

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

STATEMENT OF LEGAL AND FACTUAL BASIS

New Millennium Building Systems, LLC
2035 Diuguids Lane, Salem, Virginia
Permit No. BRRO-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, New Millennium Building Systems, LLC has applied for a Title V Operating Permit for its Salem facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: August 27, 2014
Keith Sandifer
434-582-6232

Air Permit Manager: _____ Date: _____
David J. Brown

Regional Director: _____ Date: _____
Robert J Weld

FACILITY INFORMATION

Permittee

New Millennium Building Systems, LLC
100 Diuguids Lane
Salem, VA 24153

Facility

New Millennium Building Systems, LLC
2535 Diuguids Lane
Salem, VA 24153

County-Plant Identification Number: 51-161-00181

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 was included in the Title 5 permit for VOC recordkeeping because emissions from this operation count towards the facility-wide VOC emission limit. The rack powder coating operation, two dip tanks, burn-off oven and welding rack plant were shutdown on March 19, 2009. This was reflected in the March 23, 2009 Title V amendment.

The facility is a Title V major source of VOCs. 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 issued on August 11, 2006, and replaced on October 22, 2007. Salem is included in the Western Virginia VOC Emissions Control Area, therefore DEQ Existing Source Rule 4-24 (Emission Standards For Solvent Metal Cleaning Operations) applies to the parts washers.¹ NSPS Subpart TT (Metal Coil Surface Coating) applies to the Decking roll coat operation since the process is fed from a roll of steel. Since the source performs welding, it is subject to 40 CFR

¹ As stipulated in 9VAC 5-40-10B and 9 VAC 5-50-10D, the provisions of Chapter 40 ("existing source" rules), generally do not apply to "new sources" which are covered by Chapter 50 and/or permits issued under Chapter 80 unless such Chapter 40 provisions are more restrictive than the provisions of Chapter 50 or permits issued under Chapter 80. The parts washers are not explicitly covered by a Chapter 50 standard or the underlying Minor NSR permit and therefore the provisions of Rule 4-24 are applicable and have been included in the Title V permit.

63 Subpart XXXXXX - Standards for Hazardous Air Pollutant Area Source Standards-Fabricated Metals Products. The welding rods contain manganese.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit on May 14, 2013, 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. 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
Joist and Bridging Manufacturing					
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	
Decking Manufacturing					
EU002	Deck Line Rollcoating (Painting)	49 lb/hr VOC		NSPS TT	Aug. 11, 2006 as amended Oct. 22, 2007
Miscellaneous					
	Two parts washers using mineral spirits	100 gallons per year	None	None	

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

EMISSIONS INVENTORY

A copy of the 2013 annual emission update is attached. Emissions are summarized in the following tables.

2013 Actual Emissions

Emission Unit	2013 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
EU001	11.7	-	-	0.9	-

EU002	6.4	-	-	-	
Fuel Burning	-	0.1	-	-	0.5
Total	18.1	0.1	-	0.9	0.5

EMISSION UNIT APPLICABLE REQUIREMENTS – Joists and Bridging (EU001)

Limitations

Condition 1. specifies VOC control by use of low VOC/high solids paint or DEQ approved equivalent (from Condition 2 of 10/22/07 permit).

Condition 2. specifies VOC and Particulate emissions be controlled by process control by using the dip coating process or DEQ approved equivalent (from Condition 3 of 10/22/07 permit).

Condition 3. specifies the VOC emissions from painting be controlled by the work practice of covering the dip tanks during non-painting hours (from Condition 4 of 10/22/07 permit)

Condition 4. specifies that the particulate emissions from joist welding be controlled by using MIG welding process as the primary means for welding (from Condition 5 of 10/22/07 permit).

Condition 5. limits the throughput of VOC from painting, thinners and cleanup solvents to 233.3 tons/yr (from Condition 16 of 10/22/07 permit).

Condition 6. limits the VOC emissions from the operation of the joist painting system, thinners, and cleanup solvents (from Condition 21 of 10/22/07 permit).

Monitoring and Recordkeeping

Condition 7. requires monthly testing of the coating dip tanks by EPA Method 24 to determine the VOC content per gallon of coating as applied when using solvent-base paints and keeping records of test results (from Condition 13 of 10/22/07 permit)

Condition 8. requires that the VOC content of water-based (waterborne) paints use shall be verified by formulation data supplied by the manufacture of the coating and the permittee keep a record of all supplied data (from Condition 14 of 10/22/07 permit).

Condition 9. requires written operating procedures and operator training in the proper operation of the Joist and Bridge painting process and maintaining records.

Condition 10. requires maintaining records of emission data and operating parameters, including monthly throughput of VOCs, monthly gallons of coating, monthly pounds of VOC per gallon of coating applied in each dip tank unless only compliant water-based coatings are used. Annual throughput of tons of VOC shall be calculated monthly as the sum of each consecutive 12-month period. Material Safety Data Sheets, Certified Product Data Sheets, etc. are required. Records of operating procedures and operator training are required (from Condition 28 of 10/22/07 permit). Since the facility is located in a VOC control area and EU001 is a surface coating process, additional recordkeeping is required per 9 VAC 5-50-50 G and is specified in AQP-4. Under the provisions of 9VAC5-80-110, additional record keeping is required to ensure the permittee is obligated to maintain records sufficient to demonstrate that only compliant coatings are being used in EU001.

Monthly testing of coating dip tanks to determine VOC content per gallon of coating, manufacturers formulation data of the coating, keeping records of the data, daily records of pounds of VOC per gallon as applied excluding water and exempt solvents, and records of monthly usage of coating materials provides sufficient monitoring for compliance with the VOC content and emissions limits.

Testing

Condition 11. Upon request by the DEQ, the permittee shall conduct performance tests to demonstrate compliance with the emissions limits. (from Condition 25 of 10/22/07 permit).

Reporting

Condition 12. notes there are reporting requirements in the General Conditions.

EMISSION UNIT APPLICABLE REQUIREMENTS – Decking (EU002)

This process uses metal coil roll coating and is subject to NSPS Subpart TT- Standards of Performance for Metal Coil Surface Coating. There are no add-on VOC controls for this process.

Condition 13. states that the VOC emissions from the Deck coatings be controlled by use of water-based coatings or DEQ approved equivalent (from Condition 6 of 10/22/07 permit).

Condition 14. requires that VOC and particulate emissions from Deck painting be controlled by using roll coating or DEQ approved equivalent (from Condition 7 of 10/22/07 permit).

Condition 15. states that there shall be no particulate emissions (including liquid droplets/spatter) of any coating material containing chromium or chromium compounds from Deck coating or other Deck manufacturing surface treatment (from Condition 8 of 10/22/07 permit).

Condition 16. limits the throughput of VOC in the Decking Coating and Painting System, material treatment, edge treatment, edge sealers, thinners, and clean up substances to not exceed 12.2 tons per year (from Condition 17 of 10/22/07 permit).

Condition 17. limits VOC emissions from the operation of the Decking Coating and Painting System as follows:

Volatile Organic Compounds 12.2 tons/yr

0.28 kg/liter solids applied
(NSPS Subpart TT 60.462(a)(1))

The 3.0 lbs/gal coating applied and 3.0 lbs/gal coating as applied, excluding water, limitations in the 10/22/07 permit have been streamlined out since these limits are no more restrictive than the Chapter 50 (NSPS TT) standard of 0.28 kg/liter solids² applied.

Compliance with the VOC emissions limits may be determined as stated in condition numbers 13, 14, 15, and 16.(from Condition 22 of the 10/22/07 permit and 40CFR60.462)

Monitoring and Recordkeeping

Condition 18. stipulates that compliance with VOC content be demonstrated by the formulation data supplied by the manufacturer of the coating or be tested by EPA Method 24 to determine the VOC content per liter of coating as applied. Permittee is required to keep records of test results and/or supplier data (from 40CFR60.465(e) and 40CFR60.466(a)(1)).

Condition 19. states the measures that shall be taken to minimize the duration and frequency of excess emissions, respect to air pollution control equipment and process equipment which affect emissions.

Condition 20. specifies the monitoring and recordkeeping of emission data and operating parameters to demonstrate compliance(from Condition 28 of the 10/22/07 permit). Recordkeeping associated with streamlined emissions limits, as discussed above, have been streamlined from this condition. Since the facility is located in a VOC control area and EU002 is a surface coating process, additional recordkeeping is required per 9 VAC 5-50-50G. as specified in AQP-4.

Testing

Condition 21. Upon request by the DEQ, the permittee shall conduct performance tests to demonstrate compliance with the emissions limits. (from Condition 25 of the 10/22/07 permit)

² 0.28 kg/l = 2.34 lb/gal

Condition 22. Monthly tests shall be conducted for determining the monthly volume-weighted average emissions of VOCs in lb/gal of coating solids applied from the Decking coating operation. If each individual coating used has a VOC content, as received, that is equal to or less than 0.28 kg/liter of coating solids, the affected facility is in compliance provided no VOC's are added to the coatings during distribution or application. (from NSPS Subpart TT at §60.463)

Reporting

Condition 23. requires submittal of a written report to the Air Compliance Manager, Blue Ridge Region every calendar quarter of each instance in which the volume-weighted average of the total mass of VOCs emitted to the atmosphere per volume of applied decking coating solids is greater than 2.33 lb/gal (0.28 kg/liter) of coating solids applied. (from NSPS Subpart TT, §60.465 and Condition 29 of the 10/22/07 permit)

Condition 24. specifies the reporting requirements stated in the General Conditions.

The monthly testing, monitoring and recordkeeping required provides sufficient monitoring to demonstrate compliance with the VOC content and emissions limits

National Emissions Standards for Hazardous Air Pollutant Area Source Standards-Fabricated Metals Products – (MACT XXXXXX)

Condition 25. states that the facility shall achieve compliance with 40 CFR Subpart XXXXXX by the compliance date. The initial notification was mailed to the DEQ and EPA on June 21, 2011. The DEQ received the notification on June 27, 2011 that the facility uses more than 2,000 pounds or more of MFHAP-containing welding rod or welding wire annually. A compliance certification for January 2013 to December 2013 was received on January 21, 2014.

Condition 26. states that the permittee shall meet the standards and management practices as specified in 63.11516(f) – Standards for welding.

Monitoring

Condition 27. states that the permittee shall comply with the monitoring requirements in 40 CFR 63.115117. MACT standards include sufficient monitoring, recordkeeping, and reporting requirements to satisfy monitoring requirements.

Notification, Recordkeeping, and Reporting

Condition 28. specifies the notification, recordkeeping, and reporting requirements of 40 CFR 63.11519.

Condition 29. states that the permittee shall comply with the general provisions of 40 CFR Subpart A as specified in 63.11522 and 63.11523.

Solvent Degreasing - Parts Washers (Rule 4-24)

Limitations

Condition 30. requires the VOC emissions from the use of any cold cleaner is limited through the use of a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 85% by weight of VOCs.

Condition 31. Condition 31 specifies the procedure for the control of the VOC emissions.

Condition 32. limits the VOCs through the use of good operating practices.

Condition 33. limits VOC emissions by disposal of waste solvent through the use of reclamation or incineration.

Monitoring and Recordkeeping

Condition 34. requires the recordkeeping of emissions data and operating parameters to demonstrate compliance with the requirements of Conditions 30 – 33. Recordkeeping of emissions data and operating parameters provides sufficient monitoring for compliance with the VOC emissions.

Facility Wide Conditions

Limitations

Condition 35. limits the facility-wide VOC throughput to 245.5 tons per year, calculated monthly as the sum of each consecutive 12-month period. This VOC limit includes coatings, thinners, and clean up solvents.

Condition 36. limits the approved fuel to natural gas. The natural gas fired units stated in the Insignificant Emissions Units section in the application are not subject to the Area Source Boiler MACT (40 CFR Part 63, Subpart JJJJJ) per 63.11195 a and b.

Condition 37. limits the combined emissions of VOC from the facility to 245.5 tons per year.

Condition 38. specifies the facility-wide fugitive dust emission controls.

Condition 39. specifies the disposal and the handling of volatile organic compounds.

Monitoring and Recordkeeping

Condition 40. specifies records of emission data and operating parameters necessary to demonstrate compliance with this permit, including annual consumption of natural gas and MSDS, CPDS, or other vendor information as approved by DEQ showing VOC content, HAPs content, and solids content of each coating, thinner, and cleanup solvent used. Records of emissions data, operating parameters, consumption of natural gas, and MSDS, CPDS, or other vendor information as approved by DEQ showing VOC content, HAPs content, and solids content of each coating, thinner, and cleanup solvent used is sufficient monitoring for compliance with the VOC emissions limit.

Testing

Condition 41. requires the facility be constructed so as to allow for emissions testing. Test ports shall be provided, upon request by the DEQ.

Condition 42. requires the permittee, upon request by the DEQ, to conduct performance test to demonstrate compliance with the emissions limits contained in this permit.

Condition 43. If testing is required, in addition the monitoring specified in this permit, the permittee shall use appropriate method(s) in accordance with procedures approved by the DEQ.

Streamlined Requirements

The following conditions of the October 22, 2007 state NSR permit have been streamlined: Condition 26 requires Visible Emissions Evaluation 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.

Condition 30 – all initial notifications have been submitted.

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

47 – 52 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. 2-09”.

58 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.

77 – 79 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 58 **Failure/Malfunction Reporting**, 76 **Malfunction as an Affirmative Defense**, 77 **Malfunction as an Affirmative Defense**, and 78 **Malfunction as an Affirmative Defense**. For further explanation see the comments on General Condition 58 **Failure/Malfunction Reporting**..

83. 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.

STATE ONLY APPLICABLE REQUIREMENTS

There are no state only requirements.

FUTURE APPLICABLE REQUIREMENTS

None at this time.

Green House Gas

There are no applicable GHG permitting requirements. The facility has four air makeup units (total 10 MMBtu/hr), one office heat (2 MMBtu/hr), two tank heaters (7 MMBtu/hr), and one rinse tank heater (2 MMBtu/hr) listed as Insignificant Emissions Units. The units are fired by natural gas. Total Btu = 21 MMBtu/hr. The (8760 hr/yr) estimated annual CO₂e emissions are 10,800 tons/yr.

INAPPLICABLE REQUIREMENTS

Citation	Title of Citation	Description of Applicability
40 CFR Part 64	Compliance Assurance Monitoring (CAM)	No add-on control equipment at the facility
Chapter 40 Article 30 -Rule 4-30	Emission Standards for Coil Coating Application Systems	Standards do not apply since the source is not existing and the applicable Chapter 50 standard (NSPS, Subpart TT) is no less restrictive than Rule 4-30.
Chapter 40 Article 34 - Rule 4-34	Emissions Standards for Miscellaneous Metal Parts and Products Coating Application Systems	Standards do not apply since the source is not existing and the 10/22/07 permit is no less restrictive than Rule 4-34.

COMPLIANCE PLAN

None

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.

The Insignificant emission units are listed in the permit (Condition 44).

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

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 will be placed on public notice in the Roanoke Times from July 11, 2014 to August 10, 2014.