



## INTERMEDIATE STATE PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

**Intermediate Operating Permit Number:** OP2006-056  
**Expiration Date:** AUG 10 2011  
**Installation ID:** 077-0051  
**Project Number:** 2006-04-033

**Installation Name and Address**

3M Springfield  
3211 East Chestnut Expressway  
Springfield, MO 65802  
Greene County

**Parent Company's Name and Address**

3M Company  
Building 42-2E-27, PO Box 33331  
St. Paul, MN 55133-3331

**Installation Description:**

The 3M Springfield plant manufactures adhesives, sealants, coating and coated products. The processes used include compounding, coating, extruding, milling, mixing and slitting.

AUG 11 2006

Effective Date

  
Director or Designee  
Department of Natural Resources

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# I. Installation Description and Equipment Listing

## INSTALLATION DESCRIPTION

The 3M Springfield plant manufactures adhesives, sealants, coatings and coated products. The processes used include compounding, coating, extruding, milling, mixing and slitting.

Raw materials are shipped to the plant by truck and rail car. They are stored in the warehouse or in bulk tanks. Raw materials are mixed and, in some cases, reacted in process vessels. Further processing includes coating application, extruding, milling, additional mixing, and slitting. Two boilers and a thermal oxidizer are also operated on site.

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO <sub>x</sub> )	Nitrogen Oxides (NO <sub>x</sub> )	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2005	4.10	-	10.35	70.75	8.39	-	20.36
2004	7.06	-	7.51	100.17	5.83	-	1.37
2003	4.68	-	0.91	99.22	0.19	-	1.40
2002	17.86	-	8.74	108.22	2.16	-	2.15
2001	4.14	0.08	14.47	153.91	2.25	-	1.64

## EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation which emits air pollutants and which is identified as having unit-specific emission limitations. The locations of emission units given below are provided for assistance in identifying the units, and should not be construed as limitations on where the units may be located. *The units which are asterisked and italicized have been inactivated and are expected to be removed / decommissioned around September 1, 2006.*

<u>Emission Unit #</u>	<u>Description of Emission Unit</u>
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General Installation

EU0010	Boiler 1 (007-33)
EU0020	Boiler 2 (007-34)
* <i>EU0030</i>	<i>Talc Storage Silo (TK-136, formerly TK 888-39)</i>
EU0040	#2 Fuel Oil Storage Tank – █ Gallon (TK 888-33)

Building 6

EU0050	30 SC (006-05, 006-08, 006-14, 006-018)
EU0060	30 SC Oven (006-09, 06-11, 006-13, 006-15)
EU0070	Thermal Oxidizer (006-19)

Building 7

EU0080	32HM (007-18)
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Building 3

EU0090	120M Mixer (003-02)
EU0100	215M Mixer (003-05)
EU0110	318M Mixer (003-09, 003-10)
EU0120	418M Mixer (003-11, 003-12)
EU0130	10CR Reactor/Mixer (003-13)
EU0140	20CR Reactor/Mixer (003-14)

Building 11

EU0150	61KM Mixer with condenser † (011-11)
EU0160	60SS Blender (011-12, 011-13)
* EU0170	07PM Blender (011-14, 011-41)
* EU0180	LITT Powder Receiver (011-16)
* EU0190	LITT Powder Receiver (011-17)
* EU0200	LITT Blender (011-18)
* EU0210	LITT Blender (011-21)
* EU0220	LITT Ribbon Blender (011-23)
* EU0230	CHEM Mixer (011-24)
* EU0240	CHEM Nolte Mixer (011-25)
* EU0250	17LW Mixer (011-26)
* EU0260	71HM Mixer (011-27)
EU0270	55HS Hold Tank (011-33)
EU0280	51HS Hold Tank (011-34)
EU0290	21HS Mixer (011-35)
EU0300	51HS Mixer (011-37)
EU0310	55HS Mixer (011-39)
EU0320	WBPM400 Mixer (011-46)
EU0330	WBPM80 Mixer (011-48)
EU0340	RE01 Mixer (011-04, 011-07, 011-44, 011-45)

† Condenser may be installed on 61KM Mixer sometime in 2006.

Building 2

EU0350	GRAN (002-13)
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**EMISSION UNITS WITHOUT LIMITATIONS**

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance. The locations of emission units are provided for assistance in identifying the units and should not be construed as limitations on where the units may be located. *The units which are asterisked and italicized have been inactivated and are expected to be removed / decommissioned around September 1, 2006.*

Description of Emission Source

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Building 2

MIX1 and JM3Q (002-05)
JM3A and JM3B (002-06)
01RM Mill (002-12)

02FM Mill (002-14)  
Line 3 Mixer Lines (002-27, 002-28)  
Line 3 Tote Vents (002-29, 002-30)

Building 3

Condensate Vent (003-04)  
80MM Mixer (003-06)  
Vacuum Pump (003-07)  
65PI Mill (003-08)  
CR Weigh Tanks (003-15, 003-16)  
77KM Mill (003-29)  
06BN and 06BS Blenders (003-30)  
496E Mixer with condenser † (003-31)  
496W Mixer with condenser † (003-32)  
416S Mixer (003-33)  
74MM Mixer (003-34)  
73PB Blender (003-36)  
Visa Process (003-37, 003-38, 003-39)

† Condensers may be installed on 496E and 496W Mixers sometime in 2006.

Building 7

31CL Calendar (007-19)  
31CL Mill (007-21)  
31 CL Mill (007-22)  
31CL Mixer (007-23)  
XPAN (007-35, 007-36)

Building 11

DM25 Mixer (011-01)  
RE2A Mixer (011-50) ††  
RE2B Mixer (011-51) ††  
†† These mixers may be installed early in 2007

Building 12

Surge Bin Vacuum-White (012-09)  
Surge Bin Vacuum-Black (012-10)  
Mixer (012-11, 012-25)  
Hoppers (012-12, 012-13)  
MDI Hold Station (012-20)

Bulk Tanks

Solvent Tank #1 (TK 888-01)  
Solvent Tank #2 (TK 888-02)  
Solvent Tank #3 (TK 888-03)  
Solvent Tank #4 (TK 888-04)  
Solvent Tank #5 (TK 888-05)  
Solvent Tank #6 (TK 888-06)

Solvent Tank #7 (TK 888-07)  
Solvent Tank #8 (TK 888-08)  
Solvent Tank #9 (TK 888-09)  
Solvent Tank #10 (TK 888-10)  
Solvent Tank #11 (TK 888-11)  
Solvent Tank #12 (TK 888-12)  
Solvent Tank #13 (TK 888-13)  
Solvent Tank #14 (TK 888-14)  
Polyol Tank #1 (TK 888-15)  
Polyol Tank #2 (TK 888-16)  
Polyol Tank #3 (TK 888-17)  
Polyol Tank #4 (TK 888-18)  
Polyol Tank #5 (TK 888-19)  
Polyol Tank #6 (TK 888-20)  
Polymer Tank #2 (TK 888-21)  
Polymer Tank #3 (TK 888-22)  
Polymer Tank #4 (TK 888-23)  
Polymer Tank #5 (TK 888-24)  
MDI Tank (TK 888-25)  
TDI Tank (TK 888-26)  
Solvent Tank # 15 (TK 888-27)  
Latex Tank #1 (TK-888-28)  
Latex Tank #2, out of service (TK 888-29)  
Latex Tank #3 (TK-888-30)  
\* *Underground Asphalt Tank (TK 888-31)*  
Polymer Tank #1 (TK 888-32)  
Propane #1 Tank, leased (TK 888-35)  
Propane #2 Tank, leased, out of service (TK 888-36)  
Nitrogen Air Products Tank, leased (TK 888-37)  
Nitrogen Praxair Tank, leased (TK 888-38)  
Two firewater tanks

Insignificant Activities (The list below is not all-inclusive, and is subject to change.)

Parts washers and cleaners, Safety Kleen (IA-001)  
Emergency diesel pump (340 HP) (IA-002)  
Spray booths for testing (IA-003)  
Mixing system (IA-004)  
█ gallon #2 fuel oil tank in diesel pump house for backup diesel (IA-005 / TK 888-34)  
Quad rack line, no solvent (IA-006)  
Area 1 – packaging (IA-007)  
Compounding room in building 4 (IA-008)  
Area 2 – splicing (IA-009)  
Film and shape adhesives (IA-010)  
Miscellaneous mixing vessels (IA-011)  
Area 3 – converting (IA-012)  
Emergency generators (IA-013)  
Ovens (IA-014 / 002-04, 002-17, 002-20, 002-26)

Testing Hood (IA-015 / 002-22)  
Laboratory (IA-016)

**DOCUMENTS INCORPORATED BY REFERENCE**

These documents, as modified by “Construction Permit Revisions” in the Statement of Basis attached to this permit, have been incorporated by reference into this permit:

- 1) Air Pollution Control Program Construction Permit # 1182-007A, issued 11/04/1982
- 2) Springfield Air Pollution Control Authority Construction Permit #0685006D, issued 06/27/1985,
- 3) Springfield Air Pollution Control Authority Construction Permit #0686015D, issued 06/30/1986, and
- 4) Springfield Air Pollution Control Authority Construction Permit #1186020D, issued 11/12/1986.

## II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### PERMIT CONDITION PW001

10 CSR 10-6.065(2)(C) and 10 CSR 10-6.065(5)(A) Voluntary Limitation(s)

#### Emission Limitations:

- 1) The permittee shall discharge into the atmosphere from the entire installation no more than 9.9 tons of any single hazardous air pollutant (HAP) in any consecutive 12-month period.
- 2) The permittee shall discharge into the atmosphere from the entire installation no more than 24.9 tons of all HAPs combined in any consecutive 12-month period.

#### Monitoring/Recordkeeping:

- 1) The permittee shall maintain accurate records of the amount of each individual HAP and of the amount of all HAPs combined emitted to the atmosphere from this installation. The permittee shall record the monthly and running 12-month totals of each individual HAP and of all HAPs combined emitted from this installation. The permittee shall use the forms in Attachments A1, A2, A3, A4 and A5, or equivalent forms, for this purpose.
- 2) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 3) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

#### Reporting:

- 1) The permittee shall report to both of the following:  
Air Pollution Control Program Enforcement Section      Springfield Air Pollution Control Authority  
P.O. Box 176      227 East Chestnut Expressway  
Jefferson City, MO 65102      Springfield, MO 65802  
no later than ten days after the records maintained to satisfy the monitoring/recordkeeping requirements of this permit condition indicate that the installation exceeded any of the emission limitations in this permit condition.
- 2) The permittee shall report any deviations from the monitoring and recordkeeping requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

### III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

<b>EU0010 AND EU0020 – BOILERS</b>			
Emission Unit	Description	Manufacturer/Model #	PFD Ref #
EU0010	Boiler #1, pipeline grade natural gas and #2 fuel oil, ■ MMBtu, installed November 1966	Cleaver Brooks	007-34
EU0020	Boiler #2, pipeline grade natural gas and #2 fuel oil, ■ MMBtu, installed November 1966	Cleaver Brooks	007-33

**PERMIT CONDITION (EU0010 AND EU0020)-001**  
10 CSR 10-4.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment  
Used for Indirect Heating and  
Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 3 (Sections  
6.231 through 6.237) Particulate Matter from Fuel Burning Equipment

**Emission Limitation:**

The permittee shall not emit particulate matter in excess of ■ pounds per million BTU of heat input from emission units EU0010 and EU0020.

**Operational/Equipment Limitation:**

These emission units shall be limited to burning pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight.

**Monitoring/Recordkeeping:**

- 1) Documentation must be maintained for Permit Condition (EU0010 AND EU0020)-003 supporting that all fuel burned in these units is pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight. That documentation also suffices to demonstrate compliance with the operational/equipment limitation of this permit condition. The permittee only needs to maintain one set of that documentation.
- 2) The permittee will be in compliance with this permit condition as long these emission units burn only pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5 sulfur by weight. Calculations demonstrating this are in Attachment B. The permittee shall keep this attachment with the rest of this permit.
- 3) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:  
Air Pollution Control Program Enforcement Section      Springfield Air Pollution Control Authority  
P.O. Box 176      227 East Chestnut Expressway  
Jefferson City, MO 65102      Springfield, MO 65802

no later than ten days after any exceedance of the emission limitation or operational/equipment limitation of this permit condition.

- 2) The permittee shall report any deviations from the monitoring and recordkeeping requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION (EU0010 AND EU0020)-002**

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants and  
Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 2 (Sections  
6.211 through 6.213) Visible Air Contaminants from Equipment

**Emission Limitations:**

No person shall discharge or permit the discharge of, into the outside atmosphere, from any single existing source of emission whatsoever, any air contaminant:

- 1) Of a shade or density equal to or darker than that designated as number 2 on the Ringelmann smoke chart (40 percent opacity); or
- 2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke of a shade or density equal to or darker than that designated as number 2 on the Ringelmann smoke chart (40 percent opacity).
- 3) Exceptions:
  - a) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 2 on the Ringelmann chart (40% opacity) so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period;
  - b) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 3 (60% opacity) on the Ringelmann chart so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period and the emission is caused by the starting of or cleaning of a fire, and so long as such emissions do not occur on more than three occasions during any consecutive 24-hour period;
  - c) Air contaminants which fail to meet the requirements of section 6-211 or 6-212 only because of the presence therein of uncombined water; or
  - d) Air contaminants resulting from an unavoidable breakdown or malfunction of equipment.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on these emission units using the procedures contained in Test Method 22 in Appendix A of 40 CFR Part 60. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct an observation using the procedures contained in Test Method 9 in Appendix A of 40 CFR Part 60.
- 2) The following monitoring schedule must be maintained:
  - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then –
  - b) Observations must be made once every two-(2) weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then –

c) Observations must be made semi-annually. If a violation is noted, monitoring reverts to weekly. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency. If the source has already performed the weekly and biweekly monitoring and is doing monitoring in compliance with a previous permit, the weekly and biweekly monitoring do not need to be repeated.

**Recordkeeping:**

- 1) The permittee shall maintain records of all Method 22 observation results (See Attachment C1 or C2.), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions that result in visible emissions. (See Attachment D.)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (See Attachment E.)
- 4) Attachments C1, C2, D, and E are forms satisfying these recordkeeping requirements. These forms or equivalents created by the permittee must be used to certify compliance with this requirement.
- 5) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 6) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:

Air Pollution Control Program Enforcement Section P.O. Box 176 Jefferson City, MO 65102	Springfield Air Pollution Control Authority 227 East Chestnut Expressway Springfield, MO 65802
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no later than ten days after the permittee determines, using the Method 9 test, that the emission unit(s) exceeded the opacity limit.
- 2) The permittee shall report any deviations from the monitoring, recordkeeping and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION (EU0010 AND EU0020)-003**  
10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds

**Emission Limitations:**

- 1) No person shall cause or allow emissions of sulfur dioxide into the atmosphere from any indirect heating source in excess of eight pounds of sulfur dioxide per million BTUs actual heat input averaged on any consecutive three hour time period

- 2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.

Pollutant	Concentration by Volume	Remarks
Sulfur Dioxide (SO <sub>2</sub> )	0.03 parts per million (ppm) (80 micrograms per cubic meter (µg/m <sup>3</sup> ))	Annual arithmetic mean
	0.14 ppm (365 µg/m <sup>3</sup> )	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 µg/m <sup>3</sup> )	3-hour average not to be exceeded more than once per year
Hydrogen Sulfide (H <sub>2</sub> S)	0.05 ppm (70 µg/m <sup>3</sup> )	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 µg/m <sup>3</sup> )	½-hour average not to be exceeded over 2 times in any 5 consecutive days
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	10 µg/m <sup>3</sup>	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 µg/m <sup>3</sup>	1-hour average not to be exceeded more than once in any 2 consecutive days

**Operational/Equipment Limitation:**

These emission units shall be limited to burning pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight.

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain documentation supporting that all fuel burned in these units is pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight.
  - a) Fuel purchase receipts, analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable for this documentation.
  - b) If none of the records specified in a) above are available, the permittee shall perform and maintain records of source testing. The heating value of the fuel shall be determined as specified in 10 CSR 10-6.040(2). Source testing shall be performed as specified in 10 CSR 10-6.030(6). The actual heat input shall be determined by multiplying the heating value of the fuel by the amount of fuel burned during the source test period.
  - c) Other methods approved in advance by the Air Pollution Control Program of the Missouri Department of Natural Resources and the Springfield Air Pollution Control Authority may be used.
- 2) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 3) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:
 

Air Pollution Control Program Enforcement Section P.O. Box 176 Jefferson City, MO 65102	Springfield Air Pollution Control Authority 227 East Chestnut Expressway Springfield, MO 65802
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no later than ten days after any exceedance of the emission limitations or operational/equipment

limitation of this permit condition.

- 2) The permittee shall report any deviations from the monitoring and recordkeeping requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

Note: The current version of 10 CSR 10-6.260 (May 30, 2004, effective date) exempts combustion equipment that exclusively uses pipeline grade natural gas or liquefied petroleum gas, or any combination of these fuels, from the requirements of this rule. However, even when the provisions of the current version of 10 CSR 10-6.260 are incorporated into the federally approved SIP as a final EPA action, the emission units will still be subject to 10 CSR 10-6.260 because they can burn fuel oil.

<b>EU0030 – TALC STORAGE SILO</b>		
<b>Emission Unit</b>	<b>Description</b>	<b>PFD Ref #</b>
EU0030	Storage silo for talc, a raw material, installed 1981	TK-136

**PERMIT CONDITION EU0030-001**

10 CSR 10-6.060 Construction Permits Required  
Air Pollution Control Program Construction Permit #1182-007A, Issued November 4, 1982,  
Springfield Air Pollution Control Authority Construction Permit #0685006D,  
Springfield Air Pollution Control Authority Construction Permit #0686015D, and  
Springfield Air Pollution Control Authority Construction Permit #1186020D

**Emission Limitation:**

The permittee shall not emit more than 40 tons of VOC in any consecutive 12-month period from the following combination of sources:

- |                                                 |                                                |
|-------------------------------------------------|------------------------------------------------|
| * <i>EU0030 – Talc Storage Silo (TK-136)</i>    | * <i>EU0200 – LITT Blender (011-18)</i>        |
| EU0090 – 120M Mixer (003-02)                    | * <i>EU0210 – LITT Blender (011-21)</i>        |
| EU0100 – 215M Mixer (003-05)                    | * <i>EU0220 – LITT Ribbon Blender (011-23)</i> |
| EU0110 – 318M Mixer (003-09, 003-10)            | * <i>EU0230 – CHEM Mixer (011-24)</i>          |
| EU0120 – 418M Mixer (003-11, 003-12)            | * <i>EU0240 – CHEM Nolte Mixer (011-25)</i>    |
| EU0130 – 10CR Reactor/Mixer (003-13)            | * <i>EU0250 – 17LW Mixer (011-26)</i>          |
| EU0140 – 20CR Reactor/Mixer (003-14)            | * <i>EU0260 – 71HM Mixer (011-27)</i>          |
| EU0150 – 61KM Mixer with condenser † (011-11)   | EU0270 – 55HS Hold Tank (011-33)               |
| EU0160 – 60SS Blender (011-12, 011-13)          | EU0280 – 51HS Hold Tank (011-34)               |
| * <i>EU0170 – 07PM Blender (011-14, 011-41)</i> | EU0290 – 21HS Mixer (011-35)                   |
| * <i>EU0180 – LITT Powder Receiver (011-16)</i> | EU0300 – 51HS Mixer (011-37)                   |
| * <i>EU0190 – LITT Powder Receiver (011-17)</i> | EU0310 – 55HS Mixer (011-39)                   |

† Condenser may be installed on 61KM Mixer sometime in 2006.

**Monitoring/Recordkeeping/Reporting:**

The monitoring, recordkeeping, and reporting required to demonstrate compliance with Permit Condition PW001 also suffice to demonstrate compliance with this permit condition. No additional monitoring, recordkeeping, or reporting is required for this permit condition.

Note: The sources in the above list which are asterisked and italicized have been inactivated and are expected to be removed / decommissioned around September 1, 2006. After the Talc Storage Silo (EU0030) is removed / decommissioned, this permit condition will no longer be an applicable requirement in this operating permit.

**PERMIT CONDITION EU0030-002**

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants and  
Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 2 (Sections  
6.211 through 6.213) Visible Air Contaminants from Equipment

**Emission Limitations:**

No person shall discharge or permit the discharge of, into the outside atmosphere, from any single new source of emission whatsoever, any air contaminant:

- 1) Of a shade or density equal to or darker than that designated as number 1 on the Ringelmann smoke chart (20 percent opacity); or
- 2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke of a shade or density equal to or darker than that designated as number 1 on the Ringelmann smoke chart (20 percent opacity).
- 3) Exceptions:
  - a) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 2 on the Ringelmann chart (40% opacity) so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period;
  - b) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 3 (60% opacity) on the Ringelmann chart so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period and the emission is caused by the starting of or cleaning of a fire, and so long as such emissions do not occur on more than three occasions during any consecutive 24-hour period;
  - c) Air contaminants which fail to meet the requirements of section 6-211 or 6-212 only because of the presence therein of uncombined water; or
  - d) Air contaminants resulting from an unavoidable breakdown or malfunction of equipment.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on this emission unit using the procedures contained in Test Method 22 in Appendix A of 40 CFR Part 60. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct an observation using the procedures contained in Test Method 9 in Appendix A of 40 CFR Part 60.
- 2) The following monitoring schedule must be maintained:
  - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then –
  - b) Observations must be made once every two (2) weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then –
  - c) Observations must be made semi-annually. If a violation is noted, monitoring reverts to weekly. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency. If the source has already performed the weekly and biweekly monitoring and is doing monitoring in compliance with a previous permit, the weekly and biweekly monitoring do not need to be repeated.

**Recordkeeping:**

- 1) The permittee shall maintain records of all Method 22 observation results (See Attachment C1 or C2.), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions that result in visible emissions. (See Attachment D.)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (See Attachment E.)
- 4) Attachments C1, C2, D, and E are forms satisfying these recordkeeping requirements. These forms or equivalents created by the permittee must be used to certify compliance with this requirement.
- 5) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 6) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:

Air Pollution Control Program Enforcement Section	Springfield Air Pollution Control Authority
P.O. Box 176	227 East Chestnut Expressway
Jefferson City, MO 65102	Springfield, MO 65802

no later than ten days after the permittee determines, using the Method 9 test, that the emission unit exceeded the opacity limit.
- 2) The permittee shall report any deviations from the monitoring, recordkeeping and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

Note: The Talc Storage Silo (EU0030) has been inactivated and is expected to be removed / decommissioned around September 1, 2006. After that, this permit condition will no longer be an applicable requirement in this operating permit.

**PERMIT CONDITION EU0030-003**

10 CSR 10-6.400 Restriction of Emission of Particulate Matter From Industrial Processes and Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) Particulate Matter from Industrial Processes

**Emission Limitations:**

- 1) The permittee shall not emit particulate matter in excess of ■ lbs/hr from this emission unit.
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot.

**Monitoring/Recordkeeping/Reporting:**

- 1) Attachment F contains calculations demonstrating that this unit is always in compliance with this permit condition. The permittee shall keep this attachment with the rest of this permit.
- 2) The permittee shall immediately make this attachment available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

Note: The Talc Storage Silo (EU0030) has been inactivated and is expected to be removed / decommissioned around September 1, 2006. After that, this permit condition will no longer be an applicable requirement in this operating permit.

<b>EU0040 – #2 FUEL OIL STORAGE TANK</b>	
Emission Unit	Description
EU0040	█-gallon (█ m <sup>3</sup> ) storage tank for #2 fuel oil (true vapor pressure less than 0.1 psia or 0.69 kPa), manufactured 1992

<p><b>PERMIT CONDITION EU0040-001</b> 10 CSR 10-6.070 New Source Performance Regulations and 40 CFR Part 60, Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984</p>
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**Emission Limitation:**

Per 40 CFR §60.110b(b), storage vessels with a capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15 kPa are exempt from this subpart and from the general provisions 40 CFR Part 60, Subpart A, except for the provisions in the “Monitoring/Recordkeeping/Reporting” section below.

**Monitoring/Recordkeeping/Reporting:**

- 1) The permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.
- 2) The permittee shall keep these records on-site for the life of the source. They may be kept in either written or electronic form.
- 3) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

<b>EU0050 THROUGH EU0080 – BUILDING 6 AND BUILDING 7 UNITS</b>			
Emission Unit	Description	Manufacturer/Model #	PFD Ref #
EU0050	30 SC Coater (█web coating█ controlled by EU0070), installed█	Unknown	006-05, 006-08, 006-14, 006-18
EU0060	30 SC Oven (█ controlled by EU0070), installed█	Unknown	006-09, 006-11, 006-13, 006-15
EU0070	Thermal Oxidizer, pipeline grade natural gas, 8 MMBtu, installed█	Ross Air Systems/ RI-3-30,000-90	006-19
EU0080	32HM█, installed█	Unknown	None

**PERMIT CONDITION (EU0050 THROUGH EU0080)-001**

10 CSR 10-6.070 New Source Performance Regulations and  
40 CFR Part 63, Subpart A General Provisions and Subpart JJJJ National Emission Standards for  
Hazardous Air Pollutants: Paper and Other Web Coatings

**Emission Limitations [40 CFR §63.3320]:**

- 1) The permittee must limit organic HAP emissions to one of the following four levels. [*§63.3320(b)*]
  - a) No more than 5 percent of the organic HAP applied for each month (95 percent or greater reduction) at existing affected sources, and no more than 2 percent of the organic HAP applied for each month (98 percent or greater reduction) at new affected sources; or [*§63.3320(b)(1)*]
  - b) No more than 4 percent of the mass of coating materials applied for each month at existing affected sources, and no more than 1.6 percent of the mass of coating materials applied for each month at new affected sources; or [*§63.3320(b)(2)*]
  - c) No more than 20 percent of the mass of coating solids applied for each month at existing affected sources, and no more than 8 percent of the mass of coating solids applied for each month at new affected sources, or [*§63.3320(b)(3)*]
  - d) If the permittee uses an oxidizer to control organic HAP emissions, the oxidizer must be operated such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) by compound on a dry basis is achieved and the efficiency of the capture system is 100 percent. [*§63.3320(b)(4)*]

*Existing affected source:* any affected source the construction or reconstruction of which is commenced on or before September 13, 2000, and has not undergone reconstruction as defined in 40 CFR §63.2.

*New affected source:* any affected source the construction or reconstruction of which is commenced after September 13, 2000.

- 2) The permittee must demonstrate compliance with this permit condition by following the procedures in the “Compliance Demonstration” portion of this permit condition. [*§63.3320(c)*]

**Operational/Equipment Limitations [40 CFR §63.3321]:**

- 1) For any web coating line or group of web coating lines for which the permittee uses add-on control devices, unless a solvent recovery system is used and a liquid-liquid material balance is conducted, the permittee must meet the operating limits specified a), b), or c) below or according to 2) below. These operating limits apply to emission capture systems and control devices, and the permittee must establish the operating limits during the performance test according to the requirements 5)e) in the “Performance Testing” portion of this permit condition. The permittee must meet the operating limits at all times after establishing them. [*§63.3321(a) and Table 1 in 40 CFR Part 63 Subpart JJJJ*]
  - a) For a thermal oxidizer, the average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to 5) c) i) in the “Performance Testing” portion of this permit condition. The permittee must demonstrate continuous compliance with this operating limit by
    - i) Collecting the combustion temperature data according to 5) i) in the “Monitoring” portion of this permit condition;
    - ii) Reducing the data to 3-hour block averages; and
    - iii) Maintaining the 3-hour average combustion temperature at or above the temperature limit.

- b) For a catalytic oxidizer,
    - i) The average temperature at the inlet to the catalyst bed temperature in any 3-hour period must not fall below the combustion temperature limit established according to 5) c) ii) in the “Performance Testing” portion of this permit condition. The permittee must demonstrate continuous compliance with this operating limit by
      - A) Collecting the catalyst bed inlet temperature data according to 5) i) in the “Monitoring” portion of this permit condition;
      - B) Reducing the data to 3-hour block averages, and
      - C) Maintaining the 3-hour average catalyst bed inlet temperature at or above the temperature limit.
    - ii) The temperature rise across the catalyst bed must not fall below the limit established according to 5) c) ii) in the “Performance Testing” portion of this permit condition. The permittee must demonstrate continuous compliance with this operating limit by
      - A) Collecting the catalyst bed inlet and outlet temperature data according to 5) i) in the “Monitoring” portion of this permit condition;
      - B) Reducing the data to 3-hour block averages, and
      - C) Maintaining the 3-hour average temperature rise across the catalyst bed at or above the temperature limit.
  - c) For an emission capture system, the permittee must submit a monitoring plan to the Director that identifies the operating parameters to be monitored according to 6) in the “Monitoring” portion of this permit condition. The permittee must conduct monitoring as described in 6)c) in the “Monitoring” portion of this permit condition according to this plan.
- 2) If the permittee uses an add-on control device other than a thermal oxidizer, a catalytic oxidizer or an emission capture system or wishes to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Director for approval of alternative monitoring under 40 CFR §63.8. [*§63.3321(b)*]

**Monitoring [40 CFR §63.3350]:**

- 1) If the permittee operates a web coating line with [*§63.3350(a)*]
  - a) Intermittently-controlled work stations, then the permittee must record parameters related to possible exhaust flow bypass of control device and to coating use as described in 3) below. [*§63.3350(a)(1)*]
  - b) A solvent recovery unit, then the permittee must operate a continuous emission monitoring system and perform quarterly audits or determine volatile matter recovered and conduct a liquid-liquid material balance as described in 4) below. [*§63.3350(a)(2)*]
  - c) A control device(s), then the permittee must operate a continuous parameter monitoring system as described in 5) below. [*§63.3350(a)(3)*]
  - d) A capture system, then the permittee must monitor the capture system operating parameter as described in 6) below. [*§63.3350(a)(4)*]
- 2) Following the date on which the initial performance test of a control device is completed to demonstrate continuing compliance with the standards, the permittee must monitor and inspect each capture system and each control device used to comply with the “Emission Limitations” portion of this permit condition. The permittee must install and operate the monitoring equipment as specified in 3) and 6) below. [*§63.3350(b)*]
- 3) *Bypass and coating use monitoring:* For web coating lines with intermittently-controlled work stations, the permittee must monitor bypasses of the control device and the mass of each coating material applied at the work station during any such bypass. If using a control device for complying

with the requirements of this subpart, the permittee must demonstrate that any coating material applied on a never-controlled work station or an intermittently-controlled work station operated in bypass mode is allowed in the compliance demonstration according to 13) and 14) in the “Compliance Demonstration” portion of this permit condition. The bypass monitoring must be conducted using at least one of the procedures in a) through d) below for each work station and associated dryer. [§63.3350(c)]

- a) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour as well as every time the flow direction is changed. A flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere. [§63.3350(c)(1)]
  - b) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line. [§63.3350(c)(2)]
  - c) *Valve closure continuous monitoring.* Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position when the emission source is in operation and is using a control device for compliance with the requirements of this subpart. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve position. [§63.3350(c)(3)]
  - d) *Automatic shutdown system.* Use an automatic shutdown system in which the web coating line is stopped when flow is diverted away from the control device to any bypass line when the control device is in operation. The automatic system must be inspected at least once every month to verify that it will detect diversions of flow and would shut down operations in the event of such a diversion. [§63.3350(c)(4)]
- 4) *Solvent Recovery Unit.* If a solvent recovery unit is used to comply with the “Emission Limitations” portion of this permit condition, the permittee must meet the requirements in either a) or b) below depending on how control efficiency is determined. [§63.3350(d)]
- a) *Continuous emission monitoring system (CEMS).* If demonstrating compliance with the “Emission Limitations” portion of this permit condition through continuous emission monitoring of a control device, the permittee must install, calibrate, operate, and maintain the CEMS according to i) through iii) below. [§63.3350(d)(1)]
    - 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. [§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, the permittee must use compounds representative of the gaseous emission stream being controlled. [§63.3350(d)(1)(ii)]
    - iii) The permittee must have valid data from at least 90 percent of the hours during which the process is operated. [§63.3350(d)(1)(iii)]
  - b) *Liquid-liquid material balance.* If demonstrating compliance with the “Emission Limitations” portion of this permit condition through liquid-liquid material balance, the permittee must install,

calibrate, maintain, and operate according to the manufacturer's specifications a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device must be certified by the manufacturer to be accurate to within  $\pm 2.0$  percent by mass. [§63.3350(d)(2)]

- 5) *Continuous parameter monitoring system (CPMS)*. If using a control device to comply with the "Emission Limitations" portion of this permit condition, the permittee must install, operate, and maintain each CPMS specified in i) and j) below and in 6) below according to the requirements in a) through h) below. The permittee must install, operate, and maintain each CPMS specified in 3) above according to e) through g) below. [§63.3350(e)]
- a) 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. [§63.3350(e)(1)]
  - b) The permittee must have valid data from at least 90 percent of the hours during which the process operated. [§63.3350(e)(2)]
  - c) The permittee must determine the hourly average of all recorded readings according to i) and ii) below. [§63.3350(e)(3)]
    - i) 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. [§63.3350(e)(3)(i)]
    - ii) Provided all of the readings recorded in accordance with c) above clearly demonstrate continuous compliance with the applicable standard, then the permittee is not required to determine the hourly average of all recorded readings. [§63.3350(e)(3)(ii)]
  - d) The permittee must determine the rolling 3-hour average of all recorded readings for each operating period. To calculate the average for each 3-hour averaging period, the permittee must have at least two of three of the hourly averages for that period using only average values that are based on valid data (i.e., not from out-of-control periods). [§63.3350(e)(4)]
  - e) The permittee must record the results of each inspection, calibration, and validation check of the CPMS. [§63.3350(e)(5)]
  - f) At all times, the permittee must maintain the monitoring system in proper working order including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. [§63.3350(e)(6)]
  - g) Except for monitoring malfunctions, associated repairs, or required quality assurance or control activities (including calibration checks or required zero and span adjustments), the permittee must conduct all monitoring at all times that the unit is operating. Data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities shall not be used for purposes of calculating the emissions concentrations and percent reductions specified in the "Compliance Demonstration" portion of this permit condition. The permittee must use all the valid data collected during all other periods in assessing compliance of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. [§63.3350(e)(7)]
  - h) Any averaging period for which the permittee does not have valid monitoring data and such data are required constitutes a deviation, and the permittee must notify the Director in accordance with 3) in the "Reporting" portion of this permit condition. [§63.3350(e)(8)]
  - i) *Oxidizer*. If using an oxidizer to comply with the "Emission Limitations" portion of this permit condition, the permittee must comply with i) through iii) below. [§63.3350(e)(9)]

- i) Install, calibrate, maintain, and operate temperature monitoring equipment according to the manufacturer's specifications. The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months or the chart recorder, data logger, or temperature indicator must be replaced. The permittee must replace the equipment whether the permittee chooses not to perform the calibration or the equipment cannot be calibrated properly. [§63.3350(e)(9)(i)]
  - ii) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature-monitoring device equipped with a continuous recorder. The device must have an accuracy of  $\pm 1$  percent of the temperature being monitored in degrees Celsius, or  $\pm 1$  ° Celsius, whichever is greater. The thermocouple or temperature sensor must be installed in the combustion chamber at a location in the combustion zone. [§63.3350(e)(9)(ii)]
  - iii) For a catalytic oxidizer, install, calibrate, operate, and maintain a temperature-monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of  $\pm 1$  percent of the temperature being monitored in degrees Celsius or  $\pm 1$  degree Celsius, whichever is greater. The thermocouple or temperature sensor must be installed in the vent stream at the nearest feasible point to the inlet and outlet of the catalyst bed. Calculate the temperature rise across the catalyst. [§63.3350(e)(9)(iii)]
  - j) *Other types of control devices.* If using a control device other than an oxidizer or wishing to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Director for approval of an alternative monitoring method under 40 CFR §63.8(f). [§63.3350(10)]
- 6) *Capture system monitoring.* If complying with the emission standards in §63.3320 through the use of a capture system and control device for one or more web coating lines, the permittee must develop a site-specific monitoring plan containing the information specified in a) and b) below for these capture systems. The permittee must monitor the capture system in accordance with c) below. The permittee shall immediately make the monitoring plan available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request. [§63.3350(f)]
- a) The monitoring plan must [§63.3350(f)(1)]
    - i) Identify the operating parameter to be monitored to ensure that the capture efficiency determined during the initial compliance test is maintained; and [§63.3350(f)(1)(i)]
    - ii) Explain why this parameter is appropriate for demonstrating ongoing compliance; and [§63.3350(f)(1)(ii)]
    - iii) Identify the specific monitoring procedures. [§63.3350(f)(1)(iii)]
  - b) The monitoring plan must specify the operating parameter value or range of values that demonstrate compliance with the “Emission Limitations” portion of this permit condition. The specified operating parameter value or range of values must represent the conditions present when the capture system is being properly operated and maintained. [§63.3350(f)(2)]
  - c) The permittee must conduct all capture system monitoring in accordance with the plan. [§63.3350(f)(3)]
  - d) 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. [§63.3350(f)(4)]
  - e) The permittee must review and update the capture system monitoring plan at least annually. [§63.3350(f)(5)]

**Performance Testing [40 CFR §63.3360]:**

- 1) If the permittee controls organic HAP on any individual web coating line or any group of web coating lines by [§63.3360(a)]
  - a) Limiting organic HAP or volatile matter content of coatings, then the permittee must determine the organic HAP or volatile matter and solids content of coating materials according to procedures in 3) and 4) below. If applicable, the permittee must determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to 7) below. [§63.3360(a)(1)]
  - b) Using a capture and control system, then the permittee must conduct a performance test for each capture and control system to determine: the destruction or removal efficiency of each control device other than solvent recovery according to 5) below, and the capture efficiency of each capture system according to 6) below. If applicable, the permittee must determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to 7) below. [§63.3360(a)(2)]
- 2) If using a control device to comply with the “Emissions Limitations” portion of this permit condition, the permittee is not required to conduct a performance test to demonstrate compliance if one or more of the criteria in a) through c) below are met. [§63.3360(b)]
  - a) The control device is equipped with continuous emission monitors for determining inlet and outlet total organic volatile matter concentration and capture efficiency has been determined in accordance with the requirements of this subpart such that an overall organic HAP control efficiency can be calculated, and the continuous emission monitors are used to demonstrate continuous compliance in accordance with the “Monitoring” portion of this permit condition; or [§63.3360(b)(1)]
  - b) The permittee has met the requirements of 40 CFR §63.7(h) (for waiver of performance testing; or [§63.3360(b)(2)]
  - c) The control device is a solvent recovery system and the permittee complies by means of a monthly liquid-liquid material balance. [§63.3360(b)(3)]
- 3) *Organic HAP content.* If determining compliance with the “Emission Limitations” portion of this permit condition by means other than determining the overall organic HAP control efficiency of a control device, the permittee must determine the organic HAP mass fraction of each coating material “as-purchased” by following one of the procedures in a) through c) below, and determine the organic HAP mass fraction of each coating material “as-applied” by following the procedures in d) below. If the organic HAP content values are not determined using the procedures in a) through c) below, the permittee must submit an alternative test method for determining their values for approval by the Administrator in accordance with 40 CFR §63.7(f). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied. [§63.3360(c)]
  - a) *Method 311.* The permittee may test the coating material in accordance with Method 311 of Appendix A of 40 CFR Part 63 Subpart JJJJ. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the permittee. The organic HAP content must be calculated according to the criteria and procedures in i) through iii) below. [§63.3360(c)(1)]
    - i) Include each organic HAP determined to be present at greater than or equal to 0.1 mass percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 mass percent for other organic HAP compounds. [§63.3360(c)(1)(i)]

- ii) Express the mass fraction of each organic HAP included according to i) above as a value truncated to four places after the decimal point (for example, 0.3791). [*§63.3360(c)(1)(ii)*]
  - iii) Calculate the total mass fraction of organic HAP in the tested material by summing the counted individual organic HAP mass fractions and truncating the result to three places after the decimal point (for example, 0.763). [*§63.3360(c)(1)(iii)*]
  - b) *Method 24*. For coatings, 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 40 CFR Part 60, Appendix A. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to the permittee. [*§63.3360(c)(2)*]
  - c) *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 permittee by the manufacturer of the material. In the event of an inconsistency between Method 311 (Appendix A of 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 29 CFR 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used. [*§63.3360(c)(3)*]
  - d) *As-applied organic HAP mass fraction*. 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. Otherwise, the as-applied organic HAP mass fraction must be calculated using Equation 1a in 3)a)ii) in the “Compliance Demonstration” portion of this permit condition. [*§63.3360(c)(4)*]
- 4) *Volatile organic and coating solids content*. If determining compliance with the “Emission Limitations” portion of this permit condition by means other than determining the overall organic HAP control efficiency of a control device and choosing to use the volatile organic content as a surrogate for the organic HAP content of coatings, the permittee must determine the as-purchased volatile organic content and coating solids content of each coating material applied by following the procedures in a) or b) below, and the as-applied volatile organic content and coating solids content of each coating material by following the procedures in c) below. [*§63.3360(d)*]
- a) *Method 24*. The permittee may determine the volatile organic and coating solids mass fraction of each coating applied using Method 24 (40 CFR Part 60, Appendix A.) The Method 24 determination may be performed by the manufacturer of the material and the results provided to the permittee. If these values cannot be determined using Method 24, the permittee must submit an alternative technique for determining their values for approval by the Administrator. [*§63.3360(d)(1)*]
  - b) *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 40 CFR Part 60, Appendix A, and the Method 24 results are higher, the results of Method 24 will govern. [*§63.3360(d)(2)*]
  - c) *As-applied volatile organic content and coating solids content*. If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied volatile organic content is equal to the as-purchased volatile content and the as-applied coating solids content is equal to the as-purchased coating solids content. Otherwise, the as-applied volatile organic content must be calculated using Equation 1b in 3)a)ii) in the “Compliance Demonstration” portion of this permit condition and the as-applied coating solids content must

be calculated using Equation 2 in 3)b)i) in the “Compliance Demonstration” portion of this permit condition. [§63.3360(d)(3)]

- 5) *Control device efficiency.* If using an add-on control device other than solvent recovery, such as an oxidizer, to comply with the “Emission Limitations” portion of this permit condition, the permittee must conduct a performance test to establish the destruction or removal efficiency of the control device according to the methods and procedures in a) and b) below. During the performance test, the permittee must establish the operating limits required by the “Operational/Equipment Limitations” portion of this permit condition according to c) below. [§63.3360(e)]
- a) An initial performance test to establish the destruction or removal efficiency of the control device must be conducted such that control device inlet and outlet testing is conducted simultaneously, and the data are reduced in accordance with the test methods and procedures in i) through (ix) below. The permittee must conduct three test runs as specified in 40 CFR §63.7(e)(3), and each test run must last at least 1 hour. [§63.3360(e)(1)]
- i) Method 1 or 1A of 40 CFR Part 60, Appendix A, must be used for sample and velocity traverses to determine sampling locations. [§63.3360(e)(1)(i)]
- ii) Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR Part 60, Appendix A, must be used to determine gas volumetric flow rate. [§63.3360(e)(1)(ii)]
- iii) Method 3, 3A, or 3B of 40 CFR Part 60, Appendix A, must be used for gas analysis to determine dry molecular weight. The permittee may also use as an alternative to Method 3B the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],” (incorporated by reference, see 40 CFR §63.14). [§63.3360(e)(1)(iii)]
- iv) Method 4 of 40 CFR Part 60, Appendix A, must be used to determine stack gas moisture. [§63.3360(e)(1)(iv)]
- v) The gas volumetric flow rate, dry molecular weight, and stack gas moisture must be determined during each test run specified in vii) below. [§63.3360(e)(1)(v)]
- vi) Method 25 or 25A of 40 CFR Part 60, Appendix A, must be used to determine total gaseous non-methane organic matter concentration. Use the same test method for both the inlet and outlet measurements which must be conducted simultaneously. The permittee must submit notice of the intended test method to the Director for approval along with notification of the performance test required under 40 CFR §63.7(b). The permittee must use Method 25A if any of the conditions described in A) through (D) below apply to the control device. [§63.3360(e)(1)(vi)]
- A) The control device is not an oxidizer. [§63.3360(e)(1)(vi)(A)]
- B) The control device is an oxidizer but an exhaust gas volatile organic matter concentration of 50 ppmv or less is required to comply with the “Emission Limitations” portion of this permit condition; or [§63.3360(e)(1)(vi)(B)]
- C) The control device is an oxidizer but the volatile organic matter concentration at the inlet to the control system and the required level of control are such that they result in exhaust gas volatile organic matter concentrations of 50 ppmv or less; or [§63.3360(e)(1)(vi)(C)]
- D) The control device is an oxidizer but because of the high efficiency of the control device the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration. [§63.3360(e)(1)(vi)(D)]
- vii) Except as provided in 40 CFR §63.7(e)(3), each performance test must consist of three separate runs with each run conducted for at least 1 hour under the conditions that exist when

the affected source is operating under normal operating conditions. For the purpose of determining volatile organic compound concentrations and mass flow rates, the average of the results of all the runs will apply. [§63.3360(e)(1)(vii)]

- viii) Volatile organic matter mass flow rates must be determined for each run specified in vii) above using Equation 1 below.

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}] \quad \text{Equation 1}$$

Where:

$M_f$  = Total organic volatile matter mass flow rate, kilograms (kg)/hour(h).

$Q_{sd}$  = Volumetric flow rate of gases entering or exiting the control device, as determined according to ii) above, dry standard cubic meters (dscm)/h.

$C_c$  = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter ( $\text{mol/m}^3$ ) (@293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

[§63.3360(e)(1)(viii)]

- ix) For each run, emission control device destruction or removal efficiency must be determined using Equation 2 below:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} (100) \quad \text{Equation 2}$$

Where:

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

$M_{fi}$  = Organic volatile matter mass flow rate at the inlet to the control device, kg/h.

$M_{fo}$  = Organic volatile matter mass flow rate at the outlet of the control device, kg/h.

[§63.3360(e)(1)(ix)]

- x) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the test runs and calculated in Equation 2 in ix) above.

[§63.3360(e)(1)(x)]

- b) The permittee must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Operations during periods of startup, shutdown, and malfunction will not constitute representative conditions for the purpose of a performance test. [§63.3360(e)(2)]

- c) *Operating limits.* If using one or more add-on control devices other than a solvent recovery system for which a liquid-liquid material balance is conducted to comply with the “Emission Limitations” portion of this permit condition, the permittee must establish the applicable operating limits required by the “Operational/Equipment Limitations” portion of this permit condition. These operating limits apply to each add-on emission control device, and the permittee must establish the operating limits during the performance test required by 5) above according to the requirements in i) and ii) below. [§63.3360(e)(3)]

- i) *Thermal oxidizer.* If the add-on control device is a thermal oxidizer, the permittee must establish the operating limits according to A) and B) below. [§63.3360(e)(3)(i)]

A) During the performance test, the permittee must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

[§63.3360(e)(3)(i)(A)]

- B) The permittee must use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for the thermal oxidizer. [§63.3360(e)(3)(i)(B)]
- ii) *Catalytic oxidizer*. If the add-on control device is a catalytic oxidizer, the permittee must establish the operating limits according to A) and (B) below or C) and D) below. [§63.3360(e)(3)(ii)]
- A) During the performance test, the permittee must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs. [§63.3360(e)(3)(ii)(A)]
- B) The permittee must use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for the catalytic oxidizer. [§63.3360(e)(3)(ii)(B)]
- C) As an alternative to monitoring the temperature difference across the catalyst bed, the permittee may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for the catalytic oxidizer as specified in D) below. During the performance test, the permittee must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. The permittee must use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for the catalytic oxidizer. [§63.3360(e)(3)(ii)(C)]
- D) The permittee must develop and implement an inspection and maintenance plan for the catalytic oxidizer(s) for which the permittee elects to monitor according to C) above. The plan must address, at a minimum, the elements specified in 1) through 3) below. [§63.3360(e)(3)(ii)(D)]
- 1) Annual sampling and analysis of the catalyst activity (i.e., conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures, [§63.3360(e)(3)(ii)(D)(1)]
  - 2) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems, and [§63.3360(e)(3)(ii)(D)(2)]
  - 3) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, the permittee must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency in accordance with this section. [§63.3360(e)(3)(ii)(D)(3)]
- 6) *Capture efficiency*. If demonstrating compliance by meeting the requirements of 5), 6), 7), 8), 9)b), 11), 13)b) or c), or 15) in the "Compliance Demonstration" portion of this permit condition, the permittee must determine capture efficiency using the procedures in a), b), or c) below, as applicable. [§63.3360(f)]
- a) The permittee may assume the 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. [§63.3360(f)(1)]

- b) 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. The permittee may exclude never-controlled work stations from such capture efficiency determinations. [*§63.3360(f)(2)*]
- c) 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 in 40 CFR Part 63 Subpart KK. The permittee may exclude never-controlled work stations from such capture efficiency determinations. [*§63.3360(f)(3)*]
- 7) *Volatile matter retained in the coated web or otherwise not emitted to the atmosphere.* 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 Limitations” portion of this permit condition. If choosing this option, the permittee must develop a testing protocol to determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere and submit this protocol to the Director for approval. The permittee must submit this protocol with the site-specific test plan under §63.7(f). If the permittee intends 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 and demonstrate compliance according to 3)c), 3)d), 3)e), or 4) in the “Compliance Demonstration” portion of this permit condition, then the test protocol submitted must determine the mass of organic HAP retained in the coated web or otherwise not emitted to the atmosphere. Otherwise, compliance must be shown using the volatile organic matter content as a surrogate for the HAP content of the coatings. [*§63.3360(g)*]
- 8) Control devices in series. If the permittee uses multiple control devices in series to comply with the “Emission Limitations” portion of this permit condition, the performance test must include, at a minimum, the inlet to the first control device in the series, the outlet of the last control device in the series, and all intermediate streams (e.g., gaseous exhaust to the atmosphere or a liquid stream from a recovery device) that are not subsequently treated by any of the control devices in the series. [*§63.3360(h)*]

**Compliance Demonstration [40 CFR §63.3370]:**

- 1) If the permittee chooses to demonstrate compliance by [*§63.3370(a)*]
  - a) Use of “as-purchased” compliant coating materials, then the permittee must demonstrate one of the two following, either i) or ii): [*§63.3370(a)(1)*]
    - i) Each coating material used at an existing affected facility does not exceed 0.04 kg organic HAP per kg coating material and each coating material used at a new affected facility does not exceed 0.016 kg organic HAP per kg coating material as-purchased. The permittee must accomplish this by following the procedures set out in 2) below. [*§63.3370(a)(1)(i)*]
    - ii) Each coating material used at an existing affected facility does not exceed 0.2 kg organic HAP per kg coating solids and each coating material used at a new affected facility does not exceed 0.08 kg organic HAP per kg coating solids as-purchased. The permittee must accomplish this by following the procedures set out in 2) below. [*§63.3370(a)(1)(ii)*]
  - b) Use of “as-applied” compliant coating materials, then the permittee must demonstrate one of the four following, either i) or ii) or iii) or iv): [*§63.3370(a)(2)*]
    - i) Each coating material used at an existing affected facility does not exceed 0.04 kg organic HAP per kg coating material and each coating material used at a new affected facility does not exceed 0.016 kg organic HAP per kg coating material as-applied. The permittee must accomplish this by following the procedures set out in 3)a) below. The permittee must use either Equation 1a or Equation 1b in 3)a)ii) below to determine compliance with 1)b) in the

- “Emission Limitations” portion of this permit condition, in accordance with 3)e)i) below. [*§63.3370(a)(2)(i)*]
- ii) Each coating material used at an existing affected facility does not exceed 0.2 kg organic HAP per kg coating solids and each coating material used at a new affected facility does not exceed 0.08 kg organic HAP per kg coating solids as-applied. The permittee must accomplish this by following the procedures set out in 3)b) below. The permittee must use either Equation 2 or Equation 3 in 3)b) below to determine compliance with 1)c) in the “Emission Limitations” portion of this permit condition, in accordance with 3)e)i) below. [*§63.3370(a)(2)(ii)*]
- iii) Monthly average of all coating materials used at an existing affected facility does not exceed 0.04 kg organic HAP per kg coating material and monthly average of all coating materials used at a new affected facility does not exceed 0.016 kg organic HAP per kg coating material as-applied on a monthly average basis. The permittee must accomplish this by following the procedures set out in 3)c) below. The permittee must use Equation 4 in 3)c) below to determine compliance with 1)b) in the “Emission Limitations” portion of this permit condition, in accordance with 3)e)ii) below. [*§63.3370(a)(2)(iii)*]
- iv) Monthly average of all coating materials used at an existing affected facility does not exceed 0.2 kg organic HAP per kg coating solids and monthly average of all coating materials used at a new affected facility does not exceed 0.08 kg organic HAP per kg coating solids as-applied on a monthly average basis. The permittee must accomplish this by following the procedures set out in 3)d) below. The permittee must use Equation 5 in 3)d) below to determine compliance with 1)c) in the “Emission Limitations” portion of this permit condition, in accordance with 3)e)ii) below. [*§63.3370(a)(2)(iv)*]
- c) Tracking total monthly organic HAP applied, then the permittee must demonstrate that total monthly organic HAP applied does not exceed the calculated limit based on emission limitations. The permittee must accomplish this by following the procedures set out in 4) below. The permittee must show total monthly organic HAP applied (Equation 6 in 4) below) is less than the calculated equivalent allowable organic HAP (Equation 13a or Equation 13b in 12)e) below.) [*§63.3370(a)(3)*]
- d) Use of a capture system and control device, then the permittee must demonstrate one of the four following, either i) or ii) or iii) or iv): [*§63.3370(a)(4)*]
- i) Overall organic HAP control efficiency is 95% or greater at an existing affected facility and 98% or greater at a new affected facility on a monthly basis; or oxidizer outlet HAP concentration is no greater than 20 ppmv and capture efficiency is 100 percent; or operating parameters are continuously monitored. The permittee must accomplish this by following the procedures set out in 5) below to determine compliance with 1)a) in the “Emission Limitations” portion of this permit condition, according to 9) below if using a solvent recovery device, to 10) below if using a control device and CPMS, or to 11) below if using an oxidizer. [*§63.3370(a)(4)(i)*]
- ii) Overall organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis. The permittee must accomplish this by following the procedures set out in 6) below to determine compliance with 1)c) in the “Emission Limitations” portion of this permit condition, according to 9) below if using a solvent recovery device or to 11) below if using an oxidizer. [*§63.3370(a)(4)(ii)*]
- iii) Overall organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for

- a new affected source on a monthly average as-applied basis. The permittee must accomplish this by following the procedures set out in 7) below to determine compliance with 1)b) in the “Emission Limitations” portion of this permit condition, according to 9) below if using a solvent recovery device or to 11) below if using an oxidizer. [*§63.3370(a)(4)(iii)*]
- iv) Overall organic HAP emission rate does not exceed the calculated limit based on emission limitations. The permittee must accomplish this by following the procedures set out in 8) below. The permittee must show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or Equation 13b in 12)e) below.) The permittee must calculate the monthly organic HAP emission rate according to 9) below if using a solvent recovery device or to 11) below if using an oxidizer. [*§63.3370(a)(4)(iv)*]
- e) Use of multiple capture and/or control device(s), then the permittee must demonstrate one of the four following, either i) or ii) or iii) or iv): [*§63.3370(a)(5)*]
- i) Overall organic HAP control efficiency is 95% or greater at an existing affected facility and 98% or greater at a new affected facility on a monthly basis. The permittee must accomplish this by following the procedures set out in 5) below to determine compliance with 1)a) in the “Emission Limitations” portion of this permit condition, according to 5)a) or 5)b) below. [*§63.3370(a)(5)(i)*]
- ii) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis. The permittee must accomplish this by following the procedures set out in 6) below to determine compliance with 1)c) in the “Emission Limitations” portion of this permit condition, according to 13) below. [*§63.3370(a)(5)(ii)*]
- iii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis. The permittee must accomplish this by following the procedures set out in 7) below to determine compliance with 1)b) in the “Emission Limitations” portion of this permit condition, according to 13) below. [*§63.3370(a)(5)(iii)*]
- iv) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations. The permittee must accomplish this by following the procedures set out in 8) below. The permittee must show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or Equation 13b in 12)e) below) according to 13) below. [*§63.3370(a)(5)(vi)*]
- f) Use of a combination of compliant coatings and control devices, then the permittee must demonstrate one of the three following, either i) or ii) or iii): [*§63.3370(a)(6)*]
- i) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis. The permittee must accomplish this by following the procedures set out in 6) below to determine compliance with 1)c) in the “Emission Limitations” portion of this permit condition, according to 13) below. [*§63.3370(a)(6)(i)*]
- ii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis. The permittee must accomplish this by following the procedures set out in 7) below to determine compliance

with 1)b) in the “Emission Limitations” portion of this permit condition, according to 13) below. [§63.3370(a)(6)(ii)]

iii) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations. The permittee must accomplish this by following the procedures set out in 8) below. The permittee must show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or Equation 13b in 12)e) below) according to 13) below. [§63.3370(a)(6)(iii)]

2) *As-purchased “compliant” coating materials* [§63.3370(b)]

a) If complying by using coating materials that individually meet 1)b) and 1)c) in the “Emission Limitations” portion of this permit condition, the permittee must demonstrate that each coating material applied during the month at an existing affected source contains no more than 0.04 mass fraction organic HAP or 0.2 kg organic HAP per kg coating solids, and that each coating material applied during the month at a new affected source contains no more than 0.016 mass fraction organic HAP or 0.08 kg organic HAP per kg coating solids on an as-purchased basis as determined in accordance with 3) in the “Performance Testing” portion of this permit condition. [§63.3370(b)(1)]

b) The permittee is in compliance with 1)b) and 1)c) in the “Emission Limitations” portion of this permit condition if each coating material applied at an existing affected source is applied as-purchased and contains no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and each coating material applied at a new affected source is applied as-purchased and contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids. [§63.3370(b)(2)]

3) *As-applied “compliant” coating materials.* If complying by using coating materials that meet 1)b) or 1)c) in the “Emission Limitations” portion of this permit condition as-applied, the permittee must demonstrate compliance by following one of the procedures in a) through d) below. Compliance is determined in accordance with e) below. [§63.3370(c)]

a) *Each coating material as-applied meets the mass fraction of coating material standard in 1)b) in the “Emission Limitations” portion of this permit condition.* The permittee must demonstrate that each coating material applied at an existing affected source during the month contains no more than 0.04 kg organic HAP per kg coating material applied, and each coating material applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material applied as determined in accordance with i) and ii) below. The permittee must calculate the as-applied organic HAP content of as-purchased coating materials which are reduced, thinned, or diluted prior to application. [§63.3370(c)(1)]

i) Determine the organic HAP content or volatile organic content of each coating material applied on an as-purchased basis in accordance with 3) in the “Performance Testing” portion of this permit condition. [§63.3370(c)(1)(i)]

ii) Calculate the as-applied organic HAP content of each coating material using Equation 1a below.

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

Where:

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

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

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

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

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

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

or calculate the as-applied volatile organic content of each coating material using Equation 1b below.

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

Where:

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

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

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

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

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

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

[§63.3370(c)(1)(ii)]

- b) *Each coating material as-applied meets the mass fraction of coating solids standard in 1)c) in the “Emission Limitations” portion of this permit condition.* The permittee must demonstrate that each coating material applied at an existing affected source contains no more than 0.20 kg of organic HAP per kg of coating solids applied and each coating material applied at a new affected source contains no more than 0.08 kg of organic HAP per kg of coating solids applied. The permittee must demonstrate compliance in accordance with i) and ii) below. [§63.3370(c)(2)]

- i) Determine the as-applied coating solids content of each coating material following the procedure in 4) in the “Performance Testing” portion of this permit condition. The permittee must calculate the as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 2 below.

$$C_{asi} = \frac{\left( C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}} \quad \text{Equation 2}$$

Where:

$C_{asi}$  = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

$C_{si}$  = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

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

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, kg/kg.

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

[§63.3370(c)(2)(i)]

ii) Calculate the as-applied organic HAP to coating solids ratio using Equation 3 below

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \quad \text{Equation 3}$$

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, kg/kg.

$C_{asi}$  = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

[§63.3370(c)(2)(ii)]

c) *Monthly average organic HAP content of all coating materials as-applied is less than the mass percent limit in 1)b) in the “Emission Limitations” portion of this permit condition.* Demonstrate that the monthly average as-applied organic HAP content of all coating materials applied at an existing affected source is less than 0.04 kg organic HAP per kg of coating material applied, and all coating materials applied at a new affected source are less than 0.016 kg organic HAP per kg of coating material applied, as determined by Equation 4 below.

$$H_L = \frac{\sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}} \quad \text{Equation 4}$$

Where:

$H_L$  = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.

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, kg/kg.

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

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

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

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

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

[§63.3370(c)(3)]

d) *Monthly average organic HAP content of all coating materials as-applied is less than the mass fraction of coating solids limit in 1)c) in the “Emission Limitations” portion of this permit condition.* Demonstrate that the monthly average as-applied organic HAP content on the basis of coating solids applied of all coating materials applied at an existing affected source is less than

0.20 kg organic HAP per kg coating solids applied, and all coating materials applied at a new affected source are less than 0.08 kg organic HAP per kg coating solids applied, as determined by Equation 5 below.

$$H_s = \frac{\sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^p C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij}} \quad \text{Equation 5}$$

Where:

$H_s$  = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg 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, kg/kg.

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

$q$  = Number of different materials added to the coating material.

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

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

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

$C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$C_{sij}$  = Coating solids content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass-fraction, kg/kg.

[§63.3370(c)(4)]

e) The affected source is in compliance with 1)b) and 1)c) in the Emission Limitations” portion of this permit condition if: [§63.3370(c)(5)]

i) The organic HAP content of each coating material as-applied at an existing affected source is no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the organic HAP content of each coating material as-applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids; or [§63.3370(c)(5)(i)]

ii) The monthly average organic HAP content of all as-applied coating materials at an existing affected source are no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the monthly average organic HAP content of all as-applied coating materials at a new affected source is no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids. [§63.3370(c)(5)(ii)]

4) *Monthly allowable organic HAP applied.* Demonstrate that the total monthly organic HAP applied as determined by Equation 6 below is less than the calculated equivalent allowable organic HAP as determined by Equation 13a or Equation 13b in 12)e) below:

$$H_m = \sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret} \quad \text{Equation 6}$$

Where:

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

$p$  = 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, kg/kg.

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

$q$  = Number of different materials added to the coating material.

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

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

$M_{\text{vret}}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this "Compliance Demonstration" portion of this permit condition.

[§63.3370(d)]

- 5) *Capture and control to reduce emissions to no more than allowable limit in 1)a) in the "Emission Limitations" portion of this permit condition.* Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent at an existing affected source and at least 98 percent at a new affected source for each month, or operate a capture system and oxidizer so that an outlet organic HAP concentration of no greater than 20 ppmv by compound on a dry basis is achieved as long as the capture efficiency is 100 percent as detailed in 1)d) in the "Emission Limitations" portion of this permit condition. Unless one of the cases described in a), b), or c) below applies to the affected source, the permittee must either demonstrate compliance in accordance with the procedure in 9) below when emissions from the affected source are controlled by a solvent recovery device, or the procedure in 11) below when emissions are controlled by an oxidizer or demonstrate compliance for a web coating line by operating each capture system and each control device and continuous parameter monitoring according to the procedures in 10) below.

[§63.3370(e)]

- a) If the affected source has only always-controlled work stations and operates more than one capture system or more than one control device, the permittee must demonstrate compliance in accordance with the provisions of either 13) or 15) below. [§63.3370(e)(1)]
- b) If the affected source operates one or more never-controlled work stations or one or more intermittently-controlled work stations, the permittee must demonstrate compliance in accordance with the provisions of 13) below. [§63.3370(e)(2)]
- c) An alternative method of demonstrating compliance with 1)a) in the "Emissions Limitations" portion of this permit condition is the installation of a PTE around the web coating line that achieves 100 percent capture efficiency and ventilation of all organic HAP emissions from the total enclosure to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv by compound on a dry basis. If this method is selected, the permittee must demonstrate compliance by following the procedures in i) and ii) below. Compliance is determined according to iii) below. [§63.3370(e)(3)]
- i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in 6)a) in the "Performance Testing" portion of this permit condition will be considered a total enclosure. [§63.3370(e)(3)(i)]

- ii) Determine the organic HAP concentration at the outlet of the total enclosure using the procedures in A) or B) below. [*§63.3370(e)(3)(ii)*]
    - A) Determine the control device efficiency using Equation 2 in 5)a)ix) in the “Performance Testing” portion of this permit condition and the applicable test methods and procedures specified in 5) in the “Performance Testing” portion of this permit condition. [*§63.3370(e)(3)(ii)(A)*]
    - B) Use a CEMS to determine the organic HAP emission rate according to 9)b)i) through x) below. [*§63.3370(e)(3)(ii)(B)*]
  - iii) The permittee is in compliance if the installation of a total enclosure is demonstrated and the organic HAP concentration at the outlet of the incinerator is demonstrated to be no greater than 20 ppmv by compound on a dry basis. [*§63.3370(e)(3)(iii)*]
- 6) *Capture and control to achieve mass fraction of coating solids applied limit in 1)c) in the “Emission Limitations” portion of this permit condition.* Operate a capture system and control device and limit the organic HAP emission rate from an existing affected source to no more than 0.20 kg organic HAP emitted per kg coating solids applied, and from a new affected source to no more than 0.08 kg organic HAP emitted per kg coating solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then the permittee must demonstrate compliance in accordance with the provisions of 13) below. Otherwise, the permittee must demonstrate compliance following the procedure in 9) below when emissions from the affected source are controlled by a solvent recovery device or the procedure in 11) below when emissions are controlled by an oxidizer. [*§63.3370(fe)*]
- 7) *Capture and control to achieve mass fraction limit in 1)b) in the “Emissions Limitations” portion of this permit condition.* Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg coating material applied at an existing affected source, and no more than 0.016 kg organic HAP emitted per kg coating material applied at a new affected source as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then the permittee must demonstrate compliance in accordance with the provisions of 13) below. Otherwise, the permittee must demonstrate compliance following the procedure in 9) below when emissions from the affected source are controlled by a solvent recovery device or the procedure in 11) below when emissions are controlled by an oxidizer. [*§63.3370(g)*]
- 8) *Capture and control to achieve allowable emission rate.* Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with 12) below. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then the permittee must demonstrate compliance in accordance with the provisions of 13) below. Otherwise, the permittee must demonstrate compliance following the procedure in 9) below when emissions from the affected source are controlled by a solvent recovery device or the procedure in 11) below when emissions are controlled by an oxidizer. [*§63.3370(h)*]
- 9) *Solvent recovery device compliance demonstration.* If using a solvent recovery device to control emissions, the permittee must show compliance by following the procedures in either a) or b) below: [*§63.3370(i)*]
- a) *Liquid-liquid material balance.* Perform a monthly liquid-liquid material balance as specified in i) through v) below and use the applicable equations in vi) through ix) below to convert the data

to units of the selected compliance option in 5) through 8) above. Compliance is determined in accordance with x) below. [§63.3370(i)(1)]

- i) Determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common solvent recovery device during the month.  
[§63.3370(i)(1)(i)]
- ii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in 3) in the “Performance Testing” portion of this permit condition. [§63.3370(i)(1)(ii)]
- iii) Determine the volatile organic content of each coating material as-applied during the month following the procedure in 4) in the “Performance Testing” portion of this permit condition.  
[§63.3370(i)(1)(iii)]
- iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in 4) in the “Performance Testing” portion of this permit condition.  
[§63.3370(i)(1)(iv)]
- v) Determine and monitor the amount of volatile organic matter recovered for the month according to the procedures in 4) in the “Monitoring” portion of this permit condition.  
[§63.3370(i)(1)(v)]
- vi) Recovery efficiency. Calculate the volatile organic matter collection and recovery efficiency using Equation 7 below

$$R_v = \frac{M_{vr} + M_{vret}}{\sum_{i=1}^p C_{vi} M_i + \sum_{i=1}^q C_{vij} M_{ij}} \times 100 \quad \text{Equation 7}$$

Where:

$R_v$  = Organic volatile matter collection and recovery efficiency, percent.

$M_{vr}$  = Mass of volatile matter recovered in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

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

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

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

$q$  = Number of different materials added to the coating material.

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

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

[§63.3370(i)(1)(vi)]

- vii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 8 below.

$$H_e = \left[ 1 - \frac{R_v}{100} \right] \left[ \sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret} \right] \quad \text{Equation 8}$$

Where:

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

$R_v$  = Organic volatile matter collection and recovery efficiency, percent.

$p$  = 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, kg/kg.

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

$q$  = Number of different materials added to the coating material.

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

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

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

[§63.3370(i)(1)(vii)]

viii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 9 below.

$$L = \frac{H_e}{\sum_{i=1}^p C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij}} \quad \text{Equation 9}$$

Where:

$L$  = Mass organic HAP emitted per mass of coating solids applied, kg/kg.

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

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

$C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

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

$q$  = 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, kg/kg.

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

[§63.3370(i)(1)(viii)]

ix) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 below.

$$S = \frac{H_e}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}} \quad \text{Equation 10}$$

Where:

$S$  = Mass organic HAP emitted per mass of material applied, kg/kg.

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

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

M<sub>i</sub> = Mass of as-purchased coating material, i, applied in a month, kg.

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

M<sub>ij</sub> = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

[§63.3370(i)(1)(ix)]

- x) The permittee is in compliance with 2) in the “Emission Limitations” portion of this permit condition if: [§63.3370(i)(1)(x)]
- A) The volatile organic matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or [§63.3370(i)(1)(x)(A)]
- B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or [§63.3370(i)(1)(x)(B)]
- C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or [§63.3370(i)(1)(x)(C)]
- D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using 12) below. [§63.3370(i)(1)(x)(D)]
- b) *Continuous emission monitoring of capture system and control device performance.* Demonstrate initial compliance through a performance test on capture efficiency and continuing compliance through continuous emission monitors and continuous monitoring of capture system operating parameters following the procedures in i) through vii) below. Use the applicable equations specified in viii) through x) below to convert the monitoring and other data into units of the selected compliance option in 5) through 8) above. Compliance is determined in accordance with xi) below. [§63.3370(i)(2)]
- i) *Control device efficiency.* Continuously monitor the gas stream entering and exiting the control device to determine the total organic volatile matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter and the volumetric flow rate in cubic meters per second such that the total organic volatile matter mass flow rate in grams per second can be calculated) such that the control device efficiency of the control device can be calculated for each month using Equation 2 in 5)a)ix) in the “Performance Testing” portion of this permit condition. [§63.3370(i)(2)(i)]
- ii) *Capture efficiency monitoring.* Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with 6) in the “Monitoring” portion of this permit condition to ensure capture efficiency. [§63.3370(i)(2)(ii)]
- iii) Determine the percent capture efficiency in accordance with 6) in the “Performance Testing” portion of this permit condition. [§63.3370(i)(2)(iii)]
- iv) *Control efficiency.* Calculate the overall organic HAP control efficiency achieved for each month using Equation 11 below.

$$R = \frac{(E)(CE)}{100} \quad \text{Equation 11}$$

Where:

R = Overall organic HAP 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.

[§63.3370(i)(2)(iv)]

- v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common control device during the month. [§63.3370(i)(2)(v)]
- vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in 3) in the “Performance Testing” portion of this permit condition. [§63.3370(i)(2)(vi)]
- vii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material as-applied during the month following the procedure in 4) in the “Performance Testing” portion of this permit condition. [§63.3370(i)(2)(vii)]
- viii) Organic HAP emitted. Calculate the organic HAP emitted during the month for each month using Equation 12 below:

$$H_e = (1 - R) \left( \sum_{i=1}^p C_{ahi} M_i \right) - M_{vret} \quad \text{Equation 12}$$

Where:

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

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

$p$  = 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, kg/kg.

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

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

[§63.3370(i)(2)(viii)]

- ix) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 9 in 9)a)viii) above.

[§63.3370(i)(2)(ix)]

- x) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 in 9)a)ix) above.

[§63.3370(i)(2)(x)]

- xi) *Compare actual performance to the performance required by compliance option.* The affected source is in compliance with the emission standards in 1) in the “Emission Limitations” portion of this permit condition for each month if the capture system is operated such that the average capture system operating parameter is greater than or less than (as appropriate) the operating parameter value established in accordance with 6) in the “Monitoring” portion of this permit condition; and [§63.3370(i)(2)(xi)]

- A) The organic volatile matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or  
[§63.3370(i)(2)(xi)(A)]
  - B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or  
[§63.3370(i)(2)(xi)(B)]
  - C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or  
[§63.3370(i)(2)(xi)(C)]
  - D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using 12) below. [§63.3370(i)(2)(xi)(D)]
- 10) *Capture and control system compliance demonstration procedures using a CPMS.* If using an add-on control device, the permittee must demonstrate initial compliance for each capture system and each control device through performance tests and demonstrate continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in a) through c) below. Compliance is determined in accordance with d) below. [§63.3370(j)]
- a) Determine the control device destruction or removal efficiency using the applicable test methods and procedures in 5) in the “Performance Testing” portion of this permit condition.  
[§63.3370(j)(1)]
  - b) Determine the emission capture efficiency in accordance with 6 in the “Performance Testing” portion of this permit condition. [§63.3370(j)(2)]
  - c) Whenever a web coating line is operated, continuously monitor the operating parameters established according to 5) and 6) in the “Monitoring” portion of this permit condition.  
[§63.3370(j)(3)]
  - d) The permittee is in compliance with 1) in the “Emission Limitations” portion of this permit condition if the control device is operated such that the average operating parameter value is greater than or less than (as appropriate) the operating parameter value established in accordance with 5) in the “Performance Testing” portion of this permit condition for each 3-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with 6) in the “Monitoring” portion of this permit condition.; and [§63.3370(j)(4)]
    - i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or [§63.3370(j)(4)(i)]
    - ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or  
[§63.3370(j)(4)(ii)]
    - iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or  
[§63.3370(j)(4)(iii)]
    - iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using 12) below. [§63.3370(j)(4)(iv)]
- 11) *Oxidizer compliance demonstration procedures.* If using an oxidizer to control emissions, the permittee must show compliance by following the procedures in a) below. Use the applicable

equations specified in b) below to convert the monitoring and other data into units of the selected compliance option in 5) through 8) above. Compliance is determined in accordance with c) below. [§63.3370(k)]

- a) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in i) through vi) below: [§63.3370(k)(1)]
  - i) Determine the oxidizer destruction efficiency using the procedure in 5) in the “Performance Testing” portion of this permit condition. [§63.3370(k)(1)(i)]
  - ii) Determine the capture system capture efficiency in accordance with 6) in the “Performance Testing” portion of this permit condition. [§63.3370(k)(1)(ii)]
  - iii) *Capture and control efficiency monitoring.* Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with 5) and 6) in the “Monitoring” portion of this permit condition to ensure capture and control efficiency. [§63.3370(k)(1)(iii)]
  - iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common oxidizer during the month. [§63.3370(k)(1)(vi)]
  - v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in 3) in the “Performance Testing” portion of this permit condition. [§63.3370(k)(1)(v)]
  - vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in 4) in the “Performance Testing” portion of this permit condition. [§63.3370(k)(1)(vi)]
- b) Convert the information obtained under 15)a) below into the units of the selected compliance option using the calculation procedures specified in i) through iv) below. [§63.3370(k)(2)]
  - i) *Control efficiency.* Calculate the overall organic HAP control efficiency achieved using Equation 11 in 9)b)iv) above. [§63.3370(k)(2)(i)]
  - ii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 12 in 9)b)viii) above. [§63.3370(k)(2)(ii)]
  - iii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 9 in 9)a)viii) above. [§63.3370(k)(2)(iii)]
  - iv) *Organic HAP based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 in 9)a)ix) above.. [§63.3370(k)(2)(iv)]
- c) The permittee is in compliance with 1) in the “Emission Limitations” portion of this permit condition if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with 5) in the “Performance Testing” portion of this permit condition for each 3-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with 6) in the “Monitoring” portion of this permit condition; and [§63.3370(k)(3)]

- i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or [§63.3370(k)(d)(i)]
  - ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source, or [§63.3370(k)(3)(ii)]
  - iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source, or [§63.3370(k)(3)(iii)]
  - iv) The organic HAP emitted during the month is less than the calculated allowable organic AP as determined using 12) below. [§63.3370(k)(3)(iv)]
- 12) *Monthly allowable organic HAP emissions.* This paragraph provides the procedures and calculations for determining monthly allowable organic HAP emissions for use in demonstrating compliance in accordance with 4), 8), 9)a)x)D), 9)b)xi)D), or 11)c)iv) above. The permittee will need to determine the amount of coating material applied at greater than or equal to 20 mass percent coating solids and the amount of coating material applied at less than 20 mass percent coating solids. The allowable organic HAP limit is then calculated based on coating material applied at greater than or equal to 20 mass percent coating solids complying with 0.2 kg organic HAP per kg coating solids at an existing affected source or 0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows: [§63.3370(l)]
- a) Determine the as-purchased mass of each coating material applied each month. [§63.3370(l)(1)]
  - b) Determine the as-purchased coating solids content of each coating material applied each month in accordance with 4)a) in the “Performance Testing” portion of this permit condition. [§63.3370(l)(2)]
  - c) Determine the as-purchased mass fraction of each coating material which was applied at 20 mass percent or greater coating solids content on an as-applied basis. [§63.3370(l)(3)]
  - d) Determine the total mass of each solvent, diluent, thinner, or reducer added to coating materials which were applied at less than 20 mass percent coating solids content on an as-applied basis each month. [§63.3370(l)(4)]
  - e) Calculate the monthly allowable organic HAP emissions using Equation 13a below for an existing affected source:

$$H_a = 0.20 \left[ \sum_{i=1}^p M_i G_i C_{si} \right] + 0.04 \left[ \sum_{i=1}^p M_i (1 - G_i) + \sum_{j=1}^q M_{Lj} \right] \quad \text{Equation 13a}$$

Where:

$H_a$  = Monthly allowable organic HAP emissions, kg.

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

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

$G_i$  = Mass fraction of each coating material,  $i$ , which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

$C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$q$  = Number of different materials added to the coating material.

$M_{Lj}$  = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

or Equation 13b below for a new affected source:

$$H_a = 0.08 \left[ \sum_{i=1}^p M_i G_i C_{si} \right] + 0.016 \left[ \sum_{i=1}^p M_i (1 - G_i) + \sum_{j=1}^q M_{Lj} \right] \quad \text{Equation 13b}$$

Where:

$H_a$  = Monthly allowable organic HAP emissions, kg.

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

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

$G_i$  = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

$C_{si}$  = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

$q$  = Number of different materials added to the coating material.

$M_{Lj}$  = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

[§63.3370(1)(5)]

13) *Combinations of capture and control.* If operating more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, the permittee must calculate organic HAP emissions according to the procedures in a) through d) below, and use the calculation procedures specified in e) below to convert the monitoring and other data into units of the selected control option in 5) through 8) above. Use the procedures specified in f) below to demonstrate compliance. [§63.3370(n)]

a) *Solvent recovery system using liquid-liquid material balance compliance demonstration.* If choosing to comply by means of a liquid-liquid material balance for each solvent recovery system used to control one or more web coating lines, the permittee must determine the organic HAP emissions for those web coating lines controlled by that solvent recovery system either:

[§63.3370(n)(1)]

i) In accordance with 9)a)i) through iii) and v) through vii) of above, if the web coating lines controlled by that solvent recovery system have only always-controlled work stations; or

[§63.3370(n)(1)(i)]

ii) In accordance with 9)a)ii), iii), v), and vi) above and 14) below, if the web coating lines controlled by that solvent recovery system have one or more never-controlled or intermittently-controlled work stations. [§63.3370(n)(1)ii)]

b) *Solvent recovery system using performance test compliance demonstration and CEMS.* To demonstrate compliance through an initial test of capture efficiency, continuous monitoring of a capture system operating parameter, and a CEMS on each solvent recovery system used to control one or more web coating lines, the permittee must: [§63.3370(n)(2)]

i) For each capture system delivering emissions to that solvent recovery system, monitor the operating parameter established in accordance with 6) in the “Monitoring” portion of this permit condition to ensure capture system efficiency; and [§63.3370(n)(2)(i)]

ii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that solvent recovery system either: [§63.3370(n)(2)(ii)]

- A) In accordance with 9)b)i) through iii), v), vi), and viii) above, if the web coating lines served by that capture and control system have only always-controlled work stations; or [§63.3370(n)(2)(ii)(A)]
- B) In accordance with 9)b)i) through iii), and vi) above and 14) below, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations. [§63.3370(n)(2)(ii)(B)]
- c) *Oxidizer*. To demonstrate compliance through performance tests of capture efficiency and control device efficiency, continuous monitoring of capture system, and CPMS for control device operating parameters for each oxidizer used to control emissions from one or more web coating lines, the permittee must: [§63.3370(n)(3)]
  - i) Monitor the operating parameter in accordance with 5) in the “Monitoring” portion of this permit condition to ensure control device efficiency; and [§63.3370(n)(3)(i)]
  - ii) For each capture system delivering emissions to that oxidizer, monitor the operating parameter established in accordance with 6) in the “Monitoring” portion of this permit condition to ensure capture efficiency; and [§63.3370(n)(3)(ii)]
  - iii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that oxidizer either: [§63.3370(n)(3)(iii)]
    - A) In accordance with (11)a)i) through vi) above, if the web coating lines served by that capture and control system have only always-controlled work stations; or [§63.3370(n)(3)(iii)(A)]
    - B) In accordance with 9)a)i) through iii), and v) above, and 14) below, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations. [§63.3370(n)(3)(iii)(B)]
- d) *Uncontrolled coating lines*. If owning or operating one or more uncontrolled web coating lines, the permittee must determine the organic HAP applied on those web coating lines using Equation 6 in 4) above. The organic HAP emitted from an uncontrolled web coating line is equal to the organic HAP applied on that web coating line. [§63.3370(n)(4)]
- e) Convert the information obtained under a) through d) above into the units of the selected compliance option using the calculation procedures specified in i) through iv) below. [§63.3370(n)(5)]
  - i) *Organic HAP emitted*. Calculate the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to a), b)ii), c)iii), and d) above. [§63.3370(n)(5)(i)]
  - ii) *Coating solids applied*. If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, the permittee must determine the coating solids content of each coating material applied during the month following the procedure in 4) in the “Performance Testing” portion of this permit condition. [§63.3370(n)(5)(ii)]
  - iii) *Organic HAP emission rate based on coating solids applied*. Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 9 in 9)a)viii) above. [§63.3370(n)(5)(iii)]
  - iv) *Organic HAP based on materials applied*. Calculate the organic HAP emission rate based on material applied using Equation 10 in 9)a)ix) above. [§63.3370(n)(5)(iv)]
- f) *Compliance*. The affected source is in compliance with 1) in the “Emission Limitations” portion of this permit condition for the month if all operating parameters required to be monitored under a) through c) above were maintained at the values established under the “Monitoring” and “Performance Testing” portions of this permit condition; and [§63.3370(n)(6)]

- i) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or [§63.3370(n)(6)(i)]
  - ii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source; or [§63.3370(n)(6)(ii)]
  - iii) The total mass of organic HAP emitted by the affected source during the month is less than the calculated allowable organic HAP as determined using 12) above; or [§63.3370(n)(6)(iii)]
  - iv) The total mass of organic HAP emitted by the affected source was not more than 5 percent of the total mass of organic HAP applied for the month at an existing affected source and no more than 2 percent of the total mass of organic HAP applied for the month at a new affected source. The total mass of organic HAP applied by the affected source in the month must be determined using Equation 6 in 4) above. [§63.3370(n)(6)(in)]
- 14) *Intermittently-controlled and never-controlled work stations.* If this paragraph was expressly referenced by paragraphs 13)a)ii), 13)b)ii)B), or 13)c)iii)B) above for calculation procedures to determine organic HAP emissions for intermittently-controlled and never-controlled work stations, the permittee must: [§63.3370(o)]
- a) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in bypass mode and the mass of all coating materials as-applied on never-controlled work stations during the month. [§63.3370(o)(1)]
  - b) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in a controlled mode and the mass of all coating materials applied on always-controlled work stations during the month. [§63.3370(o)(2)]
  - c) *Liquid-liquid material balance compliance demonstration.* For each web coating line or group of web coating lines using the provisions of 13)a)ii) above, the permittee must calculate the organic HAP emitted during the month using Equation 14 below:

$$H_e = \left[ \sum_{i=1}^p M_{Ci} C_{ahi} \right] \left[ 1 - \frac{R_v}{100} \right] + \left[ \sum_{i=1}^p M_{Bi} C_{ahi} \right] - M_{vret} \quad \text{Equation 14}$$

Where:

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

$p$  = 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, kg.

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

$R_v$  = Organic volatile matter collection and recovery 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, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

[§63.3370(o)(3)]

- d) *Performance test to determine capture efficiency and control device efficiency.* For each web coating line or group of web coating lines using the provisions of 13)b)ii)B) or 13)c)iii)B) above, the permittee must calculate the organic HAP emitted during the month using Equation 15 below

$$H_e = \left[ \sum_{i=1}^p M_{Ci} C_{ahi} \right] \left[ 1 - \frac{R}{100} \right] + \left[ \sum_{i=1}^p M_{Bi} C_{ahi} \right] - M_{vret} \quad \text{Equation 15}$$

Where:

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

$p$  = 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, kg.

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

$R$  = 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, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the permittee chooses 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 this “Compliance Demonstration” portion of this permit condition.

[§63.3370(o)(4)]

- 15) *Always-controlled work stations with more than one capture and control system.* If operating more than one capture system or more than one control device and only having always-controlled work stations, then the permittee is in compliance with the emission standards in 1)a) in the “Emissions Limitations” portion of this permit condition for the month if for each web coating line or group of web coating lines controlled by a common control device: [§63.3370(p)]

- a) The volatile matter collection and recovery efficiency as determined by 9)a)i), iii), v), and vi) above is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or [§63.3370(p)(1)]
- b) The overall organic HAP control efficiency as determined by 9)b)i) through iv) above for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or [§63.3370(p)(2)]
- c) The overall organic HAP control efficiency as determined by 11)a)i) through iii) and 11)b)i) above for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source. [§63.3370(p)(3)]

**Recordkeeping [40 CFR §63.3410]:**

- 1) The permittee must maintain the records specified in a) and b) below on a monthly basis in accordance with the requirements of 40 CFR §63.10(b)(1): [*§63.3410(a)*]
  - a) Records specified in 40 CFR §63.10(b)(2) of all measurements needed to demonstrate compliance with this standard, including: [*§63.3410(a)(1)*]
    - i) Continuous emission monitor data in accordance with the requirements of 4) in the “Monitoring” portion of this permit condition. [*§63.3410(a)(1)(i)*]
    - ii) Control device and capture system operating parameter data in accordance with the requirements of 3), 5), and 6) in the “Monitoring” portion of this permit condition; [*§63.3410(a)(1)(ii)*]
    - iii) Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of 3) in the “Performance Testing” portion of this permit condition; [*§63.3410(a)(1)(iii)*]
    - iv) Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 4) in the “Performance Testing” portion of this permit condition; [*§63.3410(a)(1)(iv)*]
    - v) Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of 5) and 6) in the “Performance Testing” portion of this permit condition; and [*§63.3410(a)(1)(v)*]
    - vi) Material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 2), 3), and 4) in the “Compliance Demonstration” portion of this permit condition. [*§63.3410(a)(1)(vi)*]
  - b) Records specified in §63.10(c) for each CMS operated by the permittee in accordance with the requirements of 2) in the “Monitoring” portion of this permit condition. [*§63.3410(a)(2)*]
- 2) The permittee must maintain records of all liquid-liquid material balances performed in accordance with the requirements of the “Compliance Demonstration” portion of this permit condition. The records must be maintained in accordance with the requirements of §63.10(b). [*§63.3410(b)*]
- 3) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 4) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting [40 CFR §63.3400]:**

- 1) The permittee must submit the reports specified in 2) through 7) below to the Director: [*§63.3400(a)*]
- 2) The permittee must submit an initial notification as required by 40 CFR §63.9(b). [*§63.3400(b)*]
  - a) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in 40 CFR §63.3330(a). [*§63.3400(b)(1)*]
  - b) Initial notification for new and reconstructed affected sources must be submitted as required by 40 CFR §63.9(b). [*§63.3400(b)(2)*]
  - c) For the purpose of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under 40 CFR §63.9(b), provided the same information is contained in the permit application as required by 40 CFR §63.9(b) and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA to implement and enforce this subpart. [*§63.3400(b)(3)*]

- d) If using a permit application in lieu of an initial notification in accordance with c) above, the permit application must be submitted by the same due date specified for the initial notification. *[\\$63.3400(b)(4)]*
- 3) The permittee must submit a semi-annual monitoring report and compliance certification as required by Section V of this permit. The compliance report must contain the information in a) through f) below: *[\\$63.3400(c)]*
- a) Company name and address. *[\\$63.3400(c)(2)(i)]*
- b) Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report. *[\\$63.3400(c)(2)(ii)]*
- c) Date of report and beginning and ending dates of the reporting period. *[\\$63.3400(c)(2)(iii)]*
- d) If there are no deviations from any emission limitations (emission limit or operating limit) that apply to the permittee, 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. *[\\$63.3400(c)(2)(iv)]*
- e) For each deviation from an emission limitation (emission limit or operating limit) that applies to the permittee and that occurs at an affected source where the permittee is not using a CEMS to comply with the "Emission Limitations" portion of this permit condition, the compliance report must contain the information in a) through c) above, and: *[\\$63.3400(c)(2)(v)]*
- i) The total operating time of each affected source during the reporting period. *[\\$63.3400(c)(2)(v)(A)]*
- ii) Information on the number, duration, and cause of deviations (including unknown cause), if applicable, and the corrective action taken. *[\\$63.3400(c)(2)(v)(B)]*
- iii) 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. *[\\$63.3400(c)(2)(v)(C)]*
- f) For each deviation from an emission limit occurring at an affected source where a CEMS is being used to comply with the emission limit in this subpart, the permittee must include the information in a) through c) above and i) through x) below. *[\\$63.3400(c)(2)(vi)]*
- i) The date and time that each malfunction started and stopped. *[\\$63.3400(c)(2)(vi)(A)]*
- ii) The date and time that each CEMS and CPMS, if applicable, was inoperative except for zero (low-level) and high-level checks. *[\\$63.3400(c)(2)(vi)(B)]*
- iii) The date and time that each CEMS and CPMS, if applicable, was out-of-control, including the information in §63.8(c)(8). *[\\$63.3400(c)(2)(vi)]*
- iv) 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. *[\\$63.3400(c)(2)(vi)(D)]*
- v) 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. *[\\$63.3400(c)(2)(vi)(E)]*
- vi) 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. *[\\$63.3400(c)(2)(vi)(F)]*
- vii) 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. *[\\$63.3400(c)(2)(vi)(G)]*
- viii) 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. [*§63.3400(c)(2)(vi)(H)*]
- ix) The date of the latest CEMS and CPMS certification or audit. [*§63.3400(c)(2)(vi)(I)*]
- x) A description of any changes in CEMS, CPMS, or controls since the last reporting period. [*§63.3400(c)(2)(vi)(J)*]
- 4) The permittee must submit a Notification of Performance Tests as specified in 40 CFR §§63.7 and 63.9(e) if complying with the emission standard using a control device and if required to conduct a performance test of the control device. This notification and the site-specific test plan required under 40 C FR §63.7(c)(2) must identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the control device determined during the performance test are maintained. Unless EPA objects to the parameter or requests changes, the permittee may consider the parameter approved. [*§63.3400(d)*]
- 5) The permittee must submit a Notification of Compliance Status as specified in 40 CFR §63.9(h). [*§63.3400(e)*]
- 6) The permittee must submit performance test reports as specified in 40 CFR §63.10(d)(2) if using a control device to comply with the emission standard and the permittee has not obtained a waiver from the performance test requirement or the permittee is not exempted from this requirement by 2) in the “Performance Testing” portion of this permit condition. The performance test reports must be submitted as part of the notification of compliance status required in 5) above. [*§63.3400(f)*]
- 7) The permittee must submit startup, shutdown, and malfunction reports as specified in 40 CFR §63.10(d)(5), except that the provisions in 40 CFR Part 63 Subpart A pertaining to startups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this permit condition. [*§63.3400(g)*]
- a) If actions taken by the permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not consistent with the procedures specified in the affected source's SSMP required by 40 CFR §63.6(e)(3), the permittee must state such information in the report. The startup, shutdown, or malfunction report must consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy and must be submitted to the Director. [*§63.3400(g)(1)*]
- b) Separate startup, shutdown, and malfunction reports are not required if the information is included in the report specified in 3)f) above, [*§63.3400(g)(2)*]

**PERMIT CONDITION EU0070-002**

10 CSR 10-4.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment  
Used for Indirect Heating and  
Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 3 (Sections  
6.231 through 6.237) Particulate Matter from Fuel Burning Equipment

**Emission Limitation:**

The permittee shall not emit particulate matter in excess of ■ pounds per million BTU of heat input from emission unit EU0070.

**Operational/Equipment Limitation:**

This emission unit shall be limited to burning pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight.

**Monitoring/Recordkeeping:**

- 1) Documentation must be maintained for Permit Condition EU0070-004 supporting that all fuel burned in this unit is pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight. That documentation also suffices to demonstrate compliance with the operational/equipment limitation of this permit condition. The permittee only needs to maintain one set of that documentation.
- 2) The permittee will be in compliance with this permit condition as long this emission unit burns only pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5 sulfur by weight. Calculations demonstrating this are in Attachment B. The permittee shall keep this attachment with the rest of this permit.
- 3) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:  
Air Pollution Control Program Enforcement Section    Springfield Air Pollution Control Authority  
P.O. Box 176    227 East Chestnut Expressway  
Jefferson City, MO 65102    Springfield, MO 65802  
no later than ten days after any exceedance of the emission limitation or operational/equipment limitation of this permit condition.
- 2) The permittee shall report any deviations from the monitoring and recordkeeping requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION EU0070-003**

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants and  
Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 2 (Sections  
6.211 through 6.213) Visible Air Contaminants from Equipment

**Emission Limitations:**

No person shall discharge or permit the discharge of, into the outside atmosphere, from any single new source of emission whatsoever, any air contaminant:

- 1) Of a shade or density equal to or darker than that designated as number 1 on the Ringelmann smoke chart (20 percent opacity); or
- 2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke of a shade or density equal to or darker than that designated as number 1 on the Ringelmann smoke chart (20 percent opacity).
- 3) Exceptions:
  - a) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 2 on the Ringelmann chart (40% opacity) so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period;
  - b) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 3 (60% opacity) on the Ringelmann chart so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period and the emission is caused by the starting of or cleaning of a fire, and so long as such emissions do not occur on more than three occasions during any consecutive 24-hour period;
  - c) Air contaminants which fail to meet the requirements of section 6-211 or 6-212 only because of the presence therein of uncombined water; or

- d) Air contaminants resulting from an unavoidable breakdown or malfunction of equipment.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on this emission unit using the procedures contained in Test Method 22 in Appendix A of 40 CFR Part 60. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct an observation using the procedures contained in Test Method 9 in Appendix A of 40 CFR Part 60.
- 2) The following monitoring schedule must be maintained:
  - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then –
  - b) Observations must be made once every two (2) weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then –
  - c) Observations must be made semi-annually. If a violation is noted, monitoring reverts to weekly. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency. If the source has already performed the weekly and biweekly monitoring and is doing monitoring in compliance with a previous permit, the weekly and biweekly monitoring do not need to be repeated.

**Recordkeeping:**

- 1) The permittee shall maintain records of all Method 22 observation results (See Attachment C1 or C2.), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions that result in visible emissions. (See Attachment D.)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (See Attachment E.)
- 4) Attachments C1, C2, D, and E are forms satisfying these recordkeeping requirements. These forms or equivalents created by the permittee must be used to certify compliance with this requirement.
- 5) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 6) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:

Air Pollution Control Program Enforcement Section P.O. Box 176 Jefferson City, MO 65102	Springfield Air Pollution Control Authority 227 East Chestnut Expressway Springfield, MO 65802
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no later than ten days after the permittee determines, using the Method 9 test, that the emission unit

exceeded the opacity limit.

- 2) The permittee shall report any deviations from the monitoring, recordkeeping and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION EU0070-004**

10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds

**Emission Limitations:**

- 1) No person shall cause or allow emissions of sulfur dioxide into the atmosphere from any indirect heating source in excess of eight pounds of sulfur dioxide per million BTUs actual heat input averaged on any consecutive three hour time period
- 2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.

Pollutant	Concentration by Volume	Remarks
Sulfur Dioxide (SO <sub>2</sub> )	0.03 parts per million (ppm) (80 micrograms per cubic meter (µg/m <sup>3</sup> ))	Annual arithmetic mean
	0.14 ppm (365 µg/m <sup>3</sup> )	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 µg/m <sup>3</sup> )	3-hour average not to be exceeded more than once per year
Hydrogen Sulfide (H <sub>2</sub> S)	0.05 ppm (70 µg/m <sup>3</sup> )	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 µg/m <sup>3</sup> )	½-hour average not to be exceeded over 2 times in any 5 consecutive days
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	10 µg/m <sup>3</sup>	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 µg/m <sup>3</sup>	1-hour average not to be exceeded more than once in any 2 consecutive days

**Operational/Equipment Limitation:**

This emission unit shall be limited to burning pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight.

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain documentation supporting that all fuel burned in this unit is pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight.
  - a) Fuel purchase receipts, analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable for this documentation.
  - b) If none of the records specified in a) above are available, the permittee shall perform and maintain records of source testing. The heating value of the fuel shall be determined as specified in 10 CSR 10-6.040(2). Source testing shall be performed as specified in 10 CSR 10-6.030(6). The actual heat input shall be determined by multiplying the heating value of the fuel by the amount of fuel burned during the source test period.
  - c) Other methods approved in advance by the Air Pollution Control Program of the Missouri Department of Natural Resources and the Springfield Air Pollution Control Authority may be used.

- 2) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 3) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:  

Air Pollution Control Program Enforcement Section	Springfield Air Pollution Control Authority
P.O. Box 176	227 East Chestnut Expressway
Jefferson City, MO 65102	Springfield, MO 65802

 no later than ten days after any exceedance of the emission limitations or operational/equipment limitation of this permit condition.
- 2) The permittee shall report any deviations from the monitoring and recordkeeping requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

Note: The current version of 10 CSR 10-6.260 (May 30, 2004, effective date) exempts combustion equipment that exclusively uses pipeline grade natural gas or liquefied petroleum gas, or any combination of these fuels, from the requirements of this rule. However, even when the provisions of the current version of 10 CSR 10-6.260 are incorporated into the federally approved SIP as a final EPA action, the emission unit will still be subject to 10 CSR 10-6.260 because it can burn fuel oil.

<b>EU0090 THROUGH EU0310 – BUILDING 3 AND MOST OF BUILDING 11 UNITS</b>		
Emission Unit	Description	2004 EIQ Reference #
EU0090	120M Mixer	003-02
EU0100	215M Mixer	003-05
EU0110	318M Mixer	003-09, 003-10
EU0120	418M Mixer	003-11, 003-12
EU0130	10CR Reactor/Mixer	003-13
EU0140	20CR Reactor/Mixer	003-14
EU0150	61KM Mixer with condenser (Condenser may be installed in 2006.)	011-11
EU0160	60SS Blender	011-12, 011-13
* EU0170	07PM Blender	011-14, 011-41
* EU0180	LITT Powder Receiver	011-16
* EU0190	LITT Powder Receiver	011-17
* EU0200	LITT Blender	011-18
* EU0210	LITT Blender	011-21
* EU0220	LITT Ribbon Blender	011-23
* EU0230	CHEM Mixer	011-24
* EU0240	CHEM Nolte Mixer	011-25
* EU0250	17LW Mixer	011-26
* EU0260	71HM Mixer	011-27
EU0270	55HS Hold Tank	011-33
EU0280	51HS Hold Tank	011-34
EU0390	21HS Mixer	011-35
EU0300	51HS Mixer	011-37
EU0310	55HS Mixer	011-39

**PERMIT CONDITION (EU0090 THROUGH EU0310)-001**

10 CSR 10-6.060 Construction Permits Required

Air Pollution Control Program Construction Permit #1182-007A, Issued 11/04/1982,  
 Springfield Air Pollution Control Authority Construction Permit #0685006D, Issued 06/27/1985,  
 Springfield Air Pollution Control Authority Construction Permit #0686015D, Issued 06/30/1986, and  
 Springfield Air Pollution Control Authority Construction Permit #1186020D, Issued 11/12/1986

**Emission Limitation:**

The permittee shall not emit more than 40 tons of VOC in any consecutive 12-month period from the following combination of sources:

- |                                                 |                                                |
|-------------------------------------------------|------------------------------------------------|
| * <i>EU0030 – Talc Storage Silo (TK-136)</i>    | * <i>EU0200 – LITT Blender (011-18)</i>        |
| EU0090 – 120M Mixer (003-02)                    | * <i>EU0210 – LITT Blender (011-21)</i>        |
| EU0100 – 215M Mixer (003-05)                    | * <i>EU0220 – LITT Ribbon Blender (011-23)</i> |
| EU0110 – 318M Mixer (003-09, 003-10)            | * <i>EU0230 – CHEM Mixer (011-24)</i>          |
| EU0120 – 418M Mixer (003-11, 003-12)            | * <i>EU0240 – CHEM Nolte Mixer (011-25)</i>    |
| EU0130 – 10CR Reactor/Mixer (003-13)            | * <i>EU0250 – 17LW Mixer (011-26)</i>          |
| EU0140 – 20CR Reactor/Mixer (003-14)            | * <i>EU0260 – 71HM Mixer (011-27)</i>          |
| EU0150 – 61KM Mixer with condenser † (011-11)   | EU0270 – 55HS Hold Tank (011-33)               |
| EU0160 – 60SS Blender (011-12, 011-13)          | EU0280 – 51HS Hold Tank (011-34)               |
| * <i>EU0170 – 07PM Blender (011-14, 011-41)</i> | EU0290 – 21HS Mixer (011-35)                   |
| * <i>EU0180 – LITT Powder Receiver (011-16)</i> | EU0300 – 51HS Mixer (011-37)                   |
| * <i>EU0190 – LITT Powder Receiver (011-17)</i> | EU0310 – 55HS Mixer (011-39)                   |

† Condenser may be installed on 61KM Mixer sometime in 2006.

**Monitoring/Recordkeeping/Reporting:**

The monitoring, recordkeeping, and reporting required to demonstrate compliance with Permit Condition PW001 also suffice to demonstrate compliance with this permit condition. No additional monitoring, recordkeeping, or reporting is required for this permit condition.

Note: The sources in the above lists which are asterisked and italicized have been inactivated and are expected to be removed / decommissioned around September 1, 2006. After a piece of equipment is removed / decommissioned, this permit condition will no longer apply to it.

<b>EU0320 THROUGH EU0350 – REST OF BUILDING 11 UNITS AND BUILDING 2 UNIT</b>		
Emission Unit	Description	2004 EIQ Reference #
EU0320	WBPM400 Mixer, installed 2002	011-46
EU0330	WBPM80 Mixer, installed 2002	011-48
EU0340	RE01 Mixer, installed 2002	011-04, 011-07, 011-44, 011-45
EU0350	GRAN (chops rubber into small pieces) and baghouse, installed after September 24, 1971.	002-13

**PERMIT CONDITION (EU0320 THROUGH EU0350)-001**

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants and  
Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 2 (Sections  
6.211 through 6.213) Visible Air Contaminants from Equipment

**Emission Limitations:**

No person shall discharge or permit the discharge of, into the outside atmosphere, from any single new source of emission whatsoever, any air contaminant:

- 1) Of a shade or density equal to or darker than that designated as number 1 on the Ringelmann smoke chart (20 percent opacity); or
- 2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke of a shade or density equal to or darker than that designated as number 1 on the Ringelmann smoke chart (20 percent opacity).
- 3) Exceptions:
  - a) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 2 on the Ringelmann chart (40% opacity) so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period;
  - b) Air contaminants of a shade, density or opacity equal to but not darker than that designated as number 3 (60% opacity) on the Ringelmann chart so long as the emission shall not exist for a period aggregating more than six minutes in any consecutive 60-minute period and the emission is caused by the starting of or cleaning of a fire, and so long as such emissions do not occur on more than three occasions during any consecutive 24-hour period;
  - c) Air contaminants which fail to meet the requirements of section 6-211 or 6-212 only because of the presence therein of uncombined water; or
  - d) Air contaminants resulting from an unavoidable breakdown or malfunction of equipment.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on these emission units using the procedures contained in Test Method 22 in Appendix A of 40 CFR Part 60. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct an observation using the procedures contained in Test Method 9 in Appendix A of 40 CFR Part 60.
- 2) The following monitoring schedule must be maintained:
  - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then –
  - b) Observations must be made once every two (2) weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then –
  - c) Observations must be made semi-annually. If a violation is noted, monitoring reverts to weekly. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency. If the source has already performed the weekly and biweekly monitoring and is doing monitoring in compliance with a previous permit, the weekly and biweekly monitoring do not need to be repeated.

**Recordkeeping:**

- 1) The permittee shall maintain records of all Method 22 observation results (See Attachment C1 or C2.), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions that result in visible emissions. (See Attachment D.)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (See Attachment E.)
- 4) Attachments C1, C2, D, and E are forms satisfying these recordkeeping requirements. These forms or equivalents created by the permittee must be used to certify compliance with this requirement.
- 5) The permittee shall maintain these records for the most recent five years. They must be maintained on-site for two years. They may be kept in either written or electronic form.
- 6) The permittee shall immediately make these records available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

**Reporting:**

- 1) The permittee shall report to both of the following:

Air Pollution Control Program Enforcement Section P.O. Box 176 Jefferson City, MO 65102	Springfield Air Pollution Control Authority 227 East Chestnut Expressway Springfield, MO 65802
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no later than ten days after the permittee determines, using the Method 9 test, that the emission unit(s) exceeded the opacity limit.
- 2) The permittee shall report any deviations from the monitoring, recordkeeping and reporting requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.

**PERMIT CONDITION (EU0340 AND EU0350) -002**

10 CSR 10-6.400 Restriction of Emission of Particulate Matter From Industrial Processes and Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) Particulate Matter from Industrial Processes

**Emission Limitation:**

- 1) The permittee shall not emit particulate matter in excess of █ lbs/hr from the RE01 Mixer (EU0340).
- 2) The permittee shall not emit particulate matter in excess of █ lbs/hr from the GRAN (EU0350).
- 3) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 grain per standard cubic foot.

**Monitoring/Recordkeeping/Reporting:**

- 1) Attachments G and H contain calculations demonstrating that these units are always in compliance with this permit condition. The permittee shall keep these attachments with the rest of this permit.
- 2) The permittee shall immediately make these attachments available for inspection to any Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.

## IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR), Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### **Springfield City Code Article XVI Breakdown of Equipment**

In the event that emissions as a direct result of upset conditions or breakdown exceed any of the established limits, the permittee shall advise the city of Springfield Director of Health of such a breakdown and outline a corrective program acceptable to the Director.

**This requirement is not federally or state enforceable.**

### **10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions**

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
  - a) Name and location of installation;
  - b) Name and telephone number of person responsible for the installation;
  - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
  - d) Identity of the equipment causing the excess emissions;
  - e) Time and duration of the period of excess emissions;
  - f) Cause of the excess emissions;
  - g) Air pollutants involved;
  - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
  - i) Measures taken to mitigate the extent and duration of the excess emissions; and
  - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.

- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

### **Springfield City Code Article III Construction Permits Required**

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

### **10 CSR 10-6.065 Operating Permits**

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(5)(B)1.A(III)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)3.B]

### **10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information**

- 1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 3) The fees shall be due April 1 each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

### **10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential**

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

### **10 CSR 10-6.150 Circumvention**

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

### **10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin**

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin

of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.

- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
  - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
  - b) Paving or frequent cleaning of roads, driveways and parking lots;
  - c) Application of dust-free surfaces;
  - d) Application of water; and
  - e) Planting and maintenance of vegetative ground cover.
- 4) The staff director may allow an exemption for unusual and adverse weather conditions for any activity which would otherwise be a violation of item 1) or 2) above. These conditions may include, but are not limited to, high winds, extended dry weather periods and extreme cold weather periods.

#### **10 CSR 10-6.180 Measurement of Emissions of Air Contaminants**

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

#### **10 CSR 10-4.090 or Springfield City Code Article VIII Open Burning Restrictions**

- 1) The permittee shall not conduct, cause, permit or allow a salvage operation, the disposal of trade wastes or burning of refuse by open burning.
- 2) Exception - Open burning of trade waste or vegetation may be permitted only when it can be shown that open burning is the only feasible method of disposal or an emergency exists which requires open burning.
- 3) Any person intending to engage in open burning shall file a request to do so with the director. The request shall include the following:
  - a) The name, address and telephone number of the person submitting the application; The type of business or activity involved; A description of the proposed equipment and operating practices, the type, quantity and composition of trade wastes and expected composition and amount of air contaminants to be released to the atmosphere where known;
  - b) The schedule of burning operations;
  - c) The exact location where open burning will be used to dispose of the trade wastes;
  - d) Reasons why no method other than open burning is feasible; and
  - e) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.

- 4) Upon approval of the open burning permit application by the director, the person may proceed with the operation under the terms of the open burning permit. Be aware that such approval shall not exempt 3M Springfield from the provisions of any other law, ordinance or regulation.
- 5) The permittee shall maintain files with letters from the director approving the open burning operation and previous DNR inspection reports.

#### **10 CSR 10-4.070 Restriction on Emission of Odors**

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. **This requirement is not federally enforceable.**

#### **Springfield City Code Article X Control of Odors in the Ambient Air**

No person shall emit odorous matter as to cause an objectionable odor on or adjacent to:

- 1) Residential, recreational, institutional, retail sales, hotel or educational premises.
- 2) Industrial premises when air containing odorous matter is diluted with 20 or more volumes of odor-free air; or
- 3) Premises other than those in 1. and 2 above when air containing odorous matter is diluted with four or more volumes of odor-free air.

The previously mentioned requirement shall apply only to objectionable odors. An odor will be deemed objectionable when 30% or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy; the sample size to be at least 20 people or 75% of those exposed if fewer than 20 people are exposed. **This requirement is not federally enforceable.**

#### **Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone**

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
  - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
  - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
  - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

- d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
  - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
  - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
  - 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR part 82*

#### **10 CSR 10-6.280 Compliance Monitoring Usage**

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
  - a) Applicable monitoring or testing methods, cited in:
    - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
    - ii) 10 CSR 10-6.040, "Reference Methods";
    - iii) 10 CSR 10-6.070, "New Source Performance Standards";
    - iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
  - b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

## V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### **10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.B Permit Duration**

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

### **10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.C General Recordkeeping and Reporting Requirements**

- 1) Recordkeeping
  - a) All required monitoring data and required support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
  - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources or Springfield Air Pollution Control Authority personnel upon request.
- 2) Reporting
  - a) All reports shall be submitted to both of the following:

Air Pollution Control Program	Springfield Air Pollution Control Authority
Enforcement Section	227 East Chestnut Expressway
P.O. Box 176	Springfield, MO 65802
Jefferson City, MO 65102	
  - b) The permittee shall submit a report of all required monitoring by:
    - i) April 1 for monitoring which covers the July through December time period.
    - ii) October 1 for monitoring which covers the January through June time period.
    - ii) Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
  - c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit.
  - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
    - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7 of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice

- must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
- ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
  - iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semi-annual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
  - f) The permittee may request confidential treatment of information submitted in any report of deviation.

**10 CSR 10-6.065 §(5)(C)1 and §(6)(C)1.D Risk Management Plan Under Section 112(r)**

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

**10 CSR 10-6.065(5)(C)1.A General Requirements**

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application. However, any terms and conditions that are designated as “not federally enforceable” or “not federally or state enforceable” are not enforceable by the Environmental Protection Agency or citizens pursuant to the Clean Air Act.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The

permittee may make a claim of confidentiality for any information or records submitted under this rule.

- 6) Failure to comply with the limitations and conditions that qualify the installation for an Intermediate permit make the installation subject to the provisions of 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit.

<b>10 CSR 10-6.065(5)(C)1.C Reasonably Anticipated Operating Scenarios</b>
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None.

<b>10 CSR 10-6.065, §(5)(B)4; §(5)(C)1, §(6)(C)3.B; and §(6)(C)3.D; and §(5)(C)3 and §(6)(C)3.E.(I) – (III) and (V) – (VI) Compliance Requirements</b>
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- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
  - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
  - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
  - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and exceedances must be included in the compliance certifications. The compliance certification shall include the following:
  - a) The identification of each term or condition of the permit that is the basis of the certification;
  - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
  - c) Whether compliance was continuous or intermittent;
  - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and

- e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

**10 CSR 10-6.065, §(5)(C)1 and §(6)(C)7 Emergency Provisions**

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
  - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
  - b) That the installation was being operated properly,
  - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
  - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

**10 CSR 10-6.065(5)(C)5 Off-Permit Changes**

- 1) Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:
  - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the recordkeeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
  - b) The permittee must provide written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, no later than the next annual emissions report. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and
  - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

**10 CSR 10-6.020(2)(R)12 Responsible Official**

The application utilized in the preparation of this permit was signed by Michael Retterath, Plant Manager at the time. The responsible official for purposes of this permit includes any of the following persons: the president, secretary, treasurer, or vice-president of 3M, including 3M's Vice President for Environmental Health and Safety Operations, as well as the 3M plant manager for the Springfield plant. All persons holding a position in this list are responsible persons to represent and bind the installation in

environmental permitting affairs. If this changes, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the complete new list of responsible officials assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by a responsible official that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

**10 CSR 10-6.065 §(5)(E)4 and §(6)(E)6.A(III)(a)-(c) Reopening-Permit for Cause**

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 2) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
  - a) The permit has a remaining term of less than three years;
  - b) The effective date of the requirement is later than the date on which the permit is due to expire;or
  - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 3) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

**10 CSR 10-6.065 §(5)(E)1.A and §(6)(E)1.C Statement of Basis**

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

## **VI. Attachments**

Attachments follow.







**ATTACHMENT A4**  
**Tracking Record of Monthly Individual HAP Emissions from All Sources**

For month of \_\_\_\_\_, year of \_\_\_\_\_

For HAP Name: \_\_\_\_\_ CAS No.: \_\_\_\_\_ <sup>1</sup>

Company Name: 3M Springfield

Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

\_\_\_\_\_ Subtotal of This HAP Emitted This Month from Coating Operations <sup>2</sup> (tons)

\_\_\_\_\_ Subtotal of This HAP Emitted This Month from Tanks <sup>3</sup> (tons)

\_\_\_\_\_ Subtotal of This HAP Emitted This Month from Compounding <sup>4</sup> (tons)

\_\_\_\_\_ Subtotal of this HAP emitted this month from any other source <sup>5</sup> (tons)

\_\_\_\_\_ Total of This HAP Emitted This Month <sup>6</sup> (tons)

\_\_\_\_\_ Running 12-Month Total of This HAP Emitted <sup>7</sup> (tons)

- 1 Duplicate and fill out this form each month for each HAP emitted
- 2 Take this figure from Attachment A1 for this HAP for this month and year
- 3 Take this figure from Attachment A2 for this HAP for this month and year
- 4 Take this figure from Attachment A3 for this HAP for this month and year
- 5 If there are any other sources of this HAP for this month and year at the installation, enter the subtotal emitted here, and maintain documentation verifying the figure.
- 6 Sum the subtotals on the previous four lines to obtain this total
- 7 Sum the total line above and the total lines from the previous 11 months' Attachment A4s for this HAP to obtain this running 12-month total

***If "Running 12-Month Total of This HAP Emitted" is not more than 9.9 tons for any HAP emitted, then installation is in compliance with the first emission limitation of Permit Condition PW001.***



**ATTACHMENT B**

**Page 1 of 2**

**Demonstration of Compliance with Permit Conditions (EU0010 AND EU0020)-001 and EU0070-002**

Company Name: 3M Springfield  
 Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

The following calculations demonstrate that, as long as they are burning pipeline grade natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight, Boiler #1 (EU0010), Boiler #2 (EU0020), and the Thermal Oxidizer (EU0070) are in compliance with the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 3 (Sections 6.231 through 6.237) Particulate Matter from Fuel Burning Equipment. Since that regulation is more restrictive than 10 CSR 10-4.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating, these emission units are also in compliance with 10 CSR 10-4.040.

The installation's total heat input Q in millions of Btu per hour =

$$\frac{? \text{MMBtu}}{\text{hr}} \text{ for Boiler\#1} + \frac{? \text{MMBtu}}{\text{hr}} \text{ for Boiler\#2} + \frac{? \text{MMBtu}}{\text{hr}} \text{ for ThermalOxidizer} = ? \text{MMBtu} / \text{hr}$$

This can be converted to millions of cubic feet of natural gas per hour by using the thermal equivalent conversion factor for natural gas, 1050 Btu per cubic foot.

$$\left( \frac{? \times 10^6 \text{ Btu}}{\text{hr}} \right) \left( \frac{\text{ft}^3}{1050 \text{ Btu}} \right) = \frac{? \text{ft}^3}{\text{hr}} = ? \text{MMCF} / \text{hr}$$

It can be converted to gallons of distillate fuel oil by using the thermal equivalent conversion for distillate fuel oil, 5.9 X 10<sup>6</sup> Btu/bbl. Note that this is a U. S. petroleum barrel of 42 gallons, not a U.S. liquid barrel of 31.5 gallons.

$$\left( \frac{? \times 10^6 \text{ Btu}}{\text{hr}} \right) \left( \frac{\text{bbl}}{5.9 \times 10^6 \text{ Btu}} \right) \left( \frac{42 \text{ gal}(\text{petroleum})}{\text{bbl}} \right) = ? \text{gal} / \text{hr}$$

Allowable PM Emission Factor = ■ lb/MMBtu, per the Springfield ordinance. This was determined by interpolating between the ■ lb/MMBtu the regulation allows for a ■ MMBtu/hr source and the ■ lb/MMBtu it allows for a ■ MMBtu/hr source.

$$\text{Allowable PM Emission Factor} = 0.90 \left( \frac{? \text{MMBtu}}{\text{hr}} \right)^{-0.174} = \blacksquare \text{ lb/MMBtu, per 10 CSR 10 4.040}$$

The allowable PM emission rate is calculated using the lower of these two emission factors.

$$\text{Allowable PM Emission Rate} = \left( \frac{? \text{MMBtu}}{\text{hr}} \right) \left( \frac{? \text{lb}}{\text{MMBtu}} \right) = ? \text{lb} / \text{hr}$$

Table 1.4-2 in U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition gives the emission factor for total PM for these emission units as 7.6 lb/10<sup>6</sup> ft<sup>3</sup> of natural gas burned. Table 1.3-1 gives the emission factor for PM as 2 lb/10<sup>3</sup> gal of distillate fuel oil burned.

**ATTACHMENT B**

**Page 2 of 2**

**Demonstration of Compliance with Permit Conditions (EU0010 AND EU0020)-001  
and EU0070-002**

Company Name: 3M Springfield

Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

$$PotentialPMEmissionRateBurningGas = \left( \frac{? \times 10^6 \text{ ft}^3}{hr} \right) \left( \frac{7.6 \text{ lb}}{10^6 \text{ ft}^3} \right) = ? \text{ lb/hr}$$

$$PotentialPMEmissionRateBurningOil = \left( \frac{? \text{ gal}}{hr} \right) \left( \frac{2 \text{ lb}}{10^3 \text{ gal}} \right) = ? \text{ lb/hr}$$

For particulate matter, the potential emission rate for EU0010, EU0020, and EU0070 is less than ■% of their allowable emission rate. Therefore, as long as these units burn only natural gas or fuel oil with a sulfur content of no more than 0.5% sulfur by weight, they will be in compliance with these regulations.







**ATTACHMENT E**

Method 9 Opacity Emission Observations	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Min.	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY				
Set Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from \_\_\_\_\_ to \_\_\_\_\_ % opacity.  
 Was the emission unit in compliance at the time of evaluation? \_\_\_\_\_  
 YES NO Signature of Observer \_\_\_\_\_

**ATTACHMENT F**  
**Demonstration of Compliance with Permit Condition EU0030-003**

Company Name: 3M Springfield  
Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

The following calculations demonstrate that the Talc Storage Silo (EU0030) is in compliance both with the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) Particulate Matter from Industrial Processes and with 10 CSR 10-6.400 Maximum Allowable Emission of Particulate Matter From Industrial Processes.

Maximum Hourly Design Rate = ■ ton talc loaded per hour

Stack Flow rate = ■ standard cubic feet per minute (scfm)

Controlled Emission Factor = 0.0035 lb PM / 1000 lb talc loaded (from Table 11.26-1 in U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.) This emission factor assumes that a fabric filter control is being used. To get the worst-case uncontrolled emission factor, assume 99.9% control efficiency by the fabric filter.

Then

(100% - 99.9%) X Uncontrolled Emission Factor = 0.0035 lb PM / 1000 lb talc loaded,

so

Uncontrolled Emission Factor = 3.5 lb PM / 1000 lb talc loaded,

and converting pounds to tons gives

$$\text{Uncontrolled Emission Factor} = \left( \frac{3.5 \text{ lb PM}}{1000 \text{ lb Talc Loaded}} \right) \left( \frac{2000 \text{ lb}}{\text{ton}} \right) = \frac{7.0 \text{ lb PM}}{\text{ton Talc Loaded}}$$

Uncontrolled Potential Emission Rate = Maximum Hourly Design Rate X Uncontrolled Emission Factor

$$= \left( \frac{? \text{ ton Talc Loaded}}{\text{hr}} \right) \left( \frac{7.0 \text{ lb PM}}{\text{ton Talc Loaded}} \right) = \frac{? \text{ lb PM}}{\text{hr}}$$

Allowable Emission Rate = ■ lb PM/hr, per the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Sections 6.254 and 6.154

Allowable Emission Rate = 4.10(■)<sup>0.67</sup> = ■ lb PM/hr, per 10 CSR 10-6.400

$$\text{Uncontrolled Potential Concentration} = \left( \frac{? \text{ lb PM}}{\text{hr}} \right) \left( \frac{7000 \text{ grains}}{\text{lb}} \right) \left( \frac{\text{min}}{? \text{ scf}} \right) \left( \frac{\text{hr}}{60 \text{ min}} \right) = \frac{? \text{ gr PM}}{\text{scf}}$$

Allowable Concentration = 0.30 gr PM/scf, per either regulation.

For particulate matter, the worst-case potential uncontrolled emission rate of ■ lb PM/hr is less than either of the allowable emission rates of ■ lb PM/hr and ■ lb PM/hr. The worst-case potential uncontrolled concentration of ■ gr PM/scf is much less than the allowable concentration of 0.30 gr PM/scf. Therefore, this unit is in compliance with Permit Condition EU0030-003.

**ATTACHMENT G**

**Page 1 of 2**

**Demonstration of Compliance with Permit Condition (EU0340 AND EU0350)-002**

Company Name: 3M Springfield

Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

The following calculations demonstrate that the RE01 Mixer (EU0340) is in compliance both with the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) Particulate Matter from Industrial Processes and with 10 CSR 10-6.400 Maximum Allowable Emission of Particulate Matter From Industrial Processes.

Maximum Hourly Design Rate = ■ gallons product per hour. Since this unit mixes several different products, the worst-case scenario at the time this permit was written was used. The product that required the most powder addition then had a density of ■ lb/gal and a powder content of ■% by weight. The following calculation converts the MHDR from gallons product per hour to tons powder per hour.

Maximum Hourly Design Rate =

$$\left(\frac{? \text{ gal Pr oduct}}{\text{hr}}\right)\left(\frac{? \text{ lb Pr oduct}}{\text{gal Pr oduct}}\right)\left(\frac{? \text{ lb Powder}}{\text{lb Pr oduct}}\right)\left(\frac{\text{ton Powder}}{2000 \text{ lb Powder}}\right) = \frac{? \text{ ton Powder}}{\text{hr}}$$

Stack Flow rate = ■ standard cubic feet per minute (scfm) at EIQ Reference # 011-04  
= ■ scfm at EIQ Reference # 011-07

Uncontrolled Emission Factor = 2 lb PM / ton powder (from Table 6.7-1 in U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.) This emission factor is for the addition of pigment in ink manufacturing. At the time this permit was written, no emission factors were available for the addition of powder in adhesive manufacturing, so this emission factor was used as a best estimate.

Uncontrolled Potential Emission Rate = Maximum Hourly Design Rate X Uncontrolled Emission Factor

$$= \left(\frac{? \text{ ton Powder}}{\text{hr}}\right)\left(\frac{2 \text{ lb PM}}{\text{ton Powder}}\right) = \frac{? \text{ lb PM}}{\text{hr}}$$

Allowable Emission Rate = ■ lb PM/hr, per the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Sections 6.254 and 6.154

Allowable Emission Rate = 4.10(■)<sup>0.67</sup> = ■ lb PM/hr, per 10 CSR 10-6.400

Uncontrolled Concentration

$$\text{At 011-04,} = \left(\frac{? \text{ lb PM}}{\text{hr}}\right)\left(\frac{7000 \text{ grains}}{\text{lb}}\right)\left(\frac{\text{min}}{? \text{ scf}}\right)\left(\frac{\text{hr}}{60 \text{ min}}\right) = \frac{? \text{ gr PM}}{\text{scf}}$$

$$\text{At 011-07,} = \left(\frac{? \text{ lb PM}}{\text{hr}}\right)\left(\frac{7000 \text{ grains}}{\text{lb}}\right)\left(\frac{\text{min}}{? \text{ scf}}\right)\left(\frac{\text{hr}}{60 \text{ min}}\right) = \frac{? \text{ gr PM}}{\text{scf}}$$

Allowable concentration = 0.30 gr PM/scf, per either regulation.

**ATTACHMENT G**

**Page 2 of 2**

**Demonstration of Compliance with Permit Condition (EU0340 AND EU0350)-002**

Company Name: 3M Springfield

Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

For particulate matter, the worst-case potential uncontrolled emission rate of ■ lb PM/hr is less than either of the allowable emission rates of ■ lb PM/hr and ■ lb PM/hr. Both the worst-case potential uncontrolled concentrations of ■ gr PM/scf and ■ gr PM/scf are less than the allowable concentration of 0.30 gr PM/scf. Therefore, unit EU0340 is in compliance with Permit Condition (EU0340 AND EU0350)-002.

**ATTACHMENT H**

**Page 1 of 2**

**Demonstration of Compliance with Permit Condition (EU0340 AND EU0350)-002**

Company Name: 3M Springfield

Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

The following calculations demonstrate that the GRAN (EU0350) is in compliance both with the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) Particulate Matter from Industrial Processes and with 10 CSR 10-6.400 Maximum Allowable Emission of Particulate Matter From Industrial Processes.

Maximum Hourly Design Rate = ■ tons rubber chopped per hour

Stack Flow rate (assumed the same as for the rubber mills) = ■ standard cubic feet per minute (scfm)

Controlled Emission Factor =  $9.09 \times 10^{-7}$  lb/lb rubber processed

This emission factor is taken from Table 4.12-12 in U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition. It is for grinding operations in rubber manufacturing, which will produce about the same, or more, particulate emissions than EU0350 does. The table gives emission factors for several different grinding operations. The one for retread is used, because it is given in lb PM/lb of rubber processed. The emission factors for the other grinding operations listed are given in lb PM/lb of rubber removed. This emission factor assumes that a fabric filter control with 97.9% control efficiency is being used.

Then

(100% - 97.9%) X Uncontrolled Emission Factor =  $9.09 \times 10^{-7}$  lb PM/lb rubber processed,  
 so

Uncontrolled Emission Factor =  $4.33 \times 10^{-5}$  lb PM/lb rubber processed,  
 and converting pounds to tons gives

$$\text{Uncontrolled Emission Factor} = \left( \frac{4.33 \times 10^{-5} \text{ lbPM}}{\text{lbRubber Pr ocessed}} \right) \left( \frac{2000 \text{ lb}}{\text{ton}} \right) = \frac{0.087 \text{ lbPM}}{\text{tonRubber Pr ocessed}}$$

Uncontrolled Potential Emission Rate = Maximum Hourly Design Rate X Uncontrolled Emission Factor

$$= \left( \frac{? \text{ tonRubber Pr ocessed}}{\text{hr}} \right) \left( \frac{0.087 \text{ lbPM}}{\text{tonRubber Pr ocessed}} \right) = \frac{? \text{ lbPM}}{\text{hr}}$$

Allowable Emission Rate = ■ lb PM/hr, per the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Sections 6.254 and 6.154

Allowable Emission Rate =  $4.10(\text{■})^{0.67} = \text{■}$  lb PM/hr, per 10 CSR 10-6.400

$$\text{Uncontrolled Potential Concentration} = \left( \frac{? \text{ lbPM}}{\text{hr}} \right) \left( \frac{7000 \text{ grains}}{\text{lb}} \right) \left( \frac{\text{min}}{? \text{ scf}} \right) \left( \frac{\text{hr}}{60 \text{ min}} \right) = \frac{? \text{ grPM}}{\text{scf}}$$

Allowable Concentration = 0.30 gr PM/scf, per either regulation.

**ATTACHMENT H**

**Page 2 of 2**

**Demonstration of Compliance with Permit Condition (EU0340 AND EU0350)-002**

Company Name: 3M Springfield

Facility Location: 3211 East Chestnut Expressway, Springfield, MO 65802      Greene County      Facility ID: 077-0051

For particulate matter, the worst-case potential uncontrolled emission rate of ■ lb PM/hr is less than either of the allowable emission rates of ■ lb PM/hr and ■ lb PM/hr. The worst-case potential uncontrolled concentration of ■ gr PM/scf is much less than the allowable concentration of 0.30 gr PM/scf. Therefore, unit EU0350 is in compliance with Permit Condition (EU0340 AND EU0350)-002.



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# STATEMENT OF BASIS

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## Voluntary Limitations

In order to qualify for this Intermediate State Operating Permit, the permittee has accepted voluntary, federally enforceable emission limitations. Per 10 CSR 10-6.065(5)(C)1.A.(VI), if these limitations are exceeded, the installation immediately becomes subject to 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit. It is the permittee's responsibility to monitor emission levels and apply for a part 70 operating permit far enough in advance to avoid this situation. This may mean applying more than eighteen months in advance of the exceedance, since it can take that long or longer to obtain a part 70 operating permit.

## Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Intermediate Operating Permit Application, received 4/10/2006;
- 2) 2004 Emissions Inventory Questionnaire, received 3/25/2005;
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition,
- 4) Construction permits other than those listed in the "Documents Incorporated by Reference" portion of Section II of this permit (These are items 5) through 14) in the list of construction permits issued in the "Construction Permit Revisions" below.), and
- 5) The "No Permit Required" letters for the installation listed below.
  - a) The January 16, 1992, letter from Melanie Field, P.E., Senior Environmental Engineer at 3M to Ronald Boyer, Chief of Air Pollution Control Springfield-Greene County, regarding installation of a solventless hot melt barrier coater, a jet melt process line improvement, and temporary installation of a 400-gallon vessel. Also the February 6, 1992, response letter from Karl Barke, Air Control Specialist III in Springfield.
  - b) The October 22, 1992, letter from Hazem El-Gamal, Environmental Engineer for 3M to Ronald Boyer regarding installation of an 8,000-gallon epoxy resin storage tank (TK-888-27). Also the November 6, 1992 response letter from Ronald Boyer.
  - c) The February 23, 1993 letter from Ronald Boyer to Hazem El-Gamal regarding installation of 30,000-gallon fuel oil tank (TK-888-33).
  - d) The June 14, 1993, letter from Hazem El-Gamal to Ronald Boyer regarding installation of a packaging system. Also the July 2, 1993, response letter from Ronald Boyer.
  - e) The July 22, 1993 letter from Hazem El-Gamal to Ronald Boyer regarding installation of a fabric filter on a grandfathered Banbury mixer.
  - f) The August 31, 1993 letter from Hazem El-Gamal to Brian Adams, Springfield – Greene County Public Health Center, regarding minor modifications to the chemical processing system.
  - g) The February 4, 2003 letter from Brian Adams to Wendy Reno, Advanced Environmental Engineer at 3M regarding the Visa Process (003-37, 003-38, 003-39)

There may be additional "No Permit Required" letters in the Springfield Air Pollution Control Authority files.

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**Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits**

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

None.

**Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program (APCP) has determined that the following requirements are not applicable to this installation at this time for the reasons stated.

**10 CSR 10-6.100, *Alternate Emission Limits***

This rule is not applicable because the installation is in an ozone attainment area.

**Construction Permit Revisions**

Following is a list of the construction permits issued to this installation, with all revisions made to them by this operating permit.

- 1) 1182-007A, issued 11/04/1982 by Department of Natural Resources Air Pollution Control Program. This permitted the urethane 1 line (a.k.a. the black line), and restricted the combined VOC emissions from this line and some existing equipment to 40 tons per year (tpy.) The urethane 1 line consisted of LITT Powder Receiver (011-16), LITT Blender (011-18), LITT Ribbon Blender (011-23), CHEM Mixer (011-24), CHEM Nolte Mixer (011-25), and 10CR Reactor/Mixer (003-13). The existing grandfathered equipment consisted of 215M Mixer (003-05), 318M Mixer (003-09, 003-10), and 418M Mixer (003-11, 003-12). The urethane 1 line, except for the 10CR Reactor/Mixer, has since been inactivated and is expected to be removed / decommissioned around September 1, 2006. The conditions of this construction permit will not apply to equipment after it is removed / decommissioned.
- 2) 0685-006D, issued 06/27/1985 by Springfield Air Pollution Control Authority. This permitted the urethane 2 line (a.k.a. the white line). It restricted the combined VOC emissions of this, the urethane 1 line permitted by 1182-007A, and the existing equipment to 40 tpy. This urethane 2 line consisted of 20CR Reactor/Mixer (003-14), LITT Powder Receiver (011-17), LITT Blender (011-21), 17LW Mixer (011-26), and 71HM Mixer (011-27). The urethane 1 and urethane 2 lines, except for the 10CR Reactor/Mixer and the 20CR Reactor/Mixer, have since been inactivated and are expected to be removed / decommissioned around September 1, 2006. The conditions of this construction permit will not apply to equipment after it is removed / decommissioned.
- 3) 0686-015D, issued 06/30/1986 by Springfield Air Pollution Control Authority. This permitted the #20 Mogul system in building 11, now known as 120M Mixer (003-02). It restricted the combined VOC emissions of this, the urethane 2 line permitted by 0685-006D, the urethane 1 line permitted by 1182-007A, and the existing equipment to 40 tpy. The urethane 1 and urethane 2 lines, except for the 10CR Reactor/Mixer and the 20CR Reactor/Mixer, have since been inactivated and are expected to be removed / decommissioned around September 1, 2006. The conditions of this construction permit will not apply to equipment after it is removed / decommissioned.
- 4) 1186-020D, issued 11/12/1986 by Springfield Air Pollution Control Authority. This permitted 61KM Mixer (011-11), 60SS Blender (011-12, 011-13), 07PM Blender (011-14, 011-41) five hold tanks (including 55HS Hold Tank (011-33) and 51HS Hold Tank (011-34)), 51HS Mixer (011-37), 55HS Mixer (011-39) and a 250-gallon Kady mill. It restricted the combined VOC emissions of these, the #20 Mogul system permitted by 0686-015D, the urethane 2 line permitted by

0685-006D, the urethane 1 line permitted by 1182-007A, and the existing equipment to 40 tpy The 250-gallon Kady mill was replaced by 21HS, which was permitted by 0891-120D. The 07PM Blender and the urethane 1 and urethane 2 lines, except for the 10CR Reactor/Mixer and the 20CR Reactor/Mixer, have since been inactivated and are expected to be removed / decommissioned around September 1, 2006. The conditions of this construction permit will not apply to equipment after it is removed / decommissioned. A condenser may be installed on the 61KM Mixer sometime in 2006.

- 5) 0590-050D, issued 05/23/1990 by Springfield Air Pollution Control Authority  
This permitted a vertical mixer (011-01), with no conditions.
- 6) 0690-051D, issued 06/27/1990 by Springfield Air Pollution Control Authority  
This permitted an 85-gallon Myers mixer (003-06), with no conditions.
- 7) 0691-118, issued 06/20/1991 by Springfield Air Pollution Control Authority  
This permitted a new pressure sensitive tape and surface coater, with some conditions. This permit was superseded by Permit 0791-119, so it is null and void.
- 8) 0791-119, issued 07/10/1991, was a modified version of 0691-118. On 01/10/1994, 3M-Springfield notified the Air Pollution Control Program that the project had been abandoned and the equipment would not be installed, so this permit is null and void.
- 9) 0891-120D, issued 08/06/1991 by Springfield Air Pollution Control Authority  
This permitted 21HS (011-35), with no conditions. This mixer replaced the 250-gallon Kady mill which was permitted by 1186-020D.
- 10) 0891-122D, issued 08/26/1991 by Springfield Air Pollution Control Authority  
This permitted a compounding room in building 4, with no conditions.
- 11) 0392-131D, issued 03/20/1992 by Springfield Air Pollution Control Authority  
This permitted a █-gallon "Drummaster 55" solvent recovery unit, with no conditions. This equipment has since been removed, so this permit is null and void.
- 12) 0692-138D, issued 06/12/1992 by Springfield Air Pollution Control Authority  
This permitted a █-gallon "Chemmaster 55" solvent recovery unit, with no conditions. This equipment has since been removed, so this permit is null and void.
- 13) 0295-171D, issued 02/17/1995 by Springfield Air Pollution Control Authority  
This permitted a █-gallon mixer system in building 12, with no conditions.
- 14) 0802-231D, issued 08/07/2002 by Springfield Air Pollution Control Authority  
This permitted adhesive mixers in building 11 – █-gallon (011-04, 011-07, 011-44, 011-45)-, █-gallon (011-46), and █-gallon premixer (011-48) – with a limitation on toluene emissions. This operating permit makes the following revisions to this construction permit:
  - The latest standard wording is used for 10 CSR 10-6.20, *Restriction of Emission of Visible Air Contaminants*.
  - The special limitation for toluene emissions from the permitted mixers is no longer needed. No separate emission limitation, recordkeeping, monitoring, or reporting is required for this, because toluene emissions are covered by the plant wide Permit Condition PW001.

### **New Source Performance Standards (NSPS) Applicability**

Boiler #1 (EU0010) and Boiler #2 (EU0020) were both installed in November 1966. This exempts them from 40 CFR Part 60 Subpart D, *Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971*, as well as from the subsequent subparts Da, Db, and Dc which have more recent dates.

The installation has a number of storage tanks. A list of these follows, with details. The tanks in this list which are asterisked and italicized have been inactivated and are expected to be removed / decommissioned around September 1, 2006.

<u>TK-888-</u>	<u>Tank</u>	<u>Year</u>	<u>Gallons</u>	<u>Location</u>	<u>Contents</u>
01	Solvent #1 Tank	1967		West Yard	
02	Solvent #2 Tank	1967		West Yard	
03	Solvent #3 Tank	1967		West Yard	
04	Solvent #4 Tank	1967		West Yard	
05	Solvent #5 Tank	1967		West Yard	
06	Solvent #6 Tank	1967		West Yard	
07	Solvent #7 Tank	1967		West Yard	
08	Solvent #8 Tank	1967		West Yard	
09	Solvent #9 Tank	1967		West Yard	
10	Solvent #10 Tank	1967		West Yard	
11	Solvent #11 Tank	1967		West Yard	
12	Solvent #12 Tank	1967		West Yard	
13	Solvent #13 Tank	1967		West Yard	
14	Solvent #14 Tank	1967		West Yard	
15	Polyol #1 Tank	1999		Building 8 South	
16	Polyol #2 Tank	1999		Building 8 South	
17	Polyol #3 Tank	1999		Building 8 South	
18	Polyol #4 Tank	1999		Building 8 South	
19	Polyol #5 Tank	1984		Building 8 North	
20	Polyol #6 Tank	1984		Building 8 North	
21	Polymer #2 Tank	1984		Building 3 North	
22	Polymer #3 Tank	1984		Building 3 North	
23	Polymer #4 Tank	1984		Building 3 North	
24	Polymer #5 Tank	1984		Building 3 North	
25	MDI Tank	1984		Building 3 North	
26	TDI Tank	1980		Building 3 North	
27	Solvent #15 Tank	1993		Building 3 North	
28	Latex #1 Tank	1987		Inside, HV 3	
29	Latex #2 Tank	1987		Inside, HV 3	
30	Latex #3 Tank	1987		Inside, HV 2	
* 31	<i>Asphalt Tank</i>	<i>1966</i>		<i>Building 3 North</i>	
32	Polymer #1 Tank	1984		Building 3 North	
33	#2 Fuel Oil Tank	1992		Building 8 North	
34	2 Fuel Oil Tank	1990		Diesel Pump House	
35	Propane #1 Tank (Leased)	1970's		PB South	
36	Propane #2 Tank (Leased)	1970's		PB South	
37	Nitrogen Air Products (Leased)	1994		West Yard	
38	Nitrogen Praxair (Leased)	2002		West Yard	
* 39	<i>Talc Storage Silo</i>	<i>1981</i>	<i>ft<sup>3</sup></i>	<i>Building 3 North</i>	
	Firewater Tank				Water
	Firewater Tank				Water

Of these tanks, only the #2 Fuel Oil Storage Tank (EU0040, 33 in above list) is subject to 40 CFR Part 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*. Subpart Kb is included in this permit, in Permit Condition EU0040-001. None of the tanks are subject to the related Subparts K and Ka

No other NSPS regulations apply to this installation.

#### **Maximum Available Control Technology (MACT) Applicability**

CFR 40 Part 63 Subpart KK, *National Emission Standards for the Printing and Publishing Industry*, does not apply to this installation. The installation does not have either rotogravure or wide-web flexographic printing presses as defined in this subpart.

CFR 40 Part 63 Subpart FFFF, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*, would apply to this installation, except it is accepting the federally enforceable voluntary limitations in this permit before that MACT's deadline of November 10, 2006. Doing this means it will no longer be a major source of hazardous air pollutants (HAP), which exempts it from this MACT.

CFR 40 Part 63 Subpart JJJJ, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating*, does apply to this installation, because it was still a major source of HAP when the deadline for this MACT passed. Subpart JJJJ is included in this permit, in Permit Condition (EU0050 THROUGH EU0080)-001.

CFR 40 Part 63 Subpart HHHHH, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing*, would apply to this installation, except it is accepting the federally enforceable voluntary limitations in this permit before that MACT's deadline of December 11, 2006. Doing this means it will no longer be a major source of hazardous air pollutants (HAP), which exempts it from this MACT.

No other MACT regulations apply to this installation.

#### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

In the permit application and according to APCP records, there was no indication that any Missouri Air Conservation Law, *Asbestos Abatement*, 643.225 through 643.250; 10 CSR 10-6.080, *Emission Standards for Hazardous Air Pollutants*, Subpart M, *National Standards for Asbestos*; and 10 CSR 10-6.250, *Asbestos Abatement Projects - Certification, Accreditation, and Business Exemption Requirements* apply to this installation. The installation is subject to these regulations if they undertake any projects that deal with or involve any asbestos containing materials. None of the installation's operating projects underway at the time of this review deal with or involve asbestos containing material. Therefore, the above regulations were not cited in the operating permit. If the installation should undertake any construction or demolition projects in the future that deal with or involve any asbestos containing materials, the installation must follow all of the applicable requirements of the above rules related to that specific project.

No other NESHAP regulations apply to this installation.

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### Other Regulatory Determinations

- 1) Normally, only annual reporting is required in Section V of an intermediate permit. However, semi-annual reporting is required for this installation because it is subject to MACT JJJJ, which requires it. (See “Maximum Available Control Technology (MACT) Applicability” above.)
  - 2) The following units are heated with steam from Boiler 1 (EU0010) and Boiler 2 (EU0020), so they do not burn fossil fuel. The only air pollutant emitted from these ovens is VOC, and such a small amount of that (█ ton per year) is emitted that they are grouped together on the list of insignificant activities as “Ovens”.
    - BARR Oven and Exchanger (002-004)
    - Ovens (002-17 and 002-20)
    - Hot Room Oven (002-26)
  - 3) Three of the moguls - the 215M Mixer (003-05), the 318M Mixer (003-09, 003-10), and the 418M Mixer (003-11, 003-12) - are grandfathered units, in existence before permitting was required. The emissions from these units must be accounted for under plant wide Permit Condition PW001, but no other regulations apply to them.
  - 4) This installation emits volatile organic compounds (VOC), some of which are hazardous air pollutants (HAP). All of these VOC/HAP emissions are regulated by Permit Condition PW001, which is plant wide. Therefore, only non-VOC emissions need to be considered when deciding whether or not a unit requires emission unit specific emission limitations. With that in mind, the following emission units are included in the “List of Emission Units Without Limitations” in Section I of this permit for the reasons given.
    - a) The following units emit only VOC air pollutants.
      - MIX1 and JM3Q (002-05)
      - JM3A and JM3B (002-06)
      - Line 3 Mixer Lines (002-27, 002-28)
      - Line 3 Tote Vents (002-29, 002-30)
      - Condensate Vent (003-04)
      - 80MM Mixer (003-06)
      - Vacuum Pump (003-07)
      - 65PI Mill (003-08)
      - CR Weigh Tanks (003-15, 003-16)
      - 77KM Mill (003-29)
      - 06BN and 06BS Blenders (003-30)
      - 496E Mixer with condenser † (003-31)
      - 496W Mixer with condenser † (003-32)
      - 416S Mixer (003-33)
      - 74MM Mixer (003-34)
      - 73PB Blender (003-36)
      - 31CL Calendar (007-19)
      - 31CL Mill (007-21)
      - 31 CL Mill (007-22)
      - 31CL Mixer (007-23)
      - XPAN (007-35, 007-36)
      - RE2A Mixer (011-50) ††
      - RE2B Mixer (011-51) ††
- † Condensers may be installed on 496E and 496W Mixers sometime in 2006.  
†† These mixers may be installed early in 2007

- b) The 01RM Mill (002-12) emits only VOC and particulate matter less than 10 microns in diameter (PM<sub>10</sub>). Its maximum hourly design rate is █ ton rubber processed. The uncontrolled potential emission factor for PM is 0.087 lb PM/ton rubber processed. (See Attachment H for the derivation of this emission factor.) Therefore its potential to emit is

$$\left( \frac{? \text{ ton Rubber Processed}}{\text{hr}} \right) \left( \frac{0.087 \text{ lb PM}}{\text{ton Rubber Processed}} \right) = \frac{? \text{ lb PM}}{\text{hr}}$$

Since its potential to emit is less than 0.5 lb PM/hr, this unit is exempt from with 10 CSR 10-6.400 *Maximum Allowable Emission of Particulate Matter From Industrial Processes*. The Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) *Particulate Matter from Industrial Processes* does not specify this exemption. However, the lowest processing weight in the table used by this Springfield ordinance to specify allowable emission rate is 0.05 ton, implying that lower processing rates are not regulated. Furthermore, interpolating between zero and the lowest processing weight of 0.05 ton gives an allowable emission rate of █ lb PM/hr, and this unit's potential to emit is less than █% of that. Therefore, neither regulation is included in this permit as an emission unit specific emission limitation. With such low emissions, the unit could not violate 10 CSR 0-6.220, *Restriction of Emission of Visible Air Contaminants*, so that regulation is not included in this permit either.

- c) The calculations and comments for the 02FM Mill (002-14) are identical to those for 01RM Mill (002-12) above.
- d) The Visa Process (003-37, 003-38, 003-39) emits only VOC and particulate matter less than 10 microns in diameter (PM<sub>10</sub>). The Springfield Air Pollution Control Authority issued a "No Permit Required" letter for this process. This exempts it from 40 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*, per § (1)(B)(8) of that regulation. Furthermore, the PTE for this process is █ lb PM<sub>10</sub> per year. With such low emissions, the unit could not violate this regulation anyway; or 10 CSR 0-6.220, *Restriction of Emission of Visible Air Contaminants*; or. The Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) *Particulate Matter from Industrial Processes*. Therefore none of these regulations are included in this permit.
- e) Construction Permit 0590-050D, issued by the Springfield Air Pollution Control Authority, determined that the potential PM emissions from the DM25 Mixer (011-01) were less than █ ton per year. Assuming 8,760 hours in a year, this is less than █ lb PM/hr. Since the potential to emit is less than 0.5 lb PM/hr for this unit, it is exempt from 10 CSR 10-6.400 *Maximum Allowable Emission of Particulate Matter From Industrial Processes*. This construction permit did not include a special condition for the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) *Particulate Matter from Industrial Processes*, so the Springfield Air Pollution Control Authority also considered the PM emissions from the units to be insignificant. Therefore neither of these two regulations are included in this permit for this unit.
- f) Construction Permit 0802-231D, issued by the Springfield Air Pollution Control Authority, calculated the combined potential PM emissions from the WBPM400 Mixer (011-46), the WBPM80 Mixer (011-48), and a third mixer in Building 11 as █ tons/year, assuming 8,760 hours of operation per year. This is only █ lb PM/hr. Since the potential to emit is less than 0.5 lb PM/hr for each of these units, they are exempt from 10 CSR 10-6.400 *Maximum Allowable*

*Emission of Particulate Matter From Industrial Processes.* This construction permit did not include a special condition for the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) *Particulate Matter from Industrial Processes*, so the Springfield Air Pollution Control Authority also considered the PM emissions from these units to be insignificant. Therefore neither of these two regulations are included in this permit for these units.

- g) Construction Permit 0295-179D, issued by the Springfield Air Pollution Control Authority, contains PM calculations for the Surge Bin Vacuum-White (012-09), the Surge Bin Vacuum-Black (012-10), the Mixer (012-11, 012-25), the Hoppers (012-12, 012-13), and the MDI Hold Station (012-20). These calculations show emissions of ■ lb PM / 8 hrs, or ■ lb PM/hr, for all the units combined. Since the potential to emit is less than 0.5 lb PM/hr for each of these units, they are exempt from 10 CSR 10-6.400 *Maximum Allowable Emission of Particulate Matter From Industrial Processes*. This permit did not include a special condition for the Code of Ordinances of the City of Springfield, Part II, Chapter 6 Article III, Division 4 (Sections 6.251 through 6.257) *Particulate Matter from Industrial Processes*, so the Springfield Air Pollution Control Authority also considered the PM emissions from these units to be insignificant. Therefore neither of these two regulations are included in this permit for these units.
- h) None of the storage tanks at this installation emit any non-VOC air pollutants. Except for the Talc Storage Silo (EU0030) and the #2 Fuel Oil Storage Tank (EU0040), no other regulations apply to these tanks. See "New Source Performance Standards (NSPS) Applicability" above for the determination on EU0040.

#### **Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis**

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons.

- 1) The specific pollutant regulated by that rule is not emitted by the installation.
- 2) The installation is not in the source category regulated by that rule.
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule.
- 4) The installation does not contain the type of emission unit which is regulated by that rule.
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:

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