

**COMMONWEALTH OF VIRGINIA  
Department of Environmental Quality  
West Central Regional Office**

**STATEMENT OF LEGAL AND FACTUAL BASIS**

John W. Hancock, Jr., LLC DBA New Millennium Building Systems  
2535 Diuguids Lane, Salem, Virginia  
Permit No. WCRO-20338

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 9 VAC 5 Chapter 80, John W. Hancock, Jr., LLC DBA New Millennium Building Systems has applied for a Title V Operating Permit for its facility in Salem, Virginia. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_ Date: \_\_\_\_\_

Air Permit Manager: \_\_\_\_\_ Date: \_\_\_\_\_

## **FACILITY INFORMATION**

### Permittee

New Millennium Building Systems  
6714 Pointe Inverness Way, Suite 200  
Fort Wayne, IN 46804

### Facility

John W. Hancock, Jr., LLC DBA New Millennium Building Systems  
100 Diuguuids Lane  
Salem VA 24153

County-Plant Identification Number: 51- 775-00181

## **SOURCE DESCRIPTION**

NAICS Code: 332312 - fabricated structural metal manufacturing

This facility manufactures steel joists, girders, bridging, decking and rack systems. Their state minor NSR permit was modified on August 11, 2006 to allow for modernization of the plant under new ownership. The August 11, 2006 permit was amended on October 22, 2007 to include a new rack dip tank operation. Although this operation was exempt from permitting under Article 6 (<10 tpy PTE for VOC), it needs to be included in the Title 5 permit for VOC recordkeeping because emissions from this operation count towards the facility-wide VOC emission limit.

Prior to the 2006 permit the facility had not been considered a Title 5 major source since emissions from the drying area were considered fugitive and therefore not counted for Title 5 or PSD purposes. However, EPA changed its determination of fugitive emissions so that VOCs from the drying process were no longer fugitive. When the state NSR permit was written a facility-wide VOC emission limit of 245.5 tons per year was established to keep it from being PSD major. The permittee submitted their application for a Title V operating permit within 12 months after becoming subject to 9 VAC 5 Chapter 80, Part II, Article 1 (Federal Operating Permits for Stationary Sources) as specified in 9 VAC 5-80-80.C.

The facility is a Title V major source for VOCs with the potential to emit greater than 100 tons annually. This source is located in an attainment area for all pollutants, and is a PSD minor source. Salem is included in the Western Virginia VOC Emissions Control Area, therefore DEQ Existing Source Rule 4-34 (Miscellaneous Metal Parts Coating) applies to the Joist painting

operation. NSPS Subpart TT (Metal Coil Surface Coating) applies to the Decking roll coat operation since the process will be fed from a roll of steel.

### **COMPLIANCE STATUS**

A full compliance evaluation of this facility, including a site visit, was conducted in 2007. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

**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	Federal Requirement	Applicable Permit Date
<b>Joist and Bridging Manufacturing</b>					
EU001	Joist Line #1 - Rod/Crimp Line	285 lb/hr VOC	none	none	Aug. 11, 2006 as amended Oct. 22, 2007
	Joist Line #2 - Long Span				
	Joist Line #3 - Specialty				
	Bridging Line Dip Paint Tank				
	Joist and Bridging MIG Welding	470 lb/hr welding wire	none	none	
<b>Decking Manufacturing</b>					
EU002	Deck Line Rollcoating (Painting)	49 lb/hr VOC		NSPS TT	Aug. 11, 2006 as amended Oct. 22, 2007
<b>Rack Manufacturing</b>					
	Rack Powder Coating **	--	none	none	Aug. 11, 2006 as amended Oct. 22, 2007
	Two Rack dip tanks ***	2.5 tons steel/hr.	none	none	

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

\*\* The rack powder coating is an insignificant emissions source for Title 5 purposes. However, since it is a required production method for VOC control, it is included in Section IV of this permit.

\*\*\* The Rack dip tanks were exempted from permitting, however VOC emissions must be accounted for facility-wide.

**EMISSIONS INVENTORY**

Emissions from calendar year 2006 are summarized below:

2006 Criteria Pollutant Emission in Tons/Year					
VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NO <sub>x</sub>	Manganese Cmpds
163.86	0.20	0.01	1.08	0.99	0.063

**EMISSION UNIT APPLICABLE REQUIREMENTS**

**Limitations**

Limits included from the Minor NSR Permit dated October 22, 2007 are as follows:

Operating Limits

Condition 16 - The throughput of VOC in the Joist and Bridging painting system, thinners and clean up solvents shall not exceed 233.3 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Condition 17 - The throughput of VOC in the Decking Coating and Painting System, including material treatment, edge treatment, edge sealers, thinners and clean up substances, shall not exceed 12.2 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Condition 18 - The combined throughput of VOC in Joist, Bridging and Decking coating, and including all thinners and clean up solvents shall not exceed 245.5 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Emission Limits

Condition 21 - VOC emissions from the operation of the Joist painting system, thinners and clean up solvents shall not exceed 233.3 tons/yr, 3.5 lbs/gal coating as applied and 3.5 lbs/gal coating as applied, excluding water if water based coatings are used.

Condition 22 - VOC emissions from the operation of the Decking Coating and Painting System, including material treatment, edge treatment, edge sealers, thinners and clean up substances, shall not exceed 12.2 tons/yr, 3.0 lbs/gal coatings as applied, 3.0 lbs/gal coatings as applied excluding water (for water-based coatings) and 2.33 lbs/gal solids as applied (NSPS Subpart TT).

Condition 23 - The combined VOC emissions in Joist, Bridging and Decking coating, including all thinners and clean up solvents shall not exceed 245.5 tons per year.

Condition 24 - Visible emissions from the Burn-off Oven 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 opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).

### **Monitoring**

The following monitoring requirements in the NSR permit have been modified to meet Part 70 requirements:

Condition 13 - Monitoring Joist and Bridging Painting VOC content when using solvent-based paints - The Joist and Bridging coating system dip tanks shall be tested at least monthly by EPA Method 24 to determine the VOC content per gallon of coating as applied in each dip tank.

Condition 14 - Monitoring Joist and Bridging Painting VOC content when using water-based paints - The VOC content of water-based paints used in Joist and Bridging painting shall be verified by formulation data supplied by the manufacturer of the coating.

Condition 15 - Monitoring Decking Coating VOC content - For water-based coatings, VOC content shall be verified by formulation data supplied by the manufacturer of the coating. For solvent-based coating, the system shall be tested monthly by EPA Method 24 to determine the VOC content per gallon of coating as applied, unless only compliant coatings are used that month.

Compliance Assurance Monitoring is not required since there are no add-on control devices for air pollution control.

### **Recordkeeping**

The permit includes requirements for maintaining records of all monitoring and testing required by the permit.

### **Testing**

NSPS Subpart TT requires tests to determine monthly volume-weighted average emissions of VOCs in lb/gal of coating solids applied from the Decking coating operation. Other processes do not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA has authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

### **Reporting**

Condition 29 - requires quarterly reporting for VOC emissions from the decking coating operation in accordance with NSPS Subpart TT (Standards of Performance for Metal Coil

Surface Coating.

### **Streamlined Requirements**

The following conditions have been streamlined out of the August 11, 2006 state NSR permit:

Condition 26 requires Visible Emission Evaluations upon request - the standard testing condition included in the permit will cover VEE requests as well.

Condition 27 - all initial performance tests have been submitted <sup>1</sup>

Condition 30 - all initial notifications have been submitted <sup>1</sup>

Condition 31 requires notification for malfunctions -- this notification requirement is part of the Title 5 boilerplate.

General Conditions 32 - 39 are included in the Title 5 General Conditions.

### **GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 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 §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 3-2006".

This general condition cite(s) the Article(s) that follow(s):

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

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<sup>1</sup> Initial performance tests and initial notifications will be complete by the time the final Title 5 permit is issued. If not, these conditions will not be streamlined out.

9 VAC 5-80-150. Action on Permit Applications

**F. Failure/Malfunction Reporting**

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 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 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

**J. Permit Modification**

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

**U. Malfunction as an Affirmative Defense**

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on General Condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

**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 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:

40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to

to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards

9 VAC 5-80-110. Permit Content

#### **STATE ONLY APPLICABLE REQUIREMENTS**

There are no state-only applicable requirements for this facility

#### **FUTURE APPLICABLE REQUIREMENTS**

There are no future applicable requirements for this facility.

#### **INAPPLICABLE REQUIREMENTS**

CAM is not applicable since there are no add-on control devices for air pollution control.

There are no applicable MACT requirements since this facility is not a Title 5 major source for HAPs.

#### **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 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit Description	Citation <sup>1</sup>	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
evaporative oil application at Deck Line	9 VAC 5-80-720B	VOC	110 gal/year
edge sealer application at Deck line	9 VAC 5-80-720B	VOC	20 gal/year
portable heaters	9 VAC 5-80-720A		
office activities	9 VAC 5-80-720A		
tobacco smoking rooms and areas	9 VAC 5-80-720A		
interior maint. including janitorial service	9 VAC 5-80-720A		
repair and maintenance shop activities	9 VAC 5-80-720A		
lawn maintenance	9 VAC 5-80-720A		
on-site food preparation	9 VAC 5-80-720A		
maintenance welding	9 VAC 5-80-720A		
forklifts, trackmobiles, shag trucks and other on-site company vehicles	9 VAC 5-80-720A		
lab activities for quality or environmental compliance	9 VAC 5-80-720A		
bench scale lab equipment	9 VAC 5-80-720A		
air compressors or pumps	9 VAC 5-80-720A		
pneumatically operated equipment	9 VAC 5-80-720A		
dumpsters	9 VAC 5-80-720A		
hand held equipment for cutting, drilling, sawing, grinding, turning wood or metal	9 VAC 5-80-720A		
solvent storage cabinets	9 VAC 5-80-720A		
storage of substances in closed drums, barrels or bottles	9 VAC 5-80-720A		
two parts washers using regular mineral spirits	9 VAC 5-80-720B	VOC	50 gal/year each
powder coating <sup>2</sup>	9 VAC 5-80-720B	VOC	24 lb/hr powder
heat cleaning oven <sup>3</sup> (associated w/ powder coat)	9 VAC 5-80-720C	VOC	0.625 MMBtu/hr <sup>4</sup>
preheat oven (associated w/ powder coat)	9 VAC 5-80-720C		2.5 MM Btu/hr <sup>4</sup>
finish over (associated w/ powder coat)	9 VAC 5-80-720C		2.5 MM Btu/hr <sup>4</sup>
pre-wash tank heater (Deck Line)	9 VAC 5-80-720C		3.5 MMBtu/hr <sup>4</sup>
wash tank heater (Deck Line)	9 VAC 5-80-720C		3.5 MMBtu/hr <sup>4</sup>

Emission Unit Description	Citation <sup>1</sup>	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
rinse tank heater (Deck Line)	9 VAC 5-80-720C		2.0 MMBtu/hr <sup>4</sup>
two make-up air units for Joist plant heat	9 VAC 5-80-720C		2.5 MMBtu/hr <sup>4</sup> each
two make-up air units for Deck plant heat	9 VAC 5-80-720C		<2 MMBtu/hr <sup>4</sup> each
heating for office	9 VAC 5-80-720C		<1 MMBtu/hr <sup>4</sup>
welding at Rack plant	9 VAC 5-80-720B	PM and Mn	30 lb/hr wire
waterbased cutting fluid for rollforming and slitting operations	9 VAC 5-80-720B	VOC	100 gal/week
cutting fluid for sawing operations	9 VAC 5-80-720B	VOC = 0	N/A
misc. spray paint (Krylon)	9 VAC 5-80-720B	VOC	(32) 10-oz cans/mo.

<sup>1</sup>The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

<sup>2</sup> the powder coat process is mentioned in the permit as a VOC and PM control measure for Rack painting

<sup>3</sup> secondary combustion chamber is required on the burn-off oven with 5% visible emission limit

<sup>4</sup> Natural Gas fuel

### **CONFIDENTIAL INFORMATION**

There is no confidential information pertaining to this permit action.

### **PUBLIC PARTICIPATION**

The proposed permit was advertised for public notice in the Roanoke Times on January 18, 2008.

The required 30-day notice period ended February 19, 2008. The permit was reviewed concurrently by EPA as a draft/proposed permit. EPA's 45-day review period started January 18, 2008 and ended March 3, 2008.

No comments were received from the public or from EPA.