Cleaning - The permittee shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the permittee shall use no more than 1.0 gallon of organic solvent per booth to prepare the surface of the booth prior to applying the booth coating.
- g. Storage Requirements - The permittee shall use normally closed containers for storing finishing, gluing, cleaning, and wash-off materials.
- h. Application Equipment Requirements - Each owner or operator of an affected source shall not use conventional air spray guns except when all emissions from the finishing application station are routed to a functioning control device.
- i. Line Cleaning - The permittee shall pump or drain all organic solvent used for line cleaning into a normally closed container.

- j. Gun Cleaning - The permittee shall collect all organic solvent used to clean spray guns into a normally closed container.
- k. Wash-Off Operations - The permittee shall control emissions from wash-off operations by:
 - i. Using normally closed tanks for wash-off; and
 - ii. Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.
- l. Formulation assessment plan for finishing operations - The permittee shall prepare and maintain with the work practice implementation plan a formulation assessment plan that:
 - i. Identifies VHAP from the list presented in Table 5 of 40 CFR Subpart 63, Subpart JJ that are being used in finishing operations;
 - ii. Establishes a baseline level of usage, as defined in 40 CFR 63.803, for each VHAP identified.
 - iii. Tracks the annual usage of each VHAP identified.
 - iv. If the annual usage of the VHAP identified exceeds its baseline level, then the permittee of the facility shall provide a written notification to the Regional Air Compliance Manager of the DEQ's NRO and the Administrator that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the owner or operator from further action, unless the affected source is not in compliance with any State regulations or requirements for that VHAP:
 - 1) The exceedance is no more than 15.0 percent above the baseline level;
 - 2) Usage of the VHAP is below the de minimis level presented in Table 5 of 40 CFR 63, Subpart JJ for that VHAP;
 - 3) The affected source is in compliance with its State's air toxic regulations or guidelines for the VHAP; or
 - 4) The source of the pollutant is a finishing material with a VOC content of no more than 1.0 lb VOC/lb solids, as applied.
 - v. If none of the explanations listed in 40 CFR 63, Subpart JJ are the reason for the increase, the permittee shall confer with the Regional Air Compliance Manager of

the DEQ's NRO and the Administrator to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality, and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the Regional Air Compliance Manager of the DEQ's NRO and the Administrator and owner or operator. If there are no practical and reasonable solutions, the facility need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan, and a schedule for submitting notification of progress.

- vi. If the facility uses a VHAP of potential concern listed in Table 6, 40 CFR 63, Subpart JJ for which a baseline level has not been previously established, then the baseline level shall be established as the de minimis level provided in that same table. The permittee shall track the annual usage of each VHAP of potential concern identified that is present in amounts subject to MSDS reporting as required by OSHA. If usage of the VHAP of potential concern exceeds the de minimis level listed in Table 6 of Subpart JJ for that chemical, then the permittee shall provide an explanation to the Regional Air Compliance Manager of the DEQ's NRO and the Administrator that documents the reason for exceedance of the de minimis level. If the explanation is not one of those listed in Condition 36.l.iv. above, the affected source shall follow the procedures established in Condition 36.l.v. above.

(9 VAC 5-80-110, 40 CFR 6.803, and condition 27 of 5/28/14 Permit)

- 37. **Monitoring** - Continuous compliance with the VHAP emissions limits in Condition 34 shall be determined as follows: (See Conditions 41 and 42 for content and timing of report submissions and signature requirements)
 - a. For finishing operations when averaging is being used to show continuous compliance, the permittee shall submit the results of the averaging calculation (Equation 1) for each month within that semiannual period and submitting a compliance certification with the semiannual report. The compliance certification shall state that the value of (E), as calculated by Equation 1, is no greater than 0.8. The facility is in violation of the standard if E is greater than 0.8 for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.

$$E = (M_{c1}C_{c1} + M_{c2}C_{c2} + \dots + M_{cn}C_{cn} + S_1W_1 + S_2W_2 + \dots + S_nW_n)/(M_{c1} + M_{c2} + \dots + M_{cn})$$

..... Equation 1 (ref. 40 CFR 63.804(a)(1))

Where:

E = the emission limit achieved by an emission point or a set of emission points, in lb VHAP/lb solids.

M_c = the mass of solids in a finishing material or coating (c) used monthly, including exempt finishing materials and coatings, lb solids/month.

C_c = the VHAP content of a finishing material or coating (c), in pounds of VHAP per pound of coating solids.

S = the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials or coatings.

W = the amount of solvent, in pounds, added to finishing materials and coatings during the monthly averaging period.

The Emission Limit (E in lb VHAP / lb solids) equals the sum, for all finishing materials and coatings, of the mass of solids in each material used within that month (M_c in lb solids / month) multiplied by the VHAP content in each material (C_c in lb VHAP / lb solids) plus the sum, for all solvents, of the mass of solvent used monthly (W in lb solvent / month) multiplied by the weight fraction of VHAP in the solvent (S in lb VHAP / lb solvent), with this total being divided by the sum, for all finishing materials and coatings, of the mass of solids in each finishing material and coating used within that month (M_c in lb solids / month).

- b. For finishing operations when compliant coatings are being used to show continuous compliance, the permittee shall use compliant coatings and thinners, maintain records that demonstrate the finishing materials and thinners are compliant, and submit a compliance certification with the semiannual report which states that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as stated in Condition 34, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. The facility is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.
- c. For finishing operations when compliant coatings are being used to show continuous compliance and the coatings are being applied using continuous coaters the permittee shall demonstrate continuous compliance by either of the following:
 - i. Use compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, use compliant thinners, and submit a compliance certification with the semiannual report which states that compliant coatings have been used each day in the semiannual reporting period, or should otherwise identify the days of noncompliance and the reasons for noncompliance. The facility is in violation of the standard whenever a noncompliant coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

- ii. Use compliant coatings, as determined by the VHAP content of the coating in the reservoir, use compliant thinners, maintain a viscosity of the coating in the reservoir that is no less than the viscosity of the initial coating by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added, maintain records of solvent additions, and submit a compliance certification with the semiannual report which states that compliant coatings, as determined by the VHAP content of the coating in the reservoir, have been used each day in the semiannual reporting period. Additionally, the certification shall state that the viscosity of the coating in the reservoir has not been less than the viscosity of the initial coating, that is, the coating that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period. The facility is in violation of the standard when a sample of the as-applied coating exceeds the applicable limit, as determined using EPA Method 311, or the viscosity of the coating in the reservoir is less than the viscosity of the initial coating.

- d. For finishing operations any of the following compliance methods may be used: 1) an averaging approach, as in Condition a above; 2) compliant coatings, as in Conditions b and c above; or 3) a combination of these methods.

- e. For contact adhesive operations when compliant adhesives are being used to show initial compliance the permittee shall submit a compliance certification with the semiannual report. The compliance certification shall state that compliant contact and/or foam adhesives have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant contact and/or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.
 - i. For strippable spray booth coatings the permittee shall submit a compliance certification with the semiannual report. The compliance certification shall state that compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the standard.

 - ii. For work practice standards the permittee shall submit a compliance certification with the semiannual report. The compliance certification shall state that the work practice implementation plan is being followed, or should otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that the permittee is required to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a violation and the Administrator may require the permittee to modify the plan (see Work Practice Standards Condition 36.a).

f. For formaldehyde emissions, the permittee shall demonstrate compliance by one of the following methods:

i. Calculate total formaldehyde emissions from all finishing materials and contact adhesives used at the facility using the following equation and

$$F_{\text{total}} = (C_{f1}V_{c1} + C_{f2}V_{c2} + * * * + C_{fn}V_{cn} + G_{f1}V_{g1} + G_{f2}V_{g2} + * * * + G_{fn}V_{gn})$$

..... Equation 5 (ref. 40 CFR 63.804(h)(1))

Where:

F_{total} = total formaldehyde emissions in each rolling 12 month period

C_f = the formaldehyde content of a finishing material (c), in pounds of formaldehyde per gallon of coating (lb/gal)

V_c = the volume of formaldehyde-containing finishing material (c), in gal

G_f = the formaldehyde content of a contact adhesive (g), in pounds of formaldehyde per gallon of contact adhesive (lb/gal)

V_g = the volume of formaldehyde-containing contact adhesive (g), in gal

ii. Use a control system such that formaldehyde emissions, F_{total} , is no more than 400 pounds per rolling 12 month period.

iii. Use coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives, maintaining a certified product data sheet for each coating and contact adhesive used (as required by Condition 39.a), and submitting a compliance certification with the semiannual report. The compliance certification shall state that low-formaldehyde coatings and contact adhesives, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. The permittee is in violation of the standard whenever a coating or contact adhesive that is not low-formaldehyde, as demonstrated by records or by a sample of the coating or contact adhesive, is used. Use of a noncompliant coating or contact adhesive is a separate violation for each day the noncompliant coating or contact adhesive is used.

(9 VAC 5-60-100, 40 CFR 63.804.(g & h) & 40 CFR 63.8, and Condition 24 of 5/28/14 Permit)

38. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ or using the test methods and procedures as specified in 40 CFR 63.805.

Pollutant	Test Method
Hazardous Air Pollutants (HAPs)	40 CFR Part 63, Appendix A, EPA Method 311
Solids Content & Density of Coatings	40 CFR Part 60, Appendix A, EPA Method 24

(9 VAC 5-80-110, 40 CFR 63.805, and 40 CFR 63, Subpart JJ)

39. **Recordkeeping** - The permittee shall maintain records of the following:
- a. A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in 40 CFR 63, Subpart JJ,
 - b. The VHAP content, in lb VHAP/lb solids, as applied, of each finishing material and contact adhesive subject to the emission limits in 40 CFR 63, Subpart JJ; and
 - c. The VOC content, in lb VOC/lb solids, as applied, of each strippable booth coating subject to the emission limits in 40 CFR 63, Subpart JJ.
 - d. A copy of the averaging calculations for each month as well as the data on the quantity of coating and thinners used that is necessary to support the calculation of the average VHAP content of all finishing materials (Equation 1 of 40 CFR 63.804(a)(1), Subpart JJ).
 - e. The permittee shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:
 - i. Records demonstrating that the operator training program required is in place;
 - ii. Records collected in accordance with the inspection and maintenance plan;
 - iii. Records associated with the cleaning solvent accounting system;
 - iv. 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 conventional air spray guns for each semiannual period;
 - v. Records associated with the formulation assessment plan; and

- vi. Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.
- f. The permittee shall maintain records of the compliance certifications submitted for each semiannual period following startup.
- g. The permittee shall maintain records of all other information submitted with the compliance status report and the semiannual reports.

The permittee shall maintain files of all information (including all reports and notifications) required, recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche. (9 VAC 5-60-90, 40 CFR 63.806(a), (b), (e), (h), (i), (j) & 63.10(b)(1), and Condition 28 of 5/28/14 Permit)

40. **Reporting** - All correspondence concerning this permit should be submitted to the following address:

Regional Air Compliance Manager
Department of Environmental Quality (DEQ)
Northern Regional Office (NRO)
13901 Crown Court
Woodbridge, VA 22193

All submittals to the Administrator, as required in 40 CFR 63 (MACT), Subpart JJ, shall be sent to DEQ (address above) and to EPA Region III at the following address:

Wood Furniture NESHAP Coordinator
U.S. Environmental Protection Agency, Region III
Air Protection Division (3AP10)
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-60-100, 40 CFR 63.13, and Condition 20 of 5/28/14 Permit)

41. **Reporting** - Each time a notification of compliance status is required (see Conditions 52 through 54), the permittee shall submit to the Regional Air Compliance Manager of the DEQ's NRO a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with 40 CFR 63, Subpart JJ. The notification shall list:

- a. The methods that were used to determine compliance;
- b. The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
- c. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;
- d. The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified;
- e. An analysis demonstrating whether the facility is a major source or an area source (using the emissions data generated for this notification);
- f. A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and
- g. A statement by the permittee as to whether the facility has complied with the relevant standards or other requirements.

The notification shall be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in 40 CFR 63, Subpart JJ.

A copy of all notifications and compliance certifications shall be addressed to U.S. EPA Region III, National Emissions Standards for Wood Furniture Manufacturing Operations, Subpart JJ NESHAP Coordinator (3AP10) at the address in Condition 40. (9 VAC 5-60-90 and 40 CFR 63.9(h), and Condition 23 of 5/28/14 Permit)

42. Reporting - Reporting not otherwise required by this permit shall consist of the following:

- a. The permittee when demonstrating continuous compliance shall submit a report required by §63.9(h) and Condition 54 covering the previous six months of wood furniture manufacturing operations:
 - i. The time periods to be addressed are the calendar months January through June, and July through December. The first report shall be submitted 30 calendar days after the end of each 6-month period, and no later than March 1 and September 1 of each calendar year.

- ii. The semiannual reports shall include the information required by Condition 37, a statement of whether the facility was in compliance or noncompliance, and, if the facility was in noncompliance, the measures taken to bring the facility into compliance.
 - iii. The frequency of the reports required by Condition a. or b. above shall not be reduced from semiannually regardless of the history of the owner's or operator's compliance status.
 - iv. The compliance certification shall be signed by a responsible official of the company that owns or operates the facility.
- b. The permittee, when required to provide a written notification by Condition 36.i.iv. for exceedance of a baseline level [§63.803(1)(4)], shall include in the notification one or more statements that explains the reasons for the usage increase. The notification shall be submitted no later than 30 calendar days after the end of the annual period in which the usage increase occurred.

Copies of reports shall be submitted to the DEQ and the U.S. Environmental Protection Agency at the address given in Condition 40.

(9 VAC 5-80-110, 40 CFR 63.807, 40 CFR 63.10 (d), and Condition 25 of 5/28/14 Permit)

Insignificant Emission Units

43. **Insignificant Emission Units** - The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation¹ (9 VAC)	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
B1, B2	Two TRIAD model GPS 600-SH, gas-fired boilers	5-80-720.C. 2.a	-	0.6 million Btu/hr, each
H1, H2, H3, H4	Four Trane gas-fired space heaters	5-80-720.C. 2.a	-	0.25 million Btu/hr, each
H5, H6	Two King gas-fired space heaters	5-80-720.C. 2.a	-	3.38 million Btu/hr, each
M1	Greenheck gas-fired make-up air/space heater	5-80-720.C. 2.a	-	0.79 million Btu/hr
M2, M3	Two Greenheck gas-fired make-up air/ space heaters	5-80-720.C. 2.a	-	0.70 million Btu/hr, each
M4	AbsoluteAire, Inc. make-up air/space heater	5-80-720.C. 2.a	-	0.65 million Btu/hr
M5, M6, M7, M8	Four Rupp Air make-up air units	5-80-720.C. 2.a	-	4.54 million Btu/hr, each
PW1	Parts washer, Justrite model 27220 rinse tank	5-80-720.B.2	VOC	-
PW2	Parts washer, Safety Kleen model 11 immersion cleaner	5-80-720.B.2	VOC	-

¹The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Permit Shield & Inapplicable Requirements

44. **Permit Shield & Inapplicable Requirements** - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 63 (MACT) Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	The facility previously operated an 800 kW diesel engine generator, which was permanently shutdown in 2014
40 CFR 63 (MACT) Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters	Two small gas-fired boilers are considered "hot water boilers", as defined under "hot water heaters" in 40 CFR 63.7575, which are exempt under 40 CFR 63.7491 (d)
40 CFR 60 (NSPS) Subpart Dc	Standards of Performance for Small Industrial- Commercial-Institutional Steam Generating Units	Two gas-fired boilers (and 14 space heaters) each are below 10 million Btu/hr heat input
9 VAC 5 Chapter 40, Article 17	Emission Standards for Woodworking Operations (Rule 4-17)	The facility is subject to more stringent emission standards than specified in the existing source rule (PM < 0.05 gr/dscf)
9 VAC 5 Chapter 40, Article 24	Emission Standards for Solvent Metal Cleaning Operations Using Non-Halogenated Solvents (Rule 4-24)	The two cold solvent cleaners at facility are located outside VOC emission control areas and have negligible emissions.
40 CFR Part 98	Mandatory Greenhouse Gas Reporting	Not a major greenhouse gas source with fuel combustion units under 30 million Btu/hr and no GHG permit limits.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-140)

General Conditions

45. **Federal Enforceability** - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)
46. **Permit Expiration** - This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
47. **Permit Expiration** - The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
48. **Permit Expiration** - If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
49. **Permit Expiration** - No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
50. **Permit Expiration** - If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
51. **Permit Expiration** - The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in

writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

52. **Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

- a. The date, place as defined in the permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of such analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

53. **Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9 VAC 5-80-110 F)

54. **Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and
- b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:
 - i. Exceedance of emissions limitations or operational restrictions;
 - ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or

Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

- iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.
- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110 F)

55. **Annual Compliance Certification** - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the certification. The time period to be addressed is January 1 to December 31;
- b. The identification of each term or condition of the permit that is the basis of the certification;
- c. The compliance status;
- d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;
- e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;
- f. Such other facts as the permit may require to determine the compliance status of the source; and
- g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9 VAC 5-80-110 K.5)

56. **Permit Deviation Reporting** - The permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 54 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)
57. **Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Regional Air Compliance Manager of the DEQ's NRO by facsimile transmission, email, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Regional Air Compliance Manager of the DEQ's NRO.
(9 VAC 5-20-180 C)
58. **Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)
59. **Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

60. **Need to Halt or Reduce Activity not a Defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)
61. **Permit Modification** - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)
62. **Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)
63. **Duty to Submit Information** - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)
64. **Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)
65. **Duty to Pay Permit Fees** - The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9 VAC 5-80-2310 through 9 VAC 5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9 VAC 5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9 VAC 5-80-110 H, 9 VAC 5-80-340 C and 9 VAC 5-80-2340 B)
66. **Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or

permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

- a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
- b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
- c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
- d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
- e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-90)

67. **Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E)

68. **Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.

(9 VAC 5-80-110 J)

69. **Inspection and Entry Requirements** - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:
- a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
 - d. Sample or monitor at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

70. **Reopening For Cause** - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F. The conditions for reopening a permit are as follows:
- a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
 - c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

71. **Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)
72. **Transfer of Permits** - No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
73. **Transfer of Permits** - In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
74. **Transfer of Permits** - In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
75. **Malfunction as an Affirmative Defense** - A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements stated in Condition 76 are met.
(9 VAC 5-80-250)
76. **Malfunction as an Affirmative Defense** - The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
 - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - b. The permitted facility was at the time being properly operated.
 - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
 - d. The permittee notified the Board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic

mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

(9 VAC 5-80-250)

77. **Malfunction as an Affirmative Defense** - In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
(9 VAC 5-80-250)
78. **Malfunction as an Affirmative Defense** - The provisions of Conditions 75, 76, and 77 are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
(9 VAC 5-80-250)
79. **Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-190 C and 9 VAC 5-80-260)
80. **Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)
81. **Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)
82. **Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition

and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

83. **Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

84. **Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

85. **Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:
 - a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
 - b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
 - c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

Attachment - Fabric Filter (Baghouse) (Unit: BH1) – Compliance Assurance Monitoring (CAM) Plan

	Indicator 1	Indicator 2	Indicator 3
	Opacity	Visible Emission Evaluation (optional - to determine if excursion occurs)	Periodic Structural Inspections
Measurement approach	Daily visible emission observations conducted at the control device (baghouse) emission point.	Method 9 VEE in accordance with 40 CFR 60, Appendix A conducted optionally to determine if an excursion occurs. Results recorded upon completion of each Method 9. If visible emissions are observed by Indicator 1 and a Method 9 VEE is not conducted, then an excursion has occurred.	Monthly external bag filter inspections by a qualified employee. Results recorded monthly. Annual internal bag filter inspection by a qualified employee. Results recorded upon completion of each inspection.
Indicator range	An excursion is defined as the presence of any visible emission from the control device (baghouse) unless otherwise determined by a Method 9 VEE.	An excursion is defined as an average opacity greater than 5% during one six-minute period in any one hour.	An excursion is defined as failure to perform the monthly or annual inspection of bag filters. Excursions trigger an inspection, corrective action and reporting requirement.
QIP Threshold	More than 3 excursions in a 2 week period for the control device.	More than 3 excursions in a 2 week period for the control device.	Not Applicable
Performance criteria:			
Data representativeness	Observation of visible emissions indicates possible damage to fabric filter (baghouse).	Observation of visible emissions greater than 5% indicates replacement or maintenance of bag filters is necessary.	Bags in the fabric filter shall be inspected visually for deterioration and remaining bag life monitored.
Verification of operational status	Records that indicate time, facility operational status and results of each observation.	Pressure drop across the fabric filter (baghouse).	Pressure drop across the fabric filter (baghouse).
QA/QC practices and criteria	Trained personnel to perform observations.	Trained personnel shall perform Method 9. One copy of the test results shall be submitted to the Valley Regional Office within 45 days after completion.	Trained personnel perform the inspection and maintenance.
Monitoring frequency and data collection procedure	Daily observation.	Upon the observation of visible emissions from the fabric filter (baghouse).	Monthly and annual inspections.