

**Commonwealth of Kentucky  
Energy and Environment Cabinet  
Department for Environmental Protection  
Division for Air Quality  
300 Sower Boulevard, 2<sup>nd</sup> Floor  
Frankfort, Kentucky 40601  
(502) 564-3999**

**Draft**

**AIR QUALITY PERMIT  
Issued under 401 KAR 52:020**

**Permittee Name:** 3M Company  
**Mailing Address:** 3M Center, Building 225-01-N-22,  
St. Paul, MN 55144

**Source Name:** 3M Cynthiana  
**Mailing Address:** 1309 New Lair Road,  
Cynthiana, KY 41031

**Source Location:** 1309 New Lair Road

**Permit ID:** V-25-037  
**Agency Interest #:** 1752  
**Activity ID:** APE20230001  
**Review Type:** Title V, Operating  
**Source ID:** 21-097-00021

**Regional Office:** Florence Regional Office  
8020 Veterans Memorial Drive, Suite 110  
Florence, KY 41042  
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**County:** Harrison

**Application**  
**Complete Date:** April 10, 2023  
**Issuance Date:** XX XX, 2026  
**Expiration Date:** XX XX, 2031

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**For Michael J. Kennedy, P.E.  
Director  
Division for Air Quality**

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Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
V-25-037	Renewal	APE20230001	4/10/2023		Renewal Permit

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit was issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

## SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

### WEB COATING LINES – OVERVIEW

Table 1 – Applicator Emission Point Numbers and Descriptions

Line No.	Emission Pt No.	Coater No.	Description	Construction Commenced	Oven	Control Equipment
<b>2R Line</b>	EP57	2RT-1	Tinter 1	13-May-96	none	none
	EP11b	2R2	Precoat 2	Aug-85	Oven 2R-O2	TO2
	EP11b	2R3	Functional Coat	Aug-85	Oven 2R-O3	TO2
<b>3R Line</b>	EP62	3R1	LAB Station Coater	15-Oct-01	Oven 3R-O1	RTO1
	EP22	3R2	Hot Melt Applicator	5-Jun-89	none	none
	EP22	3R3	Hot Melt Applicator	15-Oct-01	none	none
<b>4R Line</b>	EP33	4RPC-1	Precoat 1	Jan-04	Oven 4R-O1	none
	EP34	4RPC-2	Precoat 2	11-Jul-91	Oven 4R-O2	RTO1
	EP35	4RF	Functional Coat	11-Jul-91	Oven 4R-O3	SRU1
<b>5R Line</b>	EP60	5R1A	Printing - Low VOC Ink	5-Oct-98	Infrared Oven	none
	EP60	5R2	Low VOC Precoat 2	5-Oct-98	Oven 5R-O1	none
	EP60	5R3	Low VOC Precoat 3	5-Oct-98	none	none
	EP60	5RF	Low VOC Functional Coat	5-Oct-98	Oven 5R-O2	none
<b>6R Line</b>	EP61	1	Printing - Low VOC Ink	Nov-10	none	none
	EP61	2,3,4	Coating	Nov-10	none	none
	EP61	5	Coating	Nov-10	none	none
	EP61	6	Adhesive	Nov-10	N.G. Dryer	none

Table 1A – Webcoating Line Ovens

Line	Manufacturer	Heating Method (natural gas, steam, electric)	Heat Input Capacity (MMBtu/hr)	Date Constructed
2R Oven 2		Recoup TO Heat	n/a	1986
2R Oven 3 Z1-3		Recoup TO Heat	n/a	1986
3R Oven	CE Air Preheater	Steam and Recouped TO heat		2000
4R Oven 1	Thermo Electron	Natural Gas	3.85	1991
4R Oven 2	Thermo Electron	Natural Gas	3.85	1991
4R Oven 3 Zone1	Thermo Electron	Natural Gas	6.4	1991
4R Oven 3 Zone2	Thermo Electron	Natural Gas	6.4	1991
4R Oven 3 Zone3	Thermo Electron	Natural Gas	5.175	1991
4R Oven 3 Zone4	Thermo Electron	Natural Gas	3.85	1991
4R Oven 3 Zone5	Thermo Electron	Natural Gas	3.85	1991

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

Line	Manufacturer	Heating Method (natural gas, steam, electric)	Heat Input Capacity (MMBtu/hr)	Date Constructed
5R1A		Electric / Infrared	n/a	1998
5R1B		Electric / Infrared	n/a	1998
5R Oven 2	Megtec	Natural Gas	5.175	1998
5R Oven 3 Z1	Megtec	Natural Gas	3.85	1998
5R Oven 3 Z2	Megtec	Natural Gas	3.85	1998
5R Oven 3 Z3	Megtec	Natural Gas	3.85	1998
6R Oven		Natural Gas	1.83	2010
		Natural Gas		2010
		Electric / Infrared	2010	
		Electric / Infrared	2010	
		Electric / Infrared	2010	

Table 1B – Webcoating Line Supporting Equipment

Location	Description
3R Coater LAB Room	(PCT 2) - 3R Cleaning tank, 15.25”W x 72”L

See **Section C** for additional supporting equipment.

**Control Equipment:**

RTO1 – Regenerative Thermal Oxidizer #1 – Controls applicators on Line 3R, and 4R  
Advanced Environmental Systems, Inc., ThermGen 85202J1  
Natural Gas Fired (6.0 MMBtu/hr)  
Installed: September 2003, Modified 2011

TO2 – Recuperative Thermal Oxidizer #2 – Applicators 2R1, 2R2, and 2R3  
CE Air Preheater, 29.9 TRG 48  
Natural Gas Fired (26.25 MMBtu/hr)  
Installed: July 1985

SRU1 – Solvent Recovery Unit #1  
3 Chamber Carbon Adsorption System  
CEMS - Rosemount Analytical Flame Ionization Detectors at inlet and outlet  
Installed: 1991

**APPLICABLE REGULATIONS:**

The following regulations apply to the web coating lines 2R, 3R, 4R, 5R, and 6R according to Table 2.

**401 KAR 60:005 Section 2(2)(xx), 40 C.F.R. 60.440 through 60.447 (Subpart RR), Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations**

## SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

**401 KAR 63:002 Section 2(4)(ppp)**, 40 C.F.R. 63.3280 through 63.3420, Tables 1 to 2 (Subpart JJJJ), National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

**401 KAR 51:017**, Prevention of significant deterioration of air quality

**401 KAR 59:210**, New fabric, vinyl and paper surface coating operations

**401 KAR 59:212**, New graphic arts facilities using rotogravure and flexography

Table 2 – Applicable Regulations

Line No.	Emission Pt No.	Coater No.	Description	Construction Commenced	Applicable Regulations				
					40 CFR Part 60, Subpart RR	40 CFR Part 63, Subpart JJJJ	401 KAR 51:017	401 KAR 59:210	401 KAR 59:212
<b>2R Line</b>	EP57	2RT-1	Tinter 1	13-May-96	y	y	y	y	n
	EP11b	2R2	Precoat 2	Aug-85	y	y	y	y	n
	EP11b	2R3	Functional Coat	Aug-85	y	y	y	y	n
<b>3R Line</b>	EP62	3R1	LAB Station Coater	15-Oct-01	y	y	y	y	n
	EP22	3R2	Hot Melt Applicator	5-Jun-89	y	y	y	y	n
	EP22	3R13	Hot Melt Applicator	15-Oct-01	y	y	y	y	n
<b>4R Line</b>	EP33	4RPC-1	Precoat 1	Jan-04	y	y	y	y	n
	EP34	4RPC-2	Precoat 2	11-Jul-91	y	y	y	y	n
	EP35	4RF	Functional Coat	11-Jul-91	y	y	y	y	n
<b>5R Line</b>	EP60	5R1A	Printing	5-Oct-98	y	y	y	n	y
	EP60	5R1B	Printing	5-Oct-98	y	y	y	n	y
	EP60	5R2	Precoat 2	5-Oct-98	y	y	y	n	y
	EP60	5R3	Precoat 3	5-Oct-98	y	y	y	n	y
	EP60	5RF	Functional Coat	5-Oct-98	y	y	y	n	y
<b>6R Line</b>	EP61	1	Printing	Nov-10	y	y	n	n	y
	EP61	2,3,4	Coating	Nov-10	y	y	n	n	y
	EP61	5	Coating	Nov-10	y	y	n	n	y
	EP61	6	Adhesive	Nov-10	y	y	n	n	y

## SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Table 3 – Emission Limitations Summary

	401 KAR 51:017 (BACT)	401 KAR 59:210	401 KAR 59:212	40 CFR Part 60, Subpart RR (NSPS)	40 CFR Part 63, Subpart JJJJ (MACT)
2R	<ul style="list-style-type: none"> <li>for controlled applicators: subsumed by MACT limit of 95% overall control</li> <li>for the collection of uncontrolled applicators: <math>\leq 0.14</math> kg VOC/kg of ctg. solids applied, monthly average</li> <li>total VOC emissions: <math>\leq 37,485.5</math> lbs/mo., monthly total</li> </ul>	for all applicators, considered individually, or as a single collection, or as any combination thereof [3]: <ul style="list-style-type: none"> <li>VOC control efficiency: <math>\geq 85\%</math>, daily average, Or</li> <li>VOC content of coatings: <math>&lt; 2.9</math> lb/gal, daily average</li> </ul>	NA	subsumed by MACT JJJJ	<ul style="list-style-type: none"> <li>for all controlled applicators, considered individually, as a single collection, or as any combination thereof, the following as a monthly average [3]:                             <ul style="list-style-type: none"> <li><math>\leq 0.05</math> lb VOC per lb VOC applied [4], Or</li> <li><math>\leq 0.04</math> lb VOC per lb ctg. mat's applied, Or</li> <li><math>\leq 0.20</math> lb VOC per lb ctg. solids applied</li> </ul> </li> <li>for uncontrolled applicators: subsumed by BACT limit of <math>\leq 0.14</math> kg VOC/kg of ctg. solids applied, monthly average</li> </ul>
Combined applicators: 2R1, 2R2, 2R3	<ul style="list-style-type: none"> <li>from coating: <math>\leq 278.1</math> lbs/hr VOC emissions, monthly average</li> <li>from cleanup solvents: <math>\leq 1.14</math> lbs/hr VOC emissions, monthly average</li> <li>from cleanup solvents: <math>\leq 4.99</math> tpy VOC emissions, 12-mo. rolling total</li> </ul>	NA	NA	NA	NA
3R	<ul style="list-style-type: none"> <li><math>\leq 0.019</math> kg VOC/kg of ctg. solids applied, monthly average</li> <li><math>\leq 51.5</math> tpy, 12-mo. rolling total</li> </ul>	for all applicators, considered individually, or as a single collection, or as any combination thereof [3]: <ul style="list-style-type: none"> <li>VOC control efficiency: <math>\geq 85\%</math>, daily average, Or</li> <li>VOC content of coatings: <math>&lt; 2.9</math> lb/gal, daily average</li> </ul>	NA	subsumed by MACT JJJJ	subsumed by BACT limit of $\leq 0.019$ kg VOC/kg of ctg. solids applied, monthly average
4R	<ul style="list-style-type: none"> <li>either of the following:                             <ul style="list-style-type: none"> <li><math>\geq 98\%</math> overall control of VOC emissions, monthly basis, Or</li> <li><math>\leq 0.08</math> kg VOC/kg of ctg. solids applied, monthly average</li> </ul> </li> </ul>	for all applicators, considered individually, or as a single collection, or as any combination thereof [3]: <ul style="list-style-type: none"> <li>VOC control efficiency: <math>\geq 85\%</math>, daily average, Or</li> <li>VOC content of coatings: <math>&lt; 2.9</math> lb/gal, daily average</li> </ul>	NA	subsumed by MACT JJJJ	subsumed by BACT control limit of 98% control, or the $\leq 0.08$ kg VOC/kg of ctg. solids applied emission limit, monthly average
5R	<ul style="list-style-type: none"> <li><math>\leq 0.14</math> kg VOC/kg of ctg. solids applied, monthly average</li> <li><math>\leq 200</math> tpy, 12-mo. rolling total</li> </ul>	NA	for each applicator, utilize inks which meet any of the following criteria ... <ul style="list-style-type: none"> <li>volatile portion <math>\geq 75\%</math> v/v water and <math>\leq 25\%</math> v/v organic solvent, Or</li> <li><math>\geq 60\%</math> v/v nonvolatile material (excluding water), as applied to the substrate, Or</li> <li><math>\leq 0.5</math> lb VOC/lb solids as delivered to the applicator</li> </ul>	subsumed by MACT JJJJ	subsumed by BACT limit of $\leq 0.14$ kg VOC/kg of ctg. solids applied, monthly average
6R	NA	NA	for each applicator, utilize inks which meet any of the following criteria ... <ul style="list-style-type: none"> <li>volatile portion <math>\geq 75\%</math> v/v water and <math>\leq 25\%</math> v/v organic solvent, Or</li> <li><math>\geq 60\%</math> v/v nonvolatile material (excluding water), as applied to the substrate, Or</li> <li><math>\leq 0.5</math> lb VOC/lb solids as delivered to the applicator</li> </ul>	subsumed by MACT JJJJ	<ul style="list-style-type: none"> <li>for all applicators, considered individually, as a single collection, or as any combination thereof, the following as a monthly average [3]:                             <ul style="list-style-type: none"> <li><math>\leq 0.05</math> lb VOC per lb VOC applied [4], Or</li> <li><math>\leq 0.04</math> lb VOC per lb ctg. mat's applied, Or</li> <li><math>\leq 0.20</math> lb VOC per lb ctg. solids applied</li> </ul> </li> </ul>

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**

### **1. Operating Limitations:**

#### **40 CFR Part 63, Subpart JJJJ**

- a) For thermal oxidizers and capture systems which are not permanent total enclosures, the permittee must:
  - (i) Demonstrate initial compliance for each capture system and each control device through performance tests; [40 CFR 63.3360(e)(1)]
  - (ii) Establish the operating limits for each capture system and control device during the performance testing; and [40 CFR 63.3360(e)(3)]
  - (iii) Meet the operating limits at all times after establishing them. [40 CFR 63.3321(a)]
  - (iv) Perform a periodic emissions performance test within 60 months of the previous test, and subsequent tests no later than 60 months thereafter as required by 40 CFR 63.3360. [40 CFR 63.3330(a)(2)]
- b) For capture systems which are permanent total enclosures, the permittee shall:
  - (i) Demonstrate that a total enclosure is installed; [40 CFR 63.3370(f)(3)(i)]
  - (ii) Monitor the capture system operating parameters at all times web coating is being performed.
- c) For the solvent recovery systems, operate continuous emission monitoring systems and perform quarterly audits. [40 CFR 63.3350(d)]
- d) At all times, the permittee must maintain the monitoring systems in proper working order including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment [40 CFR 63.3350(e)(7)]

#### **Compliance Demonstration Method:**

The permittee shall keep records of control operations associated with Line 3R. Also, See testing requirements below.

### **2. Emission Limitations:**

See Section B.2 for each individual line.

### **3. Testing Requirements:**

- a) The permittee shall perform destruction efficiency testing of the Thermal Oxidizers within five (5) years from the last test performed. [40 CFR 63.3360(a)]
- b) See **Section G.5** for additional testing requirements.
- c) Thermal Oxidizers: [40 CFR 63.3360(e)(3)(i)]
  - (i) During each performance test, monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. Monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. [40 CFR 63.3360(e)(3)(i)(A)]
  - (ii) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees lower than this average

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

combustion temperature. [40 CFR 63.3360(e)(3)(i)(B)]

- d) Capture Efficiency: [40 CFR 63.3360(f)]
- (i) The permittee may assume capture efficiency equals 100 percent if the capture system is a Permanent Total Enclosure (PTE). The permittee must confirm that the capture system is a PTE by demonstrating that it meets the requirements of section 6 of EPA Method 204 of 40 CFR part 51, appendix M, and that all exhaust gases from the enclosure are delivered to a control device. [40 CFR 63.3360(f)(1)]
  - (ii) The permittee may determine capture efficiency according to the protocols for testing with temporary total enclosures that are specified in Methods 204 and 204A through F of 40 CFR part 51, appendix M. [40 CFR 63.3360(f)(2)]
  - (iii) The permittee may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective or the Lower Confidence Limit approach as described in appendix A of subpart KK of 40 CFR 63. The permittee may exclude never-controlled work stations from such capture efficiency determinations. [40 CFR 63.3360(f)(3)]
- e) The permittee must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Representative conditions exclude periods of startup and shutdown. The permittee may not conduct performance tests during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.3360(e)(2)]

**4. Specific Monitoring Requirements:**

See Section B.4 for each individual line.

**5. Specific Recordkeeping Requirements:**

- a) The permittee shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.10(b)(1)]
- b) The permittee shall maintain relevant records as follows for each web coating line. [401 KAR 52:020, Section 10 and 40 CFR 63.10(b)(2)]
  - (i) All required maintenance performed on the air pollution control and monitoring equipment;
  - (ii) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

**6. Specific Reporting Requirements:**

See Section B.6 for each individual line.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**7. Specific Control Equipment Operating Conditions:**

See Section B.7 for each individual line.

**8. Alternate Operating Scenarios:**

See Section B.8 for each individual line.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****2R LINE****1. Operating Limitations:**

See OVERALL requirements.

**2. Emission Limitations:****a) Limitations on VOC mass emissions under 401 KAR 51:017**

**2R Coating Line.** VOC emissions from 2R, after control, if any, shall not exceed 37,485.5 pounds per month (lb/mo.), based on a monthly total.

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30<sup>th</sup> day following the end of each month.
- ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iii. The Permittee may reference Equations 1b, 8b and 11b in Attachment B for details.

**b) Limitations on VOC emission rate under 401 KAR 51:017**

- (i) Combined VOC emissions from the collection of applicators / workstations 2R1, 2R2, and 2R3 shall not exceed 278.1 lbs/hr, based on a monthly weighted average. Emissions resulting from cleanup operations are not included in this limitation.
- (ii) Combined VOC emissions from usage of cleanup solvents by the collection of applicators / workstations 2R1, 2R2, and 2R3 shall not exceed 1.14 lbs/hr, based on a monthly weighted average.

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30<sup>th</sup> day following the end of each month.
- ii. Unless otherwise specified, the permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.

**c) Limitations on VOC emissions from usage of cleanup solvents under 401 KAR 51:017.**

Combined VOC emissions from usage of cleanup solvent by the collection of applicators / workstations 2R1, 2R2, and 2R3 shall not exceed 4.99 tpy, based on a twelve (12) month rolling total of monthly VOC emissions.

**Compliance Demonstration Method:**

- i. Compliance with this emissions limit shall be demonstrated by the 30<sup>th</sup> day following the end of each month.
- ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.

**d) Other emission limitations under 401 KAR 51:017**

VOC emissions from the collection of uncontrolled applicators / workstations of 2R shall not exceed 0.14 kg/kg (0.14 lb/lb) coating solids applied, based on a monthly weighted average across all such uncontrolled applicators / work stations of 2R. Refer to **Section B.8. Alternate Operating Scenarios.**

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30th day following the end of each month.
- ii. Unless otherwise specified, the permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iii. The permittee may reference Equations 1b, 8b, 10b and 11b in Attachment B for details.

**e) Emission limitations under 40 CFR Part 63 Subpart JJJJ**

These emissions standards apply to all of the noted applicators / workstations, whether considered individually, as a single collection, or as any combination thereof. [40 CFR 63.3320(b)]

- (i)  $\leq 0.05$  lb VOC per lb VOC applied for each month; or
- (ii)  $\leq 0.04$  lb VOC per lb coating materials applied for each month; or
- (iii)  $\leq 0.20$  lb VOC per lb coating solids applied for each month

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30th day following the end of each month.
- ii. Unless otherwise specified, the permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iii. The permittee may reference Equations 1b, 8b, 9b, 10b and 11b in Attachment B for details.

**f) Emission limitations issued pursuant to 401 KAR 59:210**

The permittee shall not discharge into the atmosphere more than fifteen (15) percent by weight of the VOCs net input into the affected facility based on an averaging period not to exceed twenty-four (24) hours. If any portion of the series of equipment or operations qualifies for an exemption according to Section 6 of 401 KAR 59:210, then that portion shall be considered to be a separate coating line. [401 KAR 59:210, Section 3 and 401 KAR 59:210, Section 1(4)(h)(i)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- (i) No person shall cause, allow, or permit an affected facility to discharge into the atmosphere more than fifteen (15) percent by weight of the VOCs net input into the affected facility; or [401 KAR 59:210, Section 3]
- (ii) Any affected facility coating fabric or paper shall be exempt from Section 3 of this administrative regulation if the VOC content of coatings < 2.9 lb/gal, excluding water or exempt solvent or both, delivered to the applicators associated with the coating line, daily average basis. [401 KAR 59:210, Section 6 (1)]

**Compliance Demonstration Method:**

- i. Compliance shall be demonstrated within twenty-four (24) hours following the end of each twenty-four (24) hour period.
- ii. Each record shall state whether compliance is demonstrated with the limit or through the exemption.
- iii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iv. The Permittee may reference Equations 1c, 2c, 5c and/or 8c in Attachment B for details.

**3. Testing Requirements:**

See OVERALL requirements.

**4. Specific Monitoring Requirements:**

See OVERALL requirements.

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain relevant records as follows for each web coating line: [401 KAR 52:020, Section 10 and 40 CFR 63.10(b)(2)]

- a) All required measurements and calculations needed to demonstrate compliance with the streamlined set of emissions limits listed above in Section B.2 of this permit (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
  - (i) Specific information to be recorded shall include the following to the extent necessary to demonstrate compliance;
    - A. Daily records maintained by the source shall include, but not be limited to, the following:
      - 1. Applicable administrative regulation number;
      - 2. Application method and substrate type;
      - 3. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were exhausted to atmosphere (includes all cases of venting, such as “never-controlled” workstations, bypass of a control device, venting during startup, shutdown, malfunction, etc.);
      - 4. Amount and type of coating, adhesive, graphic arts material, or solvent used at

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- each point of application, including exempt compounds during periods when emissions from that applicator were routed to a control device, including identification of the control device;
5. The VOC content as applied in each coating, adhesive, graphic arts material, or solvent;
  6. The date for each application of coating, adhesive, graphic arts material, or solvent;
  7. The amount of surface preparation, cleanup, or washup solvent (including exempt compounds) used and the VOC content of each; and
  8. Oven temperature, if applicable.
- B. For each coating, adhesive, graphic arts material, or solvent in use, the source shall keep a record of the material formation of each including:
1. Volatile organic content (%wt., or equivalent);
  2. Solids content (%wt., or equivalent);
  3. All properties (including but not limited to water and exempt solvent content) necessary to demonstrate compliance against a volumetric-based compliant coating (e.g. 2.9 lb/gal);
  4. The results of any reference method 24, 24a, or 311 tests or the manufacturer's formulation data in the form of Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS).  
This record may take the form of a "library" of coating materials which needs to be updated only when new materials are added or existing materials are reformulated.
- C. Control device and capture system operating parameter data in accordance with the requirements of 40 CFR 63.3350(c), (e), and (f);
- D. Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(c);
- E. Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(d);
- F. Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of 40 CFR 63.3360(e) and (f); and
- G. Material usage, organic HAP usage, VOC usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 40 CFR 63.3370(b), (c), and (d).
- H. Maintain monthly records of the amount of any solvent containing materials recovered and shipped off site for disposal. For this the permittee may record the amount of clean-up solvent used and apply the site-specific **clean-up solvent emission factor of 15%, as determined by the clean-up solvent tracking study performed at 3M Cynthiana February 2-18, 2009.**
- I. Monthly VOC emissions from the 2R coating line.
- J. Combined hourly average VOC emissions from the collection of applicators / work stations 2R1, 2R2, and 2R3 as calculated each month.
- K. Combined hourly average VOC emissions from usage of cleanup solvents by the collection of applicators / work stations 2R1, 2R2, and 2R3 as calculated each month.

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- L. The twelve (12) month rolling total VOC emissions from usage of cleanup solvent by the collection of applicators / work stations 2R1, 2R2, and 2R3 as calculated each month.
  - M. Monthly VOC emissions based on the mass of coating solids applied for the 2R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
  - N. Monthly average overall VOC control efficiency for the 2R line, as necessary, when compliance with an emission limit is demonstrated based on overall control efficiency.
  - O. Maintain a record (beginning and end dates and times) when the permittee switches from one operating scenario to another as required by Section B.8. Alternate Operating Scenarios.
  - P. Maintain a record (beginning and end dates and times) when the permittee switches from one compliance option to another for each coating line.
- b) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;
  - c) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;
  - d) All CMS calibration checks;
    - (i) For each CEM a record of all quarterly audits [40 CFR 63.3350(d)(1)(ii)]
    - (ii) Record the results of each inspection, calibration, and validation check of each CPMS [40 CFR 63.3350(e)(6)].
  - e) All adjustments and maintenance performed on the CMS.

**6. Specific Reporting Requirements:**

- a) The permittee must submit a semiannual compliance report according to paragraphs (i) and (ii) below: [401 KAR 52:020, Section 10]
  - (i) The semiannual compliance report may be submitted as part of the semiannual reporting required by Section F.5 and F.6.
  - (ii) The compliance report must contain the information in paragraphs (2)(A) through (E) of this section:
    - A. Company name and address.
    - B. Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.
    - C. Date of report and beginning and ending dates of the reporting period.
    - D. If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.
- b) Additional semiannual reporting requirements.
  - (i) Monthly VOC emissions from the 2R coating line.
  - (ii) Combined hourly average VOC emissions from the collection of applicators / work

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

stations 2R1, 2R2, and 2R3 as calculated each month.

- (iii) Combined hourly average VOC emissions from usage of cleanup solvents by the collection of applicators / work stations 2R1, 2R2, and 2R3 as calculated each month.
- (iv) The twelve (12) month rolling total VOC emissions from usage of cleanup solvent by the collection of applicators / work stations 2R1, 2R2, and 2R3 as calculated each month.
- (v) Monthly VOC emissions based on the mass of coating solids applied for the 2R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
- (vi) Monthly average overall VOC control efficiency for the 2R line, as necessary, when compliance with an emission limit is demonstrated based on overall control efficiency.
- (vii) The permittee shall identify the operating scenario used during the reporting period.
- (viii) The permittee shall identify the compliance option used during the reporting period for each coating line.

**7. Specific Control Equipment Operating Conditions:****a) Thermal Oxidizer.**

The average combustion temperature in any 3-hour period must not fall more than 50 degrees Fahrenheit below the combustion temperature limit established according to 40 CFR 63.3360(e)(3)(i). [40 CFR 63.3321]

- (i) Collect the combustion temperature data according to 40 CFR 63.3350(e)(8);
- (ii) Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature. [40 CFR 63.3360(e)(3)(i)(B)]

**b) Capture Systems.**

Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with 40 CFR 63.3350(f) to ensure capture efficiency. [40 CFR 63.3370(j)(2)(ii)]

- (i) Submit a capture system monitoring plan to the Division that identifies operating parameters to be monitored according to 40 CFR 63.3350(f).
- (ii) Conduct monitoring according to the plan. [40 CFR 63.3350(f)(3)]

**c) Continuous parameter monitoring systems (CPMS) [40 CFR 63.3350(e)]**

- (i) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four equally spaced successive cycles of CPMS operation to have a valid hour of data.
- (ii) The permittee must have valid data from at least 90 percent of the hours when the process operated.
- (iii) To calculate a valid hourly value, the permittee must have at least three of four equally spaced data values from that hour from a continuous monitoring system (CMS) that is not out-of-control.
- (iv) Provided all of the readings recorded in accordance with 40 CFR 63.3350(e)(3) clearly demonstrate continuous compliance with the standard that applies, then the permittee is not required to determine the hourly average of all recorded readings.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- d) **See Section E** for additional requirements including monitoring equipment installation, initial calibration, ongoing verification, and development of the Capture system monitoring plan.

**8. Alternate Operating Scenarios:**

The permittee may operate the 2R line without any control devices, in which case the 2R line is subject to the emission limitation issued pursuant to 401 KAR 51:017 of 0.14 kg VOC / kg of coatings solids. Alternatively, the permittee may operate the 2R line utilizing capture and control, in which case the 2R line is subject to the emission limitations of 40 CFR 63, Subpart JJJJ. The 2R line must be in compliance with either standard at all times, but it is not necessary to show compliance with both standards at the same time. When making a change from one operating scenario to another, the permittee shall record contemporaneously in a log at the permitted facility a record of the scenario under which the facility is operating. [401 KAR 52:020, Section 10]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****3R LINE****1. Operating Limitations:**

See OVERALL requirements.

**2. Emission Limitations:**

- a) **Limitations on VOC mass emissions under 401 KAR 51:017.** VOC emissions from 3R, after control, if any, shall not exceed 51.5 tons per year (tpy), based on a twelve (12) month rolling total of monthly VOC emissions.

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30<sup>th</sup> day following the end of each month.
  - ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
  - iii. The Permittee may reference Equations 1b, 8b and 11b in Attachment B for details.
- b) **Other emission limitations under 401 KAR 51:017.** VOC emissions from 3R, after control, if any, shall not exceed 0.019 lb/lb coating solids applied, based on a monthly weighted average across all applicators / work stations of 3R.

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30<sup>th</sup> day following the end of each month.
  - ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
  - iii. The Permittee may reference Equations 1b, 8b, 10b and 11b in Attachment B for details.
- c) **Emission limitations under 40 CFR Part 63 Subpart JJJJ,** Subsumed by BACT limit of 0.019 lb VOC/ lb of coating solids applied.
- d) **Emission limitations issued pursuant to 401 KAR 59:210**  
The permittee shall not discharge into the atmosphere more than fifteen (15) percent by weight of the VOCs net input into the affected facility based on an averaging period not to exceed twenty-four (24) hours. If any portion of the series of equipment or operations qualifies for an exemption according to Section 6 of 401 KAR 59:210, then that portion shall be considered to be a separate coating line. [401 KAR 59:210, Section 3 and 401 KAR 59:210, Section 1(4)(h)(i)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- (i) No person shall cause, allow, or permit an affected facility to discharge into the atmosphere more than fifteen (15) percent by weight of the VOCs net input into the affected facility; or [401 KAR 59:210, Section 3]
- (ii) Any affected facility coating fabric or paper shall be exempt from Section 3 of this administrative regulation if the VOC content of coatings < 2.9 lb/gal, excluding water or exempt solvent or both, delivered to the applicators associated with the coating line, daily average basis. [401 KAR 59:210, Section 6 (1)]

**Compliance Demonstration Method:**

- i. Compliance shall be demonstrated within twenty-four (24) hours following the end of each twenty-four (24) hour period.
- ii. Each record shall state whether compliance is demonstrated with the limit or through the exemption.
- iii. Unless otherwise specified, the permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iv. The permittee may reference Equations 1c, 2c, 5c and/or 8c in Attachment B for details.

**3. Testing Requirements:**

See OVERALL requirements

**4. Specific Monitoring Requirements:**

None

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain relevant records as follows for each web coating line: [401 KAR 52:020, Section 10 and 40 CFR 63.10(b)(2)]

- a) All required measurements and calculations needed to demonstrate compliance with the streamlined set of emissions limits listed above in Section B.2 of this permit (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
  - (i) Specific information to be recorded shall include the following to the extent necessary to demonstrate compliance;
    - A. Daily records maintained by the source shall include, but not be limited to, the following:
      - 1. Applicable administrative regulation number;
      - 2. Application method and substrate type;
      - 3. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were exhausted to atmosphere (includes all cases of venting, such as “never-controlled” workstations, bypass of a control device, venting during startup, shutdown, malfunction, etc.);
      - 4. Amount and type of coating, adhesive, graphic arts material, or solvent used at

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

each point of application, including exempt compounds during periods when emissions from that applicator were routed to a control device, including identification of the control device;

5. The VOC content as applied in each coating, adhesive, graphic arts material, or solvent;
  6. The date for each application of coating, adhesive, graphic arts material, or solvent;
  7. The amount of surface preparation, cleanup, or washup solvent (including exempt compounds) used and the VOC content of each; and
  8. Oven temperature, if applicable.
- B. For each coating, adhesive, graphic arts material, or solvent in use, the source shall keep a record of the material formation of each including:
1. Volatile organic content (%wt., or equivalent);
  2. Solids content (%wt., or equivalent);
  3. All properties (including but not limited to water and exempt solvent content) necessary to demonstrate compliance against a volumetric-based compliant coating (e.g. 2.9 lb/gal);
  4. The results of any reference method 24, 24a, or 311 tests or the manufacturer's formulation data in the form of Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS).  
This record may take the form of a "library" of coating materials which needs to be updated only when new materials are added or existing materials are reformulated.
- C. Control device and capture system operating parameter data in accordance with the requirements of 40 CFR 63.3350(c), (e), and (f);
- D. Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(c);
- E. Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(d);
- F. Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of 40 CFR 63.3360(e) and (f); and
- G. Material usage, organic HAP usage, VOC usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 40 CFR 63.3370(b), (c), and (d).
- H. Maintain monthly records of the amount of any solvent containing materials recovered and shipped off site for disposal. For this the permittee may record the amount of clean-up solvent used and apply the site-specific **clean-up solvent emission factor of 15%, as determined by the clean-up solvent tracking study performed at 3M Cynthiana February 2-18, 2009.**
- I. Monthly VOC emissions from the 3R coating line.
- J. The twelve (12) month rolling total VOC emissions as calculated each month for the 3R coating line.
- K. Monthly VOC emissions based on the mass of coating solids applied for the 3R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- L. Maintain a record (beginning and end dates and times) when the permittee switches from one compliance option to another for each coating line.
- b) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;
- c) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;
- d) All CMS calibration checks;
  - (i) For each CEM a record of all quarterly audits [40 CFR 63.3350(d)(1)(ii)]
  - (ii) Record the results of each inspection, calibration, and validation check of each CPMS [40 CFR 63.3350(e)(6)]
- e) All adjustments and maintenance performed on the CMS.

**6. Specific Reporting Requirements:**

- a) The permittee must submit a semiannual compliance report according to paragraphs (i) and (ii) below: [401 KAR 52:020, Section 10 and 40 CFR 63.3400]
  - (i) The semiannual compliance report may be submitted as part of the semiannual reporting required by Section F.5 and F.6.
  - (ii) The compliance report must contain the information in paragraphs (2)(A) through (E) of this section:
    - A. Company name and address.
    - B. Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.
    - C. Date of report and beginning and ending dates of the reporting period.
    - D. If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.
    - E. For each deviation from an emission limitation (emission limit or operating limit) that applies to you and that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (2)(i) through (iii) of this section, and:
      - 1. The total operating time of each affected source during the reporting period.
      - 2. Information on the number, duration, and cause of deviations (including unknown cause), if applicable, and the corrective action taken.
      - 3. Information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other calibration checks.
- b) Additional semiannual reporting requirements.
  - (i) Monthly VOC emissions from the 3R coating line.
  - (ii) The twelve (12) month rolling total VOC emissions as calculated each month for the 3R coating line.
  - (iii) Monthly VOC emissions based on the mass of coating solids applied for the 3R line,

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
- (iv) The permittee shall identify the operating scenario used during the reporting period.
  - (v) The permittee shall identify the compliance option used during the reporting period for each coating line.

**7. Specific Control Equipment Operating Conditions:****a) Thermal Oxidizer.**

The average combustion temperature in any 3-hour period must not fall more than 50 degrees Fahrenheit below the combustion temperature limit established according to 40 CFR 63.3360(e)(3)(i).

- (i) Collect the combustion temperature data according to 40 CFR 63.3350(e)(9);
- (ii) Maintain the 3-hour rolling average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature. [40 CFR 63.3360(e)(3)(i)(B)]

**b) Capture Systems.**

Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with 40 CFR 63.3350(f) to ensure capture efficiency. [40 CFR 63.3370(j)(2)(ii)]

- (i) Submit a capture system monitoring plan to the Division that identifies operating parameters to be monitored according to 40 CFR 63.3350(f).
- (ii) Conduct monitoring according to the plan, 40 CFR 63.3350(f)(3)

**e) Continuous parameter monitoring systems (CPMS) [40 CFR 63.3350(e)]**

- (i) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four equally spaced successive cycles of CPMS operation to have a valid hour of data.
- (ii) The permittee must have valid data from at least 90 percent of the hours when the process operated.
- (iii) To calculate a valid hourly value, the permittee must have at least three of four equally spaced data values from that hour from a continuous monitoring system (CMS) that is not out-of-control.
- (iv) Provided all of the readings recorded in accordance with 40 CFR 63.3350(e)(3) clearly demonstrate continuous compliance with the standard that applies, then the permittee is not required to determine the hourly average of all recorded readings.

**c) See Section E for additional requirements including monitoring equipment installation, initial calibration, ongoing verification, and development of the Capture system monitoring plan.**

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****4R LINE****1. Operating Limitations:**

See OVERALL requirements

**2. Emission Limitations:**

- a) **Emission limitations under 401 KAR 51:017.** VOC emissions from 4R, shall meet either of limitations below.
- (i)  $\geq 98\%$  overall VOC control, based on a monthly weighted average across all applicators / workstations of 4R; or
  - (ii)  $\leq 0.08$  kg/kg (0.08 lb/lb) coating solids applied, based on a monthly weighted average across all applicators / workstations of 4R.

Refer to Section B.8. Alternate Operating Scenarios:

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30th day following the end of each month.
  - ii. Unless otherwise specified, the permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
  - iii. The Permittee may reference Equations 1b, 8b, 10b and 11b in Attachment B for details.
- b) **Emission limitations under 40 CFR Part 63 Subpart JJJJ,** Subsumed by BACT control limit of 98% control, or the 0.08 lb VOC per lb of coating solids applied emission limit, monthly average.
- c) **Emission limitations issued pursuant to 401 KAR 59:210**  
The permittee shall not discharge into the atmosphere more than fifteen (15) percent by weight of the VOCs net input into the affected facility based on an averaging period not to exceed twenty-four (24) hours. If any portion of the series of equipment or operations qualifies for an exemption according to Section 6 of 401 KAR 59:210, then that portion shall be considered to be a separate coating line. [401 KAR 59:210, Section 3 and 401 KAR 59:210, Section 1(4)(h)(i)]
- (i) No person shall cause, allow, or permit an affected facility to discharge into the atmosphere more than fifteen (15) percent by weight of the VOCs net input into the affected facility; or [401 KAR 59:210, Section 3]
  - (ii) Any affected facility coating fabric or paper shall be exempt from Section 3 of this administrative regulation if the VOC content of coatings  $< 2.9$  lb/gal, excluding water or exempt solvent or both, delivered to the applicators associated with the coating line, daily average basis. [401 KAR 59:210, Section 6 (1)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Compliance Demonstration Method:**

- i. Compliance shall be demonstrated within twenty-four (24) hours following the end of each twenty-four (24) hour period.
- ii. Each record shall state whether compliance is demonstrated with the limit or through the exemption.
- iii. Unless otherwise specified, the permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iv. The Permittee may reference Equations 1c, 2c, 5c and/or 8c in Attachment B for details.

**3. Testing Requirements:**

See OVERALL requirements.

**4. Specific Monitoring Requirements:**

- a) Continuously monitor the gas stream entering and exiting the control device to determine the volatile matter concentration of the vent gas at the inlet and outlet of the solvent recovery unit such that the control device efficiency can be calculated for each month using Equation 2 of 40 CFR 63.3360 (refer to the referenced section for details). The permittee will use this calculated control efficiency with the equations of Section D of this permit to calculate emissions from the workstations controlled by the SRU.
- b) Capture and control efficiency monitoring.
  - (i) Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with 40 CFR 63.3350(f) to ensure capture efficiency.
- c) Determine the percent capture efficiency in accordance with 40 CFR 63.3360(f).

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain relevant records as follows for each web coating line [401 KAR 52:020, Section 10 and 40 CFR 63.10(b)(2)]

- a) All required measurements and calculations needed to demonstrate compliance with the streamlined set of emissions limits listed above in Section B.2 of this permit (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
  - (i) Specific information to be recorded shall include the following to the extent necessary to demonstrate compliance;
    - A. Daily records maintained by the source shall include, but not be limited to, the following:
      1. Applicable administrative regulation number;
      2. Application method and substrate type;
      3. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- emissions from that applicator were exhausted to atmosphere (includes all cases of venting, such as “never-controlled” workstations, bypass of a control device, venting during startup, shutdown, malfunction, etc.);
4. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were routed to a control device, including identification of the control device;
  5. The VOC content as applied in each coating, adhesive, graphic arts material, or solvent;
  6. The date for each application of coating, adhesive, graphic arts material, or solvent;
  7. The amount of surface preparation, cleanup, or washup solvent (including exempt compounds) used and the VOC content of each; and
  8. Oven temperature, if applicable.
- B. For each coating, adhesive, graphic arts material, or solvent in use, the source shall keep a record of the material formation of each including:
1. Volatile organic content (%wt., or equivalent);
  2. Solids content (%wt., or equivalent);
  3. All properties (including but not limited to water and exempt solvent content) necessary to demonstrate compliance against a volumetric-based compliant coating (e.g. 2.9 lb/gal);
  4. The results of any reference method 24, 24a, or 311 tests or the manufacturer's formulation data in the form of Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS).  
This record may take the form of a “library” of coating materials which needs to be updated only when new materials are added or existing materials are reformulated.
- C. Continuous emission monitor data for the solvent recovery device in accordance with the requirements of 40 CFR 63.3350(d);
1. Measure the organic volatile concentration at both the control device inlet and the outlet such that the reduction efficiency can be determined. Each continuous emission monitor must comply with performance specification 8 or 9 of 40 CFR part 60, appendix B, as appropriate. [40 CFR 63.3350 (d)(1)(i)]
  2. The permittee will follow the quality assurance procedures in procedure 1, appendix F of 40 CFR part 60. In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, the permittee must use compounds representative of the gaseous emission stream being controlled. [40 CFR 63.3350 (d)(1)(ii)]
  3. The permittee shall have valid data from at least 90 percent of the hours when the process is operated. Invalid or missing data should be reported as a deviation in the semiannual compliance report.[40 CFR 63.3350 (d)(1)(iii)]
- D. Maintain a calendar month record of the amount of solvent applied in the coating at each affected facility controlled by a solvent recovery device, 40 CFR 60.445(b);
- E. Control device and capture system operating parameter data in accordance with the requirements of 40 CFR 63.3350(c), (e), and (f);
- F. Organic HAP content data for the purpose of demonstrating compliance in

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

accordance with the requirements of 40 CFR 63.3360(c);

- G. Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(d);
  - H. Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of 40 CFR 63.3360(e) and (f); and
  - I. Material usage, organic HAP usage, VOC usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 40 CFR 63.3370(b), (c), and (d).
  - J. Maintain monthly records of the amount of any solvent containing materials recovered and shipped off site for disposal. For this the permittee may record the amount of clean-up solvent used and apply the site-specific **clean-up solvent emission factor of 15%, as determined by the clean-up solvent tracking study performed at 3M Cynthia February 2-18, 2009.**
  - K. Monthly VOC emissions from the 4R coating line.
  - L. Monthly VOC emissions based on the mass of coating solids applied for the 4R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
  - M. Monthly average overall VOC control efficiency for the 4R line, as necessary, when compliance with an emission limit is demonstrated based on overall control efficiency.
  - N. Maintain a record (beginning and end dates and times) when the permittee switches from one operating scenario to another as required by Section B.8. Alternate Operating Scenarios.
  - O. Maintain a record (beginning and end dates and times) when the permittee switches from one compliance option to another for each coating line.
- b) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;
  - c) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;
  - d) All CMS calibration checks;
    - (i) For each CEM a record of all quarterly audits [40 CFR 63.3350(d)(1)(ii)]
    - (ii) Record the results of each inspection, calibration, and validation check of each CPMS. [40 CFR 63.3350(e)(6)]
  - e) All adjustments and maintenance performed on the CMS.

**6. Specific Reporting Requirements:**

- a) The permittee must submit a semiannual compliance report according to paragraphs (i) and (ii) below: [401 KAR 52:020, Section 10 and 40 CFR 63.3400]
  - (i) The semiannual compliance report may be submitted as part of the semiannual reporting required by Section F.5 and F.6.
  - (ii) The compliance report must contain the information in paragraphs (2)(A) through (F) of this section:

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- A. Company name and address.
- B. Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.
- C. Date of report and beginning and ending dates of the reporting period.
- D. If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.
- E. For each deviation from an emission limitation (emission limit or operating limit) that applies to you and that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (2)(i) through (iii) of this section, and:
  1. The total operating time of each affected source during the reporting period.
  2. Information on the number, duration, and cause of deviations (including unknown cause), if applicable, and the corrective action taken.
  3. Information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other calibration checks.
- F. For each deviation from an emission limit occurring at an affected source where you are using a CMS to comply with the emission limit in this subpart, you must include the information in paragraphs (2)(i) through (iii) above and paragraphs 1 through 10 as given below. [40 CFR 63.3400(c)(2)(vi)]
  1. The total operating time of the affected source during the reporting period.
  2. The date and time that each CEMS and CPMS, if applicable, was inoperative except for zero (low-level) and high-level checks.
  3. The date and time that each CEMS and CPMS, if applicable, was out-of-control, including the information in 40 CFR 63.8(c)(8).
  4. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.
  5. A summary of the total duration (in hours) of each deviation during the reporting period and the total duration of each deviation as a percent of the total source operating time during that reporting period.
  6. A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
  7. A summary of the total duration (in hours) of CEMS and CPMS downtime during the reporting period and the total duration of CEMS and CPMS downtime as a percent of the total source operating time during that reporting period.
  8. A breakdown of the total duration of CEMS and CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.
  9. The date of the latest CEMS and CPMS certification or audit.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

10. A description of any changes in CEMS, CPMS, or controls since the last reporting period.
11. An estimate of the quantity of each regulated pollutant emitted over the emission limits in 40 CFR 63.3320 for each monthly period covered in the report if the source failed to meet an applicable emission limit of this subpart. [40 CFR 63.3400(c)(2)(v)(C)]

- b) Additional semiannual reporting requirements.
  - (i) Monthly VOC emissions from the 4R coating line.
  - (ii) Monthly VOC emissions based on the mass of coating solids applied for the 4R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
  - (iii) Monthly average overall VOC control efficiency for the 4R line, as necessary, when compliance with an emission limit is demonstrated based on overall control efficiency.
  - (iv) The permittee shall identify the operating scenario used during the reporting period.
  - (v) The permittee shall identify the compliance option used during the reporting period for each coating line.

**7. Specific Control Equipment Operating Conditions:**

- a) Thermal Oxidizer.

The average combustion temperature in any 3-hour period must not fall more than 50 degrees Fahrenheit below the combustion temperature limit established according to 40 CFR 63.3360(e)(3)(i).

  - (i) Collect the combustion temperature data according to 40 CFR 63.3350(e)(8);
  - (ii) Maintain the 3-hour rolling average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature. [40 CFR 63.3360(e)(3)(i)(B)]
- b) Capture Systems.

Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with 40 CFR 63.3350(f) to ensure capture efficiency. [40 CFR 63.3370(j)(2)(ii)]

  - (i) Submit a capture system monitoring plan to the Division that identifies operating parameters to be monitored according to 40 CFR 63.3350(f).
  - (ii) Conduct monitoring according to the plan, 40 CFR 63.3350(f)(3).
- c) Continuous parameter monitoring systems (CPMS). [40 CFR 63.3350(e)]
  - (i) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four equally spaced successive cycles of CPMS operation to have a valid hour of data.
  - (ii) The permittee must have valid data from at least 90 percent of the hours when the process operated.
  - (iii) To calculate a valid hourly value, the permittee must have at least three of four equally spaced data values from that hour from a continuous monitoring system (CMS) that is not out-of-control.
  - (iv) Provided all of the readings recorded in accordance with 40 CFR 63.3350(e)(3) clearly

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

demonstrate continuous compliance with the standard that applies, then the permittee is not required to determine the hourly average of all recorded readings.

- d) **See Section E** for additional requirements including monitoring equipment installation, initial calibration, ongoing verification, and development of the Capture system monitoring plan.

**8. Alternate Operating Scenarios:**

Pursuant to 401 KAR 51:017, the permittee may operate the 4R line without any control devices, in which case the 4R line emission limitation is 0.08 kg VOC / kg of coatings solids applied based on a monthly average of all applicators in the 4R line. Alternatively, the permittee may operate the 4R line utilizing capture and control, in which case the permittee must achieve at least 98% overall VOC control on a monthly average for all applicators in the 4R line. The 4R line must be in compliance with either emission limit at all times, but it is not necessary to show compliance with both emission limitations at the same time. When making a change from one operating scenario to another, the permittee shall record contemporaneously in a log at the permitted facility a record of the scenario under which the facility is operating. [401 KAR 52:020, Section 10]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****5R LINE****1. Operating Limitations:**

See OVERALL requirements

**2. Emission Limitations:**

- a) **Limitations on VOC mass emissions under 401 KAR 51:017**, VOC emissions from 5R, after control, if any, shall not exceed 200 tons per year (tpy), based on a twelve (12) month rolling total of monthly VOC emissions.

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30<sup>th</sup> day following the end of each month.
  - ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
  - iii. The Permittee may reference Equations 1b, 8b and 11b in Attachment B for details.
- b) **Other emission limitations under 401 KAR 51:017:** VOC emissions from 5R, after control, if any, shall not exceed 0.14 kg/kg (0.14 lb/lb) coating solids applied, based on a monthly weighted average across all applicators / workstations of 5R.

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30th day following the end of each month.
- ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iii. The Permittee may reference Equations 1b, 8b, 10b and 11b in Attachment B for details.

**c) Emission limitations issued pursuant to 401 KAR 59:212****5R and 6R Coating Lines.**

- (1) Utilize a waterborne ink (or coating) whose volatile portion consists of 75% (volume basis) water and 25% (volume basis) organic solvent (or a lower VOC content) for all applicators; or [401 KAR 59:212, Section 6 (1)]
- (2) Utilize inks (or coatings) which, excluding water, contain  $\geq 60\%$  (volume basis) nonvolatile material as applied to the substrate; or [401 KAR 59:212, Section 6 (3)]
- (3) Utilize inks (or coatings) with an emission limit of 0.5 lb VOC/lb solids as delivered to the applicators. [401 KAR 59:212, Section 6 (4)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Compliance Demonstration Method:**

- i. Compliance shall be demonstrated within twenty-four (24) hours following the end of each twenty-four (24) hour period.
  - ii. Determine the VOC weight fraction and the density of inks and coating materials used in accordance with Appendix A to 40 CFR 60, Method 24A.
  - iii. Compliance through an exemption shall be demonstrated in accordance with the procedures and methods provided in Attachment B for this regulation.
- d) **Emission limitations under 40 CFR Part 63 Subpart JJJJ**, Subsumed by BACT limit of 0.14 lb VOC per lb coating solids applied monthly average.

**3. Testing Requirements:**

See OVERALL requirements

**4. Specific Monitoring Requirements:**

See OVERALL requirements

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain relevant records as follows for each web coating line. [401 KAR 52:020, Section 10 and 40 CFR 63.10(b)(2)]

- a) All required measurements and calculations needed to demonstrate compliance with the streamlined set of emissions limits listed above in Section B.2 of this permit (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
  - (i) Specific information to be recorded shall include the following to the extent necessary to demonstrate compliance;
    - A. Daily records maintained by the source shall include, but not be limited to, the following:
      1. Applicable administrative regulation number;
      2. Application method and substrate type;
      3. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were exhausted to atmosphere (includes all cases of venting, such as “never-controlled” workstations, bypass of a control device, venting during startup, shutdown, malfunction, etc.);
      4. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were routed to a control device, including identification of the control device;
      5. The VOC content as applied in each coating, adhesive, graphic arts material, or solvent;
      6. The date for each application of coating, adhesive, graphic arts material, or solvent;
      7. The amount of surface preparation, cleanup, or washup solvent (including exempt compounds) used and the VOC content of each; and

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

8. Oven temperature, if applicable.
  - B. For each coating, adhesive, graphic arts material, or solvent in use, the source shall keep a record of the material formation of each including:
    1. Volatile organic content (%wt., or equivalent);
    2. Solids content (%wt., or equivalent);
    3. All properties (including but not limited to water and exempt solvent content) necessary to demonstrate compliance against a volumetric-based compliant coating (e.g. 2.9 lb/gal);
    4. The results of any reference method 24, 24a, or 311 tests or the manufacturer's formulation data in the form of Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS).

This record may take the form of a "library" of coating materials which needs to be updated only when new materials are added or existing materials are reformulated.
  - C. Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(c);
  - D. Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(d);
  - E. Material usage, organic HAP usage, VOC usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 40 CFR 63.3370(b), (c), and (d).
  - F. Maintain monthly records of the amount of any solvent containing materials recovered and shipped off site for disposal. For this the permittee may record the amount of clean-up solvent used and apply the site specific clean-up **solvent emission factor of 15%, as determined by the clean-up solvent tracking study performed at 3M Cynthia February 2-18, 2009.**
  - G. Monthly VOC emissions from the 5R coating line.
  - H. The twelve (12) month rolling total VOC emissions as calculated each month for the 5R coating line.
  - I. Monthly VOC emissions based on the mass of coating solids applied for the 5R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
  - J. Maintain a record (beginning and end dates and times) when the permittee switches from one compliance option to another for each coating line.
- 6. Specific Reporting Requirements:**
- a) The permittee must submit a semiannual compliance report according to paragraphs (i) and (ii) below: [401 KAR 52:020, Section 10 and 40 CFR 63.3400]
    - (i) The semiannual compliance report may be submitted as part of the semiannual reporting required by Section F.5 and F.6.
    - (ii) The compliance report must contain the information in paragraphs (2)(A) through (D) of this section:
      - A. Company name and address.
      - B. Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.
      - C. Date of report and beginning and ending dates of the reporting period.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- D. If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period.
- b) Additional semiannual reporting requirements.
- (i) Monthly VOC emissions from the 5R coating line.
  - (ii) The twelve (12) month rolling total VOC emissions as calculated each month for the 5R coating line.
  - (iii) Monthly VOC emissions based on the mass of coating solids applied for the 5R line, as necessary, when compliance with an emission limit is demonstrated based on the mass of VOC emissions per mass of coating solids.
  - (iv) The permittee shall identify the compliance option used during the reporting period for each coating line.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****6R LINE****1. Operating Limitations:**

See OVERALL requirements

**2. Emission Limitations:****a) Emission limitations under 40 CFR Part 63 Subpart JJJJ**

These emissions standards apply to all of the noted applicators / workstations, whether considered individually, as a single collection, or as any combination thereof. [40 CFR 63.3320(b)]

- (i)  $\leq 0.05$  lb VOC per lb VOC applied for each month; or
- (ii)  $\leq 0.04$  lb VOC per lb coating materials applied for each month; or
- (iii)  $\leq 0.20$  lb VOC per lb coating solids applied for each month

**Compliance Demonstration Method:**

- i. Compliance with each emissions limit shall be demonstrated by the 30th day following the end of each month.
- ii. Unless otherwise specified, the Permittee shall demonstrate compliance with the emissions limitations in this Section through the recordkeeping required by this section. Emissions shall be calculated through a mass balance, through the use of software such as Emission Master™, or through another method as approved by the Administrator in writing.
- iii. The Permittee may reference Equations 1b, 8b, 9b, 10b and 11b in Attachment B for details.

**b) Emission limitations issued pursuant to 401 KAR 59:212  
5R and 6R Coating Lines.**

- (1) 401 KAR 59:212, Section 6 (1), Utilize a waterborne ink (or coating) whose volatile portion consists of 75% (volume basis) water and 25% (volume basis) organic solvent (or a lower VOC content) for all applicators; or
- (2) 401 KAR 59:212, Section 6 (3), Utilize inks (or coatings) which, excluding water, contain  $\geq 60\%$  (volume basis) nonvolatile material as applied to the substrate; or
- (3) 401 KAR 59:212, Section 6 (4), Utilize inks (or coatings) with an emission limit of 0.5 lb VOC/lb solids as delivered to the applicators.

**Compliance Demonstration Method:**

- i. Compliance shall be demonstrated within twenty-four (24) hours following the end of each twenty-four (24) hour period.
- ii. Determine the VOC weight fraction and the density of inks and coating materials used in accordance with Appendix A to 40 CFR 60, Method 24A.
- iii. Compliance through an exemption shall be demonstrated in accordance with the procedures and methods provided in Appendix B for this regulation.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****3. Testing Requirements:**

See OVERALL requirements

**4. Specific Monitoring Requirements:**

None

**5. Specific Recordkeeping Requirements:**

The permittee shall maintain relevant records as follows for each web coating line [401 KAR 52:020, Section 10 and 40 CFR 63.10(b)(2)]

- a) All required measurements and calculations needed to demonstrate compliance with the streamlined set of emissions limits listed above in Section B.2 of this permit (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
  - (i) Specific information to be recorded shall include the following to the extent necessary to demonstrate compliance;
    - A. Daily records maintained by the source shall include, but not be limited to, the following:
      1. Applicable administrative regulation number;
      2. Application method and substrate type;
      3. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were exhausted to atmosphere (includes all cases of venting, such as “never-controlled” workstations, bypass of a control device, venting during startup, shutdown, malfunction, etc.);
      4. Amount and type of coating, adhesive, graphic arts material, or solvent used at each point of application, including exempt compounds during periods when emissions from that applicator were routed to a control device, including identification of the control device;
      5. The VOC content as applied in each coating, adhesive, graphic arts material, or solvent;
      6. The date for each application of coating, adhesive, graphic arts material, or solvent;
      7. The amount of surface preparation, cleanup, or washup solvent (including exempt compounds) used and the VOC content of each; and
      8. Oven temperature, if applicable.
    - B. For each coating, adhesive, graphic arts material, or solvent in use, the source shall keep a record of the material formation of each including:
      1. Volatile organic content (%wt., or equivalent);
      2. Solids content (%wt., or equivalent);
      3. All properties (including but not limited to water and exempt solvent content) necessary to demonstrate compliance against a volumetric-based compliant coating (e.g. 2.9 lb/gal);
      4. The results of any reference method 24, 24a, or 311 tests or the manufacturer's formulation data in the form of Material Safety Data Sheets (MSDS) or Certified Product Data Sheets (CPDS).

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

This record may take the form of a “library” of coating materials which needs to be updated only when new materials are added or existing materials are reformulated.

- C. Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(c);
  - D. Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(d);
  - E. Material usage, organic HAP usage, VOC usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 40 CFR 63.3370(b), (c), and (d).
  - F. Maintain monthly records of the amount of any solvent containing materials recovered and shipped off site for disposal. For this the permittee may record the amount of clean-up solvent used and apply the site-specific clean-up **solvent emission factor of 15%, as determined by the clean-up solvent tracking study performed at 3M Cynthia February 2-18, 2009.**
  - G. Monthly VOC emissions from the 6R coating line.
  - H. Maintain a record (beginning and end dates and times) when the permittee switches from one compliance option to another for each coating line.
  - I. The mass of VOC applied per mass of coating material, or the mass of VOC applied per mass of coating solids.
- 6. Specific Reporting Requirements:**
- a) The permittee must submit a semiannual compliance report according to paragraphs (i) and (ii) below: [401 KAR 52:020, Section 10 and 40 CFR 63.3400]
    - (i) The semiannual compliance report may be submitted as part of the semiannual reporting required by Section F.5 and F.6.
    - (ii) The compliance report must contain the information in (A) through (D) below:
      - A. Company name and address.
      - B. Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.
      - C. Date of report and beginning and ending dates of the reporting period.
      - D. If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period.
  - b) Additional semiannual reporting requirements.
    - (i) Monthly VOC emissions from the 6R coating line.
    - (ii) The permittee shall identify the compliance option used during the reporting period for each coating line.
    - (iii) The mass of VOC applied per mass of coating material, or the mass of VOC applied per mass of coating solids for the 6R line as calculated each month.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****SOLVENT COMPOUNDING****EP 154 Primer Mix Tank (Room 154)**

**Description:** Located in Room 154, this vessel is used to create water-based products

**APPLICABLE REGULATIONS:**

**401 KAR 63:002 Section 2(4)(mmmm)**, 40 C.F.R. 63.7980 through 63.8105, Tables 1 to 10 (Subpart HHHHH), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing as applicable.

**1. Operating Limitations:**

See 2. **Emission Limitations:**

**2. Emission Limitations:**

As an alternative to complying with the requirements in Table 1 to Subpart HHHHH for each individual stationary process vessel at an existing source, the permittee may elect to comply with a 5 weight percent HAP limit for process vessels at the affected source that are used to manufacture coatings with a HAP content of less than 0.05 kg per kg product subpart. The permittee may only comply with the alternative during the production of coatings that contain less than 5 weight percent HAP, as determined using any of the procedures listed below. [40 CFR 63.8055]

**Compliance Demonstration Method:**

- i. Method 311 (appendix A to 40 CFR part 63). As an alternative to Method 311, you may use California Air Resources Board Method 310, Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds (ROC) in Aerosol Coating Products (incorporated by reference, see 40 CFR 63.14) for use with aerosol cans. [40 CFR 63.8055(b)(1)]
- ii. Method 24 (appendix A to 40 CFR part 60). The permittee may use Method 24 to determine the mass fraction of volatile matter and use that value as a substitute for the mass fraction of HAP, or one of the alternatives below: [40 CFR 63.8055(b)(2)]
  - (A) ASTM D2369–10 (Reapproved 2015)e1, (incorporated by reference, see 40 CFR 63.14)
  - (B) ASTM D2697–03 (Reapproved 2014) (incorporated by reference, see 40 CFR 63.14)
  - (C) ASTM D3960–98 (incorporated by reference, see 40 CFR 63.14)
- iii. The permittee may use an alternative test method for determining mass fraction of HAP if prior approval is obtained by the Administrator. The procedure in 40 CFR 63.7(f) must be followed to submit an alternative test method for approval. [40 CFR 63.8055(b)(3)]
- iv. The permittee may rely on formulation data from raw material suppliers if it represents each organic HAP that is present at 0.1 percent by mass or more for the HAP listed in Table 11 to this subpart, and at 1.0 percent by mass or more for other compounds. If the HAP weight percent estimated based on formulation data conflicts with the results of a test conducted according to paragraphs (b)(1) through (3) of this section, then there is a rebuttal presumption that the test results are accurate unless, after consultation, you demonstrate to the satisfaction of the permitting authority that the test results are not accurate and that the formulation data are more appropriate. [40 CFR 63.8055(b)(4)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****3. Testing Requirements:**

None

**4. Specific Monitoring Requirements:**

None

**5. Specific Recordkeeping Requirements:**

None

**6. Specific Reporting Requirements:**

The permittee shall prepare a compliance report as required in 40 CFR Part 63, Subpart HHHHH. All reports shall be submitted to the EPA via CEDRI following the procedure specified in 40 CFR 63.8075(i). The report shall contain the following information: [40 CFR 63.8075(e)]

- i. Company name and address.
- ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
- iii. Date of report and beginning and ending dates of the reporting period.
- iv. Applicable records and information for periodic reports as specified in referenced subparts F, SS, TT, UU, and WW of this part 63.
- v. The compliance report must contain the information on deviations, as defined in 40 CFR 63.8105, according to the following:
  - A. If there are no deviations from any emission limit, operating limit, or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.
  - B. For each deviation from an emission limit, operating limit, and work practice standard that occurs at an affected source where the permittee is not using a continuous monitoring system (CMS) to comply with the emission limit or work practice standards in this subpart, the report must include the information below:
    1. The total operating time of each affected source during the reporting period.
    2. Before the compliance date specified in 40 CFR 63.7995(e), information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. On and after the compliance date specified in 40 CFR 63.7995(e), report the number of failures to meet an applicable standard. For each instance, report the date, time, and duration of each failure. For each failure the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, and the cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
    3. Operating logs for the day(s) during which the deviation occurred, except operating logs are not required for deviations of the work practice standards for equipment leaks.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

4. On and after the compliance date specified in 40 CFR 63.7995(e), report the total bypass hours, as monitored according to the provisions of 40 CFR 63.8080(h).
- C. For each deviation from an emission limit or operating limit occurring at an affected source where the permittee is using a CMS to comply with the emission limit in this subpart, the permittee must include the information below. This includes periods of SSM.
1. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.
  2. The date, time, and duration that each CEMS was out-of-control, including the information in 40 CFR 63.8(c)(8).
  3. Before the compliance date specified in 40 CFR 63.7995(e), the date and time that each deviation started and stopped, and whether each deviation occurred during a period of SSM or during another period. On and after the compliance date specified in 40 CFR 63.7995(e), report the number of failures to meet an applicable standard. For each instance, report the date, time, and duration of each failure. For each failure the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, and the cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
  4. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
  5. Before the compliance date specified in 40 CFR 63.7995(e), a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. On and after the compliance date specified in 40 CFR 63.7995(e), a breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
  6. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.
  7. An identification of each HAP that is known to be in the emission stream or wastewater stream, as applicable.
  8. A description of the product being produced.
  9. Identification of the CMS.
  10. The date of the latest CMS certification or audit.
  11. The operating day or operating block average values of monitored parameters for each day(s) during which the deviation occurred.
  12. A summary of the total duration of CMS data unavailability during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- vi. If the permittee uses a CEMS, and there were no periods during which it was out-of-control as specified in 40 CFR 63.8(c)(7), include a statement that there were no periods during which the CEMS was out-of-control during the reporting period.
- vii. Notification of process change.
  - A. Except as specified in paragraph B of this section, whenever the permittee changes any of the information submitted in either the notification of compliance status report or any previously reported change to the notification of compliance status report, the permittee must document the change in your compliance report. The notification must include all of the information below:
    - 1. Revisions to any of the information reported in the original notification of compliance status report under 40 CFR 63.8075(d).
    - 2. Information required by the notification of compliance status report under 40 CFR 63.8075(d) for changes involving the addition of processes or equipment at the affected source.
  - B. The permittee must submit a report 60 days before the scheduled implementation date of any of the changes identified below:
    - 1. Any change to the information contained in either the precompliance report or any previously reported change to the precompliance report.
    - 2. A change in compliance status.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****BOILERS****EP08 (08) Two (2) Natural Gas Fired Boilers**

**Description:** (2) Cleaver Brooks, Indirect Heat Exchangers  
Natural gas-fired  
Maximum continuous rating: 12.5 million Btu / hour (MMBtu/hr) each  
Installed: April 11, 1985  
Control Equipment: None

**EP21 (21) One (1) Natural Gas Fired Boiler**

**Description:** Kewanee Indirect Heat Exchanger  
Natural gas-fired  
Maximum continuous rating: 16.74 MMBtu/hr  
Installed: June 5, 1989  
Control Equipment: None

**EP32 (32) One (1) Natural Gas Fired Boiler**

**Description:** Tampella Indirect Heat Exchanger  
Natural gas-fired  
Maximum continuous rating: 39.04 MMBtu/hr  
Installed: July 29, 1991  
Control Equipment: None

**APPLICABLE REGULATIONS:**

**401 KAR 59:015. New indirect heat exchangers.**

**401 KAR 60:005 Section 2(2)(d), 40 C.F.R. 60.40c through 60.48c (Subpart Dc), Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.** Applies to EP32 only.

**401 KAR 63:002 Section 2(4)(iii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 15 (Subpart DDDDD), National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.**

**1. Operating Limitations:**

- a. The permittee shall meet each work practice standard in Table 3 to 40 CFR 63, Subpart DDDDD that applies to each boiler except as provided under 40 CFR 63.7522. [40 CFR 63.7500(a)(1)]
- b. At all times, the permittee shall operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

- c. The permittee shall conduct a tune-up once annually to demonstrate continuous compliance as specified in 40 CFR 63.7540(a)(10)(i)-(vi). This frequency does not apply to limited-use boilers and process heaters, as defined in 40 CFR 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. [40 CFR 63.7540(a)(10)]
- (i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection at any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown);
  - (ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
  - (iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown); and
  - (iv) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available.
  - (v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
  - (vi) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of 40 CFR 63.7540:
    - A. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
    - B. A description of any corrective actions taken as a part of the tune-up; and
    - C. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.
- d. If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13)]
- e. The permittee shall conduct an annual performance tune-up according to 40 CFR 63.7540(a)(10). Each annual tune-up specified in 40 CFR 63.7540(a)(10) shall be no more than 13 months after the previous tune-up. For a new or reconstructed affected source (as defined in 40 CFR 63.7490), the first annual tune-up shall be no later than 13 months after the initial startup of the new or reconstructed affected source. [40 CFR 63.7515(d)]
- f. As provided in 40 CFR 63.6(g), EPA may approve use of an alternative to the work practice standards in 40 CFR 63, Subpart DDDDD. [40 CFR 63.7500(b)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Compliance Demonstration Method:**

- i. The permittee shall demonstrate continuous compliance with each applicable work practice standard in Table 3 to 40 CFR 63, Subpart DDDDD according to the methods specified in Table 8 to 40 CFR 63, Subpart DDDDD and 40 CFR 63.7540. [40 CFR 63.7540(a)(a)(1) through (19)]
  - ii. The permittee shall conduct a tune-up of each boiler or process heater as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. [40 CFR 63.7540(a)(10)]
- g. During a startup period or shutdown period, the permittee shall comply with the work practice standards established in 401 KAR 59:015, Section 7. [401 KAR 59:015, Section 7]

**Compliance Demonstration Method:**

- i. An affected facility subject to 40 C.F.R. 63.7500 shall meet the work practice standards established in 40 C.F.R. Part 63, Table 3 to Subpart DDDDD, as established in 401 KAR 63:002, Section 2(4)(iiii) [401 KAR 59:015, Section 7(2)(a)]
- ii. See **5. Specific Recordkeeping Requirements.**

**2. Emission Limitations:**

- a. The permittee shall not cause emissions of particulate matter in excess of 0.45 lb/MMBtu actual heat input for EU 08, 0.40 lb/MMBtu actual heat input for EU 21 and 0.34 lb/MMBtu/hr actual heat input for EU 32. [401 KAR 59:015, Section 4(1)(c)]
- b. The permittee shall not cause emissions of particulate matter in excess of 20 percent opacity, except: [401 KAR 59:015, Section 4(2)]
  - i. A maximum of 40 percent opacity shall be allowed for a maximum of 6 consecutive minutes in any 60 minutes during fire box cleaning or soot blowing; and [401 KAR 59:015, Section 4(2)(b)]
  - ii. For emissions from an affected facility caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015, Section 4(2)(c)]
- c. The permittee shall not cause emissions of gases that contain sulfur dioxide in excess of 2.06 lb/MMBtu actual heat input for EU 08, 1.67 lb/MMBtu actual heat input for EU 21 and 1.27 lb/MMBtu actual heat input for EU 32. [401 KAR 59:015, Section 5(1)(c)]

**Compliance Demonstration Method:**

Compliance with the 401 KAR 59:015 emission standards is assumed. [401 KAR 50:045, Section 4(3)(c)1.]

**3. Testing Requirements:**

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 50:045 and 401 KAR 59:005.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****4. Specific Monitoring Requirements:**

The permittee shall monitor the amount of natural gas burned, in a month, for each emission unit. [401 KAR 52:020, Section 10]

**5. Specific Recordkeeping Requirements:**

a) The permittee shall keep a monthly record of the amount of each fuel used. (Applies for EU 32 only) [40 CFR 60.48c(g)(2)]

b) The permittee shall keep all records of regular maintenance and any necessary repairs to the equipment. [401 KAR 52:020, Section 10]

c) The permittee shall maintain on-site and submit, if requested by the Division, an annual report containing information from the annual tune-up, as specified in 40 CFR 63.7540(a)(10)(vi)(A).

d) The permittee shall keep a copy of each notification and report submitted to demonstrate compliance with 40 CFR 63 Subpart DDDDD.

e) The following requirements shall be met: [40 CFR 63.7560]

(i) Records shall be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).

(ii) As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(iii) The permittee shall keep each record on site, or they shall be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee may keep the records off site for the remaining 3 years.

**6. Specific Reporting Requirements:**

a) If the permittee switches fuels or makes a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, the permittee shall provide notice of the date upon which the permittee switched fuels or made the physical change within 30 days of the switch/change. The notification shall identify: [40 CFR 63.7545(h)]

(i) The name of the permittee, as defined in 40 CFR 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(ii) The currently applicable subcategory under 40 CFR 63, Subpart DDDDD.

(iii) The date upon which the fuel switch or physical change occurred.

b) The Florence Regional Office shall be notified of modifications (as defined in 401 KAR 59:001) to this affected facility. This notice shall be sent 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Cabinet may request additional relevant information subsequent to this notice. [40

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

CFR 60.7(a)(4), 401 KAR 59:005 Section 3(1)(d)]

- c) The permittee shall submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(a), 40 CFR 63.7550(h)(3)]
- d) Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct a subsequent annual tune-up according to 40 CFR 63.7540(a)(10), and not subject to emission limits or Table 4 operating limits, the permittee may submit only an annual compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report. [40 CFR 63.7550(b)]
  - (i) The first annual compliance report shall cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31, within 1 year as applicable after the compliance date that is specified for the permittee in 40 CFR 63.7495.
  - (ii) The first annual compliance report shall be postmarked or submitted no later than January 31.
  - (iii) Each subsequent annual compliance report shall cover the applicable 1 year periods from January 1 to December 31.
  - (iv) Each subsequent annual compliance report shall be postmarked or submitted no later than January 31.
- e) A compliance report shall contain the following information: [40 CFR 63.7550(c)(1)]
  - (i) Company and Facility name and address.
  - (ii) Process unit information, emissions limitations, and operating parameter limitations.
  - (iii) Date of report and beginning and ending dates of the reporting period.
  - (iv) The total operating time during the reporting period.
  - (v) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10). Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown.
  - (vi) Statement by responsible official with that official's name, title and signature, certifying the truth, accuracy, and completeness of the content of the report
- f) The permittee shall report each instance in which an applicable work practice standard in Table 3 to 40 CFR 63, Subpart DDDDD was not met. These deviations shall be reported according to the requirements in 40 CFR 63.7550. [40 CFR 63.7540(b)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****EU 67 15 J POLYPROPYLENE EXTRUSION LINE****EU 68 Corona Treater 1****EU 69 Corona Treater 2****APPLICABLE REGULATIONS:****401 KAR 59:010, New process operations****401 KAR 63:020, Potentially hazardous matter or toxic substances****1. Operating Limitations:**

None

**2. Emission Limitations:**

- a) Opacity Standard. No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity [401 KAR 59:010, Section 3(1)].

**Compliance Demonstration Method:**

Refer to **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements**.

- b) Mass emission standard. For emissions from a control device or stack no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in Appendix A to 401 KAR 59:010 and summarized below: [401 KAR 59:010, Section 3(2)]

For process weight rates  $\leq 1000$  lb/hr or less:  $E = 2.34$

Where:  $E$  = rate of particulate emissions in lb/hr

**Compliance Demonstration Method:**

The source is considered to be in compliance when the emission points are operating and properly maintained according to the manufacturer's recommendations.

- c) Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Compliance Demonstration Method:**

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

**3. Testing Requirements:**

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

**4. Specific Monitoring Requirements:**

The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]

**5. Specific Recordkeeping Requirements:**

- a) The permittee shall maintain a log of the qualitative visual observations made as specified in 4. Specific Monitoring Requirements including the date, time, initials of observer, whether any emissions were observed (yes/no), and any U.S. EPA Reference Method 9 readings taken. [401 KAR 52:020, Section 10]
- b) The permittee shall keep monthly records of the amount of material processed. [401 KAR 52:020, Section 10]

**6. Specific Reporting Requirements:**

When corrective actions are required due to an opacity exceedance as noted in **Emission Limitations** the permittee shall submit the following information from the control device inspection and repair log. [401 KAR 52:020, Section 10]

- a. A description of the deviation,
- b. The date and time period of the deviation, and
- c. Actions taken to correct the deviation.
- d. A statement of the cause of each deviation.

Copies of these records shall be submitted as a part of the semiannual reporting as required in **Section F, Subsection 5, and 6.**

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****RESIN HANDLING & RECYCLING**

- 15J-1 (15J-1) Resin Conveying System**  
Barron Pellet Feed Hopper with Cyclonic Separator (1994)
- 15J-16 (15J-16) Fluff Hopper 1**, Barron VSH900-1DS6 Vertical Storage Hopper  
Maximum continuous rating: 950 lb/hr  
Installed: 1994
- 15J-17 (15J-17) Fluff Hopper 2**, Barron VSH900-1DS6 Vertical Storage Hopper  
Maximum continuous rating: 950 lb/hr  
Installed: 1994
- 15J-18 (15J-18) (2) Custom Vertical Pellet Hoppers w/ single tube pellet headers**  
Maximum continuous rating: 1200 lb/hr  
Installed: 1994
- 15J-19 (15J-19) Grinder**  
**Pelletizer**, Gamma Meccenica  
Control Equipment: Baghouse
- 15J-23 (15J-23) (2) Alpine Grinders**  
Installed: 2/1989
- 15J-24 (15J-24) Pellet Feed Hopper**  
Maximum continuous rating: 5000 lb/hr  
Control Equipment: Cyclonic Separator
- 15J-25 (15J-25) Day Tank 1**, Columbian Tectank Vertical Storage Tank  
Maximum continuous rating: 4500 lb/hr  
Control Equipment: None  
Installed: 2002
- 15J-26 (15J-26) Day Tank 2**, Columbian Tectank Vertical Storage Tank  
Maximum continuous rating: 4500 lb/hr  
Control Equipment: None  
Installed: 2002
- 15J-27 (15J-27) Day Tank 3**, Columbian Tectank Vertical Storage Tank  
Maximum continuous rating: 3500 lb/hr  
Control Equipment: Baghouse  
Installed: 2002
- 15J-29 (15J-29) HD Silo**, Dachin Kreyenborg & Co. GimbtI Vertical Storage Silo  
Control Equipment: Baghouse  
Installed: 1994
- 15J-30 (15J-30) LD Silo**, Dachin Kreyenborg & Co. GimbtI Vertical Storage Silo

## SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Control Equipment: Baghouse  
Installed: 1994

**15J-31 (15J-31) (2) Virgin Silos**  
Maximum continuous rating: 30,000 lbs/hr

### APPLICABLE REGULATIONS:

**401 KAR 59:010, New process operations**

**401 KAR 63:020, Potentially Hazardous Matter and Toxic Substance Emissions**

#### 1. Operating Limitations:

All particulate filters and control equipment shall be in place and functional at all times of operation.

#### 2. Emission Limitations:

- a) Opacity Standard. No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity [401 KAR 59:010, Section 3(1)].

##### **Compliance Demonstration Method:**

Refer to 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements.

- b) Mass emission standard. For emissions from a control device or stack no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in Appendix A to 401 KAR 59:010 and summarized below: [401 KAR 59:010, Section 3(2)]

For process weight rates  $\leq 1000$  lb/hr or less:  $E = 2.34$

For process weight rates  $> 1000$  lb/hr up to 60,000 lb/hr;  $E = 3.59P^{0.62}$

Where: E = rate of particulate emissions in lb/hr, and

P = process weight rate in ton/hr.

##### **Compliance Demonstration Method:**

The source is considered to be in compliance when the emission points are operating and properly maintained according to the manufacturer's recommendations.

- c) Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Compliance Demonstration Method:**

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

**3. Testing Requirements:**

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

**4. Specific Monitoring Requirements:**

The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]

**5. Specific Recordkeeping Requirements:**

- a) The permittee shall maintain a log of the qualitative visual observations made as specified in 4. Specific Monitoring Requirements including the date, time, initials of observer, whether any emissions were observed (yes/no), and any U.S. EPA Reference Method 9 readings taken. [401 KAR 52:020, Section 10]
- b) The permittee shall keep monthly records of the amount of material processed. [401 KAR 52:020, Section 10]

**6. Specific Reporting Requirements:**

When corrective actions are required due to an opacity exceedance as noted in **Emission Limitations** the permittee shall submit the following information from the control device inspection and repair log. [401 KAR 52:020, Section 10]

- a. A description of the deviation,
- b. The date and time period of the deviation, and
- c. Actions taken to correct the deviation.
- d. A statement of the cause of each deviation.

Copies of these records shall be submitted as a part of the semiannual reporting as required in **Section F, Subsection 5, and 6.**

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****HAP STORAGE TANKS**

<b>T3</b>	<b>(T3)</b>	<b>Toluene Storage Tank, Tank T3</b> 12' dia. x18', white, 15000 gallon installed 1985
<b>TR1</b>	<b>(TR1)</b>	<b>Tank Farm Transfer Racks</b> Unloading of tank trucks into Tank T3
<b>CTR</b>	<b>(CTR)</b>	<b>Container Transfer Rack: Room 161</b> Unloading of material (toluene) into containers within Room 161

**Description:** Included with the HAP storage tank(s) above are the transfer rack(s) at which organic liquids are unloaded out of transport vehicles and into the storage tanks; the transport vehicles themselves while they are unloading organic liquids at transfer racks; and equipment leak components in organic liquids service that are associated with pipelines and with storage tanks and transfer racks storing, loading, or unloading organic liquids.

**APPLICABLE REGULATIONS:**

**401 KAR 63:002 Section 2(4)(kkk), 40 C.F.R. 63.2330 through 63.2406, Tables 1 through 12 (Subpart EEEE), National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)**

**1. Operating Limitations:**

None

**2. Emission Limitations:**

None

**3. Testing Requirements:**

None

**4. Specific Monitoring Requirements:**

None

**5. Specific Recordkeeping Requirements:**

- a) For each storage tank subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that is not subject to control based on the criteria specified in Table 2 to Subpart EEEE, items 1 through 6, the permittee must keep documentation, including a record of the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid, that verifies the storage tank is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to 40 CFR 63.10(b)(1), including records stored in electronic form in a separate location. [40 CFR 63.2343 (b)(3)]
- b) If the permittee changes the liquids stored in such tanks, the permittee is required to make a determination as to whether or not the true vapor pressure of the new liquid being stored

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

meets the criteria for control under Subpart EEEE and maintain a record of that determination, even if control is still not required. [401 KAR 52:020, Section 10]

**6. Specific Reporting Requirements:**

- a) Initial Compliance report must contain all information specified below.
  - (i) Company name and address. [40 CFR 63.2386(c)(1)]
  - (ii) Statement by a responsible official, including the official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete. If the report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces this requirement. [40 CFR 63.2386(c)(2)]
  - (iii) Date of report and beginning and ending dates of the reporting period. The permittee is no longer required to provide the date of report when the report is submitted via CEDRI. [40 CFR 63.2386(c)(3)]
  - (iv) A listing of all transfer racks (except those racks at which only unloading of organic liquids occurs) and of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that are part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart. [40 CFR 63.2386(c)(10)(i)]
- b) If one or more of the events listed in 40 CFR 63.2343(d)(1) through (4) occur since the filing of the Notification of Compliance Status or the last Compliance report, the permittee shall submit a subsequent Compliance report as specified in 40 CFR 63.2343(b)(2) and (c)(2). [40 CFR 63.2343(d)].
  - (i) Any storage tank or transfer rack became subject to control under this subpart EEEE; or [40 CFR 63.2343(d)(1)]
  - (ii) Any storage tank equal to or greater than 18.9 cubic meters (5,000 gallons) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of this subpart; or [40 CFR 63.2343(d)(2)]
  - (iii) Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or 40 CFR 63.2343(d)(3)]
  - (iv) Any of the information required in 40 CFR 63.2386(c)(1), 40 CFR 63.2386(c)(2), or 40 CFR 63.2386(c)(3)] has changed. 40 CFR 63.2343(d)(4)]
- c) Compliance reports must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31 and may be submitted along with the semi-annual reporting as required by Section F (5) and (6) of this permit. If none of the items in paragraphs b(i) through b(iv) as listed above occurred during the previous Compliance reporting period, the permittee is not required to submit the semi-annual compliance report. [40 CFR 63.2386(b)]
- d) Subsequent Compliance reports must contain the information in 40 CFR 63.2386(c) and 40 CFR 63.2386(d) (as applicable) as indicated below: [40 CFR 63.2386(d)]
  - (i) Company name and address. [40 CFR 63.2386(c)(1)]
  - (ii) Statement by a responsible official, including the official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete. If your report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces this requirement. [40 CFR 63.2386(c)(2)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- (iii) Date of report and beginning and ending dates of the reporting period. You are no longer required to provide the date of report when the report is submitted via CEDRI. [40 CFR 63.2386(c)(3)]
- (iv) A listing of any storage tanks at an existing affected source that became subject to controls based on the criteria for control specified in Table 2b to this subpart, items 1 through 3, since the filing of the last Compliance report. [40 CFR 63.2386(d)(3)(i)]
- (v) A listing of any transfer rack that became subject to controls based on the criteria for control specified in Table 2 to Subpart EEEE, items 7 through 10, since the filing of the last Compliance report. [40 CFR 63.2386(d)(3)(ii)]
- (vi) A listing of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report. [40 CFR 63.2386(d)(4)(i)]
- (vii) A listing of all transfer racks (except those racks at which only the unloading of organic liquids occurs) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report. [40 CFR 63.2386(d)(4)(ii)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****EMERGENCY ENGINES****EU 65 Diesel Generator – Backup (14.8 gallons/hr)****EU 66 Diesel Fire Pumphouse Engine (14.8 gallons/hr)**

Installed: Fire Pump 1985, Emergency Generator February 1985

Power Output: &lt;500 Horsepower each

**APPLICABLE REGULATIONS:**

**401 KAR 63:002 Section 2(4)(eeee)**, 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

**1. Operating Limitations:**

- a) The permittee shall perform the following for each engine. [40 CFR 63.6602 & Table 2c]
  - (i) Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; Alternately, an oil analysis program as described by 40 CFR 63.6625(i) or (j) may be utilized to extend the specified oil change requirement. [Table 2c, item 1. a.]
  - (ii) Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, whichever comes first and replace as necessary; [Table 2c, item 1. b.]
  - (iii) Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first, whichever comes first, and replace as necessary. [Table 2c, item 1. c.]
  - (iv) Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [Table 2c, item 1.]
- b) There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)(i)]
- c) Emergency stationary RICE may be operated for maintenance checks and readiness testing for a maximum of 100 hours per calendar year, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2)(i)]
- d) The permittee may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(3)]

**2. Emission Limitations:**

Refer to 1. Operating Limitations.

**3. Testing Requirements:**

None

**4. Specific Monitoring Requirements:**

- a) The permittee must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)]
- b) The permittee must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

**5. Specific Recordkeeping Requirements:**

- a) The permittee must keep the records described below, as applicable. [40 CFR 63.6655(a)]
  - (1) A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
  - (2) Records of the occurrence and duration of each malfunction of operation ( i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
  - (3) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.6655(a)(3)]
  - (4) Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
  - (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
- b) The permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that it and any after-treatment control device is operated and maintained according to the facility's maintenance plan. [40 CFR 63.6655(e)]
- c) The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the permittee must keep records of the notification of the emergency

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

situation, and the time the engine was operated as part of demand response. [40 CFR 63.6655 (f)]

- d) Records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a)]
- e) As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660(b)]
- f) The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(c)]

**6. Specific Reporting Requirements:**

If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. (40 CFR 63 Subpart ZZZZ Footnote 1 to Table 2c)

**SECTION C - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

<u>Description</u>	<u>Generally Applicable Regulation</u>
<b>Utilities</b>	
1. Domestic Hot Water Boiler (0.075 MMBtu/hr)	n/a
2. Domestic Hot Water Boiler (0.08 MMBtu/hr)	n/a
3. Domestic Hot Water Boiler (0.12 MMBtu/hr)	n/a
4. TCI-1322-75-1 Cooling Tower 1	401 KAR 59:010
5. TCI-1322-75-1 Cooling Tower 2	401 KAR 59:010
6. TCI-1322-75-1 Cooling Tower 3	401 KAR 59:010
7. TCI-1322-75-1 Cooling Tower 4	401 KAR 59:010
8. TCI-1322-75-1 Cooling Tower 5	401 KAR 59:010
9. TT T.360.319 Cooling Tower 1	401 KAR 59:010
10. TT T.360.319 Cooling Tower 2	401 KAR 59:010
<b>Quality Lab</b>	
11. Chemical Hood	n/a
12. Chemical Hood	n/a
13. Lab Drying Oven 1-3 (1985)	n/a
14. Lab Drying Oven 4 (10/1996)	n/a
15. Laboratory Fume Hood 1	n/a
16. Laboratory Fume Hood 2	n/a
17. Laboratory Fume Hood 3	n/a
<b>Fire Pumphouse</b>	
18. Diesel Storage Tank	n/a
19. Fire Protection Water Boiler (0.0016 MMBtu/hr)	n/a
20. Pumphouse – Gas Space (0.063 MMBtu/hr)	n/a
21. Pumphouse – Gas Space (0.063 MMBtu/hr)	n/a
<b>Tape Maintenance</b>	
22. Beringer JCP Jet Cleaner	n/a
23. Safety Kleen Tank	401 KAR 59:185
24. Sandblaster w/ filter, enclosed system, 775 cfm	401 KAR 59:010
25. Sandblaster w/ filter, enclosed system, 775 cfm	401 KAR 59:010
26. Sandblaster w/ filter, enclosed system, 775 cfm	401 KAR 59:010

**SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

	<u>Description</u>	<u>Generally Applicable Regulation</u>
<b>Miscellaneous</b>		
27.	Metal X 3D Printer	n/a
28.	Recycle Baler and Dust Collector	401 KAR 59:010
29.	Urethane LAB Storage Tank (6800 Gallons)	n/a
30.	Urethane LAB Storage Tank (6800 Gallons)	n/a
31.	Raildock Dust Collector – Rubber	401 KAR 59:010
<b>Solvent Recovery</b>		
32.	IPA Reflux Tank (CRU)	n/a
33.	IPA/Water Tank	n/a
<b>Storage Tanks</b>		
34.	Heptane Storage Tank, Tank T1A 12' dia. x23', white, 19000 gallon, installed 1985	n/a
35.	Heptane Storage Tank, Tank T1B 12' dia. x23', white, 19000 gallon, installed 1985	n/a
36.	Recovered Heptane Tank, Tank RT1 12' dia. x23', white, 19000 gallon, installed 1992	n/a
37.	Recovered Heptane Tank, Tank RT2 12' dia. x23', white, 19000 gallon, installed 1992	n/a
38.	#2 Fuel Oil Tank, Tank T5B 12' dia. x23', white, 19000 gallon, installed 1985	n/a
<b>Other</b>		
39.	Safety Kleen Tank, installed 2008	401 KAR 59:185
<b>15-J</b>		
40.	Cumberland Grinder Max continuous rating: 4400 lb/hr, installed 1989	401 KAR 59:010
41.	Gamma Intermediate Silo w/ bag sock filter	401 KAR 59:010
42.	15J Pelletizer	401 KAR 59:010
43.	15J Air Filter	401 KAR 59:010
44.	15J Melt Filter	401 KAR 59:010
45.	15J Pellet Dryer, Beringer Air Dryer	n/a
46.	15J Coextruder 1	n/a
47.	15J Coextruder 2	n/a
48.	15J Metering Melt Extruders	n/a
49.	15J Polypropylene Dust Collector	401 KAR 59:010
50.	15J High Density Storage Tank Dust Collector	401 KAR 59:010
<b>2R Line</b>		
51.	PC2 Station – 2R LAB Holding Tank	401 KAR 63:020
52.	Functional Coat Station – 2R Adhesive Holding Tank	401 KAR 63:020
53.	Primer Station – 2R/4R Cleaning Cart (MEK)	401 KAR 63:020

**SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

	<u>Description</u>	<u>Generally Applicable Regulation</u>
54.	(PCT1) – 2R/4R Cleaning Tank 6”W x 65”L	401 KAR 63:020
55.	2R IPA Cleaning Solution Drums (die cleaning hood)	401 KAR 63:020
56.	2R PC2 Station – 2R Cleaning Cart (IPA)	401 KAR 63:020
<b>3R Line</b>		
57.	Flametreater	n/a
58.	Resin Holding Tank (2,000 gallons)	401 KAR 63:020
59.	Resin Holding Tank (750 gallons)	401 KAR 63:020
60.	Supersack Powder Handling (Resin Compounding)	401 KAR 59:010
61.	Rubber Dust Collector	401 KAR 59:010
62.	(PCT3) – Two (2) Filter Cleaning Tank and Maintenance Parts Washer, 20.5”W x 42.5”L	401 KAR 63:020
63.	3R Bay – IPA Cleaning Solution Drums (55 gal drums)	401 KAR 63:020
64.	3R Bay – 3R Holding Tank	401 KAR 63:020
<b>4R Line</b>		
65.	PC1 Station – Primer Holding Tank (25 gallons)	401 KAR 63:020
66.	PC2 Station – LAB Holding Tank	401 KAR 63:020
67.	Adhesive Cleaning Station (IPA)	401 KAR 63:020
68.	4R PC2 Station 4R Cleaning Cart (IPA)	401 KAR 63:020
69.	4R Adhesive Station 4R Cleaning Cart (MEK)	401 KAR 63:020
70.	4R PC1 Station 4R Primer Side Tank	401 KAR 63:020
71.	4R PC1 Station – (PCT1) – 4R Cleaning Tank, 6”W x 65” L	401 KAR 63:020
<b>Solvent Compounding</b>		
72.	LAB Mix Tank (Rm 161)	401 KAR 63:020
73.	Lab Solids Tank (Rm 161)	401 KAR 63:020
74.	Adhesive Mix Tank #2 (Rm 162)	401 KAR 63:020
75.	Adhesive Storage Tank (5000 gal) (Rm 162)	401 KAR 63:020
76.	Heptane Surge Tank (Rm 162)	401 KAR 63:020
77.	LAB Storage Tank (2,000 gal) (Rm 162)	401 KAR 63:020
78.	MEK Cleaning Solution (55 gal drums) (Rm 163)	401 KAR 63:020
79.	Myers Mixer (Rm 163)	n/a
80.	3R SPU LAB Storage Tank (2,300 gal) (Rm 163)	401 KAR 63:020
81.	3R SPU LAB Storage Tank (2,300 gal) (Rm 163)	401 KAR 63:020
82.	Compounding Area 1 (Rm 161)	401 KAR 63:020
83.	Lecithin Saddle Tank (Rm 161)	401 KAR 63:020
84.	Compounding Area 2 (Rm 162)	401 KAR 63:020
85.	RM 162 Adhesive Mix Tank	401 KAR 63:020
86.	Compounding Area 3 (Rm 163)	401 KAR 63:020
87.	Mineral Spirits Cleaning Solution (55 gal drum) (Rm 163)	401 KAR 63:020
88.	IPA for cleaning (55 gal drum) (Rm 163)	401 KAR 63:020

**SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

	<u>Description</u>	<u>Generally Applicable Regulation</u>
	<b>Waterbased Compounding</b>	
89.	Cowles Mixer	n/a
90.	Lightning Mixer	n/a
91.	Dyno Mixer	n/a
	<b>Injection Molding</b>	
92.	A07S Injection Molding 1	n/a
93.	A07S Injection Molding 2	n/a
94.	A13S Injection Molding 1	n/a
95.	A13S Injection Molding 2	n/a
96.	A06S Injection Molding 1	n/a
97.	A06S Injection Molding 2	n/a
98.	A15S Injection Molding 1	n/a
99.	A15S Injection Molding 2	n/a

## SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. VOC and Particulate Matter emissions and Opacity, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. **Source Emission Limitation:**  
Source wide emissions of VOCs shall not exceed 249 tons during any consecutive 12-month period. [To preclude 401 KAR 51:017]

### **Compliance Demonstration Method:**

- a. By the 30<sup>th</sup> day following the end of each month the permittee shall sum the mass of VOC emitted across all VOC emission sources of the facility (units in Section B and C) for the preceding month.
- b. Sum the above-calculated VOC emissions with the monthly totals of the eleven (11) previous months.
- c. Record the source wide twelve (12) month VOC emissions total each month and submit this information as part of the semi-annual reporting required by Section F of this permit.
- d. If total VOC emissions during any twelve-month period exceed 225 tons, the permittee will begin tracking annual emissions on a weekly basis beginning the following calendar month. Emissions will be tracked in this manner for a minimum of three (3) consecutive months, and monthly emission reports shall be submitted to the Regional Office listed on the front of this permit, during this time. If the rolling twelve-month totals remain less than 225 tons for three (3) consecutive months, the permittee may return to monthly tracking and semi-annual reporting until such time as emissions may again exceed 225 tons for a rolling twelve (12) month total.

Note: weekly tracking will be accomplished by recalculating each of the applicable month's emissions from the prior year from a monthly total to weekly totals, and compared with the weekly totals from the same week of the current year. For the purposes of this tracking, each month shall be broken down into four (4) weeks as follows:

Week 1. Day 1 thru day 7

Week 2. Day 8 thru day 14

Week 3. Day 15 thru day 21

Week 4. Day 22 thru day 31

Weekly emissions shall be calculated by the 7<sup>th</sup> day following the end of each week.

**SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)****4. Testing Materials for VOC, HAP, and Solids Content:**

The permittee shall use the following methods for determination of VOC, HAP, and Solids content of coating materials for all compliance demonstration methods.

a. *Volatile Organic and Coating Solids Content* [40 CFR 63.3360(d)]

- (1) *Method 24*. The permittee may determine the volatile organic and coating solids mass fraction of each coating applied using Method 24 (appendix A to 40 CFR part 60) The Method 24 determination may be performed by the manufacturer of the material and the results provided. When using volatile organic compound content as a surrogate for HAP, you may also use ASTM D3960-98, (incorporated by reference, see 40 CFR 63.14) as an alternative to Method 24. If these values cannot be determined using either of these methods, you must submit an alternative technique for determining their values for approval by the Administrator. [40 CFR 63.3360(d)(1)]
- (2) *Formulation data*. The permittee may determine the volatile organic content and coating solids content of a coating material based on formulation data and may rely on volatile organic content data provided by the manufacturer of the material. In the event of any inconsistency between the formulation data and the results of Method 24 of appendix A to 40 CFR part 60, and the Method 24 results are higher, the results of Method 24 will govern. [40 CFR 63.3360(d)(2)]

b. *Organic HAP Content, 40 CFR 63.3360(c)*.

- (1) *Method 311*. The permittee may test the coating material in accordance with Method 311 of appendix A of 40 CFR Part 63. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the owner or operator. The organic HAP content must be calculated according to the criteria and procedures in 40 CFR 63.3360(c)(1)(i) through (iii); [40 CFR 63.3360(c)(1)]
- (2) *Method 24*. Determine the volatile organic content as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of Appendix A-7 to 40 CFR part 60. The Method 24 determination may be performed by the manufacturer of the coating, One of the voluntary consensus standards in 40 CFR 63.3360(c)(2)(i-v) may be used as an alternative to using Method 24. [40 CFR 63.3360(c)(2)]
- (3) *Formulation data*. The permittee may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the owner or operator by the manufacturer of the material. In the event of an inconsistency between Method 311 (appendix A to 40 CFR part 63) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200 and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used. [40 CFR 63.3360(c)(3)]

c. *Alternative Test Methods for Coating Materials* [40 CFR 63.3420(b)]

Pursuant to 40 CFR part 63, subpart JJJJ, authority to approve alternative test methods for organic HAP content determination, 40 CFR 63.3360(c); and for volatile matter determination, 40 CFR 63.3360(d) remains with the U.S. EPA.

**SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)**

- d. *Volatile matter retained in the coated web or otherwise not emitted to the atmosphere, 40 CFR 63.3360(g).*

The permittee may choose to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere when determining compliance with the emission standards in 40 CFR 63.3320. If you choose this option, you must develop a site- and product-specific emission factor (EF) and determine the amount of volatile matter retained in the coated web or otherwise not emitted using Equation 3 to 40 CFR 63.3360(g)(1). The EF must be developed by conducting a performance test using an approved EPA test method, or alternative approved by the Administrator by obtaining the average of a three-run test. You may additionally use manufacturer's emissions test data (as long as it replicates the facility's coating formulation and operating conditions), or a mass-balance type approach using a modified Method 24 (including ASTM D5403-93 for radiation-curable coatings). The EF should equal the proportion of the mass of volatile organics emitted to the mass of volatile organics in the coating materials evaluated. You may use the EF in your compliance calculations only for periods that the workstation(s) was (were) used to make the product, or a similar product, corresponding to that produced during the performance test. You must develop a separate EF for each group of different products that you choose to utilize an EF for calculating emissions by conducting a separate performance test for that group of products. You must conduct a periodic performance test to re-establish the EF if there is a change in coating formulation, operating conditions, or other change that could reasonably be expected to increase emissions since the time of the last test that was used to establish the EF.

5. **VOC and HAP Applied:**

The equations and procedures referenced in Attachment B can be used to determine the VOC and HAP input to an individual applicator / workstation, a group of applicators / workstations which are part of a coating line, or to an entire coating line as a single group. The VOC or HAP emitted from an uncontrolled applicator / workstation is equal to the VOC or HAP applied on that applicator / workstation minus the mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere.

6. **Compliant Coatings:**

The equations and procedures referenced in Attachment B can be used for each coating line, portion of a coating line, or an individual applicator / workstation which uses low VOC and HAP containing materials.

7. **Use of Capture and Control with Always-Controlled Work Stations:**

The equations and procedures referenced in Attachment B can be used for each coating line, portion of a coating line, or an individual applicator / workstation which utilizes capture and control throughout the month.

8. **Use of Capture and Control with One or More Never-Controlled or Intermittently Controlled Workstations:**

The procedures and equations referenced in Attachment B can be used for each coating line or portion of a coating line in which some of the applicators / workstations use capture and control throughout the month, and other applicators / workstations within the group are uncontrolled throughout the month or intermittently controlled.

**SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)**

9. **401 KAR 51:017, Section 16(1), Source Obligation:**

The permittee shall operate the affected facilities in accordance with the application submitted to the Cabinet under this administrative regulation.

## SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
2. **40 CFR Part 63, Subpart JJJJ**
  - (1) For thermal oxidizers and capture systems which are not permanent total enclosures, the permittee must:
    - (i) Demonstrate initial compliance for each capture system and each control device through performance tests;
    - (ii) Establish the operating limits for each capture system and control device during the performance testing; and,
    - (iii) Meet the operating limits at all times after establishing them.
    - (iv) Perform a periodic emissions performance test within 60 months of the previous test and subsequent tests no later than 60 months thereafter as required in 40 CFR 63.3360.
  - (2) For capture systems which are permanent total enclosures, the permittee shall: [40 CFR 63.3370(f)(3)]
    - (i) Demonstrate that a total enclosure is installed;
    - (ii) Monitor the capture system operating parameters at all times web coating is being performed.
  - (3) For the solvent recovery systems, operate continuous emission monitoring systems and perform quarterly audits, [40 CFR 63.3350(d)]
  - (4) At all times, the permittee must maintain the monitoring systems in proper working order including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. [40 CFR 63.3350(e)(7)]

### **Compliance Demonstration Method:**

The permittee shall keep records of control operations associated with Line 3R. Also, See testing requirements below.

### 3. **Continuous Parameter Monitoring Systems (CPMS)**

#### a. Thermal Oxidizers

- (1) The permittee shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the temperature of the solvent destruction device's exhaust gases. The monitoring device shall have an accuracy of the greater of  $\pm 0.75$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 2.5$  °C. [40 CFR 60.445(e)]
- (2) The thermocouple or temperature sensor must be installed in the combustion chamber at a location in the combustion zone. [40 CFR 63.3350(e)(10)(ii)]

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS  
(CONTINUED)**

- (3) Except for temperature sensors, you must develop a quality control program that must contain, at a minimum, a written protocol that describes the procedures for each of the operations in 40 CFR 63.3350(e)(5)(i) through (vi). The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. For temperature sensors, you must follow the requirements in 40 CFR 63.3350(e)(10). [40 CFR 63.3350(e)(5)]
- (i) Initial and any subsequent calibration of the continuous monitoring system (CMS);
  - (ii) Determination and adjustment of the calibration drift of the CMS;
  - (iii) Preventative maintenance of the CMS, including spare parts inventory;
  - (iv) Data recording, calculations, and reporting;
  - (v) Accuracy audit procedures, including sampling and analysis methods; and
  - (vi) Program of corrective action for a malfunctioning CMS.
- (4) For temperature sensors, you must develop a quality control program that must contain, at a minimum, a written protocol that describes the procedures for verifying that the temperature sensor is operating properly using at least one of the methods in 40 CFR 63.3350(e)(10)(iv)(A), (B), (C), (D), (E), or (F) of this section. The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator:
- (i) Semiannually, compare measured readings to a National Institute of Standards and Technology (NIST) traceable temperature measurement device or simulate a typical operating temperature using a NIST traceable temperature simulation device. When the temperature measurement device method is used, the sensor of the calibrated device must be placed as close as practicable to the process sensor, and both devices must be subjected to the same environmental conditions. The accuracy of the temperature measured must be 2.5 percent of the temperature measured by the NIST traceable device or 5 degrees Fahrenheit whichever is greater.
  - (ii) Annually validate the temperature sensor by following applicable mechanical and electrical validation procedures in the manufacturer owner's manual.
  - (iii) Annually request the temperature sensor manufacturer to certify or re-certify electromotive force (electrical properties) of the thermocouple.
  - (iv) Annually replace the temperature sensor with a new certified temperature sensor in lieu of validation.
  - (v) Permanently install a redundant temperature sensor as close as practicable to the process temperature sensor. The sensors must yield a reading within 2.5 percent of each other for thermal oxidizers and catalytic oxidizers.
  - (vi) Permanently install a temperature sensor with dual sensors to account for the possibility of failure.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS  
(CONTINUED)**

- (5) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.
  - (6) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.
- b. Capture System Monitoring
- (1) For any affected facility utilizing a control device, which uses a hood or enclosure to capture fugitive VOC emissions, the permittee shall install, calibrate, maintain, and operate a monitoring device which continuously indicates that the hood or enclosure is operating. [40 CFR 60.445(g)]
  - (2) In all cases, the design of any control system shall be subject to approval by the Cabinet. [401 KAR 59:210, Section 4(1)]
    - (i) Capture Efficiency Monitoring with Flow Measurements  
Each flow measurement device must meet the following requirements:
      - a) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.
      - b) Use a flow sensor with an accuracy of at least 10 percent of the flow.
      - c) Perform an initial sensor calibration in accordance with the manufacturer's requirements.
      - d) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.
      - e) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.
      - f) Perform leak checks monthly.
      - g) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.
    - (ii) Capture Efficiency Monitoring with Pressure Drop Measurements  
Each pressure drop measurement device must meet the following requirements:
      - a) Locate the pressure sensor(s) in or as close as possible to a position that provides a representative measurement of the pressure drop across each opening monitored.
      - b) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.
      - c) Perform an initial calibration of the sensor according to the manufacturer's requirements.
      - d) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.
      - e) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS  
(CONTINUED)**

- c. Capture System Monitoring Plan, 40 CFR 63.3350(f)
  - (1) The permittee shall develop a site-specific monitoring plan for the capture systems.  
The monitoring plan must:
    - (i) Identify the operating parameter to be monitored to ensure that the capture efficiency determined during the initial compliance test is maintained; and
    - (ii) Explain why this parameter is appropriate for demonstrating ongoing compliance; and
    - (iii) Identify the specific monitoring procedures.
  - (2) The monitoring plan must specify the operating parameter value or range of values that demonstrate compliance with the emission standards in 40 CFR 63.3320. The specified operating parameter value or range of values must represent the conditions present when the capture system is being properly operated and maintained.
  - (3) The permittee must conduct all capture system monitoring in accordance with the plan.
  - (4) The permittee shall make the monitoring plan available for inspection by the permitting authority upon request.
  - (5) Any deviation from the operating parameter value or range of values which are monitored according to the plan will be considered a deviation from the operating limit.
  - (6) The permittee shall review and update the capture system monitoring plan at least annually.

**4. Continuous Emission Monitoring System (CEMS)**

- a. Solvent Recovery Units
  - (1) The permittee must install, calibrate, operate, and maintain the CEMS according to 40 CFR 63.3350(d)(1)(i) through (iii).
    - (i) Measure the total organic volatile matter mass flow rate at both the control device inlet and the outlet such that the reduction efficiency can be determined. Each continuous emission monitor must comply with performance specification 6, 8, or 9 of 40 CFR Part 60, appendix B, as appropriate. [40 CFR 63.3350(d)(1)(i)]
    - (ii) The permittee must follow the quality assurance procedures in procedure 1, appendix F of 40 CFR Part 60. In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, you must use compounds representative of the gaseous emission stream being controlled. [40 CFR 63.3350(d)(1)(i)]
    - (iii) The permittee must have valid data from at least 90 percent of the hours when the process is operated. Invalid or missing data should be reported as a deviation in the semiannual compliance report. [40 CFR 63.3350(d)(1)(iii)]

## SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
  - a. Date, place as defined in this permit, and time of sampling or measurements;
  - b. Analyses performance dates;
  - c. Company or entity that performed analyses;
  - d. Analytical techniques or methods used;
  - e. Analyses results; and
  - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
  - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
  - b. To access and copy any records required by the permit;
  - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

**SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)**

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
  - a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
  - b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
  - c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.
9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
  - a. Identification of the term or condition;
  - b. Compliance status of each term or condition of the permit;
  - c. Whether compliance was continuous or intermittent;
  - d. The method used for determining the compliance status for the source, currently and over the reporting period.
  - e. For an emissions unit that was still under construction, or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the

**SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)**

permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

- f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality  
Florence Regional Office  
8020 Veterans Memorial Drive, Suite 110  
Florence, KY 41042

U.S. EPA Region 4  
Air Enforcement Branch  
Atlanta Federal Center  
61 Forsyth St. SW  
Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

## SECTION G - GENERAL PROVISIONS

### 1. General Compliance Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
  - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
  - (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
  - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
  - (4) New requirements become applicable to a source subject to the Acid Rain Program.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) b].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) d.].
- o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) a.].

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
  - (1) Applicable requirements that are included and specifically identified in this permit; and
  - (2) Non-applicable requirements expressly identified in this permit.

**2. Permit Expiration and Reapplication Requirements**

- a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
- b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

**3. Permit Revisions**

- a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
- b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

**4. Construction, Start-Up, and Initial Compliance Demonstration Requirements**

No construction authorized by this permit (V-25-037).

**SECTION G - GENERAL PROVISIONS (CONTINUED)****5. Testing Requirements**

- a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.
- b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

**6. Acid Rain Program Requirements**

- a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
- b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NO<sub>x</sub> compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

**7. Emergency Provisions**

- a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - (1) An emergency occurred, and the permittee can identify the cause of the emergency;
  - (2) The permitted facility was at the time being properly operated;

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

- (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.1-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
  - (5) This requirement does not relieve the source of other local, state or federal notification requirements.
- b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
  - c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

**8. Ozone Depleting Substances**

- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
  - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
  - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
  - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
  - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.155.
  - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156 and 40 CFR 82.157.
  - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

## **SECTION G - GENERAL PROVISIONS (CONTINUED)**

### 9. Risk Management Provisions

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP\* eSubmit software.
- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

**SECTION H - ALTERNATE OPERATING SCENARIOS**

None

**SECTION I - COMPLIANCE SCHEDULE**

None

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW**

This Section, advance minor NSR, is to facilitate permit flexibility and to allow the public and the U.S. EPA the opportunity to review and comment on potential future projects that may not require a permit revision and/or public and U.S. EPA review. This section was developed in consistent with U.S. EPA guidance and the Flexible Air Permitting Rule incorporated in 40 CFR Parts 70. The projects listed below are those reasonably anticipated changes proposed by the permittee.

1. The Division has made a case-by-case preconstruction review of the potential modifications and determined that the following changes can be made pursuant to 401 KAR 52:020 Section 18, Section 502(b)(10) Changes. This determination does not preclude the permittee's ability to pursue any of the following changes by means of any other applicable state approval processes.

All projects considered in this preconstruction review;

- a. Are not modifications under Title I of the Act;
  - (1) 3M Cynthiana shall continue to meet the source wide cap on VOC emissions of 249 tons per year as given in Section D of this permit.
  - (2) Terms and conditions consistent to 401 KAR 51:017 listed in Section B of this permit continue to apply following each change reviewed under this Section.
- b. Are not subject to the Acid Rain Program;
- c. Shall be limited to the modification of an existing affected source under 40 CFR 63 Subpart JJJJ. Reconstruction of the 40 CFR 63 Subpart JJJJ affected source as defined by 40 CFR 63.2 is not authorized by this permit.
- d. Shall not constitute a large pollutant-specific emissions unit as defined by 40 CFR Part 64 that requires the submission of a compliance assurance monitoring plan with the initial application.
- e. This preconstruction review does not relieve the permittee from any new applicable requirements, State or Federal which may become applicable.

**401 KAR 52:020, Section 18, Section 502(b)(10) Changes**

1. Modify any of the existing web coating lines 2R, 3R, 4R, 5R, and/or 6R. Modifications may include, but not be limited to, one or more of the following changes.
  - a. Installation of one or more additional coating applicators to the 2R, 3R, 4R, 5R, and/or 6R lines subject to 401 KAR 59:210, 401 KAR 59:212, 40 CFR 63, Subpart JJJJ, and 40 CFR 60, Subpart RR as applicable.
    - (1) Terms and conditions consistent to 401 KAR 51:017 continue to apply.
    - (2) Compliance with the applicable regulations and emission limits shall be demonstrated in accordance with Section B of this permit:
      - (i) Each coating line shall also continue to be subject to the monitoring, recordkeeping, and reporting requirements in Section B, F and G of this permit.

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW  
(CONTINUED)**

- (ii) The permittee shall use VOC as a surrogate for HAP in all coating materials when demonstrating compliance with 40 CFR 63, Subpart JJJJ. The permittee is not required to demonstrate compliance independently with 40 CFR 60, Subpart RR, when VOC is used as a surrogate for HAP, and compliance has been demonstrated for 40 CFR 63, Subpart JJJJ.
  - (3) Any additional VOC emissions associated with the installation and operation of one or more coating applicators shall count towards the source wide emission limits in Section D of this permit.
- b. Installation of one or more flexographic printers to the 5R and 6R lines which are subject to 401 KAR 59:212, 40 CFR 63, Subpart JJJJ, and 40 CFR 60, Subpart RR as applicable. Any web coating line subject to this part that is modified to include printing activities, may continue to demonstrate compliance with this part, in lieu of demonstrating compliance with subpart KK of this part. Any web coating line with product and packaging rotogravure print station(s) and/or a wide-web flexographic print station(s) that is subject to this subpart may elect to continue demonstrating compliance with this subpart in lieu of subpart KK of this part, if the mass of the materials applied to the line's print station(s) in a month ever exceed 5 percent of the total mass of materials applied onto the line during the same period.
  - (1) Terms and conditions consistent to 401 KAR 51:017 continue to apply.
  - (2) Compliance with the applicable regulations shall be demonstrated in accordance with Section B of this permit.
    - (i) Each coating line shall also continue to be subject to the specific monitoring, recordkeeping, and reporting requirements in Section B, F and G of this permit.
    - (ii) The permittee shall use VOC as a surrogate for HAP in all coating materials when demonstrating compliance with 40 CFR 63, Subpart JJJJ. The permittee is not required to demonstrate compliance independently with 40 CFR 60, Subpart RR, when VOC is used as a surrogate for HAP, and compliance has been demonstrated for 40 CFR 63, Subpart JJJJ.
  - (3) Any additional VOC emissions associated with the installation and operation of one or more flexographic printers shall count towards the source wide emission limits in Section D of this permit.
  - (4) If the proposed project meets all the criteria of paragraph b under this heading except the total mass of materials used on all designated printing stations, existing and proposed, exceeds 5% of the total mass of material used on a given line the permittee may elect to continue demonstrating compliance with Subpart JJJJ or shall submit for a minor permit revision under 401 KAR 52:020, Section 14, along with copies of the initial notification for 40 CFR 63, Subpart KK as required by 40 CFR 63.9 to both the Division and the U.S. EPA Region 4.
- c. Installation of one or more drying or curing ovens, utilizing only natural gas or propane for combustion. Alternatively, heat for drying may otherwise be provided by electricity or steam from an existing indirect heat exchanger or boiler.
  - (1) Any new combustion source may not contain any type of heat exchanger subject to 401 KAR 59:015, 40 CFR Part 60, Subpart Dc, or 40 CFR Part 63, Subpart DDDDD.

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW  
(CONTINUED)**

- (2) VOC emissions from any combustion sources shall count towards the source wide emission limits in Section D of this permit.
  - d. Installation of one or more in-line corona treaters.
  - e. Change of existing equipment configuration, web thread-up, air handling; sequence of operations, etc. Use of new and/or reformulated coating materials: VOC and HAP emissions shall count towards the emission limits in Section B and the source wide emission limits in Section D of this permit.
  - f. Installation of one or more items of supporting equipment which are affiliated operations of 40 CFR 63, Subpart JJJJ. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients, coating mixing for viscosity adjustment, color tint or additive blending, pH adjustment, cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater.
    - (1) Installation of volatile organic liquid storage vessels (including petroleum liquid storage vessels) subject to 40 CFR Part 60, Subpart Kb is not authorized by this permit.
    - (2) Installation of a Miscellaneous Coating Manufacturing source subject to 40 CFR 63, Subpart HHHHH is not authorized by this permit.
    - (3) Installation or modification of Organic Liquid Distribution source subject to 40 CFR 63, Subpart EEEE is not authorized by this permit.
    - (4) Any additional VOC emissions associated with the installation and operation of supporting equipment shall count towards the source wide emission limits in Section D of this permit.
    - (5) If required the Division may require testing using U.S. EPA reference test methods or Division approved alternatives to establish total emissions, emission rates, or emission factors from the affected facilities.
2. Install or construct one or more web coating lines, including an in-line corona treater, and/or drying or curing ovens, and/or print stations, if applicable, which are subject to one or more of the following; 401 KAR 59:210, 401 KAR 59:212, 40 CFR 63, Subpart JJJJ, and/or 40 CFR 60, Subpart RR.
  - a. All oven burners or other combustion sources of the web coating line constructed according to this paragraph shall be limited to using natural gas or propane. Heat for drying may otherwise be provided by electricity or steam from an existing indirect heat exchanger or boiler.
    - (1) Any new combustion source may not contain any type of heat exchanger subject to 401 KAR 59:015, 40 CFR 60, Subpart Dc, or 40 CFR 63, Subpart DDDDD.
    - (2) VOC emissions from the combustion of fuel shall count towards the source wide emission limits in Section D of this permit.
  - b. Compliance for any newly constructed web coating lines will be demonstrated in accordance with Section B of this permit.

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW  
(CONTINUED)**

- (1) Pursuant to 401 KAR 59:212, Section 1 (4)(j), all units in a machine which has both coating and printing units shall be considered as performing a printing operation and will be subject to 401 KAR 59:212 and not 401 KAR 59:210.
  - (2) The total mass of mass of materials used on the all the designated printing stations in each line shall be less than 5% of the total mass of material used on the coating line to preclude applicability of 40 CFR 63, Subpart KK.
  - (3) Compliance with 401 KAR 59:210 or 401 KAR 59:212 as applicable shall be demonstrated daily.
  - (4) The new coating line(s) shall also be subject to the specific monitoring, recordkeeping, and reporting requirements in Section B, F and G of this permit.
  - (5) The permittee shall use VOC as a surrogate for HAP in all coating materials when demonstrating compliance with 40 CFR 63, Subpart JJJJ. The permittee is not required to demonstrate compliance independently with 40 CFR 60, Subpart RR, when VOC is used as a surrogate for HAP, and compliance has been demonstrated for 40 CFR 63, Subpart JJJJ.
- c. VOC emissions from any new coating lines will count towards the source wide emission limits in Section D of this permit.
- d. If the proposed coating line meets all the criteria of paragraph 2 under this heading except the total mass of materials used on all designated printing stations proposed for a new coating line exceeds 5% of the total mass of material used on that given line, the permittee shall submit for a minor permit revision under 401 KAR 52:020, Section 14, along with copies of the initial notification for 40 CFR 60, Subpart KK as required by 40 CFR 63.9 to both the Division and the U.S. EPA Region 4.
3. Installation of one or more flexographic printers to the 2R, 3R, and/or 4R lines which are subject to 401 KAR 59:212, 40 CFR 63, Subpart JJJJ, and 40 CFR 60, Subpart RR as applicable. Any web coating line subject to this part that is modified to include printing activities, may continue to demonstrate compliance with this part, in lieu of demonstrating compliance with subpart KK of this part. Any web coating line with product and packaging rotogravure print station(s) and/or a wide-web flexographic print station(s) that is subject to this subpart may elect to continue demonstrating compliance with this subpart in lieu of subpart KK of this part, if the mass of the materials applied to the line's print station(s) in a month ever exceed 5 percent of the total mass of materials applied onto the line during the same period.
- a. Compliance will be demonstrated in accordance with Section B of this permit.
- (1) All applicators / work stations of the affected coating line(s) 2R, 3R, and/or 4R which receives installation of one or more flexographic printers will be subject to the requirements of 401 KAR 59:212 as given in Section B of this permit. 401 KAR 59:210 will no longer be applicable to the affected coating line modified under this paragraph.
  - (2) Compliance with 401 KAR 59:212 shall be demonstrated daily.
  - (3) The permittee shall continue to demonstrate compliance with all other applicable requirements of these lines according to Section B including monitoring, recordkeeping and reporting requirements in Section B, F and G of this permit.

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW  
(CONTINUED)**

- (4) If the proposed project meets all the criteria of paragraph 1 under this heading except the total mass of materials used on all designated printing stations exceeds 5% of the total mass of material used on a given line the permittee may elect to continue demonstrating compliance with Subpart JJJJ or shall submit for a minor permit revision under 401 KAR 52:020, Section 14, along with copies of the initial notification for 40 CFR 60, Subpart KK as required by 40 CFR 63.9 to both the Division and the U.S. EPA Region 4.
4. Install, construct, or modify one or more thermal oxidizers, catalytic oxidizers, or solvent recovery units for control of VOC and/or organic HAP emissions from part or all of any one or several web coating lines, as may be needed to meet applicable VOC or organic HAP emissions limitations.
- a. The permittee shall demonstrate capture and control efficiency for each new control device or modification of a control device or capture system pursuant to 40 CFR 63, Subpart JJJJ, and the testing requirements in Section B and G of this permit. The permittee is not required to test removal efficiency of a solvent recovery device utilizing a continuous emission monitoring system (CEMS).
  - b. The permittee shall not construct or operate a solvent recovery device for which control efficiency is determined by a liquid-liquid material balance. If the permittee chooses to use a liquid-liquid material balance as provided for by 40 CFR 63, Subpart JJJJ, the permittee shall first submit for a minor permit revision under 401 KAR 52:020, Section 14.
  - c. Design and installation of monitoring equipment for capture systems and control devices shall be in accordance with Section E of this permit and 40 CFR 63, Subpart JJJJ.
  - d. Pursuant to 40 CFR 63.3350(c) for all intermittently controlled work stations, the permittee must monitor bypasses of a control device and the mass of each coating material applied at the work station during any such bypass.
  - e. The permittee shall update the site specific monitoring plan and the inspection and maintenance plan, as necessary in accordance with Section E of this permit and 40 CFR 63, Subpart JJJJ.
  - f. Operating limitations for control devices associated with the web coating lines are given in Section B of this permit. The permittee shall also be subject to the monitoring, recordkeeping, and reporting requirements for the webcoating lines in Sections B, F and G of this permit.
  - g. The permittee is not authorized to remove a control device utilized to meet an emission limit issued pursuant to 401 KAR 51:017, unless alternate operating scenarios provided for in Section B of this permit.
5. Re-assignment of control devices to any combination of workstations of the web coating lines.
- a. The permittee shall demonstrate capture and control efficiency for each modification of a control device or capture system pursuant to 40 CFR 63, Subpart JJJJ, and the testing

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW  
(CONTINUED)**

requirements in Section B and G of this permit. The permittee is not required to test removal efficiency of a solvent recovery device utilizing a continuous emission monitoring system (CEMS).

- b. The permittee shall not operate a solvent recovery device for which control efficiency is determined by a liquid-liquid material balance. If the permittee chooses to use a liquid-liquid material balance as provide for by 40 CFR 63, Subpart JJJJ, the permittee shall first submit for a minor permit revision under 401 KAR 52:020, Section 14.
- c. Design and installation of monitoring equipment for capture systems and control devices shall be in accordance with Section E of this permit and 40 CFR 63, Subpart JJJJ.
- d. Pursuant to 40 CFR 63.3350 (c) for all intermittently controlled work stations, the permittee must monitor bypasses of a control device and the mass of each coating material applied at the work station during any such bypass.
- e. The permittee shall update site specific monitoring plan, the inspection and maintenance plan, as necessary in accordance with Section E of this permit and 40 CFR 63, Subpart JJJJ.
- f. Operating limitations for control devices associated with the web coating lines are given in Section B of this permit. The permittee shall also be subject to the monitoring, recordkeeping, and reporting requirements for the webcoating lines in Sections B, F and G of this permit.
- g. The permittee is not authorized to remove a control device utilized to meet an emission limit issued pursuant to 401 KAR 51:017, unless alternate operating scenarios provided in Section B of this permit.

**Notifications**

1. 3M Cynthiana shall notify the Division and the U.S. EPA in writing at least seven (7) workdays prior to making each change. The notification shall include:
  - a. A brief description of the change;
  - b. The anticipated date on which the change will occur;
  - c. Any change in emissions or pollutants that result from the change; including,
    - (1) Information sufficient to update the Kentucky Emission Inventory System (KYEIS);
    - (2) A description of how VOC emissions will be tracked against existing emission limits and the source wide VOC cap, including a description of emissions factors, if relevant;
    - (3) Stack parameters: diameter, stack height, flow rate, and temperature as applicable;
    - (4) Material Safety Data Sheets (MSDS) or certified product data sheets with the manufacturer's formulation data for new materials.

**ATTACHMENT A – ADVANCE MINOR NEW SOURCE REVIEW  
(CONTINUED)**

- d. Any new applicable requirements that will apply after the change; or
  - e. Any permit term or condition that will no longer be applicable after the change.
2. If a proposed project is revised or subsequently modified during the construction phase before startup of the affected facilities has occurred, the permittee shall promptly notify the Division of any supplementary facts or corrected information in accordance with 401 KAR 52:020, Section 7. The term promptly, as used here is defined to mean prior to the start-up date.
  3. A project meeting the criteria of this permit section and constructed accordingly may be subsequently modified following the start-up date of the affected facilities as long as the subsequent modification also meets the criteria of the preconstruction review given in this permit section. Such a modification will be considered a new project, and the permittee shall submit the applicable information in paragraphs 1, 4, and 5 under this heading.
  4. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the application, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, notification of the following:
    - a. The date when construction commenced.
    - b. The date of start-up of the affected facilities.
    - c. The date when the maximum production rate was achieved.
  5. Within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. If the permittee is required to demonstrate capture and/or control efficiency as part of a performance demonstration following modification or installation of a control device or capture system, the permittee shall also submit the notifications listed in Section G, paragraph 5.a of this permit.
  6. All claims of confidentiality of records must be made according to 400 KAR 1:060.

**ATTACHMENT B – EQUATIONS AND PROCEDURES****AS REFERENCED BY 401 KAR 59:212**

*The following compliance demonstration methods correspond with the exemptions provided by 401 KAR 59.212 Section 6. The following numbering corresponds with the numbering in the aforementioned section of the permit.*

**Compliance Demonstration Method:**

- (3) Calculate the fractions of the volatile components in the “as supplied” ink or coating.

$$\% \text{ volume solvent} = \frac{\sum_{i=1}^n (\text{weight \% solvent})_i [\text{ink density (lbs/gal)}]}{\sum_{i=1}^n (\text{solvent density})_i}$$

$$\% \text{ volume water} = \frac{(\text{weight \% water}) [\text{ink density (lbs/gal)}]}{8.34 \text{ (lbs/gal)}}$$

$$\% \text{ volume E.S.} = \frac{\sum_{i=1}^n (\text{weight \% exempt solvent})_i [\text{ink density (lbs/gal)}]}{\sum_{i=1}^n (\text{exempt solvent density})_i}$$

- (4) Calculate the fractions of the volatile components in the “as supplied” ink (or coating). Exempt solvents are considered equivalent to water for the purpose of compliance demonstration, [401 KAR 59:212, Section 4, (5)].

$$(\text{VOC})_s = \frac{\% \text{ volume solvent}}{\% \text{ volume solvent} + \% \text{ volume water} + \% \text{ volume E.S.}}$$

$$(\text{H}_2\text{O})_s = \frac{\% \text{ volume water} + \% \text{ volume E.S.}}{\% \text{ volume solvent} + \% \text{ volume water} + \% \text{ volume E.S.}}$$

Where:

$(\text{VOC})_s$  = VOC content of “as supplied” ink or coating

$(\text{H}_2\text{O})_s$  = Water content of “as supplied” ink or coating

- (5) An ink or coating, delivered to the applicator, “as supplied”, for which  $(\text{VOC})_s \leq 0.25$ , and  $(\text{H}_2\text{O})_s \geq 0.75$  is considered to be compliant with 401 KAR 59:212, Section 6, Exemption 1.
- (6) Calculate the fractions of the volatile components in an “as applied” ink.

$$(\text{VOC})_A = \frac{(\text{vol. compt.})_1 (\text{VOC}_s)_1 + (\text{vol. compt.})_2 (\text{VOC}_s)_2 + \dots + (\text{vol. compt.})_n (\text{VOC}_s)_n}{(\text{vol. compt.})_1 + (\text{vol. compt.})_2 + \dots + (\text{vol. compt.})_n}$$

$$(\text{H}_2\text{O})_A = \frac{(\text{vol. compt.})_1 (\text{H}_2\text{O}_s)_1 + (\text{vol. compt.})_2 (\text{H}_2\text{O}_s)_2 + \dots + (\text{vol. compt.})_n (\text{H}_2\text{O}_s)_n}{(\text{vol. compt.})_1 + (\text{vol. compt.})_2 + \dots + (\text{vol. compt.})_n}$$

Where:

$(\text{VOC})_A$  = VOC content of “as applied” ink or coating

$(\text{H}_2\text{O})_A$  = Water content of “as applied” ink or coating

- (7) An ink or coating, “as applied”, for which  $(\text{VOC})_A \leq 0.25$ , and  $(\text{H}_2\text{O})_A \geq 0.75$  is considered to be compliant with 401 KAR 59:212, Section 6, Exemption

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

- (8) If an ink or coating, “as supplied”, is compliant with 401 KAR 59:212, Section 6, Exemption 1, and the volatile portion of any dilutants or additives added to the “as supplied” ink, consist of only water or exempt solvent, then the “as applied” ink is also considered to meet the exemption.
- (9) Determine the coating solids content “as supplied” from the manufacturer’s formulation data in accordance with Section D.4, paragraph a.

Where:

(Solids)<sub>s</sub> = Solids content of “as supplied” ink or coating

- (10) An ink or coating, delivered to the applicator, “as supplied”, for which (Solids)<sub>s</sub> ≥ 0.60 is considered to be compliant with 401 KAR 59:212, Section 6, Exemption 3.

- (11) Calculate the fractions of the nonvolatile components in the “as applied” ink or coating.

$$(\text{Solids})_A = \frac{(\text{Solids})_s}{1 + R_d}$$

Where:

(Solids)<sub>A</sub> = Volume percent solids (nonvolatile) “as applied”

R<sub>d</sub> = Dilution solvent ratio, equals the volume of VOC added per unit volume of ink or coating “as supplied”

- (12) An ink or coating, delivered to the applicator, “as applied”, for which (Solids)<sub>A</sub> ≥ 0.60 is considered to be compliant with 401 KAR 59:212, Section 6, Exemption 3.

- (13) Alternatively, calculate the VOC content of all coating materials on the basis of coating solids applied:

$$V_s = \frac{\sum_{i=1}^n C_{vi} M_i + \sum_{j=1}^m C_{vij} M_{ij} - M_{vret}}{\sum_{i=1}^n C_{si} M_i + \sum_{j=1}^m C_{sij} M_{ij}}$$

Where:

V<sub>s</sub> = Daily average, as-applied, VOC to coating solids ratio, lb VOC / lb coating solids applied.

n = Number of different coating materials applied during the day.

C<sub>vi</sub> = Volatile organic content of coating material, i, expressed as a mass fraction, lb/lb.

M<sub>i</sub> = Mass of as-purchased coating material, i, applied, lb.

m = Number of different materials added to the coating material.

C<sub>vij</sub> = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.

M<sub>ij</sub> = Mass of material, j, added to as purchased coating material, i, lb.

M<sub>vret</sub> = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

C<sub>si</sub> = Coating solids content of coating material, i, expressed as a mass fraction, lb/lb.

C<sub>sij</sub> = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.

- (14) If each ink or coating material as-applied contains less than five-tenths (0.5) lb VOC/lb solids as delivered to the applicator then that ink or coating is considered to be compliant with 401 KAR 59:212, Section 6, Exemption 4.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)****AS REFERENCED BY SECTION D**

*The following numbering corresponds with the numbering in Section D of the permit.*

**5. VOC and HAP Applied:**

The following equations can be used to determine the VOC and HAP input to an individual applicator / work station, a group of applicators / work stations which are part of a coating line, or to an entire coating line as a single group. The VOC or HAP emitted from an uncontrolled applicator / work station is equal to the VOC or HAP applied on that applicator / work station minus the mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere.

**a. *VOC and HAP applied on a monthly basis.***

- (1) Calculate the **monthly** HAP input using Equation 1a.

$$H_m = \sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_{ij} \quad \text{Eq. 1a}$$

Where:

$H_m$  = Total monthly organic HAP applied, lb.

$p$  = Number of different coating materials applied in a month.

$C_{hi}$  = Organic HAP content of coating material,  $i$ , as-purchased, expressed as a mass fraction, lb/lb.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.

$q$  = number of different materials added to the coating material each month.

$C_{hij}$  = Organic HAP content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.

$M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.

- (2) Calculate the **monthly** VOC input using Equation 1b.

$$V_m = \sum_{i=1}^p C_{vi} M_i + \sum_{j=1}^q C_{vij} M_{ij} \quad \text{Eq. 1b}$$

Where:

$V_m$  = Total monthly VOC applied, lb.

$p$  = Number of different coating materials applied in a month.

$C_{vi}$  = Volatile organic content of coating material,  $i$ , as-purchased, expressed as a mass fraction, lb/lb.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.

$q$  = number of different materials added to the coating material each month.

$C_{vij}$  = VOC content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.

$M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.

**b. *VOC applied on a daily basis.***

- (1) Calculate the **daily** VOC input using Equation 1c.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

$$V_a = \sum_{i=1}^n C_{vi} \cdot M_i + \sum_{j=1}^m C_{vij} \cdot M_{ij} \quad \text{Eq. 1c}$$

Where:

- $V_a$  = Total daily VOC input to the applicators / work stations, lb.  
 $n$  = Number of different coating materials applied each day.  
 $C_{vi}$  = Volatile organic content of coating material, i, as-purchased, expressed as a mass fraction, lb/lb.  
 $M_i$  = Mass of as-purchased coating material, i, applied during the day, lb.  
 $m$  = Number of different materials added to the coating material each day.  
 $C_{vij}$  = VOC content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.  
 $M_{ij}$  = Mass of material, j, added to as purchased coating material, i, during to day, lb.

**6. Compliant Coatings:**

Use the following equations for each coating line, portion of a coating line, or an individual applicator / work station which uses low VOC and HAP containing materials.

a. *Use of “as-purchased” compliant coating materials.*

- (1) The permittee may demonstrate compliance with an emission standard by showing that **each coating material** applied, “as-purchased” at an affected source meets the applicable mass fraction of coating or mass fraction of solids standard.
- (2) Determine the VOC and/or HAP content of each coating material using the methods specified in Section D.4.a & b of this permit.
- (3) If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied VOC mass fraction is equal to the as-purchased VOC mass fraction and the as-applied coating solids content is equal to the as-purchased coating solids content, 40 CFR 63.3360(d)(3).
- (4) If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied organic HAP mass fraction is equal to the as-purchased organic HAP mass fraction, 40 CFR 63.3360(c)(4).

b. *Use of “as-applied” compliant coating materials to meet mass fraction of coating material standards.*

- (1) The permittee may demonstrate compliance with an emission standard by showing that **each coating material** “as-applied” at an affected source meets the applicable mass fraction of coating standard.
- (2) The permittee must calculate the as-applied organic HAP (or VOC) content of as-purchased coating materials which are reduced, thinned, or diluted prior to application, 40 CFR 63.3370(c)(1).
- (3) Determine the organic HAP (or VOC) content of each coating material on an as-purchased basis in accordance with Section D.4, paragraphs a & b.
- (4) Calculate the **average monthly**, as-applied organic HAP content of **each coating material** using Equation 2a of this section: [40 CFR 63.3370(c)(1)(ii)].

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

$$C_{ahi} = \frac{\left( C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 2a}$$

Where:

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, lb/lb.

$C_{hi}$  = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, lb/lb.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.

$q$  = number of different materials added to the coating material each month.

$C_{hij}$  = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, lb.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.

- (5) Alternatively, calculate the **average monthly**, as-applied volatile organic content of **each coating material** using Equation 2b of this section: [40 CFR 63.3370(c)(1)(ii)].

$$C_{avi} = \frac{\left( C_{vi}M_i + \sum_{j=1}^q C_{vij}M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 2b}$$

Where:

$C_{avi}$  = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, lb/lb.

$C_{vi}$  = Volatile organic content of coating material, i, expressed as a mass fraction, lb/lb.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.

$q$  = number of different materials added to the coating material each month.

$C_{vij}$  = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, lb.

- (6) If the **daily average** volatile organic content of **each coating material** as delivered to the applicators contains no more than 2.9 lb/gal VOC using Equation 2c, the affected facility is exempt from the control requirements of 401 KAR 59:210, Section 3. [59:210, Section 6(1)].

$$C_{agi} = \frac{C_{gi}G_i + \sum_{j=1}^m C_{gij}G_{ij}}{G_i + \sum_{j=1}^m G_{ij}} \quad \text{Eq. 2c}$$

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

Where:

- $C_{agi}$  = Daily average, as-applied, volatile organic content of coating material, i, expressed as a weight fraction, lb/gal.  
 $C_{gi}$  = Volatile organic content of coating material, i, expressed as a weight fraction, lb/gal.  
 $G_i$  = Number of gallons of as-purchased coating material, i, applied each day.  
 $m$  = Number of different materials added to the coating material each day.  
 $C_{gij}$  = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a weight fraction, lb/gal.  
 $G_{ij}$  = Number of gallons of material, j, added to as-purchased coating material, i, during the day.

c. *Use of “as-applied” compliant coating materials to meet mass fraction of coating solids standards.*

- (1) The permittee may demonstrate compliance with an emission standard by showing that **each coating material**, “as-applied” at an affected source meets the applicable mass fraction of coating solids standards.
- (2) Calculate the **monthly average**, as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 3 of this section:

$$C_{asi} = \frac{\left( C_{si} M_i + \sum_{j=1}^q C_{sij} M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 3}$$

Where:

- $C_{asi}$  = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, lb/lb.  
 $C_{si}$  = Coating solids content of coating material, i, expressed as a mass fraction, lb/lb.  
 $M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.  
 $q$  = number of different materials added to the coating material each month.  
 $C_{sij}$  = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.  
 $M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, lb.
- (3) Calculate the **monthly average**, as-applied organic HAP to coating solids ratio of **each coating material** using Equation 4a of this section:

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \quad \text{Eq. 4a}$$

Where:

- $H_{si}$  = As-applied, organic HAP to coating solids ratio of coating material, i.  
 $C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, lb/lb, from Equation 2a.  
 $C_{asi}$  = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, lb/lb, from Equation 3.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

- (4) Alternatively, calculate the **monthly average**, as-applied VOC to coating solids ratio of **each coating material** using Equation 4b of this section:

$$V_{si} = \frac{C_{avi}}{C_{asi}} \quad \text{Eq. 4b}$$

Where:

- $V_{si}$  = As-applied, VOC to coating solids ratio of coating material, i.  
 $C_{avi}$  = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, lb/lb, from Equation 2b.  
 $C_{asi}$  = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, lb/lb, from Equation 3.

- d. *Monthly average organic HAP or VOC content of all coating materials “as-applied” is less than the applicable mass percent emission limits.*

- (1) The permittee may demonstrate compliance with an emission standard by showing that the **monthly average** VOC or HAP content of **all coating materials** “as-applied” at an affected source meets the applicable mass fraction of coatings standards.
- (2) Calculate the **monthly average** as-applied organic HAP content of **all coating materials** applied by Equation 5a of this section:

$$H_L = \frac{\sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 5a}$$

Where:

- $H_L$  = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as lb organic HAP per lb of coating material applied, lb/lb.
- $p$  = Number of different coating materials applied in a month.
- $C_{hi}$  = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, lb/lb.
- $M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.
- $q$  = number of different materials added to the coating material each month.
- $C_{hij}$  = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.
- $M_{ij}$  = Mass of material, j, added to as purchased coating material, i, in a month, lb.
- $M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in 40 CFR 63.3370.
- (3) Alternatively, calculate the **monthly average** as-applied VOC content of **all coating materials** applied by Equation 5b of this section:

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

$$V_L = \frac{\sum_{i=1}^p C_{vi} M_i + \sum_{j=1}^q C_{vij} M_{ij} - M_{vret}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 5b}$$

Where:

- $V_L$  = Monthly average, as-applied, VOC content of all coating materials applied, expressed as lb VOC per lb of coating material applied, lb/lb.
- $p$  = Number of different coating materials applied in a month.
- $C_{vi}$  = Volatile organic content of coating material,  $i$ , expressed as a mass fraction, lb/lb.
- $M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.
- $q$  = number of different materials added to the coating material each month.
- $C_{vij}$  = Volatile organic content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.
- $M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.
- $M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

- e. *Daily average VOC content of all coating materials “as-applied” is less than the applicable mass of VOC per gallon of coating material limit.*
- (1) The permittee may show compliance with 401 KAR 59:210, Section 6, Exemption (1), by demonstrating that the **daily average** volatile organic content of **all coating materials** as delivered to the applicators is less than 2.9 lb/gal.
  - (2) Calculate the **daily average** as-applied VOC content of **all coating materials** applied using Equation 5c:

$$V_G = \frac{\sum_{i=1}^n C_{gi} G_i + \sum_{j=1}^m C_{gij} G_{ij}}{\sum_{i=1}^n G_i + \sum_{j=1}^m G_{ij}} \quad \text{Eq. 5c}$$

Where:

- $V_G$  = Daily average, as-applied, VOC content of all coating materials applied, expressed as lb VOC per gallon of coating material applied, lb/gal.
- $n$  = Number of different coating materials applied each day.
- $C_{gi}$  = Volatile organic content of coating material,  $i$ , expressed as a weight fraction, lb/gal.
- $G_i$  = Number of gallons of as-purchased coating material,  $i$ , applied each day.
- $m$  = Number of different materials added to the coating material each day.
- $C_{gij}$  = Volatile organic content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a weight fraction, lb/gal.
- $G_{ij}$  = Number of gallons of material,  $j$ , added to as-purchased coating material,  $i$ , during the day.

- f. *Monthly average organic HAP or VOC content of all coating materials “as-applied” is less than the applicable mass fraction of coating solids emission limits.*

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

- (1) The permittee may demonstrate compliance with an emission standard by showing that the **monthly average** VOC or HAP content of **all coating materials** “as-applied” at an affected source meets the applicable mass fraction of coating solids standards.
- (2) Calculate the **monthly average** as-applied organic HAP content of **all coating materials** on the basis of coating solids applied, by using Equation 6a of this section:

$$H_s = \frac{\sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^p C_{si} M_i + \sum_{j=1}^q C_{sij} M_{ij}} \quad \text{Eq. 6a}$$

Where:

- $H_s$  = Monthly average, as-applied, organic HAP to coating solids ratio, lb organic HAP/lb coating solids applied.
- $p$  = Number of different coating materials applied in a month.
- $C_{hi}$  = Organic HAP content of coating material,  $i$ , as-purchased, expressed as a mass fraction, lb/lb.
- $M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.
- $q$  = number of different materials added to the coating material each month.
- $C_{hij}$  = Organic HAP content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.
- $M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.
- $M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.
- $C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, lb/lb.
- $C_{sij}$  = Coating solids content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.

- (3) Alternatively, calculate the **monthly average** as-applied VOC content of **all coating materials** on the basis of coating solids applied by Equation 6b of this section:

$$V_s = \frac{\sum_{i=1}^p C_{vi} M_i + \sum_{j=1}^q C_{vij} M_{ij} - M_{vret}}{\sum_{i=1}^p C_{si} M_i + \sum_{j=1}^q C_{sij} M_{ij}} \quad \text{Eq. 6b}$$

Where:

- $V_s$  = Monthly average, as-applied, VOC to coating solids ratio, lb VOC / lb coating solids applied.
- $p$  = Number of different coating materials applied in a month.
- $C_{vi}$  = Volatile organic content of coating material,  $i$ , expressed as a mass fraction, lb/lb.
- $M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.
- $q$  = number of different materials added to the coating material each month.
- $C_{vij}$  = Volatile organic content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

- $M_{ij}$  = Mass of material, j, added to as purchased coating material, i, in a month, lb.
- $M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.
- $C_{si}$  = Coating solids content of coating material, i, expressed as a mass fraction, lb/lb.
- $C_{sij}$  = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.

**7. Use of Capture and Control with Always-Controlled Work Stations:**

Use the following equations for each coating line, portion of a coating line, or an individual applicator / work station which utilizes capture and control throughout the month.

**a. *Capture and control to reduce emissions to no more than allowable limit:***

- (1) Demonstrate initial compliance for each capture system and each control device through performance tests.
- (2) Calculate the overall control efficiency using Equation 7 of this section:

$$R = \frac{(E)(CE)}{100} \quad \text{Eq. 7}$$

Where:

R = Overall organic HAP / VOC control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

- (3) Demonstrate continuing compliance through continuous monitoring of capture system and control device operating parameters.

**b. *VOC and HAP emitted on a monthly basis.***

- (1) Calculate the organic HAP emitted **during the month** using Equation 8a of this section:

$$H_e = \left[ 1 - R \right] \left[ \sum_{i=1}^p C_{ahi} M_i \right] - M_{vret} \quad \text{Eq. 8a}$$

Where:

$H_e$  = Total monthly organic HAP emitted, lb.

p = Number of different coating materials applied in a month.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, lb/lb, from Equation 2a.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

- (2) Alternatively, calculate the VOC emitted **during the month** using Equation 8b:

$$V_e = \left[ 1 - R \right] \left[ \sum_{i=1}^p C_{avi} M_i \right] - M_{vret} \quad \text{Eq. 8b}$$

Where:

$V_e$  = Total monthly VOC emitted, lb.

p = Number of different coating materials applied in a month.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

- $C_{avi}$  = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, lb/lb, from Equation 2b.
- $M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.
- $M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

c. *VOC emitted on a daily basis.*

- (1) Calculate the VOC emitted
- during each day**
- using Equation 8c:

$$V_e = [1 - R] \left[ \sum_{i=1}^n C_{vi} M_i + \sum_{j=1}^m C_{vij} M_{ij} \right] - M_{vret} \quad \text{Eq. 8c}$$

Where:

- $V_e$  = Total daily VOC emitted, lb.
- $n$  = Number of different coating materials applied each day.
- $C_{vi}$  = Volatile organic content of coating material, i, as-purchased, expressed as a mass fraction, lb/lb.
- $M_i$  = Mass of as-purchased coating material, i, applied during the day, lb.
- $m$  = Number of different materials added to the coating material.
- $C_{vij}$  = VOC content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, lb/lb.
- $M_{ij}$  = Mass of material, j, added to as purchased coating material, i, during to day, lb.
- $M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

d. *Demonstrating compliance based on a coating mass standard:*

- (1) Calculate the organic HAP emission rate based on the mass of coating material applied using Equation 9a of this section:

$$S_h = \frac{H_e}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 9a}$$

Where:

- $S_h$  = Mass organic HAP emitted per mass of material applied, lb/lb.
- $H_e$  = Total monthly organic HAP emitted, lb.
- $p$  = Number of different coating materials applied in a month.
- $M_i$  = Mass of as-purchased coating material, i, applied in a month, lb.
- $q$  = Number of different materials added to the coating material.
- $M_{ij}$  = Mass of material, j, added to as purchased coating material, i, in a month, lb.

- (2) Alternatively, calculate the VOC emission rate based on the mass of coating material applied using Equation 9b:

$$S_v = \frac{V_e}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 9b}$$

Where:

- $S_v$  = Mass VOC emitted per mass of material applied, lb/lb.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

- $V_e$  = Total monthly VOC emitted, lb.  
 $p$  = Number of different coating materials applied in a month.  
 $M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.  
 $q$  = Number of different materials added to the coating material.  
 $M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.

e. *Demonstrating compliance based on a mass of coating solids standard:*

- (1) Calculate the organic HAP emission rate based on the mass of coating solids applied using Equation 10a of this section:

$$L_h = \frac{H_e}{\sum_{p=1}^p C_{si} M_i + \sum_{q=1}^q C_{sij} M_{ij}} \quad \text{Eq. 10a}$$

Where:

- $L_h$  = Mass organic HAP emitted per mass of coating solids applied, lb/lb.  
 $H_e$  = Total monthly organic HAP emitted, lb.  
 $p$  = Number of different coating materials applied in a month.  
 $C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, lb/lb.  
 $M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.  
 $q$  = Number of different materials added to the coating material.  
 $C_{sij}$  = Coating solids content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.  
 $M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.

- (2) Alternatively, calculate the VOC emission rate based on the mass of coating solids applied using Equation 10b of this section:

$$L_v = \frac{V_e}{\sum_{p=1}^p C_{si} M_i + \sum_{q=1}^q C_{sij} M_{ij}} \quad \text{Eq. 10b}$$

Where:

- $L_v$  = Mass VOC emitted per mass of coating solids applied, lb/lb.  
 $V_e$  = Total monthly VOC emitted, lb.  
 $p$  = Number of different coating materials applied in a month.  
 $C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, lb/lb.  
 $M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, lb.  
 $q$  = Number of different materials added to the coating material.  
 $C_{sij}$  = Coating solids content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, lb/lb.  
 $M_{ij}$  = Mass of material,  $j$ , added to as purchased coating material,  $i$ , in a month, lb.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)****8. Use of Capture and Control with One or More Never-Controlled or Intermittently-Controlled Work Stations:**

Use the following equations for each coating line or portion of a coating line in which some of the applicators / work stations use capture and control throughout the month, and other applicators / work stations within the group are uncontrolled throughout the month or intermittently controlled.

a. *Demonstrating compliance based on a coating mass standard:*

- (1) Calculate the organic HAP emitted **during the month** using Equation 11a of this section:

$$H_e = \left[ \sum_{i=1}^p M_{Ci} C_{ahi} \right] \left[ 1 - \frac{R}{100} \right] + \left[ \sum_{i=1}^p M_{Bi} C_{ahi} \right] - M_{vret} \quad \text{Eq. 11a}$$

Where:

$H_e$  = Total monthly organic HAP emitted, lb.

$p$  = Number of different coating materials applied in a month.

$M_{Ci}$  = Sum of the mass of coating material,  $i$ , as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material,  $i$ , as-applied on always-controlled work stations, in a month, lb.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material,  $i$ , expressed as a mass fraction, lb/lb, from Equation 2a.

$R$  = Overall organic HAP control efficiency, percent.

$M_{Bi}$  = Sum of the mass of coating material,  $i$ , as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material,  $i$ , as-applied on never-controlled work stations, in a month, lb.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

- (2) Alternatively, calculate the VOC emitted **during the month** using Equation 11b:

$$V_e = \left[ \sum_{i=1}^p M_{Ci} C_{avi} \right] \left[ 1 - \frac{R}{100} \right] + \left[ \sum_{i=1}^p M_{Bi} C_{avi} \right] - M_{vret} \quad \text{Eq. 11b}$$

Where:

$V_e$  = Total monthly VOC emitted, lb.

$p$  = Number of different coating materials applied in a month.

$M_{Ci}$  = Sum of the mass of coating material,  $i$ , as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material,  $i$ , as-applied on always-controlled work stations, in a month, lb.

$C_{avi}$  = Monthly average, as-applied, volatile organic content of coating material,  $i$ , expressed as a mass fraction, lb/lb, from Equation 2b.

$R$  = Overall VOC control efficiency, percent.

$M_{Bi}$  = Sum of the mass of coating material,  $i$ , as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material,  $i$ , as-applied on never-controlled work stations, in a month, lb.

**ATTACHMENT B – EQUATIONS AND PROCEDURES (CONTINUED)**

$M_{\text{vret}}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, lb.

- (3) Calculate the organic HAP emission rate based on the mass of coating material applied using Equation 9a of this section:
  - (4) Alternatively, calculate the VOC emission rate based on the mass of coating material applied using Equation 9b:
- b. *Demonstrating compliance based on a mass of coating solids standard:*
- (1) Calculate the organic HAP emitted **during the month** using Equation 11a.
  - (2) Alternatively, calculate the VOC emitted **during the month** using Equation 11b.
  - (3) Calculate the organic HAP emission rate based on the mass of coating solids applied using Equation 10a.
  - (4) Alternatively, calculate the VOC emission rate based on the mass of coating solids applied using Equation 10b.