

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Blue Ridge Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

MW Manufacturers, Inc.
433 North Main Street, Rocky Mount, Virginia
Permit No. BRRO-30386

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9VAC5 Chapter 80, MW Manufacturers, Inc. has applied for a Title V Operating Permit for its Rocky Mount facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Permit Contact: _____
Lillian J. Alexander
(540) 562-6783

Date:

Air Permit Manager: _____
David J. Brown

Date:

Regional Director: _____
Robert J. Weld

Date:

FACILITY INFORMATION

Permittee

MW Manufacturers, Inc.
433 North Main Street
Rocky Mount, VA 24151

Facility

MW Manufacturers, Inc.
433 North Main Street
Rocky Mount, VA 24151

County-Plant Identification Number: 51-067-0023

SOURCE DESCRIPTION

NAICS Code: 321911 – manufacture of wood and vinyl windows and doors for new construction and replacement

This plant manufactures wood and vinyl clad windows and doors. The plant has been in existence at its current location since the 1940's. Processes include woodworking (milling and machining), wood preservation using a solvent-based product in a Dual Vacuum/Pressure (DVP) process, spray painting and glass sealing.

The wood/coal boiler is used for space heating purposes only. The boiler is subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (MACT 6J).

There are 2 emergency diesel generators. The generators are subject to the area source RICE¹ MACT (Subpart ZZZZ) with a compliance date of May 3, 2013.

A mutual shutdown determination for the old water-based wood preservation process – dipping and drying (ID#3) was finalized on December 15, 2010. This equipment has been removed from the Title V permit.

The facility is a Title V major source of VOC and SO₂. This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility is currently permitted under a Minor NSR Permit initially issued on April 18, 1979; the permit document was last amended on February 21, 2014.

The original Title V operating permit was issued on September 28, 2001 and amended on October 28, 2004. The facility is operating under application shield since their renewal application was submitted in a timely fashion. This renewal also incorporates a significant

¹ Reciprocating Internal Combustion Engine

modification to incorporate the minor NSR significant amendment dated the same date as the effective date of this Title V permit action.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance.

The facility was issued a Notice of Violation on June 27, 2013 alleging noncompliance with permitted VOC emission limits for the DVP process. The facility and DEQ entered into a Consent Order to resolve the Notice of Violation on September 19, 2013. This civil penalty has been paid.

The facility was issued a Notice of Violation on October 7, 2013 alleging noncompliance with failure to submit their Title V Semi-Annual Monitoring Report by the September 1 deadline. This issue was resolved on February 11, 2014.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description	Pollutant Controlled	Applicable Permit Document Date
Fuel Burning Equipment					
1	CNB Tri-Fuel Boiler Installed 1980	21.32 MMBtu/hr (coal) 17 MMBtu/hr (wood)	Custom Multicyclone	PM	2/21/14
1B	Fire Pump Engine – installed 1973	175 HP	none	n/a	--
1C	Lab Backup Generator - installed 1999	170 HP	none	n/a	--
Woodworking/Wood Preservation/Painting					
2	Dual Vacuum/Pressure (DVP) solvent-based wood preservation process		none	n/a	2/21/14
4	Wood Parts Priming 3 spray coat primer units	unknown	none	n/a	2/21/14
5	Wood milling and machining	20,000,000 bdf/yr	2 Pneumafil Baghouses	PM	2/21/14
6	Paint Booth	2 gal/hr	Dry Filters	PM	2/21/14
GS	Glass Sealant application	varies	none	n/a	2/21/14

EMISSIONS INVENTORY

Emissions for calendar year 2012 are summarized in the following tables.

2012 Actual Emissions in Tons/Yr

VOC	CO	SO ₂	PM ₁₀	NO _x
87.015	3.412	3.617	2.885	1.994

2012 Facility Hazardous Air Pollutant Emissions

Pollutant	2012 Hazardous Air Pollutant Emissions in Tons/Yr
Hydrogen Fluoride	0.020
Cumene	0.083
Benzene	0.083
Carbon Tetrachloride	0.041
Ethylbenzene	0.083
Ethylene Glycol	0.041
Formaldehyde	0.004
2-Butoxyethanol	0.308
HCl	0.160
Toluene	0.190

CNB Tri-Fuel Boiler (ID#1)

The wood/coal boiler was installed in 1980 and is used for space heating. The initial permit for the boiler established emission limits that have not changed. Particulate emissions are controlled by a multicyclone. An evaluation of uncontrolled emissions during the last Title V renewal in 2007 confirmed that the PM emission rate of the boiler is below the threshold for Compliance Assurance Monitoring (CAM)². The boiler is subject to the area source boiler MACT (Subpart 6J). The boiler does not burn enough wood to qualify as a biomass boiler.

APPLICABLE REQUIREMENTS – (ID#1)

Underlying permit requirements (ID#1)

The following limitations are carried forward from the 2/21/14 minor NSR permit document:

Condition #3 - Limitations - Particulate emissions shall be controlled by a multicyclone.

Condition #11 - Limitations - The approved fuels are coal and wood. A change in the fuels may require a permit to modify and operate.

Condition #12 - Limitations - The maximum sulfur content of the coal shall not exceed 1 percent by weight per shipment.

² PTE (wood fuel) – PM = 29.8 tpy, PM₁₀ = 26.8 tpy (coal) PM/PM₁₀ = 46.7 tpy

Condition #13 - Limitations - Emissions shall not exceed the limits specified below:

PM	2 lbs/hr	10 tons/yr
PM-10	2 lbs/hr	10 tons/yr
Sulfur Dioxide	56 lbs/hr	135 tons/yr
Volatile Organic Compounds	2.51 lbs/hr	11 tons/yr

Condition 21 - Limitations - Visible emissions shall not exceed 20 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 30 percent.

Condition 24h and 24i - Recordkeeping - Maintain records of the following:

- Coal shipments purchased, indicating sulfur content per shipment
- Annual amount of wood and coal burned calculated monthly as the sum of each consecutive 12-month period
- Annual emission calculations for SO₂ sufficient to demonstrate compliance with annual emission limit
- Results of required observations and inspections

Additional Requirements (ID#1)

The permittee is required to make a visible emission evaluation at least once per day if the boiler is operating. If emissions are observed, the permittee is required to either take corrective action or conduct an EPA Method 9.

The permittee is required to conduct an annual internal inspection on the Custom Multicyclone to ensure structural integrity.

MACT Requirements (ID#1)

This unit meets the definition of an existing coal boiler and is subject to the area source boiler MACT (40CFR63 Subpart 6J) outlined below. The MACT standard contains sufficient monitoring to demonstrate compliance with the mercury and CO emission limits and no additional monitoring is required.

Standards specified in 40 CFR §63.11201

General Requirements specified in 40 CFR §63.11205

Initial Compliance Requirements specified in 40 CFR §63.11210

Initial compliance with emission limits and work practice standards as specified in 40 CFR §63.11211

Initial compliance with work practice standard, emission reduction measures, and management practice as specified in 40 CFR §63.11214

Implement continuous compliance requirements as specified in 40 CFR §63.11220, 40 CFR §63.11221, 40 CFR §63.11222, 40 CFR §63.11223 and 40 CFR §63.11224

Notification, reporting, and recordkeeping requirements as specified in 40 CFR §63.11225

General Provisions as specified in 40 CFR §63.11235

Compliance (ID#1)

As of the date of this document the area source boiler MACT (Subpart 6J) compliance date specified in 40 CFR §63.1196 is March 21, 2014.

The maintenance, training, observation, and MACT requirements for the boiler in conjunction with required recordkeeping are considered sufficient monitoring to ensure compliance with the requirements included for ID#1.

Emergency Generators (ID#1B and 1C)

The generators meet the definition of existing emergency stationary CI RICE located at an area source of HAP emissions.

APPLICABLE REQUIREMENTS – (ID#1B and 1C)

Limitations (ID#1B and 1C)

These units have no underlying State-issued permit. The following requirements are from 9VAC, Chapter 50:

Visible emissions from either emergency generator stack shall not exceed 20 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 30 percent.

Additional Requirements (ID#1B and 1C)

The approved fuel for the emergency generators is #2 fuel oil.

The permittee is required to make a visible emission evaluation at least once per month when the generator is operating (i.e. routine testing). If emissions are observed, the permittee is required to either take corrective action or conduct an EPA Method 9. The permittee will maintain an observation log.

MACT Requirements (ID#1B and 1C)

The permittee operates these units as emergency stationary RICE³ as defined in 40CFR §63.6675. The compliance date for this rule was May 3, 2013. These units are subject to the following area source requirements of the RICE MACT (40CFR63 Subpart ZZZZ):

General Requirements of §63.6605(a) and (b)

Monitoring, installation, collection, operation and maintenance requirements of §63.6625(e)(3), (f) and (h)

Continuous compliance requirements of §63.6640, Table 2d, Section 4 according to methods specified in Table 6, Section 9

Continuous compliance requirements of §63.6640(f) (1) through (4)

Recordkeeping requirements of §63.6655 and §63.6660

³ Reciprocating Internal Combustion Engine

Compliance (ID#1B and 1C)

The maintenance, training, observation and monitoring required for the generators in conjunction with required recordkeeping are considered sufficient monitoring to ensure compliance with the requirements included for ID#1B and 1C.

DVP Process (ID#2)

The DVP Process is comprised of an enclosed vessel that is flooded with a solvent-based preservative. After several minutes the solvent is pumped out and the vessel is put under negative pressure which helps draw the preservative into the wood. After approximately 30 minutes, the vacuum is slowly released and the wood is removed from the vessel. Emissions from the DVP process are not vented to the outside and there is no add-on control equipment. The majority of the emissions occur over the next 5 days during on site storage before the wood goes to the production area.

APPLICABLE REQUIREMENTS – (ID#2)

Underlying permit requirements (ID#2)

The following limitations are carried forward from the 2/21/14 minor NSR permit document:

Condition #15 – Limitations - VOC emissions shall not exceed 125 tpy

Condition #15 - Recordkeeping - Maintain records of the following:

- Monthly and annual material balance of VOC (in tons) from the solvent-based wood preservative Dual Vacuum/Pressure process. The mass balance shall include all VOC-containing materials used and shall assume that 100% of the VOC content is emitted to atmosphere.
- Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS) for the preservatives and solvents used at the facility

MACT Requirements (ID#2)

MACT Subpart 6Q – National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources – The DVP process is in the source category covered by this MACT, however there are no applicable requirements.

Compliance (ID#2)

The required recordkeeping is considered sufficient monitoring to ensure compliance with the emission limits included for ID#2.

Wood Parts Priming (ID#4)

There are three wood primer spray operations. The spraying operation vents inside the building. One booth has an electric drying oven that vents to the inside of the building and two have propane drying ovens that vent outside to the ambient air.

APPLICABLE REQUIREMENTS – Wood Parts Priming (ID#4)

Underlying permit requirements (ID#4)

The following limitations are carried forward from the 2/21/14 minor NSR permit document:

Condition #16 - Limitations - VOC emissions from the water-based frame priming system shall not

exceed 23.7 tpy

Condition #17 - Limitations - VOC emissions from the water-based frame priming system while applying enamel shall not exceed and 4.2 tpy

Condition #24b, c and j - Recordkeeping - Maintain records of the following:

- Monthly and annual material balance of VOC (in tons) from water-based frame primer usage.
- Monthly and annual material balance of VOC (in tons) from water-based enamel usage.
- Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS) for the paints used at the facility
- Results of required observations

Compliance (ID#4)

The recordkeeping requirements are considered sufficient monitoring to ensure compliance with the emission limits included for ID#4.

Wood Milling and Machining (ID#5)

Assorted woodworking equipment vents to one of two Pneumafil baghouses.

APPLICABLE REQUIREMENTS (ID#5)

Underlying permit requirements (ID#5)

The following limitations are carried forward from the 2/21/14 minor NSR permit document:

Condition #4 - Limitations - Particulate emissions from the wood dust handling systems shall be controlled by baghouses.

Condition #8 - Limitations - All subsequent transfer of the collected material from the baghouses shall be controlled by a baghouse or a completely enclosed transfer system.

Condition #10 - Limitations - The annual throughput of cut stock lumber shall not exceed 20.0×10^6 board feet, calculated monthly as the sum of each consecutive 12-month period.

Condition #14 - Limitations - Emissions shall not exceed the limits specified below:

PM	0.01 gr/dscf	10 tons/year
PM-10	0.01 gr/dscf	10 tons/year

Condition #21 - Limitations - Visible emissions from the baghouses shall not exceed 5 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent

Condition #5 - Monitoring - The baghouses shall be equipped with devices to continuously measure the differential pressure drop through the baghouse.

Condition #24g - Recordkeeping - Maintain records of the monthly and annual throughput of cut stock lumber

Additional Requirements (ID#5) - CAM

CAM applies to an emissions unit if that unit (1) has the potential to emit (in the absence of add-on controls) a regulated pollutant in an amount that exceeds its major source threshold, (2) is subject to an emission limitation for that pollutant, and (3) uses a control device to achieve compliance with the emission limitation.

The uncontrolled emission rate for PM (i.e. the only pollutant for which add-on control is required) from the wood milling and machining operation (ID#5) are more than the major source threshold of 100 tons/year. As such, this emission unit is subject to CAM. Visible emissions monitoring was selected as a performance indicator because the absence of visible emissions is indicative of operation of a fabric filter in a manner necessary to comply with the emission standard. When the fabric filters are operating properly, no visible emissions are expected from the exhaust. Any observation of visible emissions indicates reduced performance of the particulate control device and triggers corrective action.

Compliance (ID#5)

The maintenance, training, observation and CAM required for the wood milling and machining operation in conjunction with required recordkeeping are considered sufficient monitoring to ensure compliance with the emission limits included for ID#5.

Paint Booth (ID#6)

This paint spray booth was initially permitted in 2011.

APPLICABLE REQUIREMENTS (ID#6)

Underlying permit requirements (ID#6)

The following limitations are carried forward from the 2/21/14 minor NSR permit document:

Condition #13 - Limitations - Particulate emissions shall be controlled by dry filters

Condition #22 - Limitations - Visible emissions from the paint booth stack shall not exceed 5 percent opacity

Condition #18 - Limitations - VOC emissions shall not exceed 4.5 tpy

Condition #19 - Limitations - VOC emissions from the cleaning solvents shall not exceed 1.8 tpy

Condition #7 - Monitoring - The paint booth shall be equipped with devices to continuously measure the differential pressure drop across the dry filters

Condition #24e, f and j - Recordkeeping - Maintain records of the following:

- Monthly and annual material balance of VOC (in tons) from paint booth coatings usage
- Monthly and annual material balance of VOC (in tons) from cleaning solvents usage for the paint booth
- Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS) for the solvents, paints and cleaning solvents used at the facility
- Results of visual observations

Additional Requirements (ID#6)

The permittee is required to make a visible emission evaluation at least once per day. If emissions are observed, the permittee is required to either take corrective action or conduct an EPA Method 9.

Compliance (ID#6)

The maintenance, training, and observation required for the paint booth in conjunction with required recordkeeping are considered sufficient monitoring to ensure compliance with the emission limits included for ID#6.

APPLICABLE REQUIREMENTS – Glass Sealant Application (ID#GS)

Underlying permit requirements (ID#GS)

The following limitations are carried forward from the 2/21/14 minor NSR permit document:

Condition #45 - Limitations - The glass sealing operation shall use only low-VOC content materials. For purposes of this permit, low-VOC content materials shall have less than or equal to 250 grams/liter (2.086 lb/gal) of VOC.

Condition #46 - Recordkeeping - Maintain records of the following:

- Monthly and annual material balance of VOC (in tons) from glass sealant usage
- Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS) for the glass sealant used at the facility

Compliance (ID#GS)

The required recordkeeping is considered sufficient monitoring to ensure compliance with the emission limits included for ID#GS.

FACILITY-WIDE APPLICABLE REQUIREMENTS

Underlying permit requirements (Facility-Wide)

The following requirements are carried forward from the 2/21/14 minor NSR permit document:

Condition #23 - Testing - The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.

Condition #9 - Fugitive Dust/VOC Emissions Control – Requires control of fugitive dust and fugitive emissions.

Condition #30 - Violation of Ambient Air Quality Standard - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

Condition #32 - Permit Copy - The permittee is required to keep a copy of the 2/21/14 minor NSR permit on the premises of the facility to which it applies.

Streamlined Requirements (Facility-Wide)

Condition #26 – The requirement for site accessibility for inspection is included in the Title V general conditions.

Condition #28 – The requirement for records of malfunctions is included in the Title V general conditions.

Condition #29 – The requirement for notification for malfunctions is included in the Title V general conditions.

Condition #31 – The requirement for change of ownership is included in the Title V general conditions.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9VAC5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-2003”.

F. Failure/Malfunction Reporting

Section 9VAC5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9VAC5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9VAC5-20-180 is from the general regulations. All affected facilities are subject to section 9VAC5-20-180 including Title V facilities. Section 9VAC5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9VAC5-20-180 and 9VAC5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9VAC5-80-250 and 9VAC5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on General Condition F.

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40CFR61 Subpart M, National Emission Standards for Asbestos.

STATE ONLY APPLICABLE REQUIREMENTS

Not Applicable

FUTURE APPLICABLE REQUIREMENTS

Future applicable requirements are outlined for the area source boiler MACT (Subpart 6J) with conditions included in the permit.

INAPPLICABLE REQUIREMENTS

Green House Gases (GHG) - None identified in the application. The facility is subject to 40 CFR 98.346 and is required to maintain GHG monitoring records and calculations. However, the requirements contained in the GHG Reporting Rule in 40 CFR 98 are currently not included in the definition of applicable requirements in 40 CFR 70.2 and 71.2 and are therefore not included in the Title V permit. There are no applicable GHG permitting requirements.

The startup, shut down, and malfunction opacity exclusion listed in 9VAC5-40-20 A.4 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9VAC5-40-20 E, which state that "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."

COMPLIANCE PLAN

Not Applicable

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the 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 9VAC5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutants Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
IEM-1	Diesel tank	9VAC5-80-720 B	VOC	
IEM-2	LP gas tanks (2)	9VAC5-80-720 B	VOC	
IEM-3	Diesel tank	9VAC5-80-720 B	VOC	
IEM-4	Glass cutting operation	9VAC5-80-720 B	VOC	
IEM-7	Inkjet coding of spacer frames	9VAC5-80-720 B	VOC	
IEM-8	Grille assembly	9VAC5-80-720 B	VOC	
IEM-9	Grinding room cleaning vat (parts cleaner)	9VAC5-80-720 B	VOC	
IEM-10	Grinding room saw blade sharpening lubricant	9VAC5-80-720 B	VOC	
IEM-11	Octagon window assembly	9VAC5-80-720 B	VOC	
IEM-12	Insulated glass maintenance shop parts cleaning sinks (2)	9VAC5-80-720 B	VOC	
IEM-13	Back-bedding compounds used	9VAC5-80-720 B	VOC	

Emission Unit No.	Emission Unit Description	Citation	Pollutants Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
	throughout window assembly area			
IEM-14	Casement assembly vinyl adhesive	9VAC5-80-720 B	VOC	
IEM-16	Wood double hung; vinyl double hung sealant	9VAC5-80-720 B	VOC	
IEM-17	V-wood back bedding (glass/vinyl)	9VAC5-80-720 B	VOC	
IEM-18	Vinyl clad double hung adhesive cleaner	9VAC5-80-720 B	VOC	
IEM-20	Vinyl clad double hung adhesive	9VAC5-80-720 B	VOC	
IEM-21	Simulated Divided Light Solvent	9VAC5-80-720 B	VOC	
IEM-22	Product development and testing lab	9VAC5-80-720 A		NA
IEM-24	Used Oil burner/Space Heater	9VAC5-80-720 C		0.35 MMBtu

¹The citation criteria for insignificant activities are as follows:
 9VAC5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
 9VAC5-80-720 B - Insignificant due to emission levels
 9VAC5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit was placed on public notice in *The The Franklin News Post* from January 20, 2014 until February 19, 2014. No comments were received from the public

The proposed permit was sent to EPA for review on January 15, 2014. Comments were received on February 5, 2014 and DEQ responded to the comments on February 12, 2014. As a result of the comments, footnote #3 was deleted from the Statement of Basis. No other changes were made to the SOB or permit.