

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Bingham & Taylor Corporation
601 Nalle Place, Culpeper, Virginia 22701 (Culpeper County)
Permit No. NRO40075

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, Bingham & Taylor Corporation has applied for a Title V Operating Permit for its Culpeper, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____
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Thomas A. Faha

FACILITY INFORMATION

Permittee

Bingham & Taylor Corporation
PO Box 939
Culpeper, VA 22701

Facility

Bingham & Taylor Corporation
601 Nalle Place
Culpeper, VA 22701
(Culpeper County)

County-Plant Identification Number: 51-047-00004

SOURCE DESCRIPTION

NAICS Code: 331511 - This U.S. industry comprises establishments primarily engaged in pouring molten pig iron or iron alloys into molds to manufacture castings, (e.g., cast iron man-hole covers, cast iron pipe, cast iron skillets). Establishments in this industry purchase iron made in other establishments.

The facility is a gray iron foundry which produces metal castings (e.g., valve boxes and related parts) and plastic moldings. The primary process operations associated with the metal casting are furnace charge preparation, metal melting and casting, coring & molding and cleaning & finishing. The metal melting is accomplished via a cupola using coke as the fuel source. A portion of the metal castings produced are coated with an asphalt dip, while some are painted. As part of the plastic molding parts assembly, glues/adhesives are used.

Carbon monoxide, particulate matter and hazardous air pollutants (HAPs) are primary air pollutants from the cupola. Particulate matter and HAPs are generated from the casting, coring, molding, cleaning and finishing operations, while volatile organic compounds (VOCs) are some HAPs are emitted during the metal casting coating and painting operations. VOCs are also emitted from the use of glues/adhesives in the assembly of the plastic molding products.

The facility is a Title V & PSD major source of carbon monoxide (CO) and is an area source for HAPs. The facility began foundry operations in the mid 1940's and is an 'existing source' under the Commonwealth of Virginia State Air Pollution Control Board (SABCB) Regulations for the Control and Abatement of Air Pollution ('Regulations'). Portions of the facility have since been modified and such changes are reflected in a minor New Source Review Permit, most recently amended on July 31, 2014. The facility also is subject to a State Operating Permit, issued on October 4, 2013, which through annual limitations of iron throughput, coatings, glues/adhesives usage and shell core and resin sand assure that the facility is an area HAP source. In addition to the two aforementioned permits, the facility is subject to the following regulations:

- 9 VAC 5-40-240, *et seq.* - Emission Standards For General Process Operations (Rule 4-4)
- 9 VAC 5-40-2390, *et seq.* - Emission Standards For Primary And Secondary Metal Operations (Rule 4-18)
- 40 CFR Part 63, Subpart ZZZZZ – National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted, most recently on November 7, 2013. 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	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Metal Melting							
F-CP-SU	Fugitive	Coke start-up on natural gas (pre 1972)	0.6 mmBtu/hr	None	N/A	N/A	None
F-CP	Fugitive	Cupola charge preparation consisting of lime stone, coke and scrap iron (pre 1972)	9718 lbs/hr	None	N/A	N/A	None
F-MM&C-MM	CS-1	Cupola (pre 1972)	10 tons/hr (melted iron) 13.5 mmBtu/hr (coke burned)	Griffin Baghouse	BH-2	PM, Lead, Metal HAPs	10/4/2013
Mold and Core Production							
F-C&M-SP-28	BH-4 (vented inside building)	Sand Plant Storage Bin	77 tons (storage capacity)	DCE Dalamatic Baghouse	BH-4	PM	7/31/2014
F-C&M-SP-29	BH-3 (vented inside building)	Sand Plant Storage Bin	38 tons (storage capacity)	DCE Dalamatic Baghouse	BH-3	PM	7/31/2014
F-C&M-SP	BH-1 (vented)	Sand Plant (including sand Mueller (S27), core making/baking, cleaning	100 tons/hr	Techniflo Baghouse	BH-1	PM, Metal HAPs	10/4/2013 & 7/31/2014

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
	inside building)	& finishing operations)					
Painting, Coating & Adhesive Applications							
MSC-PBI	PB1	Paint booth for traffic paint coating of metal parts	2.5 gallons/hr	Global Finishing Solutions fabric filtration	PB1	PM	10/4/2013
MSC-ADT	Fugitives	Asphalt dip coating of metal parts	Unknown	None	N/A	N/A	10/4/2013
AS-1	Fugitives	Pipe Cement/Adhesive (dipped or hand applied)	Unknown	None	N/A	N/A	10/4/2013

* 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 Criteria Pollutant Emissions

Emission Unit	2013 Criteria Pollutant Emissions in Tons/Year				
	VOC	CO	SO2	PM10	NOx
Cupola	0.5	417.7	3.5	1.8	0.3
Cupola Charge Preparation	-	-	-	1.1	-
Pouring & Cooling	-	-	-	5.7	-
Sand Plant	-	-	-	4.5	1.4
Paint Booth (traffic painting)	0.1	-	-	0.2	-
Asphalt Dip Tank	3.3	-	-	-	-
Adhesive/Gluing	1.4	-	-	-	-
Total	5.3	417.7	3.5	13.3	1.7

2013 Facility Hazardous Air Pollutant Emissions

Pollutant	2013 Hazardous Air Pollutant Emission in Tons/Year
Ethyl Benzene	0.2
Xylene	0.5
Toluene	0.3

Metal Melting Requirements - (F-CP-SU, F-CP, and F-MM&C-MM)

The Cupola, the Cupola charge preparation and the Cupola start-up on natural gas are all operations that were installed prior to 1972 and are subject to Chapter 40 of the SAPCB Regulations. Certain aspects of these operations are currently covered by a State Operating Permit issued October 4, 2013 (“10/4/2013 SOP”) for the primary purpose of limiting annual hazardous air pollutant (HAP) emissions such that the facility is classified as an ‘area source’ for HAP emissions. These operations (mainly the Cupola) are also subject to 40 CFR Part 63, Subpart ZZZZZ – National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources.

Limitations (Cupola)

The basis for the following requirements are the 10/4/2013 SOP, Chapter 40 of the SAPCB Regulations and 9 VAC 5-80-110. The requirements of 40 CFR Part 63, Subpart ZZZZZ are provided in a separate section. The condition numbers referenced below correspond to the Condition numbers of the draft Title V Permit.

10/4/2013 SOP

- Condition 1 requires that particulate matter (PM) and metal HAPs from the Cupola be controlled with a fabric filter baghouse.
- Condition 3 limits the annual throughput of iron scrap charged to the Cupola to no more than 10,000 tons per year.
- Condition 6 limits the emissions of lead compounds to no more than 1.1 pounds per ton of iron charged and 5.5 tons per year. Compliance with this may be determined by compliance with the iron charge to the Cupola limit (referenced above in previous bulleted item).
- Condition 7 limits the visible emissions from the Cupola to no more than 20 percent with the exception of one 6-minute period in any one hour of no more than 60 percent. Note: this is consistent with the visible emission limits prescribed by 9 VAC 5-40-80.
- Condition 8 requires that the facility operate in accordance with an approved written plan for the selection and inspection of iron scrap. The facility provided such plan to DEQ on November 26, 2013 and subsequently approved by DEQ.

9 VAC 5-80-110

- Condition 2 includes the approved fuel of ‘coke’ for the Cupola and specifies a maximum sulfur content not to exceed 1.0 percent by weight. These two requirements are included to assure compliance with the allowable sulfur dioxide emission rate (described later).

9 VAC 5 Chapter 40

- Condition 4 specifies the allowable particulate matter emissions (filterable portion) from the Cupola of 24.0 pounds per hour. This value (process weight rate) is obtained from 9 VAC 5 Chapter 40, Part II, Article 18 Emission Standards For Primary And Secondary Metal Operations (Rule 4-18), specifically from 9 VAC 5-40-2410.A. Based on a process weight rate of 20,000 lbs/hr (10 tons/hr) –

the rated capacity of the Cupola (in terms of iron melting rate), the allowable PM emission rate is 24.0 pounds per hour.

- Condition 5 specifies the allowable sulfur dioxide (SO₂) emissions from the Cupola of 35.64 pounds per hour, based on 9 VAC 5 Chapter 40, Part II, Article 4, Emission Standards for General Process Operations (Rule 4-4). Specifically, the allowable SO₂ emission rate is provided in 9 VAC 5-40-280.B.1.a as a function of the heat input capacity,

$$S = 2.64K$$

where:

S = allowable emission of sulfur dioxide expressed in lbs/hr.
K = actual heat input at total capacity expressed in Btu x 10⁶ per hour.

With the maximum heat input (from coke combustion) provided as 13.5 mmBtu per hour, the allowable SO₂ emission rate is 35.64 pounds per hour.

Note: the standard for sulfur dioxide emissions provided in Rule 4-18 (9 VAC 5-40-2420) does not apply to the Cupola since it is not considered a 'primary metal operation' as defined in Rule 4-18. There is no sulfur dioxide emissions standard provided in Rule 4-18 for 'secondary metal operation' for which the Cupola at this facility is.

Maximum (theoretical) SO₂ emissions from the Cupola is based on the amount of coke charged to the Cupola, the sulfur content of the coke and the assumption that 100 percent¹ of the sulfur in the coke is converted to sulfur dioxide.

Maximum charge rate of coke to Cupola – 1000 lbs per hour
Maximum sulfur content of coke – 1.0 percent (by weight)

$$SO_2 = (1000 \text{ lbs/hr})(1 \text{ lb S}/100 \text{ lbs coke})(2 \text{ lbs SO}_2/\text{lb S}) = 20 \text{ lbs/hr.}$$

Monitoring & Recordkeeping (Cupola)

Considering the following monitoring and recordkeeping, along with the O&M requirements in the facility-wide section and the MACT compliance requirements, the prescribed monitoring is sufficient to assure compliance with the requirements of this section. The basis for the following requirements are the 10/4/2013 SOP and 9 VAC 5-80-110 E & K. The requirements of 40 CFR Part 63, Subpart ZZZZZ are provided in a separate section. The condition numbers referenced below correspond to the Condition numbers of the draft Title V Permit.

10/4/2013 SOP

- Condition 9 requires continuous pressure drop monitoring across the Cupola baghouse (BH-2), while Condition 10 requires daily (at minimum) observations of this pressure drop monitoring device.

¹ AP-42, Tables 12.10-4 and 12.10-5 (1/95) assume that 30 percent of the sulfur is converted to SO₂.

- Condition 13 requires annual sampling and analysis of the dust collected by the Cupola baghouse for metal hazardous air pollutant content. This information is used to verify the Cupola HAP emission factors used in facility lead and HAP calculations.

9 VAC 5-80-110.E and 9 VAC 5-80-110.K

- Condition 11 requires a daily observation of the Cupola baghouse exhaust for the presence of visible emissions. If visible emissions are observed, there are requirements, including corrective action measures to return the operations such that no visible emissions are present or that they are in compliance with the applicable opacity limit.
- Condition 12 requires initial and ongoing inspections of the Cupola baghouse and associated ductwork. The initial inspection is to be conducted no later than 60 days from effective date of the Title V Permit, with semi-annual inspections thereafter.

10/4/2013 SOP, 9 VAC 5-80-110.E and 9 VAC 5-80-110.K

- Condition 14 requires a list of records to be maintained to assure compliance with the limitations and monitoring requirements for the Cupola operations.

Testing (Cupola)

There are no testing requirements for the Cupola baghouse exhaust. The DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Streamlined Requirements (Cupola)

- Condition 16.a of the 10/4/2013 SOP was not included in the draft Title V permit since the purpose of this condition portion is to assure compliance with the toxic pollutant standards of 9 VAC 5-60-300, *et seq.* containing State Only Enforceable requirements (i.e., not part of Virginia's SIP as approved by EPA).
- Conditions 18, 19 and 20 of the 10/4/2013 SOP are not included in the draft Title V Permit as such conditions were initial/one time action items that have been satisfied. Specifically, the initial testing of the Cupola was conducted in January 2014 with results demonstrating compliance submitted to DEQ on March 18, 2014. The scrap metal work practice plan was provided to DEQ on November 26, 2013.

Mold and Core Production Requirements - (F-C&M-SP-28, F-C&M-SP-29, and F- C&M-SP)

The mold and core production processes include the mixer (sand muller (Ref. No. 27)), sand receiving, storage and handling and the assembly of cores and molds. While many of these operations were initialized prior to 1972 (i.e., as 'existing sources'), some of the emissions units have either been replaced or modified since 1972. The emissions (particulate matter and HAPs) are primarily fugitive, but some of the emissions are collected and controlled through fabric filtration baghouse units that vent back into the building enclosure, so have no stack or direct emissions to the atmosphere. These operations are covered in part by minor New Source Review Permit issued July 31, 2014 ('7/31/2014 mNSR Permit') and the 10/4/2013 SOP.

Limitations (Sand Plant)

The basis for the following requirements are the 7/31/2014 mNSR Permit and the 10/4/2013 SOP. The condition numbers referenced below correspond to the Condition numbers of the draft Title V Permit.

7/31/2014 mNSR Permit

- Condition 16 requires that particulate matter emissions from the sand plant operations be controlled by a fabric filter and bin vent filters (sand storage bins) and building enclosure.
- Condition 17 requires that the baghouse (BH-1) for the sand plant have a design control efficiency of at least 99.99 percent.
- Condition 19 limits the annual throughput of sand from the sand muller to no more than 140,000 tons per year.
- Condition 22 limits particulate matter (including PM10 and PM2.5) from operation of the sand muller. Compliance with these emission limits are assumed by compliance with the annual throughput limit of sand (Condition 19).

10/4/2013 SOP

- Condition 20 limits the annual throughput of shell core sand through the sand plant and core production process to no more than 5,000 tons per year.
- Condition 21 limits the annual throughput of cold box resin sand through the sand plant and core production process to no more than 5,000 gallons per year.

Monitoring & Recordkeeping (Sand Plant)

Considering the following monitoring and recordkeeping, along with the O&M and other requirements in the facility-wide section, the prescribed monitoring is sufficient to assure compliance with the requirements of this section. The basis for the following requirements are the 10/4/2013 SOP and the 7/31/2014 mNSR Permit. The condition numbers referenced below correspond to the Condition numbers of the draft Title V Permit.

7/31/2014 mNSR Permit

- Condition 23 requires that the bin vent filters and the fabric filter baghouse be equipped with devices to continuously measure the differential pressure across each fabric filter unit; Condition 24 requires daily (at minimum) observation of the baghouse monitoring device and maintaining a log of the observations.

7/31/2014 mNSR Permit and 10/4/2013 SOP

- Condition 25 requires recordkeeping of items necessary to assure compliance with the limitations associated with the sand plant.

Testing (Sand Plant)

There are no testing requirements for the Sand Plant operations/processes. The DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Streamlined Requirements (Sand Plant)

None

Painting, Coating and Adhesives Application Requirements – (MSC-PB1, MSC-ADT and AS-1)

The finishing operations, which includes the coating of a portion of the metal parts (either via an asphalt dip tank and yellow ‘traffic marking’ painting via spray booth/hand application) and the use of adhesives in the assembly of plastic parts have been a part of the facility operations prior to 1972, but are covered in the 10/4/2013 SOP to limit HAP emissions from the facility in order to be classified as an ‘area HAP source’.

Limitations (Finishing Operations)

The basis for the following requirements is the 10/4/2013 SOP. The condition numbers referenced below correspond to the Condition numbers of the draft Title V Permit.

10/4/2013 SOP

- Conditions 27, 28 and 29 limit the annual quantity of coatings (asphalt paint, mineral spirits and traffic paint) used in the metal coating processes.
- Condition 30 limits the annual quantity of Weldon glue (specialty adhesive) used in the plastic valve box manufacturing process.

Monitoring & Recordkeeping (Finishing Operations)

Monitoring for compliance with the limitations associated with the finishing operations is essentially recordkeeping of the types, quantities and MSDS/Certified Product Data Sheets for the coatings & thinners used. Such prescribed recordkeeping is sufficient to assure compliance with the requirements of this section. The basis for the recordkeeping requirements is the 10/4/2013 SOP. The condition number(s) referenced below correspond to the Condition numbers of the draft Title V Permit.

7/31/2014 mNSR Permit

Condition 31 requires recordkeeping of the annual throughput and MSDS/CPDS of the materials utilized in the finishing operations.

Testing (Finishing Operations)

There are no testing requirements for the processes that constitute the finishing operations. The DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Streamlined Requirements (Finishing Operations)

None

National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries – Area Sources (Small Foundries) – 40 CFR Part 63, Subpart ZZZZZ

The foundry (an area source of HAP emissions) is an affected facility subject to the requirements of MACT Subpart ZZZZZ, and such requirements are included in the facility's draft Title V Permit. Furthermore, per §63.10880(f), this facility is considered a "small foundry" as its metal melt production for calendar year 2008 was less than 20,000 tons. The facility is currently limited (10/4/13 SOP) to a metal melt production of no more than 10,000 tons per year as included as Condition 3 of the draft Title V Permit (described above)

Conditions 32 through 39 of the draft Title V Permit contain the 'pollution prevention management practices' (§63.10885), and 'small foundry requirements' (§63.10890) of MACT Subpart ZZZZ. This also includes the applicable notification and reporting requirements of the General Provisions (40 CFR Part 63, Subpart A).

Facility-Wide Conditions

There are emission units in various departments of the facility that are subject to the same requirements or requirements that apply to the facility as a whole. Some of the requirements are based on the 10/4/2013 SOP and some based on the 7/31/2014 mNSR Permit. The condition numbers referenced below correspond to the Condition numbers of the draft Title V Permit.

Limitations

- Condition 40 establishes proper care, including disposal, of volatile organic compound (VOC) containing materials.
- Condition 41 limits the annual quantity of any individual HAP to no more than 10 tons and any combination of HAPs to no more than 25 tons. This state and federally enforceable condition establishes the source as an 'area HAP source'.
- Condition 42 requires proper operation and maintenance of the facility equipment, including air pollution control equipment and training of facility personnel in the operation of such equipment.

Recordkeeping

- Condition 43 contains the recordkeeping deemed sufficient to assure compliance with the requirements of this section.

Testing

There are no testing requirements specified in the facility wide section. As mentioned in the process specific sections, the DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Streamlined Requirements

None

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

Conditions 48-53 (Permit Expiration)

These conditions refer 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”.

Conditions 59, 77-80 (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.

Condition 63 (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.

Conditions 77-80 (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 Conditions 59 and 77-80. For further explanation see the comments on for Conditions 59, 77-80.

Condition 84 (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 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 were no state only applicable requirements identified.

FUTURE APPLICABLE REQUIREMENTS

None identified

INAPPLICABLE REQUIREMENTS

Condition 46 of the draft Title V Permit lists inapplicable requirements and are shown in the table below.

Citation	Title of Citation	Description of Applicability
40 CFR Part 60 (NSPS), Subpart N	Standards Of Performance For Primary Emissions From Basic Oxygen Furnaces (BOPF).	The Cupola does not meet the definition of a BOPF. No high volume oxygen rich gases are introduced. The Cupola is fed ambient air.
40 CFR Part 60 (NSPS), Subpart OOO	Standards of Performance for Non-metallic Mineral Processing Plants	The facility's sand plant does not meet the definition of a non-metallic mineral processing plant – it does not crush or grind sand.
40 CFR Part 60 (NSPS), Subpart UUU	Standards of Performance for Calciners and Dryers in Mineral Industries	1. The sand return line does not have a dryer or calciner; and 2. The charge preparation process does not crush or grind the feed stocks.
40 CFR Part 60 (NSPS), Subpart Y	Standards of Performance for Coal Preparation & Processing Plants	The facility uses coke and not coal. It uses less than 200 tons/day.
40 CFR Part 60 (NSPS), Subpart Z	Standards of Performance for Ferroalloy Production Facilities	The facility does not produce ferroalloys as defined by this NSPS Subpart.
40 CFR Part 60 (NSPS), Subpart I	Standards of Performance for Hot Mix Asphalt Facilities	The facility applies asphalt paint at ambient temperature.
9 VAC 5 Chapter 50	SAPCB Regulations – New and Modified Sources	The metal melting (i.e., Cupola) and charge preparation processes have not been modified post 1972 and are considered existing sources (9 VAC 5 Chapter 40)
9 VAC 5 Chapter 40	SAPCB Regulations – Existing Sources	The mold and core making processes (F-C&M), the pouring and cooling processes, the metal surface coating processes (MSC) and the cleaning and finishing processes (F-C&F) have been modified since 1972 for which mNSR Permit has been issued containing requirements at least as stringent as requirements in 9 VAC 5 Chapter 40.
40 CFR Part 63 (MACT), Subpart EEEEE	Standards for HAPs for Iron and Steel Foundries (at Major HAP Sources)	The facility has state and federally enforceable permit limiting HAPS, classifying facility as an 'area source'.
40 CFR Part 63	Standards for HAPS From Organic	Facility is not a major HAP

Citation	Title of Citation	Description of Applicability
(MACT), Subpart EEEE	Liquids Distribution (Non Gasoline)	source.
40 CFR Part 63 (MACT), Subpart HHHHH	Standards for HAPS for Miscellaneous Coating Manufacturing	Facility is not a major HAP source.
40 CFR Part 63 (MACT), Subpart T	Standards for HAPS from Halogenated Solvent Cleaning	Degreaser used in maintenance is citric acid based; no chlorinated solvent degreasers used.
40 CFR Part 63 (MACT), Subpart MMMM	Standards for HAPS for Surface Coating of Miscellaneous Metal Parts and Products	Facility is not a major HAP source.
40 CFR Part 63 (MACT), Subpart HHHHHH	Standards for HAPS from Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources	Facility is not a major HAP source.

Note 1: Although not listed in the table above, the facility is not subject to the requirements of submitting a Compliance Assurance Monitoring (CAM) – 40 CFR Part 64 plan for the Cupola as part of this Title V Permit action. CAM, was reviewed for applicability for each ‘pollutant specific emission unit (PSEU)’ at the facility. None of the PSEUs meet all of the general applicability criteria of 40 CFR §64.2 (a) as required for this monitoring program to apply. For example, the only regulated pollutant for which the facility’s Cupola (the most significant emission unit at the site) is major is carbon monoxide (meeting Criterion 3 of §64.2); however, the unit is neither subject to an emission limitation or standard for CO nor is there a control device for CO, thus not satisfying the first two criteria of §64.2. Similarly, although the Cupola does have an emission limitation/standard for particulate matter and uses a control device (baghouse) to control PM emissions, it does not have potential pre-control device emissions of PM of 100 tons per year or more (i.e., not meeting Criterion 3 of §64.2).

Per 40 CFR Part 64, §64.5(b) *Other pollutant-specific emissions units*. For all other pollutant-specific emissions units subject to this part and not subject to §64.5(a), the owner or operator shall submit the information required under §64.4 as part of an application for a *renewal* of a part 70 or 71 permit.

Condition 4 of the draft Title V permit limits PM emissions to no more than 24.0 pounds per hour which at 8760 hours equals 105.1 tons per year, seemingly meeting the definition of a ‘large pollutant-specific emission unit’ under 40 CFR Part 64. However, with the Cupola’s maximum stated rated capacity of 10 tons per hour and with Condition 3 of the draft Title V permit limiting Cupola throughput to no more than 10,000 tons per year, the effective hours of operation is 1000 hours at maximum rated capacity – yielding maximum allowable PM emissions of 12 tons per year – qualifying the Cupola as an ‘other pollutant-specific emission unit’.

Note 2: The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 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 9 VAC 5-40-20 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.”

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 No.	Emission Unit Description	Citation¹	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
PR&VB	Plastic Molding – Cutting & Drilling	9 VAC 5-80-720 B	9 VAC 5-80-720 A 87	PM
ASSBD	Product Assembly: Lid with Terminal Board Assembly	9 VAC 5-80-720 B	9 VAC 5-80-720 A.22	-
AS-3	Product Assembly: Water Meter Pit Extension Manufacture	9 VAC 5-80-720 B	9 VAC 5-80-720 A.22	-
AS-W	Product Assembly – Welding: Valve Handle Extender Assembly	9 VAC 5-80-720 B	9 VAC 5-80-720 A.22	-
FS	Production Equipment Repair: Fabrication and machine shop	9 VAC 5-80-720 B	9 VAC 5-80-720.A.31	-
CR	Production Equipment Repair: Cupola Relining	9 VAC 5-80-720 B	9 VAC 5-80-720 A.11	-
PS-PR	Production Equipment Repair: Pattern Shop – Pattern Repair	9 VAC 5-80-720 B	9 VAC 5-80-720.A.31	-
PS-WW	Production Equipment Repair: Pattern Shop – Wood Working	9 VAC 5-80-720 B	9 VAC 5-80-720 51.A	-
HWA	Waste Management – Hazardous Waste Storage Area	9 VAC 5-80-720 B	9 VAC 5-80-720 A.57	-
BH	Space Heat: Building	9 VAC 5-80-	9 VAC 5-80-720	-

	Heat – Individual Natural Gas Ceiling Mounted Units	720 C	A.6	
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- ¹The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

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 Culpeper Star Exponent from May 16, 2015 to June 15, 2015. Concurrent with the commencement of the public comment period, the draft permit is being provided to EPA Region III for review as a 'proposed permit.