



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
VALLEY REGIONAL OFFICE

Molly Joseph Ward
Secretary of Natural Resources

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David K. Paylor
Director

Amy Thatcher Owens
Regional Director

August 18, 2014

Mr. Nicholas A. Hearne
Plant Manager
Masco Cabinetry, LLC
P.O. Box 791
Mt. Jackson, VA 22842

Location: Shenandoah County
Registration No.: 81062
Plant ID No.: 51-171-0063

Dear Mr. Hearne:

Attached is a renewal to your Title V permit to operate a wood cabinet manufacturing facility pursuant to 9 VAC 5 Chapter 80 of the Virginia Regulations for the Control and Abatement of Air Pollution. This permit incorporates provisions from the prevention of significant deterioration permit dated November 18, 2002 as amended February 8, 2006, February 22, 2008, January 12, 2009, May 26, 2009, August 12, 2010, January 28, 2011, and February 15, 2011.

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

In evaluating the application and arriving at a final decision to issue this permit, the Department deemed the application complete on March 5, 2014 and solicited public comments by placing a newspaper advertisement in the *Northern Virginia Daily* on June 27, 2014. The thirty-day comment period (provided for in 9 VAC 5-80-270) expired on July 28, 2014.

This approval to operate does 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

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:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 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, at <http://www.courts.state.va.us/courts/scv/rules.html>, for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please contact Cassandra J. Frysinger of the Valley Regional Office at 540-574-7863 or Cassandra.Frysinger@deq.virginia.gov.

Sincerely,



B. Keith Fowler
Deputy Regional Director

Attachment: Permit

c: File DEQ-VRO
Susan Tripp, OAPP, VA DEQ (via email)
Chief, Air Enforcement Branch (3AP20), U.S. EPA, Region III (via email)
David Taylor, Air Compliance Inspector, VA DEQ (via email)



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
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 Mt. Jackson Plant
Facility Location: 1325 Industrial Park Road
Mt. Jackson, Virginia 22842

Registration Number: 81062
Permit Number: VRO81062

September 1, 2014
Effective Date

August 31, 2019
Expiration Date


Deputy Regional Director

8/18/14
Signature Date

Permit consists of 57 pages.
Permit Conditions 1 to 146.
Table of Contents, 1 page.
Attachment A – Fabric Filter CAM Plan, 1 page.
Attachment B – RTO CAM Plan, 1 page.
Attachment C – Source Testing Report Format, 1 page.

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Facility Information

Permittee

Masco Cabinetry, LLC
P. O. Box 719
Mt. Jackson, Virginia 22842

Responsible Official

Nicholas A. Hearne
Plant Manager

Facility

Masco Cabinetry – Merillat Mt. Jackson Plant
State Road 720 at Interstate 81 in Shenandoah County, Virginia

Contact Person

Nicholas A. Hearne
Plant Manager
(540) 477-6231

County-Plant Identification Number: 51-171-0063

Facility Description: NAICS Code 337110 (Wood Kitchen Cabinet and Countertop Manufacturing) and SIC Code 2434 (Wood Kitchen Cabinets)

Masco Cabinetry, LLC (referred to herein as Masco, the company, or the permittee) manufactures wood cabinet components for kitchen and bath cabinets. The cabinets are made using a manufacturing process that involves several key stages with regulated emission units in each phase. The first step is to air dry the wood that is received from various lumber mills for up to 50 days to achieve a moisture content of 15 to 20 percent. The wood then enters one of the two drying kilns (DK1 or DK2) to lower the moisture content below 10 percent. Once the wood is dry, it moves through woodworking operations (W1) where it is cut, shaped, and sanded into the desired design based on the cabinet specifications. All woodworking operations have particulate matter emissions which are controlled by an extensive baghouse system that is completely enclosed.

Following the woodworking operations, some of the cabinet components enter gluing operations where lumber is glued to form panels, frames, or doors. Lastly, the cabinet will enter the finishing operations (F1), which are regulated by 40 CFR 63, Subpart JJ. Finishing operations involve various spray booths that are significant sources of volatile organic compounds (VOC's) and hazardous air pollutants (HAP's). The spray booths control devices include dry filters and a combination of dry filters and water wash along with a regenerative thermal oxidizer (RTO) on-site. At the final stage, the cabinets go through a sealer/sander function where particulate matter emissions are controlled by the baghouse system. The finished cabinets then enter a steam heated drying oven to cure before being packed and shipped.

In addition to the cabinet making process described above, Masco also produces a rigid thermo foil (RTF) product. The RTF production process is accomplished in two ways. In both scenarios, medium density fiber board (MDF) is delivered to the facility with a laminate already applied on one side. The boards are then machined to produce the appearance of a center panel with a decorative profile around the outer edge. At this point the process splits. In the first scenario, the fabricated MDF board is covered with a RTF product that is pre-coated with a heat-activated adhesive. The cabinet is then placed in a heated membrane press where using high heat and pressure, the RTF product is secured to the surface of the MDF board. The excess RTF is trimmed and the cabinet is readied for shipping. In the second scenario, the fabricated MDF board is put in an adhesive spray booth and coated with heat-resistant glue and hardener before the RTF material (without a pre-coated adhesive) is attached. The cabinet is then placed in the membrane press as described above, trimmed, and readied for shipping. The second scenario is necessary for customers who desire a heat resistant replacement door product.

All operations described above are supported by two boilers (B1 & B2) that supply heat for the wood drying kilns, finishing operations, and general plant heating. Boiler 1 is fired using wood dust that is collected by the baghouse system and is the primary boiler for the facility. Boiler 2 is used as a backup boiler and is fired with natural gas or distillate oil. Both boilers will be subject to 40 CFR 63, Subpart DDDDD starting January 31, 2016. The facility also houses two emergency fire water pumps (FP1 & FP2) that are regulated by 40 CFR 63, Subpart ZZZZ.

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** |
|-------------------------------|-----------|--|----------------------|---|---------|----------------------|------------------------------|
| Fuel Burning Equipment | | | | | | | |
| B1 | BS1 | Industrial Wood-fired Boiler Model 3-3900-150-HRT (1987) | 28.5 MMBtu/hr | Zurn Multicyclone | M1 | PM PM-10 | 11/18/02, as amended 2/15/11 |
| B2 | BS2 | Superior Boiler Works (1987) | 14.7 MMBtu/hr | --- | --- | --- | 11/18/02, as amended 2/15/11 |
| FP1 | FPS1 | Caterpillar Diesel Fire Water Pump (1986 or earlier) Model 3208-DINA | 121 HP | --- | --- | --- | --- |
| FP2 | FPS2 | Caterpillar Diesel Fire Water Pump (1986 or earlier) Model 3306 | 287 HP | --- | --- | --- | --- |
| Woodworking Operations | | | | | | | |
| W1 | BHS1-BHS4 | Miscellaneous Woodworking Equipment | Various | Pneumafil fabric filters Model 13.5-448-10 | BH1-BH4 | PM PM-10 | 11/18/02, as amended 2/15/11 |
| W1 | BHS5 | Miscellaneous Woodworking Equipment | Various | Pneumafil fabric filter Model 15-470-12 | BH5 | PM PM-10 | |
| W1 | BHS6 | Miscellaneous Woodworking Equipment | Various | Waltz-Holst Fabric Filter Model 12-456-7045 | BH6 | PM PM-10 | |
| W1 | BHS7 | Waste Wood Loadout System | Various | Pneumafil fabric filter Model 11.5-316-8 | BH7 | PM PM-10 | |

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity* | Pollution Control Device (PCD) Description | PCD ID | Pollutant Controlled | Applicable Permit Date** |
|-----------------------------|--|--|----------------------|--|-----------------------------|---|------------------------------|
| Finishing Operations | | | | | | | |
| F1 | FS1- FS11, BHS6, OS1- OS26 | One Automatic Sealer/Sander; One Stand Alone Hand Spray Booth; One RTF Adhesive Spray Booth; and One Finishing Line Consisting of One Sap Stain Booth, Two Staining Booths, One Sealer Booth, and One Top Coat Spraying Booth with Drying Ovens and Microprocessor Controlled Automatic Spraying and Air-assisted Airless Spraying Guns | Various | Sealer Booth: Regenerative Thermal Oxidizer (RTO) Spray booths: Water Wash and/or Dry Filter Automatic Sealer/Sander: Pneumafil Fabric Filter Model 8.5-156-10 | F01- F06, BH6, RTO | RTO: VOC All Else: PM PM-10 | 11/18/02, as amended 2/15/11 |
| Kilns | | | | | | | |
| DK1, DK2 | | Dry kilns | | --- | --- | --- | --- |

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

**The PSD Permit was issued on 11/18/2002 and amended on 2/8/2006, 2/22/2008, 1/12/2009, 5/26/2009, 8/12/2010, 1/28/2011, and 2/15/2011. It will be referred to herein as "11/18/02 Permit as amended 2/15/11).

Fuel Burning Equipment Requirements – Units B1 & B2

- Limitations** – Particulate emissions from the Industrial wood-fired boiler (B1) shall be controlled by a multicyclone (M1). The multicyclone shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 3 of 11/18/02 Permit as amended 2/15/11)
- Limitations** – The approved fuels for the Industrial wood-fired boiler (B1) are waste wood and sawdust. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 6 of 11/18/02 Permit as amended 2/15/11)
- Limitations** – The approved fuels for the Superior boiler (B2) are natural gas and distillate oil. Distillate oil is defined as fuel oil that meets the specifications for fuel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396-78 “Standard Specification for Fuel Oils.” A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 7 of 11/18/02 Permit as amended 2/15/11)
- Limitations** – The average sulfur content of the oil to be burned in the Superior boiler (B2) shall not exceed 0.34 percent by weight per shipment.
(9 VAC 5-80-110 and Condition 8 of 11/18/02 Permit as amended 2/15/11)
- Limitations** – Emissions from the operation of the Industrial wood-fired boiler (B1) shall not exceed the limits specified below:

| | | | | |
|--|------|----------|-------|---------|
| Particulate Matter | 0.25 | lb/MMBtu | 17.9 | tons/yr |
| PM-10 | 0.25 | lb/MMBtu | 17.9 | tons/yr |
| Sulfur Dioxide | 0.26 | lbs/hr | 1.12 | tons/yr |
| Nitrogen Oxides (as NO ₂) | 1.16 | lbs/hr | 5.06 | tons/yr |
| Carbon Monoxide | 6.80 | lbs/hr | 29.78 | tons/yr |
| Volatile Organic Compounds | 2.38 | lbs/hr | 10.42 | tons/yr |

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits shall be determined as stated in Conditions 1, 2, and 7.

(9 VAC 5-80-110 and Condition 4 of 11/18/02 Permit as amended 2/15/11)

6. **Limitations** – Emissions from the operation of the Superior boiler (B2) shall not exceed the limits specified below:

| | | |
|--------------------|----------------|---------------|
| Particulate Matter | 0.014 lb/MMBtu | 0.93 tons/yr |
| Sulfur Dioxide | 0.35 lb/MMBtu | 22.42 tons/yr |

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits shall be determined as stated in Conditions 3, 4, and 7.

(9 VAC 5-80-110 and Condition 5 of 11/18/02 Permit as amended 2/15/11)

7. **Limitations** – Visible emissions from the Industrial wood-fired boiler stack (BS1) and the Superior boiler stack (BS2) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity. This condition applies at all times except during startup, shutdown, or malfunction. (9 VAC 5-50-80, 9 VAC 5-80-110, and Condition 10 of 11/18/02 Permit as amended 2/15/11)

8. **Limitation** – 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 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.

(9 VAC 5-80-110 and Condition 48 of 11/18/02 Permit as amended 2/15/11)

9. **Limitations** – The Boiler emissions (B1 & B2) shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at a minimum.

(9 VAC 5-80-110 and 9 VAC 5-50-20)

10. **Limitations** – No later than January 31, 2016, the two boilers (B1 & B2) shall comply with the emission limitations and work practice standards (§63.7500) of 40 CFR 63, Subpart DDDDD. (9 VAC 5-80-110 and 40 CFR 63 Subpart DDDDD)

11. **Monitoring** – The permittee shall determine compliance with the annual particulate emission limits in Condition 5 for Boiler B1 by using the following procedure:

a. Calculate the average heat input capacity of the boiler based on the average steam production using the following formula:

$$C = \frac{SH}{E 10^6} \dots\dots\dots\text{Equation 1}$$

- C = computed average heat input capacity in million Btu per hour
- S = steam production in pounds per hour
- H = 1040 Btu/lb (heat content of the wood)
- E = 0.71 (boiler efficiency)

b. Calculate the tons of particulate emitted based on the computed average heat input capacity from Equation 1, using the following formula:

$$E = \frac{CLT}{2000} \dots\dots\dots\text{Equation 2}$$

- E = the PM/PM-10 emissions in tons per month
- C = computed average heat input capacity from Equation 1
- L = 0.25 lb/mmBtu (particulate limit)
- T = time boiler in operation in hours per month

(9 VAC 5-80-110 and Attachment B of 11/18/02 Permit as amended 2/15/11)

12. **Monitoring** – The multicyclone (M1) shall be equipped with a device to continuously measure the differential pressure drop across the multicyclone. The device shall be installed, maintained, calibrated, and operated in accordance with approved procedures which shall include, at a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the multicyclone is operating.

The monitoring device used to continuously measure differential pressure across the multicyclone shall be observed by the permittee with a frequency of not less than once every eight hours of the Industrial wood-fired boiler (B1) operation. The permittee shall keep a log of the observations that includes, at a minimum, the name of the observer, the date and time of the observation, and the differential pressure reading.
(9 VAC 5-80-110)

13. **Monitoring** – The permittee shall perform a visible emission observation of the Industrial wood-fired boiler stack (BS1) exhaust once each calendar week when the boiler is operating under normal conditions. Each visible emissions observation shall be performed for a sufficient period of time to identify the presence of visible emissions. If during the evaluation, visible emissions (condensed water vapor/steam is not a visible emission) are observed, a visible emissions evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 shall be conducted. The VEE shall be conducted for a minimum period of six minutes. If any of the observations exceed the applicable opacity limit, the observation period shall continue until a total of 60 minutes of observation has been completed. A Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner such that no visible emissions are present; the emissions unit is operating at normal operating conditions; and the cause and corrective measures taken are recorded. If excess emissions are expected for greater than one hour, the malfunction procedures specified in Conditions 118 and 119 shall be implemented.
(9 VAC 5-80-110)

14. **Monitoring** – The permittee shall conduct an annual internal inspection on the multicyclone (M1) to ensure structural integrity.
(9 VAC 5-80-110 and Condition 3 of 11/18/02 Permit as amended 2/15/11)

15. **Monitoring** – No later than January 31, 2016, the two boilers (B1 & B2) shall comply with the initial compliance (§63.7510) and continuous compliance (§63.7535 - §63.7540) requirements of 40 CFR 63, Subpart DDDDD.
(9 VAC 5-80-110 and 40 CFR 63 Subpart DDDDD)

16. **Recordkeeping** – The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:
 - a. The name of the fuel supplier;
 - b. The date on which the oil was received;
 - c. The volume of distillate oil delivered in the shipment;
 - d. A statement that the oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2; and
 - e. The sulfur content (in weight percent) of the oil.

(9 VAC 5-80-110 and Condition 9 of 11/18/02 Permit as amended 2/15/11)

17. **Recordkeeping** – The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:
- a. The monthly and annual throughput of natural gas (in million cubic feet) and distillate oil (in 1,000 gallons) for the Superior boiler (B2). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
 - b. The DEQ-approved, pollutant specific emission factors and the equations used to demonstrate compliance with Condition 5 and Condition 6.
 - c. The number of hours per day of operation of the Industrial wood-fired boiler (B1).
 - d. The hourly steam pressure (in pounds) of the Industrial wood-fired boiler (B1).
 - e. Multicyclone (M1) pressure drop readings recorded once every eight hours as required in Condition 12.
 - f. Industrial wood-fired boiler stack (BS1) weekly visible emission observation results as outlined in Condition 13 and including:
 - (1) The date, time, and name of person performing each visible emission observation;
 - (2) Whether or not visible emissions were observed; and
 - (3) EPA Method 9 (40 CFR Part 60, Appendix A) observation record, if applicable.
 - g. Multicyclone (M1) annual inspection results as required in Condition 14 and including:
 - (1) The date, time, and name of person performing each inspection;
 - (2) A list of the items inspected; and
 - (3) Any maintenance or repairs performed as a result of these inspections.
 - h. The monthly and annual cumulative emissions (in tons) of PM and PM-10 from the Industrial wood-fired boiler (B1). The annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. The emissions shall be calculated as described in Condition 11.
 - i. Results of all stack tests and visible emissions observations and/or evaluations.
 - j. Records of maintenance, operating procedures, and training as required by Condition 8.
 - k. All fuel supplier certifications as required by Condition 16.

These records shall be available on site 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 37 of 11/18/02 Permit as amended 2/15/11)

18. **Recordkeeping** – No later than January 31, 2016, the two boilers (B1 & B2) shall comply with the recordkeeping requirements (§63.7555 - §63.7560) of 40 CFR 63, Subpart DDDDD.
(9 VAC 5-80-110 and 40 CFR 63 Subpart DDDDD)
19. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)
20. **Reporting** – No later than January 31, 2016, the two boilers (B1 & B2) shall comply with the notification and reporting requirements (§63.7545 - §63.7550) of 40 CFR 63, Subpart DDDDD.
(9 VAC 5-80-110 and 40 CFR 63 Subpart DDDDD)

Fuel Burning Equipment Requirements – Units FP1 & FP2

The following terms and conditions are from 40 CFR Part 63, Subpart ZZZZ. A current copy of 40 CFR Part 63, Subpart ZZZZ can be accessed at <http://www.ecfr.gov/> by selecting Title 40. As used in this section, all terms shall have the meaning as defined in §63.2 and §63.6675.

21. **Limitations** – Except where this permit is more restrictive, the fire water pumps (FP1 & FP2) shall be operated in compliance with the requirements of 40 CFR 63, Subpart ZZZZ. (9 VAC 5-80-110 and 40 CFR 63, Subpart ZZZZ)
22. **Limitations** – In order for the fire water pumps to be considered an emergency stationary reciprocating internal combustion engine (RICE) under 40 CFR 63 Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in paragraphs a through c below, is prohibited. If the permittee does not operate the fire water pumps according to the requirements of paragraphs a through c, they will not be considered emergency engines under 40 CFR 63, Subpart ZZZZ and shall meet all requirements for nonemergency engines.
 - a. There is no time limit on the use of the emergency stationary RICE in emergency situations.
 - b. The permittee may operate the fire water pumps (FP1 & FP2) for any combination of the purposes specified in b(1) through b(3) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 22.c counts as part of the 100 hours per calendar year allowed by Condition 22.b.
 - (1) The permittee may operate the fire water pumps (FP1 & FP2) for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
 - (2) The fire water pumps (FP1 & FP2) may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (3) The fire water pumps (FP1 & FP2) may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

- c. The permittee may operate the fire water pumps (FP1 & FP2) up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing and emergency demand response provided for in Condition 22. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(9 VAC 5-80-110, 40 CFR 63.6640 (f), and 40 CFR 63, Subpart ZZZZ)

23. **Limitations** – If the fire water pumps (FP1 & FP2) are operated as described in Conditions 22.b(2) or 22.b(3), then by January 1, 2015 they shall comply with the following diesel fuel requirements specified in 40 CFR 80.510 (b):

- a. The sulfur content of the diesel fuel shall not exceed 15 ppm; and
- b. The diesel fuel shall have a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Any diesel fuel purchased (or otherwise obtained) prior to the January 1, 2015 date may be used until depleted.

(9 VAC 5-80-110, 40 CFR 63.6604, 40 CFR 80.510 (b) and 40 CFR 63, Subpart ZZZZ)

24. **Limitations** – The fire water pumps (FP1 & FP2) shall comply with the maintenance requirements specified in sections 1 (a) through (c) of Table 2c to Subpart ZZZZ:

- a. Change oil and filter every 500 hours of operation or annually, whichever comes first, or at an extended frequency if utilizing an oil analysis program as described in §63.6625(i) and Condition 25 below;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

(9 VAC 5-80-110, 40 CFR 63.6602 and Table 2c of 40 CFR 63, Subpart ZZZZ)

25. **Limitations** – The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 24. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 24. The analysis program must, at a minimum, analyze the following three parameters and if the corresponding condemning limit for each parameter is not exceeded, the permittee is not required to change the oil.

- a. Total Base Number must be analyzed and be less than 30 percent of the Total Base Number of the oil when new.

- b. Viscosity of the oil must be analyzed and have not changed by more than 20 percent from the viscosity of the oil when new.
- c. Percent water content of the oil must be analyzed and be (by volume) not be greater than 0.5.

If any of the limits listed above are exceeded, the permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(9 VAC 5-80-110, 40 CFR 63.6625 (i), and 40 CFR 63, Subpart ZZZZ)

- 26. **Limitations** – The permittee shall operate and maintain the fire water pumps (FP1 & FP2) according to the manufacturer’s emission-related written instructions or develop a maintenance plan that provides, to the extent practicable, for the maintenance and operation of each fire water pump in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to, review of operation and maintenance procedures and records and inspection of the source.
(9 VAC 5-80-110, 40 CFR 63.6625 (e), 40 CFR 63.6605 (b), and 40 CFR 63, Subpart ZZZZ)
- 27. **Limitations** – During periods of startup the permittee must minimize the time spent at idle for the fire water pumps (FP1 & FP2) and minimize the engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations in Condition 24 apply.
(9 VAC 5-80-110, 40 CFR 63.6625 (h), and 40 CFR 63, Subpart ZZZZ)
- 28. **Limitations** – The permittee shall continually comply with the work practice standards in Condition 24 by:
 - a. Operating and maintaining the fire water pumps (FP1 & FP2) according to the manufacturer’s emission-related operation and maintenance instructions; or
 - b. Develop and follow its own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(9 VAC 5-80-110, 40 CFR 63.6640 (a) and Table 6 of 40 CFR 63, Subpart ZZZZ)

29. **Monitoring** – The permittee shall install a non-resettable hour meter on the fire water pumps (FP1 & FP2) if one is not already installed. The hour meter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 40 CFR 63.6625 (f), and 40 CFR 63, Subpart ZZZZ)
30. **Recordkeeping** – The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:
- a. Records of the maintenance conducted on the fire water pumps (FP1 & FP2) in order to demonstrate that each engine is operated and maintained according to the maintenance plan required by Condition 26.
 - b. Records of the hours of operation of the fire water pumps (FP1 & FP2) that are recorded on a non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If an engine is used for demand response operation as specified in Condition 22.b(2) or 22.b(3), the permittee must keep records of the notification of the emergency situation, and the date, start time, and end time of the engine operation for these purposes.
 - c. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 26, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation, as applicable.

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

(9 VAC 5-80-110, 40 CFR 63.6655 (e) and (f), and 40 CFR 63, Subpart ZZZZ)

31. **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)
32. **Reporting** – If the fire water pumps (FP1 & FP2) are operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements listed in Condition 24, or if performing the work practice in Condition 24 would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice listed in Condition 24 and the federal, state, or local law under which the risk was deemed unacceptable.
(9 VAC 5-80-110 and Footnote 1 of Table 2c of 40 CFR 63, Subpart ZZZZ)

33. **Reporting** – If the fire water pumps (FP1 & FP2) are operated as described in Conditions 22.b(2) or 22.b(3), then the permittee shall submit an annual report that contains the following information:
- a. Company name and address where the engine is located;
 - b. Date of the report and beginning and ending dates of the reporting period;
 - c. Engine site rating and model year;
 - d. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;
 - e. Hours operated for the purposes specified in Conditions 22.b(2) and 22.b(3), including the date, start time, and end time for the engine operation;
 - f. Number of hours the engine is contractually obligated to be available for the purposes specified in Conditions 22.b(2) and 22.b(3) (if any); and
 - g. If there were any deviations from the fuel requirements in Condition 23 and if so, information on the number, duration, and cause of the deviation needs to be reported and the corrective action taken.

The first report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The reports shall be submitted electronically as described in §63.6650 (h)(3) and shall be available on site for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110, 40 CFR 63.6650 (h), and 40 CFR 63, Subpart ZZZZ)

Woodworking Equipment Requirements – Unit W1

34. **Limitations** – Particulate emissions from the woodworking equipment including the waste wood loadout system (W1) shall be controlled by fabric filters (BH1-BH7). The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 11 of 11/18/02 Permit as amended 2/15/11)
35. **Limitations** – All transfer of the collected material from the woodworking equipment (W1) shall be controlled by a fabric filter and/or a completely enclosed transfer system.
(9 VAC 5-80-110 and Condition 12 of 11/18/02 Permit as amended 2/15/11)
36. **Limitations** – Fugitive particulate emissions from the collection and transferring of collected wood waste shall be controlled by complete enclosure.
(9 VAC 5-80-110 and Condition 13 of 11/18/02 Permit as amended 2/15/11)
37. **Limitations** – The annual throughput of wood for the manufacture of wood cabinets shall not exceed 38,325,000 board feet, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-110 and Condition 15 of 11/18/02 Permit as amended 2/15/11)
38. **Limitations** – Total emissions from the fabric filter exhausts (BHS1-BHS7) from the operation of the woodworking equipment (W1) shall not exceed the limits specified below:
- | | | |
|--------------------|----------------|---------------|
| Particulate Matter | 0.0022 gr/dscf | 31.63 tons/yr |
| PM-10 | 0.0022 gr/dscf | 31.63 tons/yr |
- The tons/year emissions are derived from the estimated overall emission contribution. Compliance with these limits shall be determined as stated in Condition 34, 37, and 39.
(9 VAC 5-80-110 and Condition 17 of 11/18/02 Permit as amended 2/15/11)
39. **Limitations** – Visible emissions from each fabric filter exhaust (BHS1-BHS7) 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 5-50-80, 9 VAC 5-80-110 and Condition 18 of 11/18/02 Permit as amended 2/15/11)
40. **Limitations** – Visible emissions from any fugitive emission points shall not exceed ten 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 5-50-80, 9 VAC 5-80-110 and Condition 19 of 11/18/02 Permit as amended 2/15/11)

41. **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 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.

(9 VAC 5-80-110 and Condition 48 of 11/18/02 Permit as amended 2/15/11)

42. **Monitoring** – Each fabric filter (BH1-BH7) shall be equipped with a device to continuously measure the differential pressure 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 fabric filter is operating.

The monitoring device used to continuously measure differential pressure across the fabric filters (BH1- BH7) 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 that includes, at a minimum, the name of the observer, the date and time of the observation, which fabric filter is being observed, and the differential pressure reading.

(9 VAC 5-80-110 and Condition 14 of 11/18/02 Permit as amended 2/15/11)

43. **Compliance Assurance Monitoring (CAM)** – The permittee shall monitor, operate, calibrate and maintain the fabric filters (BH1- BH7) controlling the woodworking equipment (W1) as specified in Attachment A (Fabric Filter Compliance Assurance Monitoring Plan).
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))
44. **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))
45. **Compliance Assurance Monitoring (CAM)** – At all times, the permittee shall maintain the 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))

46. **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))
47. **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 emissions limitation or standard, as applicable.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))
48. **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))
49. **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 DEQ 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))

50. **Compliance Assurance Monitoring (CAM)** - If more than three exceedances or excursions from the indicator range specified in the Compliance Assurance Plan for the fabric filters (BH1- BH7) [Attachment A] 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))

51. **Recordkeeping** – The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

- a. The monthly and annual throughput of wood used for the manufacture of wood cabinets (in board feet). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- b. A log of fabric filter (BH1- BH7) pressure drop readings recorded once per day per fabric filter as required in Condition 42.
- c. Documentation of monitoring required by the Fabric Filter CAM Plan (Attachment A), to include but not limited to:
 - (1) Daily visible emissions observation records for each fabric filter including date, time, and name of trained person performing each observation.
 - (2) Method 9 Visible Emissions Evaluation results.
 - (3) Monthly and annual inspection logs including date, time, and name of person performing each inspection, list of items inspected, bag filter condition, and any maintenance or repairs performed as a result of these inspections.
 - (4) Record of all excursions, including date, time and corrective actions taken.

d. Results of all stack tests and visible emission evaluations.

e. Records of maintenance, operating procedures, and training as required in Condition 41.

These records shall be available on site 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 37 of 11/18/02 Permit as amended 2/15/11)

52. **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 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).

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

(9 VAC 5-80-110 E and 40 CFR 64.9 (b))

53. **Testing** – The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations located as required by the appropriate test method.

(9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 16 of 11/18/02 Permit as amended 2/15/11)

54. **Testing** – Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the fabric filters (BH1- BH7) to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.

(9 VAC 5-80-110 and Condition 42 of 11/18/02 Permit as amended 2/15/11)

55. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.

(9 VAC 5-80-110)

56. **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 116 of this permit to the DEQ. 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 actions taken to implement a 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))

Finishing Operation Requirements – Unit F1

57. **Limitations** – Particulate emissions from each spray booth (F1), including emissions during the rigid thermo foil (RTF) production process, shall be controlled by either dry filters or a combination of water wash and dry filters. The water wash and the filters shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 20 of 11/18/02 Permit as amended 2/15/11)
58. **Limitations** – Particulate emissions from the automatic sealer/sander (F1) shall be controlled by a fabric filter baghouse (BH6). The baghouse shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 21 of 11/18/02 Permit as amended 2/15/11)
59. **Limitations** – The permittee will continually seek new technology to include but not be limited to: selection and use of finishes with less photochemically reactive solvents; spraying equipment and techniques with improved transfer efficiencies; and water-based coatings when technically and economically acceptable and available to the industry.
(9 VAC 5-80-110 and Condition 36 of 11/18/02 Permit as amended 2/15/11)
60. **Limitations** – Volatile organic compound (VOC) emissions from the finishing operations (F1) shall be controlled by the use of lower VOC finishes and/or routing VOC emissions from the sealer booth to a regenerative thermal oxidizer (RTO). The RTO shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 22 of 11/18/02 Permit as amended 2/15/11)
61. **Limitations** – The RTO shall maintain a destruction efficiency for VOC emissions of no less than 95.0 percent on a mass basis.
(9 VAC 5-80-110 and Condition 24 of 11/18/02 Permit as amended 2/15/11)
62. **Limitations** – The enclosure to the sealer booth shall have a capture efficiency of 95.0 percent as determined by an approved negative pressure enclosure procedure, or alternate methods as approved by the DEQ.
(9 VAC 5-80-110 and Condition 25 of 11/18/02 Permit as amended 2/15/11)
63. **Limitations** – The RTO shall maintain a minimum combustion zone temperature equal to higher than that determined during the performance testing required by Condition 86 and a residence time of at least 0.9 second. The minimum combustion zone temperature shall be calculated as a three-hour average. Details concerning the method of calculating the three-hour average combustion zone temperature shall be arranged with the DEQ.
(9 VAC 5-80-110 and Condition 26 of 11/18/02 Permit as amended 2/15/11)
64. **Limitations** – The approved fuel for the RTO is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 29 of 11/18/02 Permit as amended 2/15/11)

65. **Limitations** – VOC emissions from the use of glue (two-part dispersion adhesive (Jowapur 150.17 or equivalent) and hardener (Jowat Hardener 195.40 or equivalent) or one-part adhesive (Jowapur 150.55 or equivalent)) during the RTF production process in the RTF adhesive spray booth (F1) are limited to 0.33 lb VOC/gal as applied on a daily average. A change in the product specifications of the glue may require a permit to modify and operate. (9 VAC 5-80-1180 and Condition 23 of 11/18/02 Permit as amended 2/15/11)
66. **Limitations** – The total throughput of VOC to the finishing equipment (F1) shall not exceed the quantity as determined by the following equation:

$$X + Y \left(1 - \frac{OCE}{100} \right) \leq 533 \text{ tons}$$

.....Equation 3

- X = VOC throughput to uncontrolled finishing operations in tons
- Y = VOC throughput to controlled sealer booth in tons
- OCE = overall VOC control efficiency (capture & control ≥ 90%), as determined in testing of capture system and RTO, as required by Conditions 62 and 86 respectively.

Total VOC throughput shall be calculated monthly as the sum of each consecutive 12-month period.
 (9 VAC 5-80-110 and Condition 30 of 11/18/02 Permit as amended 2/15/11)

67. **Limitations** – The total throughput of the glues approved in Condition 65 to the RTF adhesive spray booth (F1) for the production of RTF cabinet components shall not exceed 7,950 gallons per year, calculated monthly as the sum of each consecutive 12-month period. (9 VAC 5-80-1180 and Condition 31 of 11/18/02 Permit as amended 2/15/11)
68. **Limitations** – Emissions from the operation of the finishing equipment (F1), including emissions from the production of RTF cabinet components, shall not exceed the limits specified below:

| | | | | |
|----------------------------|-----|--------|------|---------|
| Particulate Matter | 3.0 | lbs/hr | 13.0 | tons/yr |
| PM-10 | 3.0 | lbs/hr | 13.0 | tons/yr |
| Volatile Organic Compounds | | | 533 | tons/yr |

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of

the exceedance of emission limits. Compliance with these limits shall be determined as stated in Conditions 57, 58, 60, 61, 62, and 65.

(9 VAC 5-80-110 and Condition 32 of 11/18/02 Permit as amended 2/15/11)

69. **Limitations** – Visible emissions from the RTO 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 34 of 11/18/02 Permit as amended 2/15/11)

70. **Limitations** – Visible emissions from each finishing operation 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 35 of 11/18/02 Permit as amended 2/15/11)

71. **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 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.

(9 VAC 5-80-110 and Condition 48 of 11/18/02 Permit as amended 2/15/11)

72. **Monitoring** – The permittee shall determine compliance with the VOC limit in Condition 68 by calculating the VOC emissions as follows:

$$E = \sum_{i=1}^n \left[M_{ciu}W_{oi} + M_{cic}W_{oi} \left(1 - \frac{OCE}{100} \right) \right]$$

.....Equation 4

E = the VOC emissions in pounds per time period

M_{ciu} = the total mass (lb) of each finishing material (i) applied during each time period as determined from facility records in an uncontrolled setting.

M_{cic} = the total mass (lb) of each finishing material (i) applied during each time period as determined from facility records in a controlled setting.

W_{oi} = the weight fraction of VOC applied of each finishing material (i) applied during each time period.

OCE = the overall VOC control efficiency.

Annual VOC emissions shall be calculated as the sum of each consecutive 12-month period.
(9 VAC 5-80-110)

73. **Monitoring** – The RTO shall be equipped with a device to continuously measure and record the combustion zone temperature. The 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. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the RTO is operating.
(9 VAC 5-80-110 and Condition 27 of 11/18/02 Permit as amended 2/15/11)

74. **Monitoring** – Each dry filter (F01 - F06) shall be equipped with a device to continuously measure the differential pressure drop across the 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 filter is operating.

The monitoring device used to continuously measure differential pressure across the filters (F01- F06) shall be observed by the permittee with a frequency of not less than once per day of operation. The inspections shall include a check of correct filter placement, filter condition, and observation of the pressure drop across the filters. The permittee shall keep a log of these observations for each filter.
(9 VAC 5-80-110)

75. **Compliance Assurance Monitoring (CAM)** – The permittee shall monitor, operate, calibrate, and maintain the RTO controlling the finishing operations (F1) as specified in Attachment B (Regenerative Thermal Oxidizer Compliance Assurance Plan).
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))
76. **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 and 40 CFR 64.6 (c))
77. **Compliance Assurance Monitoring (CAM)** – At all times, the permittee shall maintain the 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))

78. **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 finishing equipment (F1) 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))
79. **Compliance Assurance Monitoring (CAM)** – Upon detecting an excursion or exceedance, the permittee shall restore operation of the finishing equipment (F1) (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 emissions limitation or standard, as applicable.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))
80. **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))
81. **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 DEQ 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))

82. **Compliance Assurance Monitoring (CAM)** - If more than six exceedances or excursions from the indicator range specified in the Compliance Assurance Plan for the RTO [Attachment B] occur within any semi-annual reporting 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))

83. **Recordkeeping** – The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with DEQ. These records shall include, but are not limited to:
- a. Material Safety Data sheets (MSDS) or other vendor information showing VOC content, water content, and solids content for each coating material, adhesive, thinner, or cleaning solution used.
 - b. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, water content, and solids content for the glue used for the production of rigid thermo foil (RTF) cabinet components.
 - c. A monthly and annual material balance including the throughput and emissions of VOC and particulate matter (PM) (in tons). PM emissions shall be based on the appropriate transfer efficiency and control efficiency. VOC emission calculations from the RTO exhaust shall reflect the control efficiency established during the most recent emission test that demonstrated compliance. Calculations shall also account for any VOC emissions from the bypass stack due to malfunctions.
 - d. An average hourly material balance including the throughput and emission of PM. Average emissions shall be calculated and recorded monthly as the total amount of PM used within a calendar month divided by the total hours of operation of the finishing equipment (F1) to estimate a maximum hourly usage.
 - e. The number of hours per day of operation of the finishing line (F1).

- f. Finishing control device (F01- F06) inspection results including the date, time, and name of the person performing each inspection, whether or not filters were replaced, the pressure drop across each finishing control device and any maintenance or repairs performed as a result of these inspections as required by Condition 74.
- g. Hours of operation of the sealer booth when RTO is in bypass or shutdown.
- h. Monthly and annual throughput of VOC to the finishing line sealer booth. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- i. Annual throughput of glue (dispersion adhesive and hardener) to the RTF adhesive spray booth (F1) for the production of RTF cabinet components, calculated monthly as the sum of each consecutive 12-month period.
- j. Monthly and annual throughput of VOC used on areas of the finishing line not controlled by the RTO. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- k. Average combustion zone temperatures recorded in the RTO, calculated hourly as an average of the previous three hours of data.
- l. Monthly records of any three-hour period during which the combustion zone temperature of the RTO was below the average temperature observed during the most recent emission test that demonstrated compliance. The permittee shall record causes for any excursion, and corrective actions taken.
- m. Maintenance and calibration records (calibrations, checks, and adjustments) for the RTO's combustion zone temperature monitoring device.
- n. Records demonstrating compliance with the VOC content limit for the glue and hardener used in the RTF process as required by Condition 65.
- o. Documentation of monitoring required by the RTO CAM Plan (Attachment B) that is not specified above, to include but not limited to:
 - (1) The annual temperature accuracy check as required for Indicator 1.
 - (2) Annual inspection logs as required for Indicator 2, including date, time, and name of person performing each inspection, list of items inspected, and any maintenance or repairs performed as a result of the inspection.
 - (3) Record of all excursions, including date, time and corrective actions taken.
- p. Results of all stack tests and visible emissions observations and/or evaluations.
- q. Records of maintenance, operating procedures, and training as required in Condition 71.

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

(9 VAC 5-80-110 and Conditions 37 and 48 of 11/18/02 Permit as amended 2/15/11)

84. **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 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).

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

(9 VAC 5-80-110 E and 40 CFR 64.9 (b))

85. **Testing** – The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations located as required by the appropriate test method.
(9 VAC 5-80-110 and Condition 28 of 11/18/02 Permit as amended 2/15/11)

86. **Testing** – Initial performance tests shall be conducted for VOC emissions from the RTO to determine compliance with the capture and destruction efficiency requirements contained in Conditions 61 and 62. The results of the performance tests shall be used to establish appropriate operating parameter ranges for the RTO, including the minimum combustion zone temperature necessary to achieve the destruction efficiency contained in Condition 61. Upon approval by the DEQ, appropriate parameters based upon performance testing, to include minimum combustion zone temperature, shall be incorporated into Condition 63 by reference. The tests shall be performed, and demonstrate compliance, within 60 days after start-up of the RTO. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. Control efficiency testing shall be conducted according to 40 CFR 60, Appendix A, Methods 25, 25A, or 25B. Capture efficiency testing shall be conducted according to an approved negative pressure enclosure procedure, or using alternative methods as approved by the DEQ. The details of the tests are to be arranged with the DEQ. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the DEQ, within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110 and Condition 39 of 11/18/02 Permit as amended 2/15/11)

87. **Testing** – Concurrently, with the initial performance tests, Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the RTO exhaust. Each test shall consist of thirty sets of 24 consecutive observations (at 15-second intervals) to yield a six-minute average. The details of the tests are to be arranged with the DEQ. The permittee shall submit a test protocol at least 30 days prior to testing. Should conditions prevent concurrent opacity observations, the DEQ shall be notified in writing within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. One copy of the test results shall be submitted to

the DEQ, within 45 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-80-110 and Condition 40 of 11/18/02 Permit as amended 2/15/11)

88. **Testing** – Following completion of the initial stack testing, the permittee shall perform additional performance tests on a biennial basis to demonstrate compliance with the VOC emission limit and control efficiency requirements contained in Conditions 61 and 68. If two consecutive performance tests demonstrate compliance with the VOC emission limit and the control efficiency requirement, the permittee may request a revised testing schedule no less frequent than once each five-year period. The details for the tests shall be arranged with the DEQ.

(9 VAC 5-80-110 and Condition 41 of 11/18/02 Permit as amended 2/15/11)

89. **Testing** – Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the fabric filter (BH6) and the finishing operations exhausts to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.

(9 VAC 5-80-110 and Condition 42 of 11/18/02 Permit as amended 2/15/11)

90. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.

(9 VAC 5-80-110)

91. **Reporting** – The permittee shall submit a quarterly material balance reports to the DEQ in accordance with the following schedule:

| Time Period Covered by Report | Report Due Date |
|--------------------------------------|------------------------|
| January 1 – March 31 | June 1 |
| April 1 – June 30 | September 1 |
| July 1 – September 30 | December 1 |
| October 1 – December 31 | March 1 |

The reports due on March 1 and September 1 shall be submitted with the semi-annual report required by General Condition 116 and shall contain the following information:

- a. The monthly and annual throughput (in gallons), density, and percent VOC by weight of each stain, sealer, top coats, touch-up finish, and clean-up solvent used by the facility.
- b. The monthly and annual emissions (in pounds) of VOC from the finishing operation as calculated in Condition 72.

(9 VAC 5-80-110 and Condition 38 of 11/18/02 Permit as amended 2/15/11)

92. **Reporting** – The permittee shall submit a status report with the semi-annual report required by General Condition 116 addressing each emerging technology identified according to the requirements of Condition 59.

(9 VAC 5-80-110 and Condition 36 of 11/18/02 Permit as amended 2/15/11)

93. **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 116 of this permit to the DEQ. 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 actions taken to implement a QIP during the reporting period as specified in §64.8. Upon completion of a QIP, the permittee 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 and 40 CFR 64.9 (a))

94. **Notifications** – The permittee shall furnish written notification to the DEQ of:

- a. The actual start-up date of the RTO within 15 days after such date.
- b. The anticipated date of the performance tests of the RTO postmarked at least 30 days prior to such date.
- c. The anticipated date of the VEE for the finishing operation exhausts, postmarked at least 30 days prior to such date.

(9 VAC 5-80-110 and Condition 43 of 11/18/02 Permit as amended 2/15/11)

Dry Kiln Requirements – Units DK1 & DK2

95. The permittee shall operate in compliance with 40 CFR Part 63 Subpart DDDD, National Emission Standards for Hazardous Pollutants: Plywood and Composite Wood Products. A current copy of 40 CFR Part 63 Subpart DDDD can be found at <http://www.ecfr.gov/> under Title 40.

(9 VAC 5-80-110, 9 VAC 5-60-100, and 40 CFR Part 63 Subpart DDDD)

Facility Wide Conditions for Hazardous Air Pollutant Emissions

The following terms and conditions are from 40 CFR Part 63 Subpart JJ. A current copy of 40 CFR Part 63, Subpart JJ can be accessed at <http://www.ecfr.gov/> by selecting Title 40. As used in this section, all terms shall have the meaning as defined in §63.2 and §63.801.

96. **Limitations** – Except where this permit is more restrictive, the facility shall be operated in compliance with the requirements of 40 CFR 63, Subpart JJ.
(9 VAC 5-80-110 and 40 CFR 63, Subpart JJ)
97. **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:
 - (1) Achieve a weighted average VHAP content across all coatings of 1.0 lb VHAP/lb solids, as applied.
 - (2) Use compliant finishing materials that meet the following specifications:
 - (i) Each sealer and topcoat has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied;
 - (ii) Each stain has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied;
 - (iii) 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;
 - (iv) 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 1.0 lb VHAP/lb solids, as applied;
 - (v) Each washcoat, basecoat, and enamel that is formulated onsite must be formulated using a finishing material containing no more than 1.0 lb VHAP/lb solids and a thinner containing no more than 3.0 percent HAP by weight; or
 - (3) Use any combination of averaging and compliant coatings such that no greater than 1.0 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 based on the following criteria:

- (1) For aerosol adhesives, as well as hot melt, PVA, and urea-formaldehyde adhesives, and for contact adhesives applied to nonporous substrates, there is no limit on the VHAP content of these adhesives;
- (2) For foam adhesives used in products that meet flammability requirements, the VHAP content shall be no more than 1.8 lb VHAP/lb solids, as applied;
- (3) For all other contact adhesives, the VHAP content shall be no more than 1.0 lb VHAP/lb solids, as applied.

d. By November 21, 2014, the permittee shall comply with limits on formaldehyde emissions by using one of the following methods:

- (1) Limit total formaldehyde (F_{total}) used in all coatings and contact adhesives to no more than 400 pounds per rolling 12-month period; or
- (2) Use coatings and contact adhesives only if they have a product concentration of no more than 1.0 percent formaldehyde by weight.

(9 VAC 5-80-110, 40 CFR 63.802 (a), and Table 3 of 40 CFR 63, Subpart JJ)

98. **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 finishing operations (F1) and addresses each of the work practice standards presented in Conditions 98.b through 98.l that follow. The plan shall be developed no more than 60 days after the compliance date. 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 §63.803 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 washoff operations, on the use of manufacturing equipment in these operations, or implementation of the requirements of 40 CFR Part 63, Subpart JJ. All new personnel shall be trained upon hiring. All existing personnel shall be trained within six months of the compliance date. 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:
 - (1) A list of all current personnel by name and job description that are required to be trained;

- (2) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;
 - (3) 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 washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and
 - (4) 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:
- (1) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic HAP 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 time frame between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:
 - (i) 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
 - (ii) Final repairs shall be made within 15 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 washoff solvent accounting system - The permittee shall develop an organic HAP solvent accounting form to record:
- (1) The quantity and type of organic HAP solvent used each month for washoff and cleaning, as defined in §63.801;
 - (2) The number of pieces washed off, and the reason for the washoff; and
 - (3) The quantity of spent organic HAP solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.
- e. Chemical composition of cleaning and washoff solvents - The permittee shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 of 40

CFR Part 63, 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, or plastic 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 HAP 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 washoff materials.
- h. Application equipment requirements - The permittee shall not use conventional air spray guns. Conventional air spray is defined as a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization.
- i. Line cleaning - The permittee shall pump or drain all organic HAP solvent used for line cleaning into a normally closed container.
- j. Gun cleaning - The permittee shall collect all organic HAP solvent used to clean spray guns into a normally closed container.
- k. Washoff operations - The permittee shall control emissions from washoff operations by:
 - (1) Using normally closed tanks for washoff; and
 - (2) 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:
 - (1) Identifies VHAP from the list presented in Table 5 of 40 CFR Part 63, Subpart JJ that are being used in the finishing operations (F1).
 - (2) Establishes a baseline level of usage for each VHAP identified by Condition 98.l(1). The baseline usage level shall be the highest annual usage from 1994, 1995, or 1996, for each VHAP identified, except for formaldehyde and styrene which shall be determined as specified by 40 CFR 63.803 (l)(2). For VHAPs that do not have a baseline, one will be established according to Condition 98.l(6) below.
 - (3) Tracks the annual usage of each VHAP identified in Condition 98.l(1) that is present in amounts subject to MSDS reporting as required by OSHA.

- (4) If the annual usage of the VHAP identified in Condition 98.1(1) exceeds its baseline level, then the permittee shall provide a written notification to the DEQ that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the permittee from further action, unless the affected source is not in compliance with any State regulations or requirements for that VHAP:
- (i) The exceedance is no more than 15.0 percent above the baseline level;
 - (ii) Usage of the VHAP is below the de minimis level presented in Table 5 of 40 CFR Part 63, Subpart JJ for that VHAP;
 - (iii) The affected source is in compliance with its State's air toxic regulations or guidelines for the VHAP; or
 - (iv) 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.
- (5) If none of the explanations listed in 98.1(4) above are the reason for the increase, the permittee shall confer with the DEQ 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 DEQ and the permittee. 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 the 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.
- (6) If the permittee uses a VHAP of potential concern listed in Table 6 of 40 CFR Part 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 for that chemical. 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 40 CFR Part 63, Subpart JJ for that chemical, then the permittee shall provide an explanation to the DEQ that documents the reason for the exceedance of the de minimis level. If the explanation is not one of those listed in Condition 98.1(4), the permittee shall follow the procedures established in Condition 98.1(5).
- (9 VAC 5-80-110, 40 CFR 63.803, and 40 CFR 63, Subpart JJ)

99. **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 Clean Air 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 DEQ 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 63.802 (c), 40 CFR 63.6(e), and 40 CFR 63, Subpart JJ)

100. **Monitoring** – Continuous compliance with the VHAP emissions limits in Condition 97 shall be determined as follows:

- a. For finishing operations when averaging is being used to show continuous compliance, the permittee shall submit the results of the averaging calculation (Equation 5) for each month within that semiannual period and submitting a compliance certification with the semiannual report required by Condition 104. The compliance certification shall state that the value of (E), as calculated by Equation 5 below, is no greater than 1.0. The facility is in violation of the standard if E is greater than 1.0 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 5

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 VHAP / pound 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 where 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 97, 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:
 - (1) Using 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.
 - (2) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir, using compliant thinners, maintaining 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, maintaining records of solvent additions, and submitting a compliance certification with the semiannual report which states that compliant coatings, as determined by the VHAP content of the coating in the reservoir, has 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 contact adhesive operations where compliant adhesives are being used to show compliance, the permittee shall submit a compliance certification with the semiannual report that states 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.
- e. For strippable spray booth coatings, the permittee shall submit a compliance certification with the semiannual report that states 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.
- f. For work practice standards listed in Condition 98, the permittee shall submit a compliance certification with the semiannual report that states 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 Condition 98.a).
- g. For formaldehyde emissions, the permittee shall demonstrate compliance by one of the following methods:
 - (1) Calculate total formaldehyde emissions from all finishing materials and contact adhesives used at the facility using Equation 6 below and maintain a value of F_{total} no more than 400 pounds per rolling 12-month period.

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

.....Equation 6

- 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 / 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 / gallon of contact adhesive (lb/gal).

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

- (2) Using 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 101.a(1) and submitting a compliance certification with the semiannual report that states 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.

All compliance certifications submitted with the semiannual report shall be signed by a responsible official of the company that owns or operates the facility.
(9 VAC 5-80-110, 40 CFR 63.804 (g) and (h), and 40 CFR 63, Subpart JJ)

101. **Recordkeeping** – The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

- a. To show compliance with the emission limits in Condition 97, the permittee shall maintain the following:
- (1) A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in Condition 97;
 - (2) The VHAP content, in lb VHAP / lb solids, as applied, of each finishing material and contact adhesive subject to the emission limits in Conditions 97.a and 97.c;
 - (3) The VOC content, in lb VOC / lb solids, as applied, of each strippable booth coating subject to the emission limits in Condition 97.b; and
 - (4) The formaldehyde content, in lbs/gal, as applied, of each finishing material and contact adhesive subject to the emission limits in Condition 97.d and chooses to comply with the 400 lb/yr limits on formaldehyde.
- b. Following the averaging method, the permittee shall maintain copies of the averaging calculation for each month following the compliance date, as well as the data on the quantity of coatings and thinners used that is necessary to support the calculation of E in Equation 5 (as defined in Condition 100.a).

- c. Following the continuous coating operations where viscosity is being used to determine compliance, the permittee shall maintain the records required by Condition 101.a as well as the following:
- (1) Solvent and coating additions to the continuous coater reservoir;
 - (2) Viscosity measurements; and
 - (3) Data demonstrating that viscosity is an appropriate parameter for demonstrating compliance.
- d. 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:
- (1) Records demonstrating that the operator training program required by Condition 98.b is in place;
 - (2) Records collected in accordance with the inspection and maintenance plan required by Condition 98.c;
 - (3) Records associated with the cleaning solvent accounting system required by Condition 98.d;
 - (4) Records associated with the formulation assessment plan required by Condition 98.i; and
 - (5) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.
- e. The permittee shall maintain records of the compliance certifications submitted for each semiannual period following the compliance date.
- f. The permittee shall maintain records of all other information submitted with the compliance status report and the semiannual reports.

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

(9 VAC 5-80-110, 40 CFR 63.806, and 40 CFR 63, Subpart JJ)

102. **Testing** – If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ or using the test methods and procedures as specified in 40 CFR 63.805.
(9 VAC 5-80-110, 40 CFR 63.805, and 40 CFR 63, Subpart JJ)

103. **Reporting** – Each time a notification of compliance status is required (see Conditions 114 through 116), the permittee shall submit to the DEQ a notification of compliance status, signed by a responsible official of the company that owns or operates the facility who shall

certify its accuracy, attesting to whether the source has complied with 40 CFR Part 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 generated for this notification);
- f. A statement by the permittee as to whether the facility has complied with Subpart JJ as expressed in this permit.

Copies of each notification shall be sent to:

U. S. EPA Region III
Air Protection Division
ATTN: Wood Furniture NESHAP Coordinator
1650 Arch Street
Philadelphia, PA 19103

(9 VAC 5-80-110, 40 CFR 63.9 (h), and 40 CFR 63, Subpart JJ)

104. Reporting – Reporting not otherwise required by this permit shall consist of the following:

- a. The permittee when demonstrating continuous compliance shall submit a report covering the previous six months of wood furniture manufacturing operations (see Condition 116):
 - (1) Reports shall be submitted no later than March 1 and September 1 of each calendar year.
 - (2) The semiannual reports shall include the information required by Condition 100, 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.
- b. The permittee, when required to provide a written notification by Condition 98.l(4) 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 103.
(9 VAC 5-80-110, 40 CFR 63.807, 40 CFR 63.10 (d), and 40 CFR 63, Subpart JJ)

Insignificant Emission Units

105. 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 | Citation (9 VAC) | Pollutant(s) Emitted (5-80-720 B) | Rated Capacity (5-80-720 C) |
|--------------------------|---|--------------------------|--|------------------------------------|
| PW1, PW2, PW3 | Parts Washers | 5-80-720 B | VOC | --- |
| G1 | Gluing (water-based glues) | 5-80-720 B | VOC | --- |
| RTF | Rigid Thermo Foil (RTF) Membrane Press | 5-80-720 B | VOC | --- |

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

106. Compliance with the provisions of this permit shall be deemed in 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 |
|----------------------------------|-------------------|------------------------------|
| None identified by the applicant | | |
| | | |

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

107. **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)
108. **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)
109. **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)
110. **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)
111. **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)
112. **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)
113. **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 to 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)

114. **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)

115. **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)

116. **Recordkeeping and Reporting** – The permittee shall submit the results of monitoring contained in any applicable requirement to the 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 purposes of this permit, deviations include, but are not limited to:
 - (1) Exceedance of emissions limitations or operational restrictions;
 - (2) 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,
 - (3) 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)

117. 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 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 the 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)

118. Permit Deviation Reporting – The permittee shall notify the DEQ 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 116 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

119. **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 DEQ by facsimile transmission, 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 DEQ.
(9 VAC 5-20-180 C)
120. **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)
121. **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 grounds 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)
122. **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)
123. **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)
124. **Property Rights** – The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)

125. **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)
126. **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)
127. **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)
128. **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 other 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)

129. **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)

130. **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)

131. **Inspection and Entry Requirements** – The permittee shall allow the 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)

132. 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 5-80-80F. 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)

133. 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)

134. 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)

135. 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)

136. 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)

137. 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 138 are met.

(9 VAC 5-80-250)

138. **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)

139. **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)

140. **Malfunction as an Affirmative Defense** – The provisions of Conditions 137, 138, and 139 are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

141. **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 of the 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)

142. **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)

143. **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)

144. **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)

145. **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)

146. **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)

Fabric Filter CAM Plan (Units: BH1-BH7)

| | Indicator 1 | Indicator 2 | Indicator 3 |
|---|--|--|--|
| Indicator | Opacity | Visible Emission Evaluation (optional - to determine if excursion occurs) | Periodic Structural Inspections |
| Measurement approach | Daily visible emission observations conducted at each control device 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 inspections 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 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 a reporting requirement. |
| QIP Threshold | More than 3 excursions in a 2 week period per each control device | More than 3 excursions in a 2 week period per each control device. | Not Applicable |
| <u>Performance criteria:</u> | | | |
| Data Representativeness | Observation of visible emissions indicates possible damage to bag filter. | Observation of visible emissions greater than 5% indicates replacement or maintenance of bag filters is necessary. | Bags in the fabric filters 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 each filter. | Pressure drop across each filter. |
| 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 any fabric filter. | Monthly and annual inspections. |

Regenerative Thermal Oxidizer (RTO) CAM Plan (Unit: RTO)

Masco Cabinetry LLC
 Permit No.: VRO81062
 Attachment B

| | Indicator 1 | Indicator 2 | Indicator 3 |
|---|--|--|---|
| Indicator | Combustion Chamber Temperature | Annual Inspection | Periodic Stack Testing |
| Measurement approach | The combustion zone temperature is continuously monitored by a thermocouple. | The burner and valves on the air lines leading to the regenerative beds shall be inspected annually. | After initial startup of the RTO, EPA Method 25, 25A, or 25B (40 CFR 60, Appendix A) testing shall be conducted at least once every five years to verify destruction efficiency. The enclosure's capture efficiency shall also be verified. |
| Indicator range | Greater than or equal to the temperature observed during the stack test demonstrating 95.0% destruction efficiency. The monitored temperature shall be a three-hour average. | The burner shall be inspected for corrosion, mechanical failure, etc. The seal integrity of the valves shall be assessed to ensure no leakage. | Greater than or equal to 95.0% VOC destruction efficiency. Greater than or equal to 95.0% capture efficiency for enclosure to the sealer booth. |
| QIP Threshold | Six excursions below the indicator range in any semi-annual reporting period. | N/A | N/A |
| Performance criteria: | | | |
| Data representativeness | The thermocouple is installed in the combustion chamber as an integral part of the RTO design. | Each valve and associated ductwork is inspected for any warping, splits, or other degradation that may affect the tightness of seal when each valve is closed. | Testing shall be conducted when finishing operations are representative of normal operating conditions. |
| Verification of operational status | N/A | N/A | N/A |
| QA/QC practices and criteria | An accuracy check shall be conducted at least annually by inserting a second (redundant) thermocouple probe into the incinerator chamber via a hand-held meter to verify the accuracy of the thermocouple. No accuracy check is required if the thermocouple has been replaced within the previous 12 months. The acceptance criterion is +/- 10 °F. | The RTO manufacturer or other authorized technician familiar with the operating principles of regenerative thermal oxidation units shall conduct the inspection. | Test procedures shall be as required by EPA Method 25, 25A, or 25B (40 CFR 60, Appendix A). Capture efficiency for the sealer booth enclosure shall be determined by an approved negative pressure enclosure procedure or by an alternate method approved by DEQ. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. A test protocol shall be submitted to and approved by the DEQ, prior to testing. |
| Monitoring frequency and data collection procedure | Temperature is measured and recorded continuously. Three-hour averages shall be calculated hourly as the average of the previous three hours of data. | The burner and valve seals shall be inspected each calendar year in which the RTO operates. Adjustments/repairs shall be made as necessary. | After initial startup of the RTO, at least once every five-year cycle of the permit. The initial performance test required by Condition V.D.2 shall satisfy this requirement upon initial startup of the RTO. |

SOURCE TESTING REPORT FORMAT

Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. *Signed by reviewer

Copy of approved test protocol

Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. *For each emission unit, a table showing:
 - a. Operating rate
 - b. Test Methods
 - c. Pollutants tested
 - d. Test results for each run and the run average
 - e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

Test Results

1. Detailed test results for each run
2. *Sample calculations
3. *Description of collected samples, to include audits when applicable

Appendix

1. *Raw production data
2. *Raw field data
3. *Laboratory reports
4. *Chain of custody records for lab samples
5. *Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

* Not applicable to visible emission evaluation